THE WELL~ TRAINED MIND

A Guide to CLASSICAL EDUCATION at HOME

JESSIE WISE and SUSAN WISE BAUER



TYPA + FOO

USA \$35.00 CAN. \$48.99

調

A PARENT, you worry about your child's education. With so many students per classroom, even the most dedicated teachers often can't give each student the individual attention so urgently needed, and neither teachers nor parents can control the social environment of many schools.

Is your child getting lost in the system, becoming bored, losing his or her natural eagerness to learn? If so, it may be time to take charge of your child's education—by doing it yourself.

This book will instruct you, step by step, on how to give your child an academically rigorous, comprehensive education from preschool through high school-one that will train him or her to read, to think, to understand, to be well-rounded and curious about learning. Veteran home educators Jessie Wise and Susan Wise Bauer outline the classical pattern of education called the trivium, which organizes learning around the maturing capacity of the child's mind and comprises three stages: the elementary school "grammar stage," when the building blocks of information are absorbed through memorization and rules; the middle school "logic stage," in which the student begins to think more analytically; and the high school "rhetoric stage," where the student learns to write and speak with force and originality. Using this theory as your model, you'll be able to instruct your childwhether full time or as a supplement to classroom education—in all levels of reading, writing, history, geography, mathematics, science, foreign languages, rhetoric, logic, art, and music, regardless of your own aptitude in those subjects. The book also includes sample schedules, detailed book lists with

MAY



SAN RAFAEL PUBLIC LIBRARY SAN RAFAEL, CALIFORNIA

DATE DUE		
MAY 3 0 2000	APR 1 4 2003	
JUN 2 6 2000	SEP 2 5 2003	
JUL 2 4 2000	OCT 1 7 2003	
AUG 1 5 2000	SEP 1 4 2004	
SEP 0 6 2000 R	JUL 2 1 2006	
OCT 0 3 2000	OCI 0 2 2006	
OCT 2 4 2000R	APR 10 2008	
NOV 1 7 2000	CED 2 3 2009	
JAN 0 2 2001	JAN 2 6 2012	
FEB 1 6 2001		
MAR 0 9 2001 R		
MAY 2 9 2001		
007		
001 2 7 2001		
DEC 0 8 2001		
JAN 2 6 2002		
APR 0 2 2002		
GAYLORD	PRINTED IN U.S.A.	



THE WELL-TRAINED MIND



THE WELL-TRAINED MIND

A Guide to Classical Education at Home

JESSIE WISE Susan wise bauer

San Rafael Public Library 1100 E Street San Rafael, CA 94901

W. W. Norton & Company New York London Copyright © 1999 by Jessie Wise and Susan Wise Bauer

All rights reserved. Printed in the United States of America.

Permission has been granted for the following:

Norms and Nobility, by David Hicks. Copyright 1981 by Praeger Publishers, Inc. Reproduced with permission of Greenwood Publishing Group, Inc., Westport, CT.

Classical Education and the Home School, by Douglas Wilson, Wesley Callihan, and Douglas Jones. Copyright 1995 by Canon Press. Reproduced with permission of the publisher.

The Kingfisher Illustrated History of the World. Copyright © 1992 by Grisewood & Dempsey. Reprinted by permission of the publisher, Larousse Kingfisher Chambers, New York. This edition is no longer in print. A new edition, entitled *The Kingfisher History Encyclopedia*, is now available.

Rulebook for Arguments, second edition, by Anthony Weston. Copyright 1992 by Hacket Publishing Company, Inc. Reproduced with permission of the publisher.

The End of Education: Redefining the Value of School, by Neil Postman. Copyright 1995 by Alfred A. Knopf. Reproduced with permission of the author.

"Jane Goodall," *National Geographic* Magazine, December 1995. Copyright 1995 by the National Geographic Society. Reproduced with permission of the publisher.

For information about permission to reproduce selections from this book, write to Permissions, W. W. Norton & Company, Inc., 500 Fifth Avenue, New York, NY 10110.

The text of this book is composed in Iowan, with the display set in Trajan. Composition by R. R. Donnelley & Sons Company, Allentown Digital Services Center. Manufacturing by The Haddon Craftsmen, Inc.

Book design by Chris Welch.

Library of Congress Cataloging-in-Publication Data

Wise, Jessie.

The well-trained mind : a guide to classical education at home / Jessie Wise, Susan Wise Bauer.

p. cm.

Includes bibliographical references and index.

ISBN 0-393-04752-0

 Home schooling—United States—Handbooks, manuals, etc. 2. Education, Humanistic— United States—Handbooks, manuals, etc. 3. Education—Parent participation—United States—Handbooks, manuals, etc. I. Bauer, S. Wise. II. Title.

LC40.W57 1999

371.04'2'0973-dc21

99-18915

CIP

W. W. Norton & Company, Inc., 500 Fifth Avenue, New York, NY 10110 www.wwnorton.com

W. W. Norton & Company Ltd., 10 Coptic Street, London WC1A 1PU 3 4 5 6 7 8 9 0 For Christopher, Benjamin,

and Daniel.



CONTENTS

Acknowledgments15What The Well-Trained Mind Does: An Overview17Practical Considerations: Using The Well-Trained Mind without
Losing Your Own21Supplementing Your Child's Education: The Well-Trained Mind
and Full-Time School23

PROLOGUE: THE STORY OF A CLASSICAL Home education

1. Uncharted Territory: Jessie 33

2. A Personal Look at Classical Education: Susan 41

7

PART I. THE GRAMMAR STAGE: KINDERGARTEN THROUGH FOURTH GRADE

3. The Parrot Years 51 Now or Never 53

How to Teach the Poll-Parrot Stage 54 Priorities 55

4. Unlocking the Doors: The Preschool Years 56 Preschool: Birth to Three 57 Kindergarten Years: Four and Five 60 RESOURCES 70

5. Words, Words, Words: Spelling, Grammar, Reading, and Writing 77 How to Do It 78 General Instructions for Grades 1 through 4 79 Overview of Language Work 95

Resources 97

6. The Joy of Numbers: Math 109 The Way Children Think 110

Math Tables: A Defense 112

How to Do It 114 A Caution 117

Schedules 117

Resources 118

7. Seventy Centuries in Four Years: History and

Geography 123

Seventy Centuries in Four Years 125 What If You're Starting in the Middle? 127 How to Do It 127 Resources 139

8. Making Sense of the World: Science 167 Priorities 168 Textbooks 169 How to Do It 169

Resources 186

9. Dead Languages for Live Kids: Latin 199 Why Latin? 200 How Does Latin Work? 201

How to Do It203Schedules205RESOURCES205

10. Electronic Teachers: Using Computers and Videos 207

11. Matters of Faith: Religion 211 Resources 213

12. Finer Things: Art and Music 214

Art 215 Music 216 Resources 217

Part I: Epilogue 224

The Grammar Stage at a Glance224Notebook Summary, Grades 1 through 4229Whole Language and Phonics: Whole to Parts versus Parts to
Whole232

PART II. THE LOGIC STAGE: FIFTH GRADE Through Eighth grade

13. The Argumentative Child239Building on the Foundation241Logic and the Trivium242Logic in the Curriculum243How to Teach the Logic Stage244Priorities245

 14. Snow White Was Irrational: Logic for the Intuitive
 247

 How to Do It
 249

 For the Logically Challenged
 250

 Resources
 257

 15. The Language of Reason: Math
 260

 How to Do It: Fifth and Sixth Grades
 262

 The Shift to Upper-Level Math
 264

 Resources
 268

 16. Why 1492? History and Geography
 272

 Organizing the Material
 272

 How to Do It
 279

 RESOURCES
 300

17. Thinking Straight: Spelling, Grammar, Reading, and

Writing	328	
How to Do	It 329	
Spelling and	d Word Study	330
Grammar	333	
Reading	336	
Writing	352	
Schedules	353	
Resources	356	

18. Making Deductions: Science 374

 Your Goals
 375

 Texts
 376

 Schedule
 377

 The Notebook
 377

 How to Do It
 379

 Resources
 389

19. Looking into Other Worlds: Latin and Languages 402

Teaching Options403Which Languages?404Which Texts?404When Do I Do It?406Schedules407RESOURCES410

20. Away with Abusive Fallacies! Religion 414 Resources 416

21. The History of Creativity: Art and Music 418

Art 419 Music 422 Schedules 424 Resources 425

 22. Magic Boxes: Using Computers and Videos
 432

 Software
 433

 The Internet
 434

Videos 435 Resources 436

23. Moving toward Independence: Logic for Life 440

Part II: Epilogue 443

The Logic Stage at a Glance 443

PART III. THE RHETORIC STAGE: NINTH GRADE THROUGH TWELFTH GRADE

24. Speaking Your Mind: The Rhetoric Stage 451
A General Guide to the Rhetoric Stage 452
The Study of Rhetoric 453
How to Do It 454
Debate 457
Schedules 458
Resources 458
25. Skill with Words: Grammar and Writing 461
How to Do It 462
Schedules 468
Resources 469
26. Great Books: History and Reading 472
How to Do It 474
Writing Projects 482
University Sources for Great-Books Curricula 486
Schedules 489
Resources 490
27. Comfort with Numbers: Math 500
Possible Sequences 501
Outside Help 504
Advanced Placement 506
Schedules 506
Resources 507
28. Principles and Laws: Science 511
An Overview of Rhetoric-Stage Science 512
How to Do It 513
Outside Help 517
Schedules 518
Resources 520

.

29. Learning Other Worlds: Foreign Languages	526
Which Languages? 527	
Texts and Courses 528	
Schedules 530	
Resources 533	
30. Mastering the Magic Box: Computer Skills	538
Generally Speaking 538	
Practically Speaking 541	
Schedule 542	
Resources 542	
31. Apologizing for Faith: Religion 545	
Resources 547	
32. Appreciating the Arts: Art and Music 549	
Art 550	
Music 553	
Schedules 554	
Resources 555	
33. The Specialist 559	
General Guidelines 560	
Flexibility 563	
Specific Guidelines 564	
Evaluation 567	
Schedule 568	
Resource 568	
34. Some People Hate Homer 569	
Part III: Epilogue 573	
The Rhetoric Stage at a Glance 573	
PARI IV. COMING HOME: HC	OW TO EDUCATE
YOUR CHILD AT H	IOME

35. The Kitchen-Table School: Why Home-Educate? 579 Why Should You Home-School? 580 Encouragement for Parents 582 First Steps 584 Taking Your Child Out of School 585

604

The Realities of Home Schooling586A Personal Word from Jessie586Resources588

36. The Confident Child: Socialization 589

- **37. The Character Issue: Parents as Teachers** 594 *Resources* 597
- 38. And Just When Do I Do All This? Schedules for Home

Schoolers 598 How Much Time Does It Take? 600 Yearly Planning 601 Weekly Planning 602 Daily Planning 603 Jessie's Method of Organizing: A Personal Account Good Use of Time 606 Home Schooling with Babies and Toddlers 606 Sample Schedules for Home Schoolers 608 RESOURCES 614

39. Paper Proof: Grades and Record Keeping 616
Notification 617
Elementary School and Middle School: Portfolios 617
High School: Transcripts 618
Diploma 624
RESOURCES 625

40. The Yardstick: Standardized Testing 627

Yearly Testing628AP and CLEP Exams631PSAT, SAT, and ACT632Resources634

- **41. Where's the Team? Athletics at Home** 639 *Resources* 641
- **42. The Local School: Dealing with Your School System** 643 *Resource* 646
- 43. Yelling for Help: Tutors, Online Resources, Correspondence
 Schools, Cooperative Classes, and Colleges and Universities
 647
 Tutors
 648
 Online Resources
 649

Correspondence Schools651Cooperative Classes651Community Colleges and Local Universities652RESOURCES652

44. Going to College: Applications for Home Schoolers 656 Planning for College 657 Choosing a College 659 The Application Process 660 The Portfolio 661 One Successful Application 661 A Word about Early Admissions 663 663 RESOURCES

45. Working: Apprenticeships and Other Jobs 666 *Resources* 668

46. More Stuff: The Annotated Catalog List 669 General 670 **Elementary** Grades 670 History 671 Classics, Latin, Logic 671 Shakespeare 671 Language: Reading, Writing, Grammar, and So Forth 672 Science 673 **Mathematics** 674 Used-Curricula and -Book Vendors 674

47. The Final Word: Starting in the Middle 676

APPENDICES

1. Taking an Oral History 683	
2. Home-Education Organizations	687
3. National Science Competitions	705
4. Sources 711	
Selected Bibliography 725	

Index 727

ACKNOWLEDGMENTS

M//

I am grateful to Amelia and Luther Morecock—Meme and Uncle Luther for adopting me, teaching me to read before I went to school, and requiring me to be diligent. The credit for any academic or professional success I have enjoyed begins with them. My introduction to phonics materials came from a York, Maine, first-grade teacher in whose class *every* child learned to read. She showed me her systematic phonics program and told me how to order it, with the result that I taught my children how to read and started down the path to home education. I am immensely thankful that, when I took my "misfit" children to the Henrico Mental Clinic in Henrico, Virginia, I met a perceptive and encouraging psychologist, Jeffrey C. Fracher. Dr. Fracher told me to teach my children at home, an idea that had never occurred to me. I'm grateful to my children, Bob, Deborah, and Susan, for learning with me and for continuing to study and learn as adults. Working with Susan on this book has been a challenging, rewarding task. When she was a child, I nudged her beyond her intellectual comfort zone, and she is now continually doing the same for me. Finally, my husband of forty years, Jay, has been in the midst of all of this since our college years. He has encouraged and supported me at every turn.

—Jessie Wise

I am immensely grateful to my husband, Peter, for educating, caring for, and parenting our three sons. His willingness to take on half the burden of home education has made it possible for me to put the necessary hours into writing this book. Douglas Wilson and Gene Edward Veith have helped me understand the theory and practice of classical education; Beth Ferguson has provided invaluable guidance in the area of mathematics; Peggy Ahern kindly shared her expertise in college application and allowed us to quote her at length. Anne Miller and the Home Educators Association of Virginia made it possible for us to present these ideas to a wide spectrum of home schoolers. The home schoolers who told us what does and doesn't work at home include Diane Montgomery, Beth Galvez, and Traci Winyard; thanks to you and to all those we've talked to at conferences, at workshops, and by E-mail. The Williamsburg Public Library reference librarians cheerfully looked up long lists of citations for us, even in the middle of an ice storm. Thanks also to my agent, Richard Henshaw for his expert advice and stellar work on our behalf; to Starling Lawrence for giving us confidence in our own words and ideas; to Patricia Chui for seeing us through a thousand pages of manuscript and a nine-day power outage right before the final deadline; and to Carol Flechner for the suggestions that helped us clarify and present our ideas. Finally, I'd like to thank my parents, Jay and Jessie Wise, for investing all the time and care it took to train my mind. I love you both, and I'm more grateful than I can say.

—Susan Wise Bauer

WHAT The Well-trained Mind Does: An overview

MIL.

I fyou're fortunate, you live near an elementary school filled with excellent teachers who are dedicated to developing your child's skills in reading, writing, arithmetic, history, and science. These teachers have small classes—no more than ten students—and can give each student plenty of attention. The elementary school sits next to a middle school that is safe (no drugs, guns, or knives). This school also has small classes; the teachers train their students in logic, critical thinking, and advanced writing. Plenty of one-on-one instruction is offered, especially in writing. And in the distance (not too far away) is a high school that will take older students through world history, the classics of literature, the techniques of advanced writing, high-level mathematics and science, debate, art history, and music appreciation (not to mention vocational and technical training, résumé preparation, and job-hunting skills).

This book is for the rest of us.

After a combined total of forty years in education—Jessie as elementary and middle-school teacher and administrator in both public and private schools, Susan as student, graduate student, and college teacher—we have come to one simple conclusion: if you want your child to have an excellent education, you need to take charge of it yourself. You don't have to reform your entire school system. All you have to do is teach your own child.

Never mind educational rhetoric about the years of specialized training necessary for teachers. Forget everything you've heard about the need for classes in child development and educational psychology. These things are indeed necessary for the teacher faced with thirty squirming first graders or twenty-five turned-off adolescents. But you have an entirely different task: the education of your own child, one on one.

You probably feel that you don't have the skills to teach your child at home. You aren't alone; every home-schooling parent has felt this way (see Chapter 1). But we have consulted with scores of parents—some collegeeducated, some without high-school diplomas—who have successfully guided their children's education. At conferences and seminars, we've met hundreds more. Home-education magazines overflow with stories of parent-taught teens who excel at reading, writing, science, and math.

All you need to teach your child at home is dedication, some basic knowledge about how children learn, guidance in teaching the particular skills of each academic subject, and lots of books, tapes, posters, kits, and other resources. This book will provide you with everything except the dedication.

The Well-Trained Mind is a parent's guide to a do-it-yourself, academically rigorous, comprehensive education—a *classical* education.

What is classical education?

It is language-intensive—not image-focused. It demands that students use and understand words, not video images.

It is history-intensive, providing students with a comprehensive view of human endeavor from the beginning until now.

It trains the mind to analyze and draw conclusions.

It demands self-discipline.

It produces literate, curious, intelligent students who have a wide range of interests and the ability to follow up on them.

The Well-Trained Mind is a handbook on how to prepare your child to

read, write, calculate, think, and *understand*. In the Prologue, we'll outline what a classical education is and tell you about our own experience with classical education and with various forms of school at home.

You may decide to remove your child from school; you may decide to leave her in regular classes. Either way, this book will give you the tools you need to teach her at home or to supplement and reinforce what she's learning in the classroom.

Part I tells you how to lay the foundations of academic excellence, from kindergarten through fourth grade. Part II outlines a program that will train the maturing mind of a middle-school child—grades 5 through 8. Part III covers high-school skills. Even if you're starting with an older child, though, you should read through the earlier sections so that you understand the basic principles of classical education. Each section includes a grade-by-grade summary so that you can see at a glance what each school year should include.

Part IV is dedicated to the issues surrounding full-time home education—socialization, grade keeping, standardized testing, getting into college, athletics, and other home-schooling matters. If you want to keep your child in school but do remedial work in grammar or math, you can use the curricula and methods we suggest in the evenings or during breaks. If your child wants to go above and beyond what she's learning in history or science, she can pursue the at-home programs we outline on her own time.

A word about resources. We find huge lists of resources overwhelming. When Susan goes looking for a book about ancient Egypt for her second grader, she doesn't have time to sort through an extensive list of recommended books—she just wants two or three of the best choices. For this reason, we've sorted through available resources and listed our top picks. But for those who want to explore all available options, Chapter 46, "More Stuff: The Annotated Catalog List," will give you a place to start. Visit www.welltrainedmind.com for updates, Parents' Forum and futher information.

WELL PLE

Warney - ----

esta en en al antitra en al antitra en al anti-

n an an Albert State an Albert State Marine State State State State tal nel ar natiefe Tex 17 Africano Texa Sa

n na stand and an stand an stand an stand Second an an stand an stand an stand Second an stand and an stand an stand Second an stand and stand and an stand Second an stand and stand and stand

PRACTICAL Considerations: Using *The Well-Trained Mind* Without Losing Your Own

SN//

This is a very big book. *The Well-Trained Mind* provides information on teaching all the subjects in the classical curriculum for all twelve grades—literature, writing, grammar, history, science, math, Latin, modern languages, art, music, debate, and more.

It's a rare parent who will follow this program exactly. The freedom to tailor an academic program to your child's particular interests and needs is one of home education's greatest advantages. We've explained the general philosophy that governs each part of the curriculum, but our specific schedules, texts, and programs are just *illustrations* of how to put this philosophy into practice. We think the texts and programs we've settled on are the best available, but you should always feel free to substitute, to pick and choose. For example, in Chapter 16 we recommend that middle-grade history students outline their history lessons, and we demonstrate this process by quoting from the *Kingfisher Illustrated History of the World*, our recommended

21

text. But if you've found another book of world history that you love, you can certainly use it instead.

You can follow one part of the program, but not another. If, for example, you've found a math curriculum that works well for your sixth grader, you can use the language resources we suggest without feeling as though you've got to convert to the math books we like. If your high-school student already has a literature list he's reading his way through, you can still use our writing and grammar suggestions without adopting our reading list.

It's a rare child who will do *all* the work we suggest—especially in the early grades, when learning to read, write, and do sums may take most of the child's study time. Our sample schedules show you how to fit *everything* in, if that's what you want to do. But many students have extracurricular activities (soccer, music lessons, serious hobbies, clubs, skills courses such as accounting or typing) that may bump art appreciation or French from your schedule. In the classical curriculum, reading, writing, grammar, and math are the center of the curriculum. History and science become more and more important as the child matures. Foreign languages are immensely valuable, but shouldn't crowd out these basic skill areas. And music and art are wonderful when you can manage them.

After you read through Parts I, II, and III, you should have a good grasp of the principles that guide a classical education. As you put them into effect, take seriously our constant direction toward texts and curricula that are systematic and rigorous. Remember that a child *must* have a thorough grounding in the basic skills of grammar, spelling, and writing before he can proceed to more complex analytical work (more on this in Part I). But when you teach your child at home, *you* make the final decision on which books you'll use and how much time you'll spend on schoolwork. Our suggestions are simply that, suggestions, meant to guide you as you plan your child's education at home.

SUPPLEMENTING YOUR Child's Education: The Well-trained Mind And Full-time School

31/1

N ot everyone who uses this book will want to join the ranks of fulltime home schoolers. Although the schedules in this book (and most of the information in Part IV) will be useful to parents who are educating their children completely at home, the information on teaching each subject and the resource lists that follow each chapter will help you supplement the education of a child who's already in school.

Every involved parent is a home educator. If you're checking your child's compositions, talking him through his history homework, cr drilling him in math, you're already teaching him. In this case, you're acting as a teacher's aide—helping to teach and reinforce material that has already been presented in the classroom.

You may find, though, that you want to move beyond this role and take on the job of organizing and presenting new material yourself. Your child may need extra tutoring and practice in a subject in order to master it. Or

23

he may be so interested in a subject that he wants to go beyond the prescribed curriculum.

Either way, we suggest that you read Chapters 1 and 2, which explain our basic theory of classical education, and the chapters that deal with each stage of the mind's development: Chapter 3, "The Parrot Years"; Chapter 13, "The Argumentative Child"; and Chapter 24, "Speaking Your Mind." These will give you an overview of the process of learning, no matter what age your child is. We also suggest that you call for the catalogs listed in Chapter 46, "More Stuff," which will give you some idea of the immense wealth of supplementary materials available.

Encourage your child toward absorption in grades 1 through 4, critical thought in grades 5 through 8, and expression in grades 9 through 12. He must have good, phonics-based reading skills. Use one of the phonics programs that we recommend to teach beginning reading skills; make sure he does plenty of extra reading in the early grades; and use the Critical Thinking Press books recommended throughout Part II to help him think critically about middle-grade history, science, and math. In the high-school years, use as reference works Anthony Weston's *A Rulebook for Argumentation* (see Chapter 24) and *Writing Exposition* (see Chapter 25) to help the upper-grade student write and argue with fluency. Also consider using the *Writing Strands* program (described in Chapters 5, 17, and 25) as a summer project, continuing with it until the student finishes level 7. Writing is a difficult skill to teach in a group setting, and most students need extra practice and individual attention to write well.

If you want to encourage your child to go beyond the classroom, use the information we present, and adapt it to his school schedule. For example, in Chapter 18, "Making Deductions," we describe a science program for fifth through eighth grade that requires the student to read science books, write reports, sketch diagrams, and do experiments. You can use the science texts we recommend and key the child's study to what he's learning in the classroom. If he's studying fifth-grade biology and wants to know more, buy the book we recommend for biology—Burnie's *How Nature Works: One Hundred Ways Parents and Kids Can Share the Secrets of Nature*. Instead of following our home-school schedule, which suggests that you progress through this book in order (three weeks on cell structures, six weeks on plants and fungi, six weeks on aquatic life, and so forth), turn directly to whatever topic is under study at school. Or use our resource sections

to provide your child with supplementary readings and experiment kits.

You can also use these chapters to guide a course of summer study. But bear in mind that a twelve-week summer course can't cover all the material listed in these chapters, which are designed to provide a school year's worth of study at home.

If you want to make sure that your child masters a skill area that's giving him trouble, you can use the books and programs we describe as systematic and drill-oriented. You shouldn't try to key these to classroom work since each skill builds on what has already been taught. Instead, devote an appropriate amount of time to pursuing the additional study as an extracurricular activity.

If you're particularly unhappy with the way one subject is being taught, consider asking your school system whether your child can study that particular material with a tutor. Many schools will allow this as long as the child shows steady progress. You can then substitute one of the programs we outline, either acting as tutor yourself or hiring someone to work oneon-one with your child (see Chapters 42 and 43 for information on approaching your local school and finding reliable tutors). It sometimes happens that an excellent teacher and a bright student are unable to connect in the classroom because their learning styles conflict. And many children need one-on-one instruction in order to do their best work.

nan halantara (m. 1997) 1999 - Salah Karalara (m. 1997) 1999 - Salah Karalara (m. 1997)

and an and a second second

e e die eer

and the state of the state

 $(17)(100) = 1 - \epsilon^{-1}$ $(10)(100) = 1 - \epsilon^{-1}$

For we let our young men and women go out unarmed in a day when armor was never so necessary. By teaching them to read, we have left them at the mercy of the printed word. By the invention of the film and the radio, we have made certain that no aversion to reading shall secure them from the incessant battery of words, words, words. They do not know what the words mean; they do not know how to ward them off or blunt their edge or fling them back; they are a prey to words in their emotions instead of being the masters of them in their intellects. . . . We have lost the tools of learning, and in their absence can only make a botched and piecemeal job of it.

-Dorothy L. Sayers, "The Lost Tools of Learning"

2 × 1×62 2

the car is a prestant of a concerne

of the server of the total server and the total server

success an eliminate of the the second second second

the second reaction the second reaction to the second seco

An a second second these is now become become second to a second s

and the west was well a connection of the second second second second second second second second second second

THE WELL-TRAINED MIND



PROLOGUE

. .

THE STORY OF A CLASSICAL HOME EDUCATION


UNCHARTED Territory: Jessie

1/1/

The first day I taught my three children at home, I cleaned up the playroom and set up three desks. I hung an American flag at the front of the room and led them in the Pledge of Allegiance. I was shaking with nervousness.

It was 1973, and my husband, Jay, and I had just done something radical. We had removed our children from school.

I was terrified, which was ridiculous. After all, I was a state-certified teacher. I'd taught public school for six years; I'd taken postgraduate courses in education from Tulane University, the College of William and Mary, and the University of Virginia. One year, I'd managed thirty-eight second graders from dawn till dusk—no lunch break, no recess break, and no teacher's aide.

Yet I was completely intimidated by those three little children, certain that I couldn't do an adequate job of teaching them myself. All my teacher

33

education had brainwashed me. I was convinced that parents couldn't possibly teach their own children—certainly not at home. It had to be done in an institutional setting, run by professionals, with their resources and specialized training and expertise.

Unfortunately, the professionals had let us down.

I wasn't a stranger to failures in the system. The last year I taught public school, I had in my sixth-grade class two sixteen-year-old boys who had not yet learned to read. I'd never even heard of home schooling, but I remember thinking: If I ever have a child, he will know how to read before he goes to school. I will not have my son sitting in sixth grade, unable to read.

So when my oldest child turned four, I said to him one day, "Bob, would you rather take a nap, or would you like to learn how to read?" He chose reading (not surprisingly), and I started him on the old-fashioned phonics I'd been taught when I was a child. I'd lie down with him on his little bed after lunch and work on his letters (since I also had a two year old and a thirteen month old, I was always glad to lie down). We practiced vowels and consonants, and sounded out new words that year. We called it "doing kindergarten." By the time my middle child was three, she wanted in. "My do kindergarten, too," she'd say, and I would boost her up and let her repeat the sounds after me.

I was proud of myself. I was preparing my children for school. Kindergarten, when it came, was uneventful and purely social. Bob loved to play at school. At home, I went on reading to him and teaching him his language and number skills.

But when Bob reached first grade, he didn't fit in. He already knew the material, and he was bored. The school—a well-regarded private school—was cooperative and moved him into second grade. He was bored there, too. The class was working on early reading skills, and we'd already done that. The second graders didn't like him because he was a little upstart invading their turf. The administration moved him back to first grade, but now the first graders were hostile. He was a big shot who'd been thought worthy of second grade, and they wouldn't play with him. They were jealous because he was well prepared.

So here he was, in first grade, already feeling that doing well in school made him unpopular. He started to change. He had been an excited, exuberant, curious child. Now he was a behavior problem. He stopped doing well in school. His papers had always been meticulously done, but suddenly

his writing became sloppy. The teacher complained to us that Bob was always questioning her in class. And the bus ride to school was horrendous: the older kids made the younger ones sit on the floor, stole their lunches, and dirtied their clothes so they'd get demerits from the teachers at school. Every day, Bob got off the school bus with a handful of bad papers, and he was either fighting mad or crying.

At this point, Jay and I realized that we were spending most of our time with this child trying to undo what was happening to him when he was at school. And we were afraid that our second child, Susan, would go through the same metamorphosis. Susan had just started kindergarten, and the teacher was already protesting to us that she would be a social misfit because she wanted to read during free time instead of playing. We were experiencing firsthand the terrific leveling pressure applied in so many schools: the effort to smooth out the bumps by bringing well-prepared kids down to the level of the rest.

This still happens in some schools. Just this year, the best private preschool in our area agreed to stop teaching four year olds beginning reading skills. Kindergarten teachers in the local public schools had complained that the children turned out by this preschool were bored in kindergarten because they already knew the material. The schools demanded that the preschool quit turning out such well-prepared five year olds so that all the kindergartners would start at the same level of ignorance. I was appalled when the preschool buckled and went back to teaching colors and "social skills."

Back in 1973, no one had told me to stop teaching phonics to my preschoolers. And we didn't know what to do with these academic misfits I had managed to produce. So we took our two school-age children to a psychologist in the local mental-health system. He tested both of them, and I found out what my careful preparation for kindergarten had done: Bob, the second grader, was reading on a seventh-grade level; Susan, the kindergartner, was reading fifth-grade material. The psychologist called us into his office afterward. "Listen," he said, "if you keep those children in school, they are going to become nonlearners. They're bored to death. You've got a teacher's certificate. Why don't you take them out of school and teach them yourself?"

This had never occurred to us. After all, education was the domain of schools . . . and these were *our* children! We didn't know anyone else who

was home-schooling. The whole idea was odd and radical, and we weren't sure it was even legal; Virginia law was fuzzy on this point.

But we had no other choice. The local public school was a terrible environment socially, and test scores ranked our county at the bottom of the state year after year. The private school had been our solution. So, quaking in my boots, I set up the desks and the American flag and started to teach my children at home. I worried the whole time. I worried that my children weren't going to get into college. I worried that the school system was going to come and take them away from us for neglect and truancy. I worried that their social development would suffer.

I could tell you the stories of all three children, but I want to focus on my older daughter, Susan, because we've had the chance to work and speak together, and to reflect on what I did right—and wrong—in her education. As I write this, Susan is twenty-nine, happily married, and the mother of three boys. She went to college at seventeen on a full scholarship, awarded to her for being a National Merit finalist. She worked summers for a good salary as secretary for a legal firm. Her college chose her to spend a term at Oxford as a visiting student. After college, she completed a Master of Divinity—a three-year theological degree—and then a Master of Arts in English literature. She reads Hebrew, Greek, Latin, and Aramaic. She has a thriving career as a writer: she writes radio scripts for a national news commentary and articles for several national magazines, and has published two novels. She also teaches literature at the College of William and Mary in Virginia.

As I look back on the education I gave her, I can see that it follows a pattern that has mostly disappeared from public education. To begin with, I filled her head with facts when she was small. I taught her to read early and kept books everywhere in the house; we had books for presents and rewards, and I was known at the local public library as "the lady with the laundry basket" because I took my children in every week and filled a laundry basket with their books. Their cards allowed them to check out seven books each, and I made them follow a specific pattern: one biography, one science book, one history book, one practical or arts-and-crafts book, and three books of their own choosing—stories, poetry, or nonfiction. We always read everything we brought home. Furthermore, I made Susan memorize. She could recite multiplication tables, lists of linking verbs, dates, presidents, and Latin declensions. As her thought processes matured, I taught her how to fit her knowledge into logical structures. I spent a lot of time with her in one-on-one discussion and interaction. We learned spelling rules, mathematics, and basic logic; we followed an unfashionably strict grammar book and diagrammed sentences of increasing complexity; we kept science notebooks and time lines so that we could organize her growing knowledge of facts into logical and chronological order. I taught her how to organize a paragraph, an essay, a research paper. She learned Latin grammar. She learned how to discipline herself to follow a custom-made schedule, balancing academics and personal interests like music and creative writing. And she continued to read every spare moment.

As she moved into high school, I spent more time working on her skills in writing and expression. She wrote papers, book reports, and stories; she had a particular bent for this and also wrote two novels, although that wasn't a part of my curriculum. My plan *did* include allowing her to develop a specialty, some area in which she could deepen her knowledge in preparation for college and a career. She became interested in early British history and literature, and taught herself Welsh and Gaelic (certainly nothing I would have come up with). She loved practicing the piano. She also started working part time. And we spent an hour every day studying for her SATs, using test-preparation books to review reading skills, logical constructs, English vocabulary, and mathematics. She scored 740 on the verbal section of the SATs, 630 on the math (and this was before the new, adjusted scoring came in). Our mailbox was filled with college catalogs. She finally chose a school where she'd been offered a Presidential Scholarship based on her standardized scores. In her freshman year, she was given the chance to test out of several survey courses by taking the College Level Examination Program examinations. She took the whole battery, just for fun, and was awarded over thirty hours of college credit. After college she made a perfect score on the verbal section of the Graduate Record Exam and did her graduate work at William and Mary on full scholarship.

I didn't know until later that I had followed the pattern of classical education called the trivium. I did know that what I was doing worked.

Susan will write about the trivium in the next chapter; it's the classical theory of education, which organizes learning around the maturing capacity of the child's mind. It no longer exists in public education. *I* didn't learn by this method when I was educated in the county public schools back in

38 PROLOGUE

the forties and fifties. But I was raised by elderly relatives who had been taught by classical methods popular before the turn of the century. Meme, as I called her, had only finished eighth grade in a one-room schoolhouse, and Uncle Luther hadn't even gone that far. But by eighth grade, Meme had learned Latin and algebra, and Uncle Luther had learned advanced practical mathematics and how to think and write. They taught me to read before I ever went to school. The first-grade teacher was our neighbor, and when she heard that Meme was drilling me in phonics, she made a special trip over to warn us that I'd be ruined for life if Meme used such an outdated method. Meme was undaunted, and when I did enter school I was put straight into second grade because of the skills I'd already acquired.

When I came home from school in the evenings, Meme and Uncle Luther sat me down and made me learn. Meme would point at the lists in the books—multiplication tables, parts of speech—and say, "Memorize those."

"But the teacher said we don't have to memorize them," I protested. "We just have to be able to use them."

"I don't care what the teacher says," Meme insisted. "These are things you have to know."

I had been trained to be obedient and disciplined, so I memorized the lists, even though memorization was difficult for me. I learned my algebra and grammar. I went on to college and a professional position; I was the only girl in my high-school class to graduate from college. When I had children of my own, I used Meme's method and found that the three-part process of memorization, logical organization, and clear expression put them far above their peers.

In the middle of this century, Dorothy Sayers, author and creator of Lord Peter Wimsey, told an audience at Oxford University that education had given up on the trivium and was now running on what she called the "educational capital." We no longer teach our children the process of memorization, organization, and expression—the *tools* by which the mind learns.

The leftover remnants of those methods have carried us through several decades of schooling without catastrophe; I made it through public school at the top of my class because my guardians taught me from *what they had learned*. But sooner or later, the capital gets used up. My own children were faced with teachers who brought them down to the level of the class; teachers who thought it was more important to teach social skills than academic

subjects; textbooks that had abandoned grammatical rules and mathematical logic in favor of scattershot, incidental learning. They were surrounded by peers who considered anyone good at learning to be a geek. They spent seven hours every day sitting in desks, standing in lines, riding buses, and doing repetitive seatwork so that their classmates could learn what they already knew.

I wanted something better for them. As I've watched home education develop over the last two decades, I've become convinced that any dedicated parent can do what I did. My own education didn't stretch to Latin or Gaelic or calculus or computer science or art, but my children learned all of these things. With the help of resources and support groups now in place throughout the country—and with the principles we'll give you in this book—you can provide your child with a classical education at home, even if you've never glanced at Latin or logic.

You can do what my guardians did and, on your own time, teach your child the basic skills she may not be learning at school. Your young student may need particular help in math, science, reading, or writing. Even the best and most diligent teacher (I speak from experience) is often prevented from giving necessary individual attention by the growing size of her class. If you use the resources we've collected in this book and invest in some one-onone time with your child, you are capable of educating him.

When I taught school, I was convinced that parents couldn't teach their own children. But twenty-five years later, I can look back and say: The experiment was a success. I was the best teacher my children could possibly have had *because* I was their parent.

I happened to have a teacher's certificate. But during my years of home schooling, I learned more academic material, more about how to manage individual relationships with children, and more about how to teach than I did in any of my teacher-education courses. Teacher-education courses gave me a great deal of good information on how to manage large groups of children. I needed that in schools, but a parent doesn't need it to teach at home.

I happened to have a college degree. But in the twenty-five years since I first became involved with the home-education movement, I've seen parents who only finished high school lead their children successfully through twelfth grade, and I've watched those children thrive in college.

You shouldn't be afraid to take your child out of school, if necessary. This

is a radical step for most parents; it means a change in schedule, in priorities, in lifestyle. And apart from academic concerns, many parents ask, "What about my child's social development? Doesn't he need peers?" Children need friends. Children do *not* need to be surrounded by large groups of peers who inevitably follow the strongest personality in the crowd. The question for any parent is: Do I want my child to be like his peers? Or do I want my child to rise above them?

Finally, if you're accustomed to sending your child to school every morning and allowing the professionals to worry about what he learns and how he learns it, the idea of supervising an entire education may overwhelm you. I sympathize. When I started, I was convinced I could never do it. But if you feel your child is being shortchanged in school, we can give you a plan to fix that. In this book, not only will we introduce you to the trivium method, but we'll give you resources to carry it out and a plan for the entire twelve years of school.

I discovered that home education has a great advantage I knew nothing about when I started. Home education teaches children to *learn* and eventually to teach themselves. By the time my children were twelve or so, I did less and less actual teaching. I supervised; I discussed content with them; I held them accountable; I graded; I bought books and organized coursework. But by early high school, they had been trained in the methods of learning. From this point, they began the process of educating themselves, with some help from tutors and correspondence courses. As adults, they continue to educate themselves, to widen their intellectual horizons. Certainly, this should be the first goal of education.

A PERSONAL LOOK AT Classical Education: Susan

2

1/16

I loved going to school at home. As a high-school student, I would get up in the morning, practice the piano for two hours, do my math and grammar lessons, finish off my science, and then devote the rest of my school day to my favorite subjects—history, ancient languages, and writing. Once a week, we all piled into the car and drove around to music lessons, math tutoring sessions, library visits, college classes. On weekends, we went to athletic meets—my brother's bicycle races, the horse shows my sister and I trained for and rode in.

But I was nervous when I went away to college. Although I'd done well on standardized exams, I'd never really sat in a regular classroom, facing inflexible deadlines. I was used to taking tests from my mother.

I shouldn't have worried. I tested out of thirty hours' worth of college courses; by my second semester, I was taking 400-level courses. I had a host of strange skills: I could diagram sentences; I could read Latin; I knew enough logic to tell whether an assertion was true or faulty. And I was surrounded by eighteen year olds who couldn't write, didn't want to read, and couldn't reason.

I worked in the Peer Tutoring Center for two years, tutoring English composition and Greek grammar. I found myself teaching fifth-grade grammar to college students. My peers came in because they were getting failing grades in composition; I discovered that they couldn't tell the difference between fragments and run-on sentences. Students of Greek came in because they were having trouble translating; they couldn't identify nouns and verbs or tell me what the difference was.

This college was small and nonexclusive, but the problem is universal. Ten years later, I taught my first semester of university classes at the College of William and Mary in Virginia. William and Mary, which still holds to the model of classical education, *is* selective about admissions. The students in my literature classes had high grades, high test scores, lots of extracurricular credits. I had sixty students my first year and taught two sections of Major British Writers, Eighteenth and Nineteenth Centuries: Jonathan Swift to Arthur Conan Doyle in one fell swoop.

I spent the beginning of the semester teaching remedial English to these freshmen. My first hint of trouble came when I assigned Wordsworth's "Ode: Intimations of Immortality" and gave a reading quiz. As I collected the test, I saw that Wordsworth's title had been thoroughly mangled: "Intemmitions," "Intimmations," "Inntemisions."

"Didn't any of you learn phonetic spelling?" I asked. Most of them shook their heads. Well, I already knew that phonics tends to be unfashionable, so I decided to be merciful. After all, I thought, they can always run a spell checker on their papers. I told them to write a four- to six-page paper comparing two of the poems we'd covered or comparing one of the poems to a modern work—no footnotes necessary, no research into scholarly articles required. Almost at once, the E-mail started to flood into my electronic mailbox:

Professor Bauer, I never wrote a paper on a poem before and I don't know where to start.

Professor Bauer, I want to write on "The Rime of the Ancient Mariner," but I don't think I can say enough about it to fill up four pages. ("The Rime of the Ancient Mariner" has enough metaphor and philosophy in it to provide material for a doctoral thesis.)

While thinking about my paper topic, I have realized that I have no clue as to what I should write on.

Professor Bauer, I'm completely lost, I only have dillusions of correct paper topics.

The papers, when finally turned in, contained a few gems, but the majority were badly written, illogical, and full of grammatical errors. And, with a few exceptions, my privately educated students struggled right along with the public-school graduates. They labored to put a thesis into words. They sweated and complained and groaned, trying to prove it. And they didn't know whether they'd proved it or not when they got to the end of their paper.

I spend time talking to these freshmen and sophomores in my office. They're bright, lively, energetic, interesting kids. They have ideas and passions and philosophical problems and social concerns and creative aspirations. But they've been done a great disservice. Their schools gave them few tools; their minds are filled with the raw materials needed for success, but they're having to dig with their hands.

I was ahead of them when I was their age—not because of superior mental abilities, but because I'd been equipped with a closetful of mental tools. My mother taught us the way she'd been taught at home. Our education was language-centered, not image-centered; we read and listened and wrote, but we rarely watched. She spent the early years of school giving us facts, systematically laying the foundation for advanced study. She taught us to think through arguments, and *then* she taught us how to express ourselves.

This is the classical pattern of the trivium, the three-part process of training the mind.

The first years of schooling are called the "grammar stage"—not because you spend four years doing English, but because these are the years in which the building blocks for all other learning are laid, just as grammar is the foundation for language. In the elementary-school years—grades 1 through 4—the mind is ready to absorb information. Since children at this age actually find memorization fun, during this period education involves not self-expression and self-discovery, but rather the learning of facts: rules of phonics and spelling, rules of grammar, poems, the vocabulary of foreign languages, the stories of history and literature, descriptions of plants and animals and the human body, the facts of mathematics—the list goes on. This information makes up the "grammar" for the second stage of education.

By fifth grade, a child's mind begins to think more analytically. Middleschool students are less interested in finding out facts than in asking "Why?" The second phase of the classical education, the "logic stage," is a time when the child begins to pay attention to cause and effect, to the relationships among different fields of knowledge, to the way facts fit together into a logical framework.

A student is ready for the logic stage when the capacity for abstract thought begins to mature. During these years, the student learns algebra and logic, and begins to apply logic to all academic subjects. The logic of writing, for example, includes paragraph construction and support of a thesis; the logic of reading involves the criticism and analysis of texts, not simple absorption of information; the logic of history demands that the student find out why the War of 1812 was fought, rather than simply reading its story; the logic of science requires the child to learn the scientific method.

The final phase of a classical education, the "rhetoric stage," builds on the first two. At this point, the high-school student learns to write and speak with force and originality. The student of rhetoric applies the rules of logic learned in middle school to the foundational information learned in the early grades and expresses her conclusions in clear, forceful, elegant language. The student also begins to specialize in whatever branch of knowledge attracts her; these are the years for art camps, college courses, foreign travel, apprenticeships, and other forms of specialized training.

A classical education is more than just a pattern of learning, though. First, it is *language-focused:* learning is accomplished through words, written and spoken, rather than through images (pictures, videos, and television).

Why is this important? Language learning and image learning require very different habits of thought. Language requires the mind to work harder; in reading, the brain is forced to translate a symbol (words on the page) into a concept. Images, such as those on videos and television, allow the mind to be passive. In front of a video screen, the brain can "sit back" and relax; faced with the written page, the mind is required to roll its sleeves up and get to work.

Second, a classical education follows a specific three-part pattern: the mind must be first supplied with facts and images, then given the logical tools for organization of those facts and images, and finally equipped to express conclusions.

Third, to the classical mind, all knowledge is interrelated. Astronomy, for example, isn't studied in isolation; it's learned along with the history of scientific discovery, which leads into the church's relationship to science and from there to the intricacies of medieval church history. The reading of the *Odyssey* allows the student to consider Greek history, the nature of heroism, the development of the epic, and humankind's understanding of the divine.

This is easier said than done. The world is full of knowledge, and finding the links between fields of study can be a mind-twisting task. A classical education meets this challenge by taking history as its organizing outline, beginning with the ancients and progressing forward to the moderns in history, science, literature, art, and music.

We suggest that the twelve years of education consist of three repetitions of the same four-year pattern: the ancients (5000 B.C.-A.D. 400), the medieval period through the early Renaissance (400–1600), the late Renaissance through early modern times (1600–1850), and modern times (1850–present). The child studies these four time periods at varying levels—simple for grades 1 through 4, more difficult in grades 5 through 8 (when the student begins to read original sources), and taking an even more complex approach in grades 9 through 12, when the student works through these time periods using original sources (from Homer to Hitler) and also has the opportunity to pursue a particular interest (music, dance, technology, medicine, biology, creative writing) in depth.

The other subject areas of the curriculum are linked to history studies. The student who is working on ancient history will read Greek and Roman mythology, the tales of the *Iliad* and *Odyssey*, early medieval writings, Chinese and Japanese fairy tales, and (for the older student) the classical texts of Plato, Herodotus, Virgil, Aristotle. She'll read *Beowulf*, Dante, Chaucer, Shakespeare the following year, when she's studying medieval and early Renaissance history. When the eighteenth and nineteenth centuries are studied, she starts with Swift (*Gulliver's Travels*) and ends with

Dickens; finally, she reads modern literature as she is studying modern history.

The sciences are studied in a four-year pattern that roughly corresponds to the periods of scientific discovery: biology, classification, and the human body (subjects known to the ancients); earth science and basic astronomy (which flowered during the early Renaissance); chemistry (which came into its own during the early modern period); and basic physics and computer science (very modern subjects).

Nama of	The Study of	Scientific	Studied during
period	Years covered	subjects	grades
Ancients	5000 b.ca.d. 400	Biology Classification Human body	1, 5, 9
Medieval–early Renaissance	400–1600	Earth science Astronomy	2, 6, 10
Late Renaissance– early modern	1600–1850	Chemistry	3, 7, 11
Modern	1850–present	Physics Computer science	4, 8, 12

This pattern lends coherence to the study of history, science, and literature—subjects that are too often fragmented and confusing. The pattern widens and deepens as the student matures and learns. For example, a first grader listens to you read the story of the *Iliad* from one of the picture-book versions available at any public library. (Susan's experience has been that first graders think the *Iliad* is a blast, especially when Achilles starts hauling Hector's body around the walls of Troy.) Four years later, the fifth grader reads one of the popular middle-grade adaptations—Olivia Coolidge's *The Trojan War*, or Roger L. Green's *The Tale of Troy*. Four more years go by, and the ninth grader—faced with Homer's *Iliad* itself—plunges right in, undaunted. She already knows the story. What's to be scared of? In the chapters that follow, we'll show you how to follow this pattern for each subject, list the resources you'll need, and tell you where to find these resources.

Classical education is, above all, systematic—in direct contrast to the scattered, unorganized nature of so much secondary education. Rigorous, systematic study has two purposes. Rigorous study develops virtue in the student. Aristotle defines *virtue* as the ability to act in accordance to what one knows to be right. Virtuous men (or women) can force themselves to do what they know is right, even when it runs against their inclinations. Classical education continually asks a student to work against her baser tendencies (laziness or the desire to watch another half hour of TV) in order to reach a goal—mastery of a subject.

Systematic study allows the student to join what Mortimer J. Adler calls the "Great Conversation": the ongoing conversation of great minds down through the ages. Much modern education is so eclectic that the student has little opportunity to make connections between past events and the flood of current information. "The beauty of the classical curriculum," writes classical schoolmaster David Hicks, "is that it dwells on one problem, one author, or one epoch long enough to allow even the youngest student a chance to exercise his mind in a scholarly way: to make connections and to trace developments, lines of reasoning, patterns of action, recurring symbolisms, plots, and motifs."¹

My mother struggled hard to give us the benefits of a classical education. She began to teach us at home in a day when few materials existed for home-educating parents; she had to create her own curriculum. We're going to lay out a whole plan of study for you—not just theory, but resources and textbooks and curricula.

It's still hard work. We don't deny it. We'll give you a clear view of the demands and requirements of this academic project. But a classical education is worth every drop of sweat—I can testify to that. I am constantly grateful to my mother for my education. It gave me an immeasurable head start, the independence to innovate and work on my own, confidence in my ability to compete in the job market, and the mental tools to build a satisfying career.

In fifteen years, I believe that my own sons will say the same to me.

¹David Hicks, Norms and Nobility: A Treatise on Education (New York: Praeger, 1981), p. 133.

44

unterestido de terror o a la colo con an e 19 Maria alternado del 1997 de 1999 at 1997 - Angel Calorina de Calorina attentes 1997 - Angel Angel Angel Angel attentes 1997 - Angel Angel Angel Angel attentes

PARTI

THE GRAMMAR STAGE

Kindergarten through Fourth Grade



THE PARROT YEARS

3

SM/

So far (except, of course, for the Latin), our curriculum contains nothing that departs very far from common practice. The difference will be felt rather in the attitude of the teachers, who must look upon all these activities less as "subjects" in themselves than as a gathering-together of material for use in the next part of the *Trivium*.

-Dorothy Sayers, "The Lost Tools of Learning"

Houses rest on foundations. Journalists gather all the facts before writing their stories; scientists accumulate data before forming theories; violinists and dancers and defensive tackles rely on muscle memory, stored in their bodies by hours of drill.

A classical education requires a student to collect, memorize, and categorize information. Although this process continues through all twelve grades, the first four grades are the most intensive for fact collecting.

This isn't a fashionable approach to early education. Much classroom time and energy has been spent in an effort to give children every possible opportunity to express what's inside them. There's nothing wrong with self-expression, but when self-expression pushes the accumulation of knowledge offstage, something's out of balance.

Young children are described as sponges because they soak up knowledge. But there's another side to the metaphor. Squeeze a dry sponge, and

51

nothing comes out. First the sponge has to be filled. Language teacher Ruth Beechick writes, "Our society is so obsessed with creativity that people want children to be creative before they have any knowledge or skill to be creative with."¹ Your job, during the elementary years, is to supply the knowledge and skills that will allow your child to overflow with creativity as his mind matures.

That doesn't mean that your first grader has to learn about complex subjects in depth or that you're going to force him to memorize long lists of details. In the first four years of learning, you'll be filling your child's mind and imagination with as many pictures, stories, and facts as you can. Your goal is to supply mental pegs on which later information can be hung.

Think of an experience most adults have had. You read about a minor movie star, and suddenly you see his name everywhere. You learn a new vocabulary word and instantly notice it sprinkled through all sorts of different texts. You happen across the name of a tiny, obscure foreign country and in the next few days notice a dozen news items about it.

You might remark to your spouse, "What a coincidence!" Usually, though, that information has surrounded you all along. The movie star's name, the new word, the foreign country were already in the magazines and newspapers at the checkout line, but because the information was unfamiliar to you, your eyes passed over it without recognition. Once the information entered your memory, you recognized it and began to accumulate more and more details.

This is what you'll be doing with your elementary-school child. You might read a book about the planet Mars to your second grader. If it's the first time he's heard about Mars, he probably won't grasp all the information you're giving him. But he may hear on the news that night the most recent information from the Mars space probe, and suddenly something that would have passed by him clicks in his mind. You'll tell him, in history, about the Roman god Mars, the father of Romulus and Remus, and he'll hang this detail on the peg you provided when you read that book about the planets. When he runs across the word *martial* and asks what it means, you can tell him that it means *warlike* and comes from the name Mars, god of war—and the information will stick.

¹Ruth Beechick, A Strong Start in Language: Grades K-3 (Pollock Pines, Calif.: Arrow Press, 1993), p. 6.

The whole structure of the trivium recognizes that there is an ideal time and place for each part of learning: memorization, argumentation, and selfexpression. The elementary years are ideal for soaking up knowledge.

A classical education assumes that knowledge of the world past and present takes priority over self-expression. Intensive study of facts equips the student for fluent and articulate self-expression later on. Too close a focus on self-expression at an early age can actually cripple a child later on; a student who has always been encouraged to look inside himself may not develop a frame of reference, a sense of how his ideas measure up against the thoughts and beliefs of others.

So the key to the first stage of the trivium is content, content, content. In history, science, literature, and, to a lesser extent, art and music, the child should be accumulating masses of information: stories of people and wars; names of rivers, cities, mountains, and oceans; scientific names, properties of matter, classifications; plots, characters, and descriptions. The young writer should be memorizing the nuts and bolts of language—parts of speech, parts of a sentence, vocabulary roots. The young mathematician should be preparing for higher math by mastering the basic math facts.

NOW OR NEVER

Why are the first four grades a particularly fruitful time to concentrate on content?

This is the first time your child will encounter Egyptian embalming rites or the atmosphere of Venus; this is the first time he will understand what light is made of or why Americans rebelled against the British. He will never get a second chance to read *The Lion, the Witch and the Wardrobe* or hear *The Hobbit* read aloud for the first time. Seize this early excitement. Let the child delve deep. Let him read, read, read. Don't force him to stop and reflect on it yet. Don't make him decide what he likes and doesn't like about ancient Rome; let him wallow in gladiators and chariot races. He wants to find out how things work, how ancient people lived, where Mount Vesuvius is located, and what Pompeii looked like, covered with volcanic ash. This thirst for sheer accumulation won't ever die completely, but it is more easily satisfied later on. And the wonder of that first encounter with a strange civilization will never come again. The immature mind is more suited to absorption than argument. The critical and logical faculty simply doesn't develop until later on. The typical second grader will take great joy in singing the latest television commercials to you word for word but will stare at you slack-jawed if you ask him why the advertiser wants him to buy the product, or what the merits of the product are, or whether it's reasonably priced. There is nothing wrong with a child accumulating information that he doesn't yet understand. It all goes into the storehouse for use later on.

Susan recalls that somewhere around second grade she learned to chant the entire list of helping verbs. The uses of a helping verb weren't clear to her until much later on. But she finds that list popping into her mind whenever she's checking her own writing for grammatical errors or learning a foreign language.

Finally, there's the enjoyment factor. Children *like* lists at this age. They like rattling off rote information, even if they don't understand it. They enjoy the accomplishment, the look on the face of an adult when they trot out their stored knowledge, and the sounds of the syllables rolling off their tongues. As adults, we may tend to "protect" our children from memory work because *we* find it difficult and tedious. But most young children enjoy repetition and delight in the familiarity of memorized words. How many time have you read *Green Eggs and Ham* to a four year old who already knows the entire book by heart?

HOW TO TEACH THE POLL-PARROT STAGE

As your child's teacher, you'll serve as a source of information. In the early grades, you'll be telling your child stories, reading to him from history and science books, teaching him math facts. And you'll expect him to be able to repeat back to you the stories and facts he's heard. This process—which we'll outline in detail for each area of the curriculum—will train him to grasp facts and express them in his own words.

Don't make K-4 students dig for information. Fill their mind and imagination with images and concepts, pictures and stories. Spread knowledge out in front of them, and let them feast.

PRIORITIES

Schools struggle to make time for all the subjects students need and want grammar, writing, reading, math, history, science, art, music, religion, typing, sex ed, and so forth.

Part of the school dilemma results from the school's assertion of a parental role; since you're already filling that position, you won't have to decide between sex ed and mathematics. But home schoolers also struggle with the mass of material that *could* be covered. There are so many good history books, science experiments, works of classic literature, piano pieces, violin concerti, art techniques. How do you pick and choose?

In the elementary grades, we suggest that you prioritize reading, writing, grammar, and math. History and science are important. But if you don't cover all of biology in first grade, it doesn't matter: the child's going to get biology at least twice more before he goes to college. If you skimp on reading or writing, though, you're likely to hamper the child's educational progress. History and science are reading-dependent. A child who reads and writes well will pick up surprising amounts of history and science as he browses. A child who has difficulty reading and writing will struggle with every subject.

In first grade especially, the child's mind is busy with new skills. You spend an immense amount of time in one-on-one tutoring. Language skills and math will take up most of that time. If you do history and science two or three times a week, that's fine. If you don't start music until second or third grade, the sky won't fall. If you don't do art until fourth or fifth grade, nothing drastic will happen. Don't feel that you must teach every subject in depth.

Remember, classical education teaches a child *how* to learn. The child who knows how to learn will grow into a well-rounded—and well-equipped—adult . . . even if he didn't finish his first-grade science book.

UNLOCKING THE DOORS: THE Preschool years

4

31/1

Very soon after I went to live with Mr. and Mrs. Auld, she very kindly commenced to teach me the A, B, C. After I had learned this, she assisted me in learning to spell words of three or four letters. . . . I had no regular teacher [but] . . . the first step had been taken. Mistress, in teaching me the alphabet, had given me the inch, and no precaution could prevent me from taking the ell. The plan which I adopted, and the one by which I was most successful, was that of making friends of all the little white boys whom I met in the street. As many of these as I could, I converted into teachers. With their kindly aid, obtained at different times and in different places, I finally succeeded in learning to read.

--Frederick Douglass, Narrative of the Life of Frederick Douglass, an American Slave, Written by Himself

SUBJECT: Preparation for reading, writing, and math; birth-age 5 TIME REQUIRED: Start with 10 minutes day for each subject, gradually increasing to about 30 minutes a day by age 5

When you educate your child at home, you don't have to draw a line between parenting and teaching. Teaching—preparing the child for the twelve formal years of classical education—begins at birth.

PRESCHOOL: BIRTH TO THREE

The best early teaching you can give your child is to immerse her in language from birth.

Reading

Turn off the television—half an hour of *Mister Rogers' Neighborhood* per day is plenty for any child under five. Talk, talk, talk—adult talk, not baby talk. Talk to her while you're walking in the park, while you're riding in the car, while you're fixing dinner. Tell her what you're doing while you're doing it. ("Now I'm going to send a fax. I put the paper in face down and punch in the telephone number of the fax machine I'm calling . . . and then the paper starts to feed through like this." "I spilled flour on the floor. I'm going to get out the vacuum cleaner and plug it in. I think I'll use this brush—it's the furniture brush, but the flour's down in the cracks, so it should work better than the floor brush.") This sort of constant chatter lays a verbal foundation in your child's mind. She's learning that words are used to plan, to think, to explain; she's figuring out how the English language organizes words into phrases, clauses, and complete sentences. We have found that children from silent families ("We never really talk much during the day," one mother told us) struggle to read.

Read, read, read. Start reading chunky books to your baby in her crib. Give her sturdy books that she can look at alone. (A torn book or two is a small price to pay for literacy.) Read picture books, pointing at the words with your finger. Read the same books over and over; repetition builds literacy (even as it slowly drives you insane). Read longer books without pictures while she sits on your lap or plays on the floor or cuts and pastes and colors. Read books onto tapes, along with the child's comments, so that she can listen to you read over and over again. Get an infant-proof tape recorder so that she can listen to you reading, singing, talking, telling stories, and reciting poems while she plays in her crib.

After you read to your toddler, ask her questions about the story. Why did the little gingerbread man run away from the little old woman? Why did all the dogs want to go to the top of the tree in *Go*, *Dog*, *Go*? Why did Bananas Gorilla take all the bananas? As soon as your child begins to talk (which will be early if she's this immersed in language), teach her the alphabet. Sing the alphabet song whenever you change her diaper (often). Stencil alphabet letters, both capital letters and lowercase letters, to the wall, or put up a chart. Read alphabet rhymes and alphabet books.

When she knows the names of the letters, tell her that each letter has a sound, just as each animal makes a sound—"Pigs say *oink*"; "Dogs say *woof*"; and "*B* says *b*, *b*, *b* as in *baby*." Start with the sounds of the consonants (that's everything except *a*, *e*, *i*, *o*, and *u*). Tell her that *b* is the sound at the beginning of *bat*, *ball*, and *Ben*; say, "*T*, *t*, *tickle*" and "*M*, *m*, *mommy*" and "*C*, *c*, *cat*."

Then tell her that the vowels (*a*, *e*, *i*, *o*, *u*) are named A, E, I, O, and U. Sing, "Old McDonald had a farm, A, E, I, O, U." Then teach her that each vowel has a sound, just as each animal makes a sound—"A as in *at*," "*e* as in *egg*," "I as in *igloo*," "O as in *octopus*," and "U as in *umbrella*." These are the *short sounds* of the vowels, the only vowel sounds you should teach at first. All of this is *prereading*.

Prereading preparation works. Susan was reading on a fifth-grade level in kindergarten. Her son Christopher was checking out fourth- and fifthgrade books halfway through his first year of school at home. We've seen these results duplicated by other home schoolers. If you create a languagerich home, limit TV and videos, and then teach systematic phonics, you will produce readers.

Writing

Very young children (under two) will pick up a pencil and imitate scribbling. Teach a child from the beginning to hold the pencil correctly. Draw lots of circles and loops *in a counterclockwise direction*. Most printed letters use counterclockwise circles; although many children naturally want to draw circles clockwise, this habit will make cursive handwriting difficult later on. Make snowmen, Slinkies[™], smoke from a train, car wheels, and so forth counterclockwise.

Let the child practice making letters without using a regular pencil. A young child lacks fine-motor maturity, but she can form letters and numbers by writing in rice or sand with her finger. Or, if she wants to use a writing tool, she can use chalk on a big chalkboard or a crayon or big pencil on large sheets of paper. Teach your three year old basic dot-to-dot skills by drawing your own dot-to-dot picture (a house, a smiley face) using four or five big dots, then guiding the child's crayon from dot to dot so that she can see the picture emerge. Continual drawing and making counterclockwise circles will prepare the preschooler for kindergarten writing.

Math

Start to make your child "mathematically literate" in the toddler years. Just as you read to the toddler, surrounding her with language until she understood that printed words on a page carried meaning, you need to expose her to mathematical processes and language continually. Only then will she understand that mathematical symbols carry meaning.

Bring numbers into everyday life as often as possible. Start with counting: fingers, toes, eyes, and ears; toys and treasures; rocks and sticks. Play hide-and-seek, counting to five and then to ten, fifteen, or twenty together. Count by twos, fives, and tens before shouting, "Coming, ready or not!" Play spaceship in cardboard boxes, and count backward for takeoff. Read number books together. Once the child is comfortable counting, you can start working on simple math sums—usually during the K–4 and K–5 years.

General Preschool Learning

In addition to teaching your child prereading and beginning math skills, you can prepare her for kindergarten work by using June R. Oberlander's *Slow and Steady, Get Me Ready.* It's a birth-to-age-4 activity book that provides a new, developmentally appropriate activity for each week of life. Week 1 begins with exercising the newborn's arms and legs; age 4, week 52, ends with learning to pack an overnight bag. In between, Oberlander (a kindergarten teacher) covers everything from playing peekaboo and learning "in" and "out" through tying shoes, memorizing telephone numbers, bouncing balls, and singing the alphabet while making a different body movement for each letter. It's a complete preschool in one volume. You may not feel you need this resource, but by combining the prereading instruction of the Oberlander book with lots of active play, you'll have the at-home equivalent of an excellent preschool program.

KINDERGARTEN YEARS: FOUR AND FIVE

We have mixed feelings about formal kindergarten programs for four and five year olds. A kindergarten program that combines beginning reading and writing with lots of artwork and active play can be productive. But it's a rare five year old who's ready to do very much paper-and-pencil work at a desk, and a six year old who hasn't done a formal kindergarten program can easily begin first-grade work.

"I can always tell the children who've been to kindergarten from the ones who haven't," a first-grade teacher told Susan.

"Are they that much further ahead?" Susan asked.

"No," she said, "but they already know how to stand in line."

Kindergarten *does* teach five year olds to stand in line, to wait to go to the bathroom, to raise their hand when they want to ask a question, and to walk through a cafeteria without spilling their food. But if you're teaching your child at home, these aren't the survival skills she has to have right away.

Kindergarten for four year olds accomplishes even less. Most four year olds have microscopic attention spans, immature hand-eye coordination, and a bad case of the wiggles. And normal four year olds differ widely in their maturity levels: one might be ready to read but be completely disinterested in writing; another might enjoy drawing and handwork but show no desire to read; a third might like to play endless games of Uno but reject anything having to do with letters and words.

We feel that there's little point in following a formal, academic K–4 or K–5 curriculum at home. Rather, the the first four or five years of a child's life should be spent in informal teaching—preparing the child for first-grade work. In about thirty minutes per day, plus informal teaching as you go about your family life, you can easily teach your child beginning reading, writing, and math concepts, all without workbooks or teacher's manuals.

If you're already teaching an older child at home, your four year old may beg to "do school" as well. At the end of the chapter, we'll recommend several reading and math programs that will keep a kindergartner occupied at one end of the table while her big sister does second-grade math at the other end. But try not to think of these curricula as schoolwork, or you may find yourself pushing a reluctant preschooler to "just finish that page" when her attention span has long since expired.

Rather, you should aim to teach reading and math in the same way that you taught the child to speak, to tie her shoes, to dress, to clean up after herself—by demonstrating the basic skills yourself, practicing them for a few minutes each day, and talking about them as you go through the routines of life. ("There are four of us. How many spoons should you put on the table so that we can each have one?" "Can you get me the can that says *Tomato* on it? You'll recognize the *T* that says *t*, *t*, *tomato*.")

You can use charts, tapes, games, workbooks, and stickers if you want to. But you don't need them.

Reading

A classical education relies heavily on the written word. As a parenteducator, your number 1 goal should be to have your child reading fluently when she starts first-grade work.

Here's the good news: Reading is easy.

We'll repeat that: Reading is easy.

One more time: Reading is easy.

Unfortunately, the First Commandment of American Education seems to be "Thou shalt be an expert before attempting to teach reading." It isn't true. Forget everything you've ever heard about decoding, phonemic awareness, and comprehension skills. If a five year old can master beginning reading, you can master it as well.¹

Reading is easy. Frederick Douglass, as well as Abraham Lincoln, Benjamin Franklin, and thousands of eighteenth-century pioneer children, learned to read with the alphabet and a few good books. Douglass learned his ABC's from an adult and obtained the rest of his reading competency skills from street urchins. I [Jessie] learned to read from a set of alphabet

¹However, don't be surprised if you are discouraged by some professional educators. I [Jessie] was verbally accosted twenty-five years ago when I went to a reading professor to find readers for Susan. He demanded, "What do you think you are doing, teaching your child to read yourself?" I was so intimidated that I never went back to him for help. In contrast, a first-grade teacher who was successfully teaching *all* her first graders to read directed me to the phonics material she was using so that I could get it for myself. Alas, the material has now been revised beyond recognition. blocks. Between the ages of four and six, any child who has been read to since toddlerhood and is not suffering from an organic disorder can learn to read. And any reasonably literate adult (which includes anyone who can read this book) can serve as tutor for basic phonics skills.²

You should continue to immerse four and five year olds in language, just as you've been doing since birth. Read with them in the "real world": billboards, store names, bumper stickers, cereal boxes in the grocery store, banners at the gas station.

Get them books on tape—not the fifteen-minute children's tapes with all the bells and whistles designed to keep children occupied, but real books read in their entirety without sound effects. Most public libraries have shelves of books on tapes in the children's sections. Children can listen to and enjoy books that are far, far above their vocabulary level; in one year, Susan's three year old and five year old listened to all of Kipling's *Just So Stories*, the original *Jungle Book*, all of Edith Nesbit's books, *The Chronicles of Narnia*, Barrie's densely written *Peter Pan*, E. B. White's *Charlotte's Web* and *The Trumpet of the Swan*, Frances Hodgson Burnett's *A Little Princess*, the unabridged *Christmas Carol* by Dickens. Books on tape stock a child's mind with the sounds of thousands of words. When children start sounding out words later on, they'll progress much more quickly if they recognize the words.

Read yourself. Turn off the TV, and read a book, do a crossword puzzle, buy the *New York Times*.

Keep on reading together. Start to ask slightly more complex questions about the stories. "What was Wilbur afraid of in *Charlotte's Web*?" "Why was Fern's mother worried when Fern told her that the animals were talking to her?"

By the age of four, the average child should know her alphabet and the sounds that each letter makes. Continue to work on letter names and sounds. Lowercase magnetic refrigerator letters are a good way to do this. You can give the child a d magnet and say, "D, d, d, dog"; you can say, "Mary, go get me the letter that says t, t, t," and Mary will go over to the refrigerator and decide which letter makes that sound.

²Many parents have been told by a reading teacher that phonics will somehow "ruin" their child's reading skills. See pages 232–236 for a brief discussion of the phonics–whole language debate.

Unlocking the Doors: The Preschool Years 63

Sometime around age four or five, most children are ready to start reading. Sit down with a simple primer that teaches phonics—the sounds that letters make when they're combined together into words. The best primer we could find is called *Phonic's Pathways* (see page 70 for ordering information). Each lesson teaches a different sound combination and follows this with practice words that use the combination just taught. The first five lessons teach the vowel sounds *a*, *e*, *i*, *o*, and *u*; since the child probably already knows these sounds, she'll feel like she's starting to read already. The sixth lesson begins "blends," putting the short vowel sounds together with consonants such as *s*- (*sa*, *se*, *si*, *so*, *su*). We've found that young children enjoy reading these nonsense syllables.

By the eleventh lesson, the child is reading easy three-letter words such as *Dan* and *bun*. Continue systematically through the primer. Go slowly, with plenty of repetition; reread the lessons until your child is completely comfortable with the sounds and their combination into words. Do this for five minutes to start with; work up to ten or fifteen minutes per session.³

At some other time during the day, sit down with the child and a "real book," and let her read it. At the end of this chapter, you'll find a list of books that can be read with relative ease, even by a child who's only learned consonants and one or two vowel sounds. (The first few Bob Books and Modern Curriculum Press's early readers use only the *a* vowel sound, so you can start on a "real book" right after the first few lessons!) Don't forget, you've already done your drill. Give the child a good chance to sound words out, but if she gets stuck, sound it out for her and move on. If you get to a word that uses a rule she hasn't used yet, simply tell her what the rule is and keep going.

CHILD: Ann went to the steps and went — (Sticks on the word "down.") YOU: That says "down." O and w together say "ow." D-ow-n. CHILD: — down.

If you don't know the rule yourself, tell the child the word and move on. (Look the rule up later.)

Although we think Phonics Pathways is the easiest and most thorough

³Ignore the primer's suggestion that you not move on until the child learns how to write the letters; see page 67 for further discussion of this.

primer available, you can follow this process with any systematic phonics program. Many parents have successfully used *Teach Your Child to Read in 100 Easy Lessons* (New York: Simon & Schuster, 1996), another one-book phonics program. We think that the notation system in this book is unnecessarily complicated, but it has worked for many families.

Certain words need to be taught as "sight words" because, even though they are unphonetic or follow advanced phonetic rules, they appear with great regularity in the easiest of books. Put *the, she, he, a, I, of, to, was,* and *you* on flash cards and drill them; most children pick these up very quickly. You may find that a few other unphonetic words (*would, there*) pop up often enough to add to your list.

Start with five minutes of drill and five minutes of reading in an easy book every day. Work up to fifteen minutes of each. Don't ask, "Do you want to do your reading now?" (They always say no.) Plan it as matter-offactly as you would plan toothbrushing and bedmaking. You'll be astounded at the speed with which children begin to sound out words on their own.

The advantage of this method is that you're not limited in what you read with the child; if you sound out words that are beyond the child's "drill level," together the two of you can read practically anything in the "easy reading" or "beginning reader" section of the library. And you'll often find that your child has already absorbed a rule by the time you get to it in the primer. If you say enough times, while reading, "The *e* on the end makes the *a* say its name—that's the difference between *hat* and *hate*," your little reader will greet that rule when you arrive at it with a shrug and "I already knew that."

And that's it. Remember: Reading is easy.

Reading is easy.

Reading is easy.

Don't you need songs, drills, exercises, workbooks, and charts? We don't think so, for several reasons.

In the first place, lots of people who teach a four or five year old to read also have a toddler or newborn. (Susan had both when her oldest son was five.) Sorting through charts and songs and trying to follow a program with lots of aids make teaching more complicated than it needs to be. With our method, all you need is a primer and lots of books.

Second, all those reinforcements and aids create extra mental steps for the learner. If you're teaching a child to sing the song "A is for apple, b is

for bear, ...," you're teaching her to see an *a*, think "apple," and then think the sound of short *a*. If you have a flash card with a *b* and a picture of a bird on it, the picture—not the letter,—becomes a signal to the child to say the *b* sound. The child goes through an extra step in associating the sound with the letter. Instead of looking at a *b* and forming the *b* sound, the mental process becomes " $B \dots$ bird \dots *b*." This is slow, and in many cases the child stays slow because she becomes dependent on the clue. Without the clue, she has no idea how to "break" the code of the word. There's an easier way. Just point to the *a* and say "*A*, *a*, *a*" (that's the short *a* sound as in *at*); point to the *b* and say, "*B*, *b*, *b*." Even two and three year olds love this game, and they learn these associations much faster than you might expect.

Third, most reinforcements—even though they may be advertised and produced for a home-education setting—were originally designed for a classroom of children. A teacher teaching a whole group of students to read can't sit down with each one and teach her to pronounce each letter correctly whenever she sees it on the page. That's an intensive, one-on-one process. The teacher has to resort to the second-best method: reinforcing the correct sound through secondary aids in a nonreading context. You don't have to do that.

Fourth, you're not teaching your four or five year old the exhaustive elements of the English language. Beginning in first grade, your child will receive a more thorough grounding in the rules of spelling, which are simply phonics rules applied to writing. (We'll recommend resources for doing this in Chapter 5.) During the K–4 and K–5 years, your goal is simply to get the child reading as quickly and fluently as possible. A kindergartner doesn't need to be able to list from memory all the different ways a long-*e* sound can be spelled; she just needs to be able to pronounce *meal, field*, and *teeth* when she sees them.

If you prefer a workbook approach and have a coordinated preschooler who doesn't have trouble with writing skills, or if you have a younger child who's anxious to do workbooks in imitation of an older sibling, you might consider investing in Modern Curriculum Press's Phonics Program. This has lots of fun stuff for young learners: playing Alphabet Hopscotch, making "consonant cans," finding hidden pictures, and so on. None of this is necessary, but you might enjoy using it. A few words of caution. This phonics program ties reading and writing together, which we think can be frustrating for the very young child and can retard reading skills. Many children are ready to read before they are ready to write. Ignore the writing sections if you don't think your child is ready to do them. It's probably best used as an activity supplement to *Phonics Pathways*. Modern Curriculum Press's kindergarten-level book (*Level K*) seems more appropriate for home-taught three and early four year olds; *Level A*, the first-grade book, can be done at home in kindergarten. You don't need to buy the expensive teacher's manuals, which are heavy on classroom supplements and suggestions for teaching these skills to children for whom English is a second language.

What if my child isn't ready to read? If you've read to your preschooler since she could stare at a page, you can start this process at age four and take a couple of years to go through it. Or you can start at age five and do it in less time. Second and third children, who've watched older brothers and sisters learn to read, are likely to want to start sooner. If your four year old asks you for a reading lesson, oblige her. I [Jessie] taught Susan to read at three because every time I sat down with her five-year-old brother to do a phonics lesson, she wanted to be included.

Reading readiness (like everything else in this chapter) isn't complicated. A child is ready to learn to read when she collects her stuffed animals and a picture book and tells them a story; or when she picks up a book, sits on the sofa, and pretends she's reading to you; or when she constantly asks you, "What does this say?" All of these activities show that she understands that printed words carry a message.

Most five year olds are capable of learning to read, which doesn't mean that they'll want to do it. A child who squirms, complains, and protests every time you produce the primer isn't demonstrating "reading unreadiness." She's simply being five. It's a rare child who wants to do something unfamiliar that involves work; as a matter of fact, we've yet to meet a five year old who could be convinced to set her eyes on long-range goals.⁴ If the

⁴We are not impressed by "child-led" education (waiting until the child brings you a book and begs for a reading lesson) for the same reasons that we don't let our elementaryschool children eat exactly what they want: young children do not realize that spinach is not only better for them than Twinkies, but actually more satisfying in the long run. A typical learning-to-read-at-home dialogue sounds like this:

- PARENT: Don't you want to learn to read? If you work on these lists of rules for a year, you can read books to yourself!
- CHILD: (Eyeing twenty pages of rules and reasoning that the parent reads books to her anytime she wants anyway.) I don't like it.

child doesn't want to learn to read, tell her that you're going to do five minutes per day anyway.

The beginning stage, when you're teaching the child to sound out threeletter words for the first time, is the most difficult. Persist until you can start the child on the Bob Books or the first Modern Curriculum Press readers (see the list of resources at the end of this chapter). Most children will swell up with pride over being able to read a "whole book all alone." Once they've started putting sentences together, they'll tell you they don't need to do the drill anymore; they just want to read. That's a good sign, but insist on the ten minutes of drill every day until you've covered all the pages in *Phonics Pathways*.

But use common sense. If you've started on three-letter words, doing a faithful ten minutes per day for three or four weeks, and the child shows no comprehension, she hasn't made the connection between print and sounds yet. Drop it for a month or two, and then come back to it.

Writing

Many of the phonics programs we examined insist that you combine writing with reading. In other words, teach the child the consonants and the sound of *a*, but don't go on to the next step until the child is able both to read and write *sat*, *cat*, *fat*, *bat*.

We think this tends to frustrate very young readers (see page 65). Remember, you want the child to read quickly, easily, and early. Many children are ready to read long before they have the muscular coordination to write. Why delay reading until the muscles of the hand and eye catch up?

CHILD: But I don't like it anyway.

This exchange ought to sound familiar to anyone who's served a child a new food:

PARENT: These are fresh strawberries. You'll love them.

CHILD: (Eyeing the strawberries.) I don't like them.

PARENT: But you've never eaten a strawberry.

CHILD: I don't like them anyway.

The reasonable response is: Eat one every time I serve them, and you'll learn to like them. Reading is no different.

PARENT: But you haven't even tried yet.

So do your reading and writing drills separately during your child's fourth and fifth years. When she is able to hold the pencil comfortably and has some control over it, then move on to formal writing instruction. Get her a beginning writing workbook that has large-ruled lines and patterns for forming each letter (see page 75 for ordering information). Teach only one letter (always do a capital and small letter together) or one number at a time until you've gone through the entire alphabet and the numbers 1 through 100. You can either follow the suggested workbook sequence or teach the letters in the order presented in *Phonics Pathways*. The writing workbooks have arrows and numbers to show the exact way that letters should be written: the circle for a small *a* is always drawn counterclockwise; the straight edge of a capital *D* is always drawn first, with the curve of the letter drawn second. *This is important!* Make sure you teach the child to write the letter properly, and for the first few months supervise her carefully so that she doesn't fall into bad habits.

The best resources for teaching writing are from Zaner-Bloser, which publishes colorful learn-to-write workbooks using the "continuous-stroke alphabet." In traditional ball-and-stick writing, the student continually lifts her hand—if she writes a small *d*, for example, she draws a circle, picks up her pencil, and then connects a line to the circle. In the continuous-stroke alphabet, the letter is written in one motion. This simplifies writing and makes for an easier transition into cursive. Start with the kindergarten-level book, and let the child progress forward at her own rate. The books don't give a lot of practice space, so you'll want to order some extra writing paper (see the ordering information on page 75).

When you've worked through the entire alphabet, let the child begin to copy words that you write out for her—family names are a good place to start. Eventually, ask her to copy very short sentences: "I love you." "Ben is smart!" "Do you like to write?" In this way, the five year old not only practices writing, but begins to learn the conventions of written language: capitals for names and the beginnings of sentences, spaces between words, periods and exclamation points. In first and second grades, you'll progress to dictation, where she will write without a model in front of her. But for now, write out the sentences for her to copy, and let her refer to your models as often as needed. Ten minutes per day, three to five times per week, is sufficient. Frequency and consistency bring quicker results than prolonged sessions.
A word about cursive writing. A great debate is on about when to introduce cursive penmanship. Some educators say that children should begin with cursive and skip manuscript printing; others recommend beginning cursive anywhere between first and fourth grade. We have always chosen to teach printing until the child is writing quickly and well, and then begin cursive penmanship, usually in the middle of second grade. This seems easier for most children.

Math

Now that the child can count, continue to do "daily" math by adding and subtracting in the context of everyday family life. Setting the table is a great math exercise: ask your child to figure out how many plates, knives, forks, and spoons are necessary. Add and subtract in the grocery store ("Look, Mike. I'm picking up four tomatoes and then one more tomato—that makes five!"). Cook together—recipes are full of fractions and measures. When you cut a sandwich in half or quarters, say, "Look. I cut this in half!" or "I cut this into fourths!"

Play games that use numbers. Uno[™] is a classic—it teaches both number and color matching. Simple card games such as Battle and Go Fish require children to remember which numbers are higher and which are lower.

Do lots of addition and subtraction with manipulatives (beans, buttons, pencils, chocolate chips). Practice counting to one hundred—by twos, fives, and tens. Learn about money, tell time, and name geometric figures—circles, squares, triangles, rectangles. Learn to write the numbers (but don't expect the written numbers to mean very much to the child at this point).

Your public library should have a colorful selection of kindergarten-level math books—easy problems worked out with photographed objects. Get a book every week, and read through it with your child.

If you do this, your child will be ready for first-grade math. Susan's oldest had no difficulty with first-grade Saxon math (see Chapter 6), even though we had never done a formal kindergarten math program. As in reading, though, younger children may enjoy having a math program to work on along with an older brother or sister; the Saxon kindergarten math program is fun and full of manipulatives. Again, think of a kindergarten math program as a game, not as an academic pursuit. If the child gets tired after five or ten minutes, don't force her to finish the lesson.

General Kindergarten Learning

If you'd like to do kindergarten science projects with your preschooler, a marvelous resource is *Bubbles, Rainbows and Worms: Science Experiments for Pre-School Children.* Although this book is designed for preschool and kindergarten teachers, it's easily used at home; the directions are clear, and the experiments use common household items. Each experiment has a little script for you to follow when talking about the experiment (the gravity experiment, where the child stands on top of a chair and drops all sorts of objects, states, "Use the word gravity as you talk about things falling. Explain that gravity is a force that can't be seen but can be felt.") You can supplement beginning reading, writing, and math by doing a science experiment once a week. The *Bubbles, Rainbows and Worms* experiments cover air, water, animals, plants, the human body, the environment, and even a few elementary chemistry projects: growing crystals, working with magnets.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Where noted, resources are listed in chronological order (the order you'll want to use them in). Books in series are listed together.

General Learning

Oberlander, June R. Slow and Steady, Get Me Ready, 2d ed. Fairfax, Va.: Bio-Alpha, 1992.

\$17.95. For birth through age 4. Order through a local bookstore or by phone from Rainbow Resource Center.

Reading Skills

Engelmann, Siegfrid, Phyllis Haddox, and Elaine Bruner. Teach Your Child to Read in 100 Easy Lessons. New York: Simon & Schuster, 1996.

\$17.95. Order from any bookstore. We like *Phonics Pathways* best, but this is a good primer.

Hiskes, Dolores G. Phonics Pathways: A Complete Reading Program for Beginning and Remedial Readers of All Ages, 7th ed. Livermore, Calif.: Dorbooks, 1996. \$30.00. The best primer for beginners. Order from Dorbooks.

Unlocking the Doors: The Preschool Years 71

. Pyramid: Special Reading Exercises, 2d ed. Livermore, Calif.: Dorbooks, 1997.

\$18.00. Extra practice and drill. Order from Dorbooks.

Modern Curriculum Press Phonics Program. Published by Modern Curriculum Press, a division of Simon & Schuster. Parsippany, N.J.: Simon & Schuster, 1998.

The student editions range from \$6.00 to \$8.00; the teacher's resource guides are \$38.00 each. We suggest you don't buy the teacher's guides unless you find yourself struggling. All of these books should be ordered directly from Modern Curriculum Press. MCP also offers *Level D*, *Level E*, and *Level F*, but these books shift from phonics instruction to word study. Since they overlap substantially with the spelling and writing program you'll be following in first and second grade, there's no need to follow the program through to its end. If you're starting with an older child, start with *Level B*.

Level K. Student Edition. For ages 3-4.

Level K, Teacher Resource Guide.

Level A, Student Edition. For ages 4-5.

Level A, Teacher Resource Guide.

Level B, Student Edition. For ages 5-6.

Level B, Teacher Resource Guide.

Level C, Student Edition. For ages 6-7.

Level C, Teacher Resource Guide.

Beginning Readers

Little Books 1–10. Pensacola, Fla.: A Beka Book, 1996.

\$5.50. Ten small storybooks that begin with only short vowel words and progress through blends, words, and simple sentences. Includes pages to color.

Little Owl Books. Pensacola, Fla.: A Beka Book, 1991.

\$5.50. A set of eight full-color booklets, phonetically progressing from three-letter words to words with long vowel sounds. Order from A Beka Book.

Maslen, Bobby Lyn. Bob Books series, illus. John R. Maslen. New York: Scholastic, 1994.

\$14.95. Each Bob Book is a box with eight paperbacks inside. These are the first books your child will be able to read alone. Children love the Bob Books because beginning readers can start on them after only a few weeks of phonics lessons. The experience of reading an entire book, independently, just at the beginning of the learning process provides young readers with immense encouragement. *Highly recommended*. Most libraries carry them; but the books are in high demand, and you may have trouble getting them (and keeping them for more than a couple of weeks). If you plan to teach more than one child how to read, they're worth buying because older children can help younger siblings sound them out. Order from a bookstore, from Rainbow Resource Center, or directly from Scholastic.

Bob Books for Beginning Readers, Set 1.
Only uses short-vowel words.
Bob Books for Young Readers, Set 2.
Introduces vowel combinations.
Even More Bob Books for Young Readers, Set 3.
Introduces long vowels and compound words.

Modern Curriculum Press Phonics Practice Readers. Cleveland: Modern Curriculum Press, n.d.

Sets of beginning readers, with each book designed to drill one particular rule. The books are marked with the rule they are meant to reinforce. (The first two books in each series, for example, are "short *a*" books and use *only* short-*a* words—"Max the cat sat." This allows you to match the books with the appropriate lessons in *Phonics Pathways*. Each series contains two books each for short *a*, *i*, *u*, *o*, and *e*; two books each for five different types of consonant blends; and two books each for the sounds *th*, *wh*, *sh*, *ch*, and *ng/ck* (these are called "digraphs"). If cost is a problem, consider splitting the bill with a friend or neighbor.

Series A, Set 1: Short Vowels.

Series A, Set 2: Long Vowels.

Series A, Set 3: Blends.

Series A, Set 4: Digraphs.

\$18.95 for each ten-book set.

Series B, Set 1: Short Vowels.

Series B, Set 2: Long Vowels.

Series B, Set 3: Blends.

Series B, Set 4: Digraphs.

\$18.95 for each ten-book set. The same skills taught in *Series A* but different stories.

Series C, Set 1: Short Vowels.

Series C, Set 2: Long Vowels.

Series C, Set 3: Blends.

Series C, Set 4: Digraphs.

\$18.95 for each ten-book set. The same skills taught in *Series A* and *B* but with larger pictures.

Beginning Story Books

Bright and Early Books for Beginning Beginners series. New York: Random House.

This series, published by Random House, is universally available in libraries and bookstores. The books contain some unphonetic words, but you can simply provide these for the child as she reads.

Berenstain, Stan and Jan. Bears on Wheels. 1969.

———. The Berenstain's B Book. 1969.

Geisel, Theodore Seuss (Dr. Seuss). The Foot Book. 1988.

——. There's a Wocket in My Pocket! 1974.

This book provides particularly good practice because the child has to sound out nonsense words that rhyme.

LeSieg, Theo. In a People House. 1979.

I Can Read It All by Myself Beginner Books series. New York: Random House.

This series is slightly more difficult and should follow the Bright and Early series.

Eastman, P. D. Are You My Mother? 1988.

------. Go, Dog, Go! 1961.

Geisel, Theodore Seuss (Dr. Seuss). The Cat in the Hat. 1957.

———. The Cat in the Hat Comes Back. 1958.

------. Dr. Seuss's ABC. 1996.

———. *Hop on Pop.* 1963.

———. Oh, the Things You Can Think! 1975.

———. One Fish, Two Fish, Red Fish, Blue Fish. 1981.

The beginning-readers section of libraries and bookstores includes many more titles than those listed above. Look for (among others) the Little Bear series by Elsie Minarik; anything by Arnold Lobel (*Owl at Home*, the *Frog and Toad* books); the Henry and Mudge books by Cynthia Rylant; the Dial Easyto-Read books; and the HarperCollins I Can Read series (graded in three levels—you'll want Level 1 and perhaps Level 2 for kindergartners). A particular favorite of ours is "*Stand Back*," *Said the Elephant*, "*I'm Going to Sneeze*," by Patricia Thomas, illustrated by Wallace Tripp (New York: Lothrop, Lee & Shepard, 1990). The rhyming story contains many vowel combinations that look different but sound the same (for example, *bear, fair, declare* all in a row).

Books on Tape

Many books are worth listening to. Here are a few favorites. Check these out of your local library, and listen with your preschooler or kindergartner. Many different versions of these classics have been made. Make sure you look for tapes marked "Unabridged"; abridged versions often aren't marked at all.

Barrie, J. M. Peter Pan.

Carroll, Lewis. Alice in Wonderland.

———. Through the Looking-Glass and What Alice Found There.

Kipling, Rudyard. The Jungle Books, I and II.

——. Just So Stories.

Lawson, Robert. Rabbit Hill.

Lewis, C. S. The Chronicles of Narnia.

McDonald, George. The Princess and Curdie.

Nesbit, Edith. The Complete Book of Dragons.

------. The Railway Children.

White, E. B. Charlotte's Web.

——. The Trumpet of the Swan.

Look for versions read by E. B. White himself, which are very pleasant listening.

Books on tape tend to be expensive, but if you're interested in buying them (or simply finding out what's on tape) you can call the following companies for catalogs. All produce unabridged versions: Blackstone Audio Books, 800-729-2665.

Blackstone has an extensive catalog and a marvelous rental program; they ship the tapes in resealable, prepared-for-return boxes, so that you can listen to the *liad*, pop it back into the box, and put it in your mailbox.

Books in Motion, 800-752-3199.

Recorded Books Productions, Inc., 800-638-1304.

Read-Aloud Books

We have too many favorites to list here. But a good guide to reading aloud is *The Read-Aloud Handbook*, 4th ed., by Jim Trelease (New York: Viking Penguin, 1995). You can check it out of the library, or any bookstore can order it for you.

Writing

Zaner-Bloser Handwriting series. Columbus, Ohio: Zaner-Bloser, 1996.
\$7.37 each. Order from Zaner-Bloser. This is the Zaner-Bloser continuous-stroke alphabet method. Since the child doesn't have to lift her hand as she forms the letters, the transition into cursive is simpler. Also, some capital letters in the cursive alphabet have been simplified so that they look more like the printed versions. Start with *K Student Book*, and progress forward. The manuscript lines become smaller with each book.

Handwriting with Continuous-Stroke Alphabet: Grade K Student Book. Handwriting with Continuous-Stroke Alphabet: Grade 1 Student Book. Handwriting with Continuous-Stroke Alphabet: Grade 2M Student Book.

Zaner-Bloser Self-Instruction in Handwriting. Columbus, Ohio: Zaner-Bloser, 1996.

\$9.99. Order from Zaner-Bloser. This guide for the parent/teacher shows proper technique and letter formation for the teacher. If you buy this, you won't need the expensive teacher's guides that Zaner-Bloser sells along with the student books.

Zaner-Bloser Handwriting Paper

\$5.29 per ream. Order these packs of writing paper for extra handwriting practice from Zaner-Bloser. A typical student uses one ream of writing paper per year. The ruled lines on these sheets narrows each year. Grade K paper (1¼" wide). Grade 1 paper (%" wide). Grade 2 paper (½" wide).

Math

My First Math Book. New York: DK Family Learning, 1995.
 \$14.95. Order from your local bookstore, buy from a Dorling Kindersley dealer, or find it in the library. This hardback book is a big, colorful introduction to math for ages 4–6. Susan's preschoolers loved it.

Number Play. New York: DK Family Learning, n.d.

\$12.95. Order from a local bookstore or buy from a Dorling Kindersley dealer. This card game for young children teaches reading, spelling, counting, and tabulation skills.

Science

Brown, Sam Ed. Bubbles, Rainbows and Worms: Science Experiments for Pre-School Children, illus. Silas Stamper. Beltsville, Md.: Gryphon House, 1981. \$12.95. Order from Gryphon House.

WORDS, WORDS, WORDS: SPELLING, GRAMMAR, READING, AND WRITING

5

11/1

For their Studies, First they should begin with the chief and necessary rules of some good Grammar. . . . Next to make them expert in the use-fullest points of Grammar, and withall to season them, and win them early to the love of vertue and true labour, ere any flattering seducement, or vain principle seize them wandering, some easie and delight-ful Book of Education would be read to them.

-John Milton, "Of Education"

SUBJECT: Spelling, grammar, reading, and writing TIME REQUIRED: 60–110 minutes per day (by fourth grade)

Your goal, in grades 1 through 4, is to make the proper use of language second nature to your child. In the logic and rhetoric stages of classical education (grades 5 through 8 and 9 through 12, respectively), the student will need to use language to reason, argue, and express ideas. He can't do this as long as he's still struggling with the how-tos of written and verbal expression.

The first four years of formal classical education are called the grammar stage because the student spends them learning the conventions and basic facts—the "grammar"—of each academic subject. In a way, the grammar of language is the foundation on which all other subjects rest. Until a student reads without difficulty, he can't absorb the grammar of history, literature,

77

or science; until a student writes with ease, he can't express his growing mastery of this material.

Acquiring the "grammar" of language involves practice in four separate disciplines: spelling (the "grammar" of individual words—how each one is put together), English grammar itself (the way those words fit together into sentences), reading (through which the student's mind will be filled with images, stories, and words), and writing (the way in which sentences are assembled into stories and essays). Because language skills are the cornerstone of classical education, the student will spend more time on reading and writing than on any other task.

HOW TO DO IT

When you act as your child's teacher, you need a way to organize and store all of the child's work. We recommend that you keep a three-ringed notebook for each major subject: spelling, grammar, reading, writing, history, and science.¹ In grades 1 through 4, each notebook will last for the entire four years (except for science, which requires a separate notebook for each year—more about this in Chapter 8). Soon you'll have a fat stack of books, each showing the student's growing comprehension of a subject. These notebooks will also be useful for evaluation at testing time (see Part IV for more on testing for home schoolers).

Begin the academic year with six three-ringed notebooks (3-inch rings are best), a three-hole punch, and lots of paper, both lined and plain. Also lay in a boxful of art supplies: glue, scissors, construction paper, colored pencils (good artist-quality ones like Sanford Prismacolor), stickers, and anything else that strikes the child's (or your) fancy. Bring the art box out only at "notebook time."

For language skills, use four notebooks. Each notebook will last for the four years of the grammar stage. Label the first notebook "Spelling," the second "Grammar," the third "Reading," and the fourth "Writing."

¹Math and foreign-language curricula come with their own workbooks, so you won't need to keep additional notebooks for these subjects. For art and music, the elementary student does very little writing; but if you wish to keep drawings in a portfolio, you can do so (see Chapter 12).

GENERAL INSTRUCTIONS FOR GRADES 1 THROUGH 4

In the early years of school, children vary so widely in their development that assigning a child to a particular "grade" can be extremely difficult. Normal children can begin first grade reading "first grade" books and writing comfortably, reading "third grade" books and writing reasonably well, or reading "sixth grade" books and hardly writing at all. For this reason, much of the material we recommend isn't divided into grades, but rather into levels. You should always spend as much time on one level as you need and progress on to the next level only when your child has mastered the first level, whether that comes before or after the "normal" age.

Adjust the time you spend on each subject so that you can concentrate on weaker areas. Your goal will be to bring the child up to fourth-grade level in each area—spelling, grammar, reading, and writing—by the end of fourth grade (ages 10 to 11).

You should aim to begin first-grade work when your child has gone almost through the *Phonics Pathways* primer (or another phonics-based primer), has covered most of the major rules of phonics, and is reading simple books without reluctance. By the beginning of first grade, the student should also know how to form his letters. He does *not* need to write with ease; many bright children (especially boys) struggle with handwriting, and it's common for letter reversal (*p* and *q*, *b* and *d*) to persist through first grade. This is not a sign of dyslexia. We recommend beginning cursive penmanship in second grade, but if letter reversal is a consistent problem, you might consider starting cursive early (it's impossible to reverse cursive letters).

Spelling

Spelling is the first step in writing. Before you can put a word on paper, you have to know what letters to use.

We recommend that you get at least halfway through the *Phonics Pathways* primer before beginning spelling. In the primer, your child has al-

ready encountered basic spelling rules. For example, the reading rule "The silent *e* at the end of a word makes the vowel say its name" is also a spelling rule; it tells you that a word such as *late*, where *a* says its name, must have a silent *e* at the end. Now it's time for the child to apply those rules of reading to words he wants to write. Spelling, then, is a matter of transforming rules of reading into rules of writing.

The best set of workbooks we've found for this is Modern Curriculum Press's *Spelling Workout*, which comes with teacher's books and is easily used at home. As the student progresses through these books, he'll learn rules of spelling ("The sound /oi/ can be spelled oy or oi, as in toy and oil"), the proper names for letter combinations ("A consonant digraph is two consonants that come together to make just one sound"), and the phonetic symbols used in dictionaries ("/ar/ makes the sound in farm"). The Spelling Workout series even teaches basic proofreading marks.

Begin first grade with the first workbook, *Spelling Workout A*. This workbook is the most basic one: it reviews the letters of the alphabet, asks children to connect pictures of objects that begin or end with the same letter, and then has the children write three-letter words. These exercises teach beginning spellers to hear the individual sounds in words and translate those sounds into written symbols. Most first-grade students who are reading well will find this book easy. Don't skip anything, though; the books build valuable skills and confidence through repetition. (You won't begin to use the spelling notebook until you begin *Spelling Workout B*.)

Start by spending ten minutes per day on spelling lessons—one to three workbook pages. As the lessons get harder, you'll progress to fifteen minutes per day—aim to do fifteen minutes per day by the middle of the first-grade year. Most first graders can finish *Spelling Workout A* by the middle of the first year and continue on to *Spelling Workout B*. If spelling is a weak area, the student may not move on to *B* until later.

When you reach *Spelling Workout B*, you'll begin to use the spelling notebook. Use tabs to divide this notebook into three sections: "Spelling Rules," "Trouble Words," and "All about Words." In *Spelling Workout B*, spelling rules begin to appear at the head of the page in a little box headed "Pep Talk." Whenever the child encounters one of these rules, he should copy it on a sheet of notebook paper and place it in the Spelling Rules section of the notebook. (You may have to help him write these in first grade; by second grade, however, he should be able to copy the rules himself.) For example, an early second-grade "Pep Talk" reads:

The long *a* sound is the vowel sound you hear in <u>save</u> and <u>sail</u>. Each List Word has the long *a* sound spelled in one of these ways: a_e or *ai*.

The second grader writes on his Spelling Rules page:

The long a sound can be spelled a_e or ai.

In the Trouble Words section, keep a running list of words that the child consistently misspells. Two or three times per week, review the rules and trouble words at the beginning of his spelling lesson.

When you reach *Spelling Workout C* (sometime during the second-grade year), you'll start to use the All about Words section of the notebook. In this section, record all the rules that deal with word matters other than simple spelling: the meanings of prefixes and suffixes, and the definitions and examples of homonyms, antonyms, and synonyms. By the time the student reaches *Spelling Workout D* and *E*, he'll be recording such word facts as *"trans means across or over"* and *"un means not."*

Do spelling exercises, and write down all rules, trouble words, and word facts for fifteen minutes a day all the way through grade 4. Aim to finish at least level D by the end of the fourth-grade year. The student who is able to finish E or F by the end of the fourth-grade year will be exceptionally well prepared for the logic stage (grades 5 through 8).

Grammar

Before beginning grammar, the child must be able to write simple words with ease. Don't introduce grammar lessons until the child has completed *Spelling Workout A*. This may happen halfway through the first-grade year or not until the beginning of the second grade. When you move on to *Spelling Workout B*, also begin to do grammar for fifteen to twenty minutes per day.

When you start studying grammar, label a three-ringed notebook "Grammar," and divide it into two sections: "Exercises" and "Rules." Plan on using this notebook for all four years of grammar study.

In the elementary years, grammar involves learning the names of the parts of speech ("A noun names a person, place, thing, or idea"), the proper

relationships between these parts of speech ("Singular nouns take singular verbs"), and the mechanics of the English language (indenting paragraphs, using quotation marks, and so on).

Good grammar texts for elementary-aged children are hard to come by; generally, grammar is folded into complex language programs designed for entire classrooms. The best introduction to grammar that we've found is *English for the Thoughtful Child*. It's simple for the parent to use, affordable, and covers all the bases—grammar, mechanics, and beginning composition—using examples from literature, history, and natural science. The exercises involve lots of conversation between you and the child. In the lesson on nouns, for example, you ask the child, "What is your name? What is your father's name? What is the name of the place you live? What do you see in this room? Name two kinds of flowers." Although the book provides writing space, we recommend that the student do the exercises on properly lined second-grade paper (see page 108 for ordering information) and file the work under Exercises in the grammar notebook.

Whenever the student encounters a grammar rule or definition, he should copy it onto a sheet of paper and put it in the grammar notebook under Rules. Once a week, have the child read through the rules and practice saying them without looking ("The word *I* should begin with a capital letter" "Every direct quotation should be enclosed by quotation marks"). This will involve a certain amount of rote, but young minds enjoy memory work. Don't worry if the child doesn't fully understand the rule. If he's memorized it, you can bring it up whenever you correct his work ("You used a small *i* here. Remember, 'The word *I* should begin with a capital letter'"). Full comprehension will come gradually.

The book has sixty-two lessons, but we anticipate that each lesson will take a week or more to complete. Spend fifteen to twenty minutes on a lesson, stop, and come back to it the next day. You should also provide plenty of extra practice. The lesson on "statements," for example, asks the child to write seven statements, each one explaining what happened on each day of the previous week. You'll probably want to make this a two-week exercise, repeating it again the following week. Lesson 36 asks the child to write a letter to a friend; stay on this lesson until the child has written several letters over several weeks.

You should feel free to remain on each lesson until the child is comfortable with the material. Ideally, you should aim to complete this book by the end of the second-grade year. If you have to carry over into the third-grade year, that's fine.

English for the Thoughtful Child makes extensive use of narration and dictation. Dictation won't begin in earnest until third grade, but narration is a valuable teaching tool that may need a little more explanation.

Narration is a way to develop the child's understanding and story-telling skills. The process is simple: the child tells you what he's just heard or read. You started this process in preschool, when you asked your child questions about the stories you were reading together. In first grade, you begin to ask the child to summarize the plots of short simple stories; *English for the Thoughtful Child* uses Aesop's fables. Read the child the story, close the book, and ask, "What was the story about?" Write down the child's narration, and then read it back to him. Ask him how it differs from the original story.

Narration lets you know how much the child retains and understands. It also develops vocabulary and powers of expression, and lays the foundation for good writing later on. A book report or short essay is a cinch for a child who's become accustomed to narration.

You can supplement the narration exercises in *English for the Thoughtful Child* with your own exercises—choose a book of Aesop's fables, Greek myths, or familiar fairy tales. Record the child's answers in your own handwriting, and put these papers into the Exercises section of the grammar notebook.

When you finish *English for the Thoughtful Child*, your child will have a good basic grounding in punctuation, types of sentences, word use, elementary parts of speech, and elementary composition. Now it's time for a more formal approach to grammar.

By the end of fourth grade, the child should learn the proper names and usages of all the parts of speech, the rules of punctuation and capitalization, dictionary use, and the proper forms for letters, reports, and other common pieces of writing. Until these basic skills are mastered, he won't be able to exercise language with the mastery that the logic stage demands.

In our search for a grammar text that would systematically prepare third and fourth graders for the logic stage, we came up with two choices. The clearest and most complete textbook series is published by A Beka Book. The third-grade book is entitled *Language 3*, the middle-grade series is called *God's Gift of Language*, and they're unabashedly Christian. If this doesn't offend you, use Language 3 for your third grader after completing English for the Thoughtful Child. For fourth grade, use God's Gift of Language A.

The Beka text gives an excellent, rigorous, thorough grounding in grammar and composition. Two cautions. Drill—exercises that apply a principle over and over again to a number of different examples—is *very* necessary for third and fourth graders. However, these books were originally designed for a classroom, and there's enough repetition in the drill to keep a roomful of students busy. Don't feel you need to complete every exercise (if you do, you'll never get through the book). Also, Unit 4 in *God's Gift of Language A* ("The Writing Process") covers book reports. Since the writing program we describe below, *Writing Strands* (page 107), will also teach this, we suggest that you read through Unit 4 for information but not bother with all the assignments. You can easily proceed from Unit 3 (encyclopedia use) to Unit 5 (punctuation). Aim to finish *God's Gift of Language A* by the end of the fourth-grade year.

Our choice for those looking for a more secular approach to grammar is Zaner-Bloser's *G.U.M.* (grammar, usage, mechanics) series. *G.U.M.* comes in two sets: *Levels A, B, C,* and *D* are designed for grades 3, 4, 5, and 6; the *Complete Middle Level Program* book is designed for grades 6 and up. The rules are clearly stated and explained, and the exercises are colorful, interesting, and practical. After finishing *English for the Thoughtful Child,* go to *Level A* of *G.U.M.* Aim to finish *G.U.M. Level B* by the end of the fourth-grade year. Some students may continue to *C*, which introduces more advanced punctuation and usage.

If you're undecided, know that we prefer the Beka books; they demand more from the student.

Whichever book you use, continue to file exercises in the grammar notebook under Exercises; copy rules onto notebook paper, and file them in the Rules section. In third grade, order and use paper ruled for third graders; in fourth grade, use fourth-grade paper (see ordering information on page 108).

Reading

We strongly feel that "reading texts" (books with snippets of stories and poems followed by comprehension exercises) turn reading into a chore. Books, even in the early grades, ought to be sources of delight and information, not exercises to be mastered. A good classical education instills a passion for books in the student. "Reading texts" mutilate real books by pulling sections out of context and presenting them as "assignments." Even worse are textbooks that provide selections designed especially for textbook use, which means that your child spends his time reading generic prose produced by textbook writers instead of stories written by masters.

During the first four years of education, you have two purposes: to get the child to read quickly, well, and habitually; and to fill his mind with stories of every kind—myths, legends, classic tales, biographies, great stories from history. In the reading notebook, you and the child will make a record of these stories. Divide the reading notebook into two sections: "My Reading" and "Memory Work."

We suggest that reading follow the same pattern as history studies:

First grade	Ancients (5000 B.CA.D. 400)	
Second grade	Medieval-early Renaissance (400-1600)	
Third grade	Late Renaissance-early modern (1600-1850)	
Fourth grade	Modern (1850–present)	

See Chapter 7 for a full explanation of these divisions. (Once you've read Chapter 7, the following will make more sense.)

Every day, the child reads or (at first) is read to. Begin with twenty to thirty minutes of reading in first grade; you'll want to work up to forty-five minutes to an hour by fourth grade.

The principle is simple: try to give the child simplified versions of the original literature that he'll be reading in the higher grades, or introduce him (through stories or biographies) to a writer he'll encounter later.

How do you do this with elementary-aged students?

At the end of this chapter, you'll find a list of major authors for each period. Search in the children's section of the library for books about the lives of these writers and paraphrases of their works. We've supplied you with a list of some of our favorite resources: retellings of ancient myths, of the *lliad* and *Odyssey*, of Shakespeare and Dickens. First graders who are working with the Ancients can begin on the fairy tales of ancient China and Japan, stories of the Bible, myths of Rome and Greece, Aesop's fables, stories about Plato and Aristotle, and simplified versions of Homer. Susan and her husband, Peter, spent six weeks reading through a lavishly illustrated child's version of the *Iliad* with their six and four year old. Since the children hadn't learned to be frightened of the classics, they were enthralled and eventually put on a puppet show with their stuffed animals: *The Fall of Troy*, starring a stuffed bear as Ajax.

Don't overlook books on tape as a supplement (not a replacement) to reading. Most second graders, for example, can't read Shakespeare independently but will listen to a dramatized version of *As You Like It* (or the *Odyssey*, or *Oliver Twist*, or Robert Frost reading his own poetry). The biographies listed in the history resources can also be read. (You should find history and reading assignments overlapping quite a bit. Generally, put imaginative literature—stories, myths, fairy tales, poems, novels—in the reading notebook. Put factual books and biographies in the history notebook. See Chapter 7 for a full explanation.)

Don't limit the student's reading to works on a first- or second-grade level. Even though he should be doing some independent reading, you should continue to read to him, especially during the first- and second-grade years. For example, we've recommended several interesting and beau-tifully illustrated versions of the *Odyssey* for first-grade reading. These books will be well beyond most first graders' reading ability. But try reading them aloud; first graders are fascinated by the adventures of Odysseus and will listen openmouthed.

The My Reading section of the reading notebook should be a record of books (imaginative literature) that the child has read and enjoyed or that you have read to him. Although you shouldn't make him report on every book, you should ask him at least twice a week to narrate back to you the plot of a book he (or you) has (have) read. Coach him as he goes along. ("Remember what happened next, when they got to the island with the Cyclops on it?") For first grade, you write the narration down, have the child read it back to you, and then place it under My Reading. Most first graders will enjoy drawing crayon pictures to illustrate these narrations. You can also copy out favorite poems to file under My Reading, letting the child decorate the pages with stickers and glitter.

Narration removes the need for "comprehension exercises." Instead of learning to complete fill-in-the-blank questions, the child uses all his mental faculties to understand, sort through, reorganize, and relate the main points of a story.

Not all reading should be linked to the history outline, however. And not

all reading should be narrated back to the teacher. In addition to the reading time spent on assembling the reading notebook, the child should have a set time every day to read for fun. Begin with half an hour for first graders, and build up to an hour of reading time daily. We've listed some "read for fun" resources at the end of this chapter.

This is an important part of the child's education: it improves his reading skills, teaches him the habit of sitting still with a book, and reminds him that reading is fun. Remember: this doesn't *replace* the half hour spent in "assigned" reading. The reading you do for the reading notebook ought to be difficult because the child is building reading skills; the free reading time ought to be spent on literature at or slightly below the child's present reading level so that he can simply enjoy himself. The easier reading will also help him increase his speed.

However, if the child leaps off the sofa and runs to you, book in hand, shouting, "We've got to make a page for this in my notebook!" go right ahead.

Every two or three weeks, the child should also memorize a poem and recite it to you. Memorization and recitation of poetry is an important part of the reading process; it exercises the child's memory, stores beautiful language in his mind, and gives him practice in speaking aloud (early preparation for the rhetoric stage). Aim for memorization of at least four to eight short poems during each school year. Pick poems that the child has read and enjoyed, either during his "assigned" reading or his "free" reading. These poems don't have to be tied to the progression of literature from Ancients to modern; let him memorize anything that he likes. Have him read it several times onto a tape, and then allow him to listen to the tape over and over again. When he can recite the poem along with the tape, turn the tape recorder off and ask him to stand up and recite it for you.

Most children don't like this—not because they can't memorize, but because they don't like to be watched while they recite. Let them practice in front of the mirror or in front of their stuffed animals. Then have them stand up and, with their hands and feet still, recite the poem in front of you. When they can do that, bring in an extra audience member: your spouse, a grandparent, a neighbor. You're now building public-speaking skills.

When a poem has been memorized and recited to your satisfaction, write it out (or have the child write it out, if his skills are up to the job) and place it in the Memory Work section of the reading notebook along with the date of recitation. This will serve as a reward—visual proof of the child's accomplishment—as well as a reminder to review the memory work every few weeks.

You'll follow this basic pattern during second, third, and fourth grades as well. Second-grade students should spend at least thirty minutes per day reading literature from the Middle Ages and early Renaissance: simple tales from Chaucer and Shakespeare, written for children; books about Shakespeare's life; stories of King Arthur and the Knights of the Round Table. We've supplied a resource list at the end of this chapter. As in first grade, you can read aloud anything that's beyond the child's reading level.

Continue making notebook pages two or three times a week and filing them under My Reading in the reading notebook. By second grade, most children can dictate short narrations to you and then copy these narrations themselves. The second-grade notebook should contain less of your writing and more of the child's.

Also continue to give the child thirty minutes to an hour of free reading time every day. This reading should be done on the sofa or somewhere else comfortable, but we recommend that you keep an eye on the child to make sure he's actually reading.

Continue to memorize poetry and any speeches that the child finds and likes in his reading. Aim to memorize eight to twelve pieces during the second-grade year. If possible, expand the audience to include grandparents and friends.

Your third grader will spend thirty minutes per day reading writers from the late Renaissance–early modern period, which includes John Bunyan (the simplified *Pilgrim's Progress*) and Charles Dickens (abridged versions), along with the simpler poetry of Wordsworth and Blake. We provide a full list at the end of this chapter. By third grade, you should be encouraging the child to read all by himself; read to him only if you want him to read an original text instead of an abridgment (*A Christmas Carol* is a good book to read aloud in its entirety). Don't be afraid to assign the child abridged and simplified versions of the classics. In grades 5 through 8, he'll cycle through the ancient, medieval, Renaissance, and modern eras again. If he's already read *Great Expectations* in a simplified form, he'll know the basic outline of the plot and won't be intimidated by the original.

Continue to make notebook pages at least twice a week, summarizing the books the child is reading. By third grade, your student should be able to narrate the plot back to you and write it down himself without the intermediate step of dictating and then copying. In short, he'll have gradually worked his way up to doing book reports.

Aim to memorize and recife twelve to fifteen poems and speeches during the third-grade year. Third-grade history, like third-grade reading, covers the years 1600 to 1850, a period during which great American documents and speeches (the preamble to the Constitution, the Declaration of Independence, and Patrick Henry's "Give Me Liberty" speech, among others) abound. Third grade isn't too early to memorize these foundational American works.

The fourth grader will read and make notebook pages for literature of the modern period, 1850 to the present. We've listed a few reading suggestions at the end of the chapter, but children vary widely in reading ability by fourth grade. Your best bet would be to consult with your local children's librarian. Also, don't neglect poetry; Carl Sandburg, T. S. Eliot, Walter de la Mare, and other great poets of the modern period wrote much that can be enjoyed by young children.

A fourth grader's written summary of a book should fill three-quarters of a notebook page or more. By the middle of the fourth-grade year, these notebook pages should be taking the form of book reports; both *Writing Strands* (described below, pages 93–94) and the grammar texts we're recommending cover the writing of book reports.

By fourth grade, your child should be spending at least an hour in free reading every day. Do *not* require any sort of reporting on this reading. Library visits should be a weekly or biweekly part of your schedule. Help your child check out many different books—don't leave the selection entirely up to ten-year-old discretion—but let him choose anything from that stack that he wants to read during his free hour. And never force your child to finish something that he has no taste for.

A word about beginning readers. We *strongly* object to the *Goosebumps* and *Spinechillers* books, as well as to *Sweet Valley High* and other lightweight romance series directed at young readers. "At least they're reading," parents sigh. But these books are the literary equivalent of TV cartoons. Just because your child develops a taste for cartoons doesn't mean that he'll then go on to watch National Geographic specials. The cartoons train him to pay attention in five-second bursts and teach him that he doesn't need to think in a connected series of propositions because bursts of images will work

.

just as well. In the same way, *Goosebumps* and *Sweet Valley High* books develop a child's taste for short sentences, simple sentence structure, easy vocabulary, uncomplicated paragraphs, and shallow, simple plots. This won't help him make the transition to decent literature; it may teach him to turn away from anything that makes his brain work too hard. A diet of *Goosebumps* does not promote the patterns of thought that produce intellectual and personal excellence.

So we urge you to censor your child's reading. After all, you censor what he eats until his tastes mature; supervise his reading until his brain is capable of enjoying complex material. We've listed several guides to children's literature at the end of this chapter.

Comic books, like cartoons, are image-centered entertainment. They do *not* qualify as "books" for free reading time.

Writing

Divide the writing notebook into four sections: Copying, Dictation, Exercises, and Compositions. You'll use the Copying section in first grade, the Dictation section in the second and third grades, and the Exercises and Compositions sections in the third and fourth grades. The notebook will then serve as a complete record of the child's writing development in grades 1 through 4.

As the child is able, work up from five to thirty minutes per day, beginning with penmanship practice and progressing on to the writing exercises we describe. To begin, use a first-grade handwriting book. We recommend Zaner-Bloser's Handwriting series, which uses the continuous-stroke alphabet. Both the spelling and handwriting books require the child to write short sentences, so he'll be writing one to three sentences per day.

Once he's writing well, your child should begin to do simple copying exercises. In first grade, he should start by copying short sentences. Pick sentences from good writers: E. B. White, C. S. Lewis, Lynn Reid Banks. Look through your child's books for sentences eight to twenty words long. Write them out (in your best handwriting) on first-grade manuscript paper (see the ordering information on page 108). Put the paper in front of the child, and ask him to copy the sentence. Look at his work, praise what he's done right, and then correct his mistakes with a red pencil so that he can clearly see the correction. Ask him to compare his work with the original. Do this

Words, Words: Spelling, Grammar, Reading, and Writing 91

two or three times per week. Put the child's papers in the notebook under Copying.

Does this stifle creativity?

No—it builds the skills the child needs in order to be truly creative. When a first grader copies a sentence from *Charlotte's Web*, he's learning spelling, mechanics (punctuation and so forth), basic grammar (subjectverb agreement, adjective use), and vocabulary from a master of English prose. He'll need all this information in order to write down the sentences he forms in his own head. Jack London learned to write by copying literature in the San Francisco Public Library; Benjamin Franklin learned to write by copying essays from *The Spectator*. The classical pupil learns to write by copying great writers.

If your first grader has a sudden desire to write a story, poem, or letter to a friend (or to Santa Claus), by all means put the copying away and help him do it. Put the stories and poems in the Compositions section of the notebook. If at all possible, photocopy the letter before you send it, and keep the copy.

But the next day, get the copying work back out. You're laying the groundwork for dictation (second grade), which in turn will develop the skills needed for original writing (third and fourth grades . . . and the rest of the child's life).

At the beginning of the second-grade year, you should introduce the child to cursive writing. We suggest you use the Zaner-Bloser *Grade 2C Student Book*, which begins with practice of manuscript letters and then moves on to cursive handwriting. Until the child is comfortable with all cursive letters, he can continue to print his spelling and writing assignments (*Spelling Workout B* begins the transition to cursive halfway through the book). Spend a few minutes each day practicing cursive writing one letter at a time. And make sure you order second-grade paper at the beginning of the second-grade year—the lines are slightly narrower than those on first-grade paper (see the ordering information on page 108).

Once your child is copying sentences easily, move on to dictation. This usually happens around the beginning of the second-grade year.

The process (used in *English for the Thoughtful Child*) is simple. Dictate a short sentence slowly to the child as he writes. Look at the sentence, and correct it with a different colored pencil—for example, if a child has left out capital letters or has failed to leave spaces between the words, mark this.

Then have the child write the sentence again—correctly. That's all there is to it.

At first, this will take a lot of time. Start with simple words in very short sentences, three or four words maximum ("The cat sat up"). You'll have to help the child sound the letters out, reminding him of his phonics (and telling him the answers if he's stuck). Don't frustrate him, especially at the beginning. "What letters make the *th* sound? *T* and *h*, remember? Now write a *t* and an *h*. Do you remember what letter comes at the end of the word *the*? You don't? It's an *e*. *The. Cat.* Do you remember what letters make a *k* sound? Does a *k* or a *c* come at the beginning of *cat*? Now what letter makes that middle sound?" The child who's spent first grade copying will already have a visual memory of common words. But during the transition from copying to dictation, you'll need to help him develop the skills of sounding out and writing down words without looking at a model.

When he's finished writing, praise some aspect of his work before correcting it. Then write your corrections clearly: "Sentences begin with a capital letter. Let me write a capital T for you." "You forgot to put quotation marks around that. Let me show you what they look like." Ask the child to rewrite any misspelled words correctly on another line.

Like any new skill, this is difficult at first. But do it for a brief time three days per week. Ten to twenty minutes per day on a regular basis will result in a rapid improvement in writing skills.

When these short sentences become easy, progress to dictating sentences from literature—any ten- to fifteen-word sentence from the child's books. Susan likes E. B. White's books: *Charlotte's Web, Stuart Little,* and *The Trumpet of the Swan.* White's books are full of amusing sentences, and he's a wonderful stylist. C. S. Lewis's *Chronicles of Narnia* are another good source for dictation.

File dictation exercises in the Dictation section of the writing notebook. This will allow your child to look back over his work and see how he's improved or what areas of punctuation and form continue to trip him up.

Dictation is a tool that develops a number of language skills: phonics, spelling, handwriting, grammar, and punctuation. By writing sentences from high-quality writers, the child learns—almost subconsciously—the rules of good style and expression.

Also during second grade, ask your child at least once a month to write a letter to a friend or relative. Copy these letters, and file them under Compositions. Letter writing is an important part of language development. As soon as possible, the child should begin to use his writing skills by composing short letters (thank-you notes for gifts are a marvelous starting place) to relatives and friends.

Although you should encourage any creative impulses, we don't think you should require the child to be creative during the grammar stage of education. He's still absorbing and taking in. If he's naturally creative, fine. If not, demanding creativity will only be counterproductive. *English for the Thoughtful Child* will supply exercises in paragraph writing and description; also, the child will be writing brief compositions in both history and science (see Chapters 7 and 8). This is plenty of writing for a second grader.

If the child does have a bent toward storytelling, you can follow the same pattern you're using for narration: write down the stories that the first grader tells, and put them in the notebook; write down the stories that the second grader tells, and have the child copy them in his own writing; help a third or fourth grader write his own stories and poems without a written model.

But don't force this skill. In many cases, creativity will develop later, once the child is comfortable with writing skills. And some children may never become creative writers. That's fine; they'll still have the essay- and letter-writing skills they need.

By third grade, encourage the child to do all formal work (work that will be filed in the writing notebook) using cursive writing. Continue to practice penmanship whenever the child slips into sloppy habits. Require all work to be done neatly; don't be afraid to tell a third grader to recopy something that's carelessly done. Order third-grade paper for all writing exercises (see the ordering information on page 108).

Third graders should continue to do dictation exercises three times per week. Most third graders can now progress to complex sentences or two or three sentences at a time.

During second grade and on into third grade, the student will be using *English for the Thoughtful Child*. When he finishes this book and moves on to a formal grammar book (either *G.U.M.* or *God's Gift of Language*), you should begin a formal writing program to supplement his grammar study. The best we've found is *Writing Strands*, a program developed for home-school use by the National Writing Institute. The seven-book series begins with simple descriptions and progresses through paragraph construction, tense use,

narrative voice, dialogue, reports, interviews, and short stories (everything Susan wishes her freshman college students had learned in high school). Two additional books cover exposition and fiction on the high-school level.

When you finish *English for the Thoughtful Child*, begin work on a *Writing Strands* assignment twice a week. If you find that your child is frustrated, drop it for six to eight weeks and try again. When you start *Writing Strands* work, reduce dictation from three days per week to two (but no more!).

The first *Writing Strands* book is really a prewriting book. It describes word games you can play with your child to prepare him for writing. You can read through it for ideas, but there's no need to go through it systematically; a child who's done narration and dictation will be ready to go straight into *Writing Strands 2*. According to the National Writing Institute, book 2 is written for second graders. However, we think that using it in addition to *English for the Thoughtful Child* would be overwhelming for most children. So begin it in third grade, and expect to progress through book 2 fairly quickly.

The exercises are scripted, meaning that you, the parent, are told exactly what to say and what concepts to get across. For example, the first lesson tells you to hold up a pencil and ask the child to describe it. As you progress through writing descriptive sentences about the pencil, the child learns about adjectives and using commas in a series.

File the *Writing Strands* exercises in the Exercises section of the writing notebook. As you move on into book 3, the child will learn to organize paragraphs and will begin to write longer and longer compositions. (The *Writing Strands* books also give you pages on which to list words that are consistently misspelled; we suggest that you ignore these pages and continue to put this list in the spelling notebook.)

One caution. The *Writing Strands* books declare that no one ever learned to write by studying grammar. While this is true, there's a strong flavor of "Therefore, nobody needs to study grammar" throughout the books. *Grammar is necessary.* So is writing. Contractors should be able to draw up plans *and* hammer nails; young writers should know their grammar rules and be able to put them to use in compositions.

In fourth grade, the student will write from dictation twice a week and do *Writing Strands* exercises twice a week. Use fourth-grade paper (see the ordering information on page 108).

You should choose short paragraphs for fourth-grade dictation. By this

time, most children are capable of writing from dictation such paragraphs as this:

The house was really a small castle. It seemed to be all towers; little towers with long pointed spires on them, sharp as needles. They looked like huge dunce's caps or sorcerer's caps. And they shone in the moonlight and their long shadows looked strange on the snow! Edmund began to be afraid of the house.²

The fourth grader who writes this from dictation is practicing spelling and punctuation (semicolons and exclamation points); he's learning vocabulary (What is a dunce cap?); and he's working on spelling (*sorcerer*, *moonlight*, *afraid*). Most of all, he's learning what a vivid, evocative description sounds like.

Aim to finish book 4 of *Writing Strands* by the end of the fourth-grade year. Books 3 and 4 deal with paragraph construction, composition organization, and other elements of style—voice, tense, person, descriptive technique, dialogue, and so on. Book 5 begins dealing with the logical development of arguments; although you can start book 5 if you finish book 4 early, it really takes the student into the logic stage. But if you do finish book 4 before the end of fourth grade, consider using the extra time to catch up on another subject or to write history or science compositions, extra letters to friends and grandparents, or stories and poems.

Fourth graders should continue to write letters several times per month. File all *Writing Strands* exercises under Exercises in the writing notebook. Put copies of letters sent and any extra work in the Compositions section.

OVERVIEW OF LANGUAGE WORK

Daily Schedule

Spelling

First Grade 10–15 minutes Finish reading primer; begin Spelling Workout A and Handwriting . . . : Grade 1.

²C. S. Lewis, *The Lion, the Witch, and the Wardrobe* (New York: Macmillan, 1978), pp. 88–89.

Grammar	15–20 minutes	Begin after completing Spelling Workout A; use English for the Thoughtful Child.
Reading	20–30 minutes	Structured reading (schedule 30–60 minutes at another time for fun reading); focus on ancient myths and legends.
Writing	5–20 minutes	Begin with penmanship practice; progress to copying short sentences two or three days per week.
		Second Grade
Spelling Grammar	10–15 minutes 20 minutes	Go on to Spelling Workout B and C. English for the Thoughtful Child.
Reading	30 minutes	Structured reading (schedule 30–60 minutes at another time for fun reading); focus on stories of the Middle Ages.
Writing	10–20 minutes	Begin cursive penmanship; write from dictation three days per week; short compositions in history or science, or letters to friends and relatives, once a month.
		Third Grade
Spelling	15 minutes	Go on to Spelling Workout C and D.
Grammar	20–30 minutes	<i>English for the Thoughtful Child;</i> if finished before the end of the third-grade year, progress to <i>Language 3</i> or <i>G.U.M. Level A</i> .
Reading	30 minutes	Structured reading (schedule 30–60 minutes at another time for fun reading); read literature of the late Renaissance to early modern eras.
Writing	20–30 minutes	Continue cursive penmanship; write from dictation three days per week; begin <i>Writing Strands</i> program; continue short compositions in history or science, or letters to friends and relatives once or twice a month.

		Fourth Grade
Spelling	15 minutes	Continue with Spelling Workout D and E
	· ·	(or E and F).
Grammar	20 minutes	-Formal grammar book: God's Gift of
		Language (A Beka Book) or G.U.M. Level B.
Reading	230–45 minutes	Structured reading (schedule 60 minutes
		at another time for fun reading); focus on
		modern works.
Writing	20–30 minutes	Practice penmanship whenever the child
		begins to slip into bad habits; dictation
		exercises two or three days per week;
		Writing Strands two days per week;
		continue with short compositions in
		history or science; write letters to friends
		and relatives at least twice per month.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. Where noted, resources are listed in chronological order (the order you'll want to use them in). Books in series are listed together.

Spelling

Modern Curriculum Press Spelling Workout series. Cleveland: Modern Curriculum Press, 1994.

\$7.25 for each student edition, \$6.95 for each *Teacher's Edition*. Order from Modern Curriculum Press. We've listed the entire series for fast workers, but most children won't get past E or F by fourth grade.

Spelling Workout A (first-grade level). Teacher's Edition A. Spelling Workout B (second-grade level). Teacher's Edition B. Spelling Workout C (third-grade level). Teacher's Edition C. Spelling Workout D (fourth-grade level).
Teacher's Edition D.
Spelling Workout E (fifth-grade level).
Teacher's Edition E.
Spelling Workout F (sixth-grade level).
Teacher's Edition F.
Spelling Workout G (seventh-grade level).
Teacher's Edition G.
Spelling Workout H (eighth-grade level).
Teacher's Edition H.

Grammar

Beechick, Ruth. A Strong Start in Language. Pollock Pines, Calif.: Arrow Press, 1993.

\$4.00. Most bookstores can order this for you; you can also buy it through Amazon.com. It's a wonderful resource for technique in dictation and teaching basic phonics.

God's Gift of Language A: Writing and Grammar. Pensacola, Fla.: A Beka Book, 1998.

\$11.65. Order from A Beka Book, Inc. The Teacher's Edition is \$20.55.

G.U.M.: Instruction and Practice for Grammar, Usage and Mechanics series. Columbus, Ohio: Zaner-Bloser, 1997.

\$8.37 for each student edition. Order from Zaner-Bloser. Teacher's editions are \$17.95 each; you should buy them for yourself if possible.

G.U.M. Level A, Grade 3 (student edition).

G.U.M. Level A, Grade 3 (teacher edition).

G.U.M. Level B, Grade 4 (student edition).

G.U.M. Level B, Grade 4 (teacher edition).

G.U.M. Level C, Grade 5 (student edition).

G.U.M. Level C, Grade 5 (teacher edition).

Hyde, Mary F., and Cynthia A. Shearer. *English for the Thoughtful Child*. Lebanon, Tenn.: Greenleaf Press, 1990.

\$18.95. Order from Greenleaf Press.

Language 3: Grammar, Creative Writing, Dictionary Skills. Pensacola, Fla.: A Beka Book, 1996.

\$11.65. Order from A Beka Book. If you're not comfortable with grammar, you should also order the *Teacher's Edition* (\$22.55).

Reading

This is listed in order of use. Remember, you don't have to read all of these. But you can choose reading assignments from among the following names. Note that this list—especially the early-modern and modern sections—is merely a starting place. There are many other authors and books worth reading, and you'll discover them as you explore your library. Rather than organizing these books and authors alphabetically, we have listed them in chronological order, and we suggest that you read them in this order. In most cases, you can use any version of these stories. We have suggested a few specific editions that we particularly like.

Ancients, 5000 B.C.-A.D. 400 (First Grade)

Work through these books and authors in the following order.

Stories and poems by, about, or from . . .

The Bible

Homer

- Hutton, Warwick. The Trojan Horse. New York: Margaret K. McElderry Books, 1992.
- McCaughrean, Geraldine. *The Odyssey*. Illus. Victor G. Ambrus. New York: Oxford University Press, 1993.

At most public libraries; worth asking for on interlibrary loan. Too difficult for first graders, but a wonderful read-to over several weeks (one chapter per session). McCaughrean manages to keep the poetic flow of the original.

Greek and Roman myths

Fisher, Leonard Everett. Theseus and the Minotaur. New York: Holiday House, 1989.

---. The Olympians. New York: Holiday House, 1984.

Twelve mythological figures are profiled. Fisher also provides the Roman names.

-----. Cyclops. New York: Holiday House, 1991.

Geringer, Laura. *The Pomegranate Seeds*. Boston: Houghton Mifflin, 1995. A read-aloud rendition of the Persephone myth.

- Hutton, Warwick. Theseus and the Minotaur. New York: Margaret K. McElderry Books, 1989.
 - -----. Perseus. New York: Margaret K. McElderry Books, 1993.
- McCaughrean, Geraldine. Greek Myths. New York: Margaret K. McElderry Books, 1993.
 - A read-aloud collection of sixteen tales.

Aesop's fables

Plato

Aristotle

Egyptian myths

Indian folktales

Turnbull, E. Luica. Fairy Tales of India. Scranton, Pa.: Criterion Books, 1960.

African folktales

Courlander, Harold. The King's Drum and Other Stories. New York: Harcourt Brace, 1962.

Try your local library. These are particularly good because the stories are identified by tribal source.

Confucius

Chinese and Japanese folktales

Ancient Chinese and Japanese poetry

Bishop, Clair. *The Five Chinese Brothers*. New York: Coward-McCann, 1938. Try your local library. This favorite folktale is available in several different versions.

Cicero

Virgil

English, Irish, and Welsh fairy tales

- Bennet, Richard. Little Dermot and the Thirsty Stones, and Other Irish Folk Tales. New York: Coward-McCann, 1953.
- Steel, Flora Ann. English Fairy Tales. Illus. Arthur Rackham. New York: Macmillan, 1962.

Medieval/Early Renaissance, 400–1600 (Second Grade) Work through these books and authors in the following order.

Stories and poems by, about, or from . . .

Saint Augustine Beowulf Sir Gawain and the Green Knight

- Hastings, Selina. Sir Gawain and the Green Knight. Illus. Juan Wijngaard. New York: William Morrow, 1981.
 - —. Sir Gawain and the Loathly Lady. Illus. Juan Wijngaard. New York: William Morrow, 1987.

Geoffrey Chaucer, Canterbury Tales

- McCaughrean, Geraldine. *The Canterbury Tales*. Illus. Victor G. Ambrus. New York: Oxford University Press, 1995.
 - *The Junior Bookshelf* calls this "one of the very finest interpretations of Chaucer for the young." A read-to for most second graders. Well worth the effort of ordering on interlibrary loan.

Edmund Spenser, The Fairie Queene

Hodges, Margaret. *Saint George and the Dragon.* Illus. Trina Schart Hyman. New York: Little, Brown, 1984.

A Caldecott Medal winner; retells the story of Saint George from Edmund Spenser's *Fairie Queene*. Beautiful illustrations, and Hodges retains some of Spenser's original poetry. At most libraries.

William Shakespeare, all the plays

- A Shakespeare Coloring Book. Santa Barbara, Calif.: Bellerophon, 1995.
 \$3.95. Order from Greenleaf Press. Historical illustrations of famous scenes from Shakespeare's plays.
- Beneduce, Ann Keay. William Shakespeare: The Tempest. Illus. Gennady Spirin. New York: Philomel Books, 1996.
- Birch, Beverly. Shakespeare's Stories series. New York: Peter Bedrick Books, 1998.

\$7.95 each. Birch's retellings keep much of the original dialogue. Reading level: grades 4–6; the stories are accessible to good readers, but probably a read-to for most grammar-stage students. Complete series of three paperbacks includes all the major plays. Order from the Writing Company. Comedies: Twelfth Night, A Midsummer Night's Dream, The Taming of the Shrew, Much Ado About Nothing, The Tempest; histories: Richard the Third, Henry the Fourth, Henry the Fifth, Julius Caesar, Antony and Cleopatra; tragedies: King Lear, Othello, Hamlet, Macbeth, Romeo and Juliet.

Burdett, Lois. Macbeth for Kids. Buffalo, N.Y.: Black Moss Press, 1996.

—. Twelfth Night for Kids. Buffalo, N.Y.: Black Moss Press, 1994. Shakespeare retold in rhyming couplets; reading level: grades 2–4. Order both from the Writing Company. Coville, Bruce. William Shakespeare's The Tempest. Illus. Ruth Sanderson. New York: Doubleday, 1994.

Found in most libraries, this can be either a self-read for strong second-grade readers or a wonderful read-to.

Lamb, Charles, and Mary Lamb. *Tales from Shakespeare*. New York: Puffin Classics, 1994.

\$3.99. Order from the Writing Company. These classic retellings of Shakespeare's stories use the original words wherever possible. Sixth-grade reading level. A read-to for grammar-stage students.

Dante, The Inferno

Thomas Malory, Morte d'Arthur

Translated, this means the "death of Arthur." Look for retellings of the Arthur legend, most of which are based on Malory.

Gross, Gwen. Knights of the Round Table. Bullseye Step into Classics series. Illus. Norman Green. New York: Random House, 1993.

The Step into Classics series adapts classic stories to a second- to third-grade level.

Erasmus

Martin Luther

John Calvin

Sir Thomas Wyatt

Wyatt sometimes shows up as a secondary character in stories about Henry VIII and Anne Boleyn.

Sir Thomas More

John Knox

René Descartes

Late Renaissance/Early Modern, 1600–1850 (Third Grade) Work through these books and authors in the following order.

Stories and poems by, about, or from . . .

John Milton French fairy tales Many were collected by Charles Perrault, 1628–1703. Daniel Defoe, *Robinson Crusoe* Jonathan Swift, *Gulliver's Travels* Riordan, James. *Gulliver's Travels*. Illus. Victor G. Ambrus. New York: Oxford University Press, 1998.

Wonderful pictures, and a decent adaptation of Swift's prose; most third graders should be able to read the text. You may need to order this by interlibrary loan.

John Bunyan, Pilgrim's Progress

Victor Hugo

Hugo, Victor, and Marc Cerasini. *The Hunchback of Notre Dame*. Bullseye Step into Classics series. New York: Random House, 1995.

Adapted to a second- to third-grade reading level.

Hugo, Victor, and Monica Kulling. *Les Misérables*. Bullseye Step into Classics series. New York: Random House, 1995.

Adapted to a second- to third-grade reading level.

Alexandre Dumas

Dumas, Alexandre, and Deborah G. Felder. *The Three Musketeers:* Bullseye Step into Classics series. New York: Random House, 1994.

Adapted to a second- to third-grade reading level.

William Blake, Songs of Innocence

William Wordsworth, collected poems

Jane Austen

Alfred, Lord Tennyson

Robert Browning, The Pied Piper of Hamelin

Elizabeth Barrett Browning

Jacob and Wilhelm Grimm, Grimms' Fairy Tales

Charles Dickens

Dickens, Charles, and Monica Kulling. *Great Expectations*. Bullseye Step into Classics series. New York: Random House, 1996.

Adapted to a second- to third-grade reading level.

 —. Oliver Twist. Bullseye Step into Classics series. New York: Random House, 1994.

Adapted to a second- to third-grade reading level.

------. The Magic Fishbone. Illus. Louis Slobodkin. New York: Vanguard Press, 1953.

This is a children's story, available at your local library.

Edward Lear, the nonsense poems

Christina Rossetti, all the poems

Lewis Carroll, Alice in Wonderland and Through the Looking-Glass

Mark Twain, all the stories

Twain, Mark, and Monica Kulling. *The Adventures of Tom Sawyer*. Bullseye Step into Classics series. New York: Random House, 1995.

Adapted to a second- to third-grade reading level.

James Fenimore Cooper, all the novels

Jules Verne, all the novels

- Verne, Jules, and Gino D'Achille. 20,000 Leagues under the Sea. Bullseye Step into Classics series. New York: Random House, 1994.
- Verne, Jules, et al. A Journey to the Center of the Earth. Troll Illustrated Classics series. Mahway, N.J.: Troll Associates, 1990.

Order from Troll Communications. Adapted to a third- to fourthgrade reading level.

Norwegian folktales

Asbjrnsen, Peter, et al. East of the Sun and West of the Moon: Fifty-Nine Norwegian Folk-Tales. New York: Dover, 1970.

This book is an affordable version of the original 1849 collection. Herman Melville, *Moby Dick*

Modern, 1850-Present (Fourth Grade)

Tell the children's librarian at your local library that you're looking for classic literature from 1850 to the present, on your child's reading level, and follow up on his or her suggestions. (Librarians may differ in their ideas about what's suitable for fourth graders, so glance through all the recommendations.) We also suggest the following (work through these books and authors in the following order).

Stories by, about, or from . . .

Robert Louis Stevenson, all the novels

Stevenson, Robert Louis, and Lisa Norby. *Kidnapped*. Bullseye Step into Classics series. New York: Random House, 1994.

Adapted to a second- to third-grade reading level.

Stevenson, Robert Louis, and Paul Wenzel. *Treasure Island*. Bullseye Step into Classics series. New York: Random House, 1993.

Adapted to a second- to third-grade reading level.

Stevenson, Robert Louis, and Earle Hitchner. Treasure Island. Troll Illustrated Classics series. Mahway, N.J.: Troll Associates, 1990. Order from Troll Communications. Adapted to a third- to fourth-grade reading level.
Arthur Conan Doyle

Doyle, Sir Arthur Conan, and Judith Conaway. Mysteries of Sherlock Holmes. Bullseye Step into Classics series. New York: Random House, 1994.

Adapted to a second- to third-grade reading level.

Johanna Spyri, Heidi

Carlo Collodi, Pinocchio

Collodi, Carlo. The Adventures of Pinocchio: Story of a Puppet. Trans. Nicholas J. Perella. Berkeley, Calif.: University of California Press, 1991.

Try to read this in an unabridged version, not the Disney version, which changes both the plot and the original moral message of the story.

H. G. Wells, all the novels

Wells, H. G. *The Time Machine*. Troll Illustrated Classics series. Mahway, N.J.: Troll Associates, 1992.

Order from Troll Communications. Adapted to a third- to fourthgrade reading level.

Louisa May Alcott, all the novels

Andrew Lang, collected tales

Lang, Andrew. *The Blue Fairy Book*. Illus. John Lawrence and Henry Ford. New York: Dover, 1975.

------. The Orange Fairy Book. Illus. Henry Ford. New York: Dover, 1975.

———. The Violet Fairy Book. Illus. Henry Ford. New York: Dover, 1990.

Frances Hodgson Burnett, all the novels

Kenneth Grahame, The Wind in the Willows

Grahame, Kenneth. *The Wind in the Willows*. New York: Yearling Classics, 1990.

James Barrie, Peter Pan and all the plays

Barrie, James, and Jean Zallinger. *Peter Pan.* Bullseye Step into Classics series. New York: Random House, 1994.

Adapted to a second- to third-grade reading level.

Rudyard Kipling, Just So Stories and The Jungle Books.

Kipling, Rudyard. *The Jungle Book*. Troll Illustrated Classics series. Mahway, N.J.: Troll Associates, 1992.

Order from Troll Communications. Adapted to a third- to fourthgrade reading level.

Beatrix Potter, all the stories

Laura Ingalls Wilder, all the novels

Walter de la Mare, collected poems

Carl Sandburg, collected poems

John Ciardi, collected poems

Ciardi, John. You Read to Me, I'll Read to You. Illus. Edward Gorey. New York: HarperTrophy, 1987.

Order from Greenleaf Press. An award-winning book of poetry designed for parents and children to read to each other.

T. S. Eliot, Old Possum's Book of Practical Cats

Eliot, T. S. *Growltiger's Last Stand*. Illus. Erroll Le Cain. New York: Farrar, Straus and Giroux, 1990.

Order from Greenleaf Press. Some selected poems from T. S. Eliot's larger collection, *Old Possum's Book of Practical Cats*.

Recordings to Supplement Readings

Storyteller Jim Weiss retells classic stories for children and sells them through Greathall Productions. These audiotapes and compact discs are wonderful listening; they won't replace reading, but they will serve as a valuable supplement. You can order them from Greathall Productions. Many libraries also stock them. Titles include:

Arabian Knights A Christmas Carol and Other Favorites Greek Myths The Jungle Book King Arthur and His Knights Rip Van Winkle/Gulliver's Travels Shakespeare for Children She and He: Adventures in Mythology Sherlock Holmes for Children Tales from Cultures Far and Near Tales from the Old Testament Three Musketeers/Robin Hood

Imaginative Reading

There are hundreds of good books and collections of poetry available to a child who is reading on a first- through fourth-grade level. The children's

librarian at your local library or the children's books manager at a larger bookstore can direct you toward award-winning stories, novels, and poetry on your child's reading level. Also consider the following resources:

Perfection Books Catalog, Grades Pre K-8. Logan, Iowa: Perfection Book Company.

This catalog lists literally hundreds of children's titles on all subjects and provides short descriptions. Readers on all levels, fairy tales and fables, stories of ancient times, stories of other nations, poetry, science titles, biographies, Newbery and Caldecott winners, and even audio books, all coded for reading level and interest level. You'll use this catalog as a resource for finding titles and as a wonderful source for placing orders. Call 800-831-4190, tell them you're teaching your child at home, and ask for a catalog.

Wilson, Elizabeth L. Books Children Love: A Guide to the Best Children's Literature. Wheaton, Ill.: Crossway Books, 1997.

Writing

See Chapter 4, Resources, for information on basic handwriting instructional materials.

Poster/Wall Chart Super Pak. Columbus, Ohio: Zaner-Bloser, 1996.

\$9.99. Five charts showing how to hold a pencil, how to sit properly, and correct formation of all letters.

Writing Strands: Challenging Writing Programs for Homeschoolers series. Niles, Mich.: National Writing Institute, 1995.

The *Writing Strands* program can be purchased directly from the National Writing Institute or, at a small discount, from Rainbow Resource Center. The books aren't cheap, but they aren't consumable either; you do all the assignments on notebook paper, so you can reuse these books for another child or resell them.

Writing Strands 2 (\$17.25). Writing Strands 3 (\$17.25). Writing Strands 4 (\$17.25). Writing Strands 5 (\$19.25). Zaner-Bloser Handwriting Paper

\$5.29 per ream. Order these packs of writing paper for extra handwriting practice from Zaner-Bloser. A typical student uses one ream of writing paper per year. The ruled lines on these sheets narrow each year. See Chapter 4, Resources, for K–1 paper.

Grade 2 paper (½" wide)

Grade 3 paper (½" wide)

Grade 4 paper (¾" wide)

Grade 5 paper (%" wide without red baseline)

Zaner-Bloser Handwriting series. Columbus, Ohio: Zaner-Bloser, 1996.
\$7.37 each. Order from Zaner-Bloser. This is the Zaner-Bloser continuousstroke alphabet method. See Chapter 4, Resources, for the first three books in the series (grades K–1).

Handwriting with a Simplified Alphabet: Grade 2C Student Book.

This book provides the transition into cursive writing. Use for either second or third grade.

Handwriting with a Simplified Alphabet: Grade 3 Student Book. More practice in cursive writing.

Handwriting with a Simplified Alphabet: Grade 4 Student Book.

Handwriting with a Simplified Alphabet: Grade 5 Student Book.

Handwriting with a Simplified Alphabet: Grade 6 Student Book.

THE JOY OF NUMBERS: Math

-6

11/1

Let no one ignorant of mathematics enter here.

-Plato (inscription written over the entrance to the Academy)

SUBJECT: Elementary mathematics TIME REQUIRED: 30–60 minutes per day

The four years of elementary math—first through fourth grade—lay the foundation for the high-level abstract thinking required by algebra, trigonometry, and calculus later on. And foundation laying is what the grammar stage is all about.

The job of laying a mathematical foundation should be taken seriously. Basic mathematics—the skills of addition and subtraction, multiplication and division, the knowledge of basic geometrical shapes and patterns, the ability to think through word problems, a firm grasp of the relationships between numbers—is as vital to high-level mathematical achievement as an understanding of punctuation and sentence structure is to high-level language use. In fact, mathematics *is* a language because it uses symbols and phrases to represent abstract realities. For most children, it's a foreign language because they don't grow up hearing it all around them.

Before a child can master the much touted "higher-level thinking skills" so necessary to mathematics, she must learn the language of mathematics. Higher-level thinking skills can never be substituted for mathematical literacy; rather, those thinking skills are dependent on the child's knowledge of basic mathematical operations. In this chapter, we'll explain how to make your grammar-stage student mathematically literate so that she can master those higher-level thinking skills when the time is right.

THE WAY CHILDREN THINK

As you teach math to your first grader, you'll use the same process we described in the language chapter. When you taught the child to write, the first step was to put a concrete model—a written word or sentence—in front of the child so that she could copy it. Only when she mastered copying did you take away the concrete model and ask her to write from dictation. Only after copying from a written model was she able to form a mental picture of the spoken sentence.

This first step is necessary because young children tend to think in concrete terms. They don't do mathematical operations in their heads; if you ask a first grader to add 3 and 2, she'll look around for spoons, fingers, apples, or pennies to count so that she can find the answer. Just as you asked the beginning writer to copy a visible model, you'll ask the beginning mathematician to do arithmetic using "manipulatives"—objects that she can see, touch, and move around.

Math companies sell boxed manipulatives (see Resources at the back of this chapter), but you can also use beans, pennies, blocks, or chocolate chips. Pencils work well when you get to place value—you can move a bundle of 10 pencils from the 1s column to the 10s column to illustrate adding two-digit numbers, or you can break the bundles open to illustrate "borrowing." Every time you teach a new math skill, have the child work the problems out with real objects until the concept makes sense to her. YOU: Put these three beans in one pile. Put these two beans in another pile. Now push them together. That's addition. How many do you have?

CHILD: (Carefully counts the beaps.) Five.

Or . . .

YOU: Let's add thirty-six and twenty-seven. For thirty-six, we have three bundles of ten pencils—that's thirty pencils—plus six extra pencils. For twenty-seven we have two bundles of ten pencils, plus seven extra pencils. How many bundles of pencils do we have?

CHILD: (Counts the bundles.) Five.

YOU: How many pencils is that all together?

CHILD: Fifty.

YOU: That's the number that goes in the tens column. How many ones—single pencils—do we have?

CHILD: (Groups the six pencils with the seven pencils.) Thirteen.

YOU: Can we write that in the ones column? No, because it won't fit. Where can we put the extra pencils?"

(The child sees that she can bundle together ten of the thirteen pencils and put them with the five bundles she already has. Now she has six groups of ten and three left over—sixty-three pencils in all. She's just learned how to carry.)

Even older children may revert to this mode when learning a new skill; fractions, for example, may require division of an apple pie before they make sense.

When the concept is mastered on this concrete level, it is time to move on to mental arithmetic, where the child can picture the items in her mind instead of having actual apples, pennies, beans, or pencils in front of her.¹ Mental arithmetic requires abstract thinking because numerals now stand for concrete objects: 3 and 2 represent 3 beans and 2 beans; the number 27 represents 2 bundles of pencils plus 7 single pencils. But don't push the child to dispense with her manipulatives until she's ready. Children's minds

¹Educators refer to this as moving from the manipulative or preoperational stage to the mental image or concrete operational stage.

mature at different rates; if you require a child to do addition with numerals alone (no objects) before she's ready, the result will be math frustration.

Children aged 5 through 7 usually need concrete objects; children aged 8 through 10 shift into "mental image" mode. Ask a five year old how many people are in her family, and she'll turn around and count everyone present. Ask an eight year old the same question, and you'll see her summon a mental image of each person to mind and count the images: "Me, Mom, Dad, Jeremy. That's four."

True abstract thinking—the ability to use the symbols 5 + 7 or 27×2 without using or picturing concrete objects—is the third stage of mental development. Abstract thinking begins around age nine or ten, which coincides with the beginning of the logic stage. And the logic stage is the time to teach "higher-order critical thinking skills."

The goal of early elementary mathematics is to move the child from manipulating real objects to picturing those objects mentally. You achieve this through lots of practice with real objects. In later elementary mathematics (third or fourth grade), you'll begin to nudge the child, through much repetition, toward early symbolic thinking so that she can use written numbers and understand what those numbers represent.

You can't force a child to develop abstract thinking. Instead, lay the foundation for it with practice. You've got four years to get there. Take your time, and the child will have a strong foundation on which to build those higher-order skills.²

MATH TABLES: A DEFENSE

We think that the memorization of mathematical facts—addition and subtraction facts, the multiplication and division tables—is essential in building a strong foundation. We feel that much of the protest over learning the math tables by rote arose because children were being taught to skip that

²The concept of "higher-order skills" may seem to imply that "lower-order skills" (such as the knowledge of addition or division facts) are somehow inferior, less important, or unnecessary. But "higher" simply means "coming after." The tenth story of a building is "higher" than the foundation, but no one would argue that the foundation is less important simply because it is "lower." important mental-image step of thinking. If a child goes straight from manipulative mode to symbolic mode, the symbols 2 + 4 = 6 don't mean anything to her. She's never practiced them with beans. If she's forced to memorize a whole sheet of these meaningless symbols (2 + 1 = 3, 2 + 2 =4, 2 + 3 = 5), she's memorizing gobbledygook. That's rote learning at its worst, and, of course, it isn't productive.

But after you've practiced addition with manipulatives (2 beans and 1 bean equal 3 beans, 2 beans and 2 beans equal 4 beans, 2 beans and 3 beans equal 5 beans) and then practiced these same sums with imaginary beans, the child understands the concept of addition. At this point, the memory of the math tables reinforces and strengthens the concept that the child comprehends.

The memory work also moves the child's mind toward abstract, symbolic thinking. Thorough knowledge of math facts leads to an instinctive understanding of math relationships. Consider, for example, the 9 times table:

 $9 \times 2 = 18$ $9 \times 3 = 27$ $9 \times 4 = 36$ $9 \times 5 = 45$ $9 \times 6 = 54$

When you multiply a number by 9, the first digit of the resulting number is always one less than the number you began with:

 $9 \times 2 = 1_{--}$ $9 \times 3 = 2_{--}$ $9 \times 4 = 3_{--}$ $9 \times 5 = 4_{--}$ $9 \times 6 = 5_{--}$

And the second digit of the resulting number, when added to the first digit, always adds up to 9.

 $9 \times 2 = 18 (1 + 8 = 9)$ $9 \times 3 = 27 (2 + 7 = 9)$ $9 \times 4 = 36 (3 + 6 = 9)$ $9 \times 5 = 45 (4 + 5 = 9)$ $9 \times 6 = 54 (5 + 4 = 9)$

This little mental trick for remembering the 9 times table also reveals an important mathematical relationship: because 9 is 1 less than 10, multiplying a number (like 6) by 9 will never produce a number that has a 6 in the 10s column:

$$\begin{array}{ccc}
6 & 6 \\
\times \underline{9} & \times \underline{10} \\
\underline{54} & \underline{60}
\end{array}$$

There's also a practical aspect to math-facts memorization: math facts protect you from being suckered. Yes, you could carry a calculator around with you all the time to compute grocery prices, taxi tips, and the totals of restaurant meals. Most people don't. It's much easier to memorize the math facts in grades 1 through 4, when the mind is naturally receptive.

Mastering basic facts now lays the foundation for true understanding later on. One of Jessie's eighth-grade relatives goes to a well-regarded private school nearby. Instead of being required to memorize his math facts, he has been allowed to use a calculator for math since a very early grade. He's now doing algebra. He can work rote problems—problems that exactly follow the pattern in the textbook—but he lacks a true understanding of basic mathematical relationships. When more difficult or innovative problems appear, he's helpless. The machine has done his computation for too many years.

This leads us to a firm principle of elementary mathematics: *no calculators*. No child who has not already memorized her mathematical facts should be allowed to use a calculator. We recommend the use of calculators beginning in seventh grade and not before.

HOW TO DO IT

We find Ruth Beechick's booklet *An Easy Start in Arithmetic* a valuable introduction to elementary mathematics. Beechick explains the mental modes and gives the so-called "scope and sequence"—what children should learn at each grade—as well as tips on teaching math to beginners.

We've found several different math curricula that are both rigorous and systematic, introducing new cońcepts only after earlier ones have been thoroughly mastered. No math system is perfect, but we recommend that you choose one of the following.

Saxon Math

The most thorough and understandable curriculum for home instruction still seems to be Saxon Math. Saxon—which originally created material for classroom use—has begun to sell *Home Study Kits* that contain student workbooks, a teacher's manual that explains the concepts to the parent and tells her/him how best to teach them, and something called the *Daily Meeting Book*, which takes the parent through practical skills like measuring, telling time, reading charts, and so on. Saxon Math has plenty of activities as well: playing story, measuring rooms, graphing the ages of everyone the child knows, and so on.

The *Home Study Kits* are expensive but complete—well worth the cost. Saxon also provides help via an 800 number and Website. The manuals recommend that the young child study math for short periods twice per day: for the first session, explain the concept using manipulatives, and complete one side of a work sheet; later in the day, have the child review the material by completing the other side of the sheet. Many home schoolers (Susan included) find one session per day (and one side of the work sheet) to be plenty, though. You don't have to buy the manipulative kit sold separately. But if you don't, be sure to read ahead so that you can prepare; the lessons are often structured around a particular type of manipulative.

Saxon Math is graded K, 1, 2, and 3 for kindergarten through thirdgrade students. After third grade, the textbooks switch to "skill level" rather than "grade level." Thus, Math 3 is followed by Math 54, which is for bright fourth graders who have finished the Math 3 book or for average fifth graders who took two years to get through the Math 3 book. The second digit is for quick workers; the first is supposed to represent the "average" student level. Math 54 is followed by 65, 76, 87 (general math for those who need extra practice), and then Algebra 1/2 (see Chapter 5). Ideally, you go from Math 76 straight to Algebra 1/2. Saxon works only if you (the parent) take the job of teaching it seriously. It is not a self-teaching program. You *must* explain the concepts thoroughly, or the child will be confused—the text alone won't do the job. Parents who are not seriously math-phobic can teach Saxon math successfully.

Math-U-See

This is a good program for parents who are intimidated by the idea of teaching math at any level. The Math-U-See program supplies manipulatives, workbooks, and videos. These videos are *not* for the student, but for the parent, who is supposed to watch the video alone in order to learn how to teach the concept to the student.

The Math-U-See curriculum is divided into Introduction to Mathematics (preschool and kindergarten), Foundations of Mathematics (first, second, and third grades), and Intermediate Mathematics (fourth, fifth, and sixth grades).

We have only two reservations about Math-U-See: the program involves a large investment of time for the parent, who has to watch the videos before teaching the lessons; and there's not nearly enough drill. The concepts come with one page of problems each, which isn't sufficient for most students. If you decide to use Math-U-See, consider ordering the A Beka Book drill sheets to go with it (see Resources, at the back of the chapter).

If you're math-phobic, you may want to start with the Math-U-See program and switch to a less time-intensive system such as Saxon or A Beka Book (below) as soon as you feel confident enough.

A Beka Math

A Beka Book, a long-time publisher of home-school materials, supplies a very comprehensive math program. A Beka's general philosophy is to review previously taught concepts over and over again. A student who's been through A Beka math *knows* math.

The downside of A Beka is that the books provide too much drill. You'll want to pick and choose among the problems so that the child won't be overwhelmed. Since A Beka is a conservative Christian publisher, an occasional Bible verse crops up at the bottom of the workbooks' pages, along with quotes from Jefferson, Franklin, Milton, and others.

Developmental Math

Another option—less elaborate—is the Developmental Math program sold by Mathematics Program Associates. This set of sixteen workbooks is a good introduction to basic skills; it takes you through about fifth grade, at which point you'll have to switch to something else. It's less complicated than the Saxon system, and the child works at her own pace instead of sticking to a daily lesson plan.

This program is sold as a complete math system, but there's very little drill and problem solving. Once you do the workbook page, you're finished. It seems to us that Developmental Math is best used along with another program. It would be an excellent choice for a child who's already in school but struggling and in need of supplemental work.

A CAUTION

Pick a program, and start on it. If the child thrives, stick with it; if she doesn't do well, switch to another program. Sometimes a child's mind simply is not in sync with a particular math program. She may flounder with Saxon and sail through Beka or vice versa.

Once you find a workable program, though, try to stick with it. All math programs build on what's been taught the year before. The more often you change systems, the more chances you have to confuse the student.

SCHEDULES

Math is best done daily, especially in the early grades. (And most home schoolers schedule math first thing in the morning.) A typical school year is 36 weeks, or 180 days, although you can arrange your school year to fit your family situation (see Chapter 38 for more details). Count the lessons in whichever curriculum you've chosen. Then decide if you want to do math five days a week or four days a week (saving one day for field trips or library visits).

The Saxon first-grade home-study kit, for example, has 130 lessons,

which means that you can do four lessons per week and save a day for something else, or four lessons per week with the option of doing a lesson or two over two days (some of the lessons are longer than others), or five lessons per week and take a week off from math now and then. When Susan's oldest was in first grade, he loved the playing-store lessons, so we would stretch those over a couple of days. We also took a week off from math now and then and did some special history or science project: building a model of the Great Wall of China; assembling a nature notebook; planting a flower garden; going to the science museum.

Remember, in first and second grades especially, you won't want to take more than a week off at a time from math. Unfamiliar math concepts are easily forgotten.

Sample Schedules First Grade		
30-40 minutes per day	M, T, W, TH	Math lesson
	F	Project/library day
	Second Grade	
40-60 minutes per day	M, T, W, TH	Math lesson
	F	Project/library day
	Third Grade	
40-60 minutes per day	M, T, W, TH	Math lesson
	F	Project/library day
Fourth Grade		
40-60 minutes per day	M, T, W, TH	Math lesson
	F	Project/library day

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). We suggest that you contact these publishers of math materials and examine their catalogs closely before deciding on a curriculum. Most will aid you in assigning your child to the appropriate level.

General

Beechick, Ruth. An Easy Start in Arithmetic. Pollock Pines, Calif.: Arrow Press, 1988.

Most bookstores can order this for you; it is also available through Amazon.com.

Math Curricula

A Beka Book Traditional Arithmetic series. Pensacola, Fla.: A Beka Book.
\$10.80 for student texts, \$18.65 for teacher's editions; \$4.25 for student speed drills and tests, \$8.60 for teacher speed drills and tests. Order from A Beka Book. A Beka Book also offers a wide range of mathematics teaching aids. Ask for a copy of their Home School Catalog.

Arithmetic 1.

Arithmetic 1 Teacher Edition. Student Speed Drills and Tests. Teacher Speed Drills/Test Key.

Arithmetic 2.

Arithmetic 2 Teacher Edition. Student Speed Drills and Tests. Teacher Speed Drills/Test Key.

Arithmetic 3.

Arithmetic 3 Teacher Edition. Student Speed Drills and Tests. Teacher Speed Drills/Test Key.

Arithmetic 4.

Arithmetic 4 Teacher Edition. Student Speed Drills and Tests. Teacher Speed Drills/Test Key.

Developmental Mathematics: A Self-Teaching Program. Halesite, NY: Mathematics Programs Associates.

Each level includes a workbook and teacher's edition and costs \$14.00. Buy from Mathematics Programs Associates, or at a small discount from Rainbow Resource Center. A full description of the sixteen levels (available for separate purchase) can be obtained by calling 516-643-9300.

Level 1: Number Concepts and Symbols.

Level 2: Addition Concept, Basic Facts 1-9.

Level 3: Subtraction Concept, Basic Facts 1-9.

Level 4: Tens Concept, Addition and Subtraction of Tens.

Level 5: Two-Digit Numbers, Addition and Subtraction without Regrouping.

Level 6: Addition with Regrouping.

Level 7: Subtraction with Regrouping.

Level 8: Multiplication Concept and Facts.

Level 9: Division Concept and Facts.

Level 10: Hundreds Concept, Three-Digit Addition and Subtraction.

Level 11: Three-Digit Multiplication and Division.

Level 12: Thousands Concept; All Operations.

Level 13: Decimal and Metric System.

Level 14: Fractions.

Level 15: Fractions; Advanced Skills.

Level 16: Ratio, Proportion, Percent, Probability Number Theory, Graphs.

Math-U-See. Virginia Beach, Va.: Math+Plus.

This program has a number of different levels and workbook/video/manipulative combinations. For prices, explanatory material, and brochures, call Math+Plus at 888-490-9323.

Introduction to Mathematics, Preschool-K.

\$70.00 for the basic curriculum; supplementary materials are additional.

Foundations of Mathematics, Grades 1-3.

\$95.00 for the basic curriculum; supplementary materials are additional.

Intermediate Mathematics, Grades 4-6.

\$125.00 for the basic curriculum; supplementary materials are additional.

Saxon Primary Mathematics. Norman, Okla.: Saxon Publishers.

Order from Saxon, from the Education Connection, or from Rainbow Resource Center. If you decide to use Saxon, call Educational Teaching Aids at 800-445-5985 to ask about Saxon-compatible manipulatives. The Saxon home study catalogs include a diagnostic test. Request a catalog and test from Saxon Publishers at 800-284-7019 (their answering machine message is hokey, but the company is very efficient). You can also E-mail them at www.saxonpub.com. Math 1 Home Study Kit. \$85.00. Math 2 Home Study Kit. \$87.50. Math 3 Home Study Kit. \$90.00. Math 4 Home Study Kit. \$47.95. Math 54 Home Study Kit. \$48.95. For advanced fourth graders.

Drill Resources

Audio Memory Songs. Newport Beach, Calif.: Audio Memory.

\$9.95 each. Order from Audio Memory. These cassette tapes contain the addition, subtraction, and multiplication facts, put to music. Play these in the car, and you'll all learn your math facts. Available from Rainbow Resource Center. Each tape is \$9.95 and includes a poster.

Addition Songs. Subtraction Songs. Multiplication Songs.

Holey Cards

\$1.00 each. Order from Greenleaf Press. These cards fold in half around a blank sheet of white paper. The student writes the answer to each problem on the bit of white paper visible through the hole. The goal is for the student (with practice) to be able to write the correct answer to all the problems in less than two minutes. Each card has 52 problems drilling one skill.

Addition Facts. Subtraction Facts. Multiplication Facts. Division Facts.

Math Wipe-off Books. New York: Scholastic.

\$1.99 each. Order from Rainbow Resource Center. The fact pages have fold-over wipe-off pages for reuse (use a nonpermanent overhead marker).

Addition. Common Units of Measure. Count Your Change. Division. Multiplication. Subtraction. Time. Fractions.

Skip Counting Songs. Virginia Beach, Va.: Math+Plus.

\$10.00. Order from Math+Plus. This tape of songs covers skip-counting by twos, threes, fours, fives, sixes, sevens, eights, and nines. The tunes are catchy, and the songs are related to familiar stories and nursery rhymes. (The tape comes in two voices—you can choose the voice of Mack the Muskrat or a nice tenor. We think Mack is annoying.)

Math Games and Books

If you're interested in math games and books, you can call Scholastic Book Clubs and order the Super Science and Math catalog for K–6, full of lots of interesting games, books, and resources. Two of our favorites:

Long, Lynette. *Dominoes Addition*. Watertown, Mass.: Charlesbridge Publishing, 1996.

This teaches addition through the game of dominoes. When you buy it through Scholastic, a pack of dominoes accompanies the 32-page book.

Neuschwander, Cindy. Sir Cumference and the First Round Table. Illus. Wayne Geehan. Watertown, Mass.: Charlesbridge Publishing, 1997.

SEVENTY CENTURIES IN FOUR Years: History and Geography

31/1/2

The history of the world is but the biography of great men.

---Thomas Carlyle

SUBJECT: History and geography

TIME REQUIRED: An average of 3 hours per week, about 60 minutes per day, three days per week or 1½ hours per day, two days per week

Documentary filmmaker Ken Burns appeared at the National Press Club in early 1997 to plug his latest project (the life of Thomas Jefferson). Afterward, he took questions. One questioner pointed out that an astronomical percentage of high-school graduates saw no purpose in studying history and asked for a response.

Ken Burns answered: history is the study of everything that has happened until now; unless you plan to live entirely in the present moment, the study of history is inevitable.

History, in other words, is not *a* subject. History is *the* subject. It is the record of human experience, both personal and communal. It is the story

of the unfolding of human achievement in every area—science, literature, art, music, and politics. A grasp of historical facts is essential to the rest of the classical curriculum.

When you first introduce the elementary student to history, you must keep one central fact in mind: *history is a story*.

The logical way to tell a story is to begin (as the King said to Alice) at the beginning and go on till you come to the end. Any story makes less sense when learned in bits and pieces. If you were to tell your five year old the story of Hansel and Gretel, beginning with the house made of candy and cookies (because that's likely to be the most interesting part of the story to the child), then backing up and telling about the woodchopper's unfortunate second marriage, then skipping to the witch's demise, and then scooting backward again and relating the story of Hansel and Gretel's walk in the woods, the story isn't going to form a coherent whole in the child's mind. Even if he listens to the end, you may have lost him long before that.

History is no different. Yet it's too often taught unsystematically—as a series of unrelated bits and pieces: American history this year, ancient history the next, eighteenth-century France the year after that. Think back. By the time you graduated high school or college, you'd studied King Tut and the Trojan War and the Bronze Age; you probably learned about the end of the Athenian monarchy and the rise of the city-state; you may have been taught about the Exodus and the conquest under Joshua or the early history of Ethiopia. Chances are you studied these subjects in different years, in different units, out of different textbooks. You probably have difficulty fitting them together chronologically.

Furthermore, you probably started with American history (which is pretty near the end of the story as we know it) and then spent at least twice as much time studying American history as you did studying the rest of the world. Yes, American history is important for Americans, but this myopic division of the curriculum does the Founding Fathers a disservice. Children who plunge into the study of the American Revolution with no knowledge of the classical models used by Jefferson, Washington, and their colleagues can achieve only a partial understanding of American government and ideals. And American history ought to be kept in perspective: the history curriculum covers seventy centuries; America occupies only five of them.

Seventy Centuries in Four Years: History and Geography 125

A common assumption found in history curricula seems to be that children can't comprehend (or be interested in) people and events distant from their own experience. So the first-grade history class is renamed Social Studies and begins with what the child knows: first, himself and his family, followed by his community, his state, his country, and only then the rest of the world.

This intensely self-focused pattern of study encourages the student of history to relate everything he studies to himself, to measure the cultures and customs of other peoples against his own experience. And that's exactly what the classical education fights *against*—a self-absorbed, self-referential approach to knowledge. History learned this way makes *our* needs and wants the center of the human endeavor. This attitude is destructive at any time, but it is especially destructive in the present global civilization.

The goal of the classical curriculum is multicultural in the best sense of the word: the student learns the proper place of his community, his state, and his country by seeing the broad sweep of history from its beginning and then fitting his own time and place into that great landscape. The systematic study of history in the first four years lays the foundation for the logic stage, when the student will begin to understand the relationships between historical events—between Egypt and Greece, Greece and Rome, Rome and England, England and America.

From a practical point of view, starting the curriculum with ancient history makes sense. First graders are fascinated by ancient times—the mummies of Egypt, the myths of Greece, the great wars of Rome, the armies of China. The average first grader would much rather read about the embalming process than go on a field trip to his local center of government.

SEVENTY CENTURIES IN FOUR YEARS

Where's the text that supplies this comprehensive survey of history from its beginnings?

Well, there isn't one. The trivium in general steers away from "texts"--predigested historical facts, analyzed and reduced by someone else—and requires the student to tackle original sources. In the years to come, your history student will read Herodotus, not a textbook version of his histories; *The Federalist*, not a simplified explanation of the relationship between the states and the federal government.

Of course, students aren't reading at this level in first through fourth grades. But instead of limiting your elementary student to a text, you'll use a basic history survey to anchor your study. Armed with a library card, you'll study history using the fascinating, inventive, colorful history books published for young children.

Over the four years of the grammar stage, you'll progress from 5000 B.C. to the present, accumulating facts the whole way. These four years will be an exploration of the *stories* of history: great men and women of all kinds; battles and wars; important inventions; world religions; details of daily life and culture; and great books.

As a base text—a book that helps you keep your facts straight—you'll need a simple guide to world history. We recommend the Usborne Book of World History, a colorful, easy-to-follow chronology of world history. For the logic stage, you'll be using a more difficult text—the Kingfisher Illustrated History of the World. If possible, buy this book now; the memorization assignments we suggest are neatly outlined in its appendix. The Kingfisher Illustrated History can also serve as a source for questions that the Usborne Book of World History doesn't answer.

World history is divided into four segments, one segment per year of study. In first through fourth grades, the child will study history from 5000 B.C. through the present day. In fifth through eighth grades (the logic stage), he'll study it again, concentrating on cause-and-effect and chronological relationships. In grades 9 through 12, he'll repeat it yet again, this time studying original sources and writing thoughtful essays about them.

The classical method leans heavily on original sources. Because these increase as time goes on, the centuries aren't divided evenly among the four years of study (see the table). This breakdown, however, does allow for a fairly even division of labor from year to year. It takes notice of the fact that an immense amount of great literature was produced between the years 1600 and 1850, and that scientific discovery and technological changes accelerated at a tremendous rate between 1850 and the present day.

Period	Years	Studied during grades
Ancients	5000 в.с.–а.д. 400 (5,400 years)	1, 5, 9
Medieval-early Renaissance	400–1600 (1,200 years)	2, 6, 10
Late Renaissance-early modern	1600–1850 (250 years)	3, 7, 11
Modern	1850–present (150 years)	4, 8, 12

The Study of History

WHAT IF YOU'RE STARTING IN THE MIDDLE?

If you're beginning to home-school a second or third grader, remember that history is a story and that you should always start at the beginning. Most of the resources we recommend can be used and enjoyed by students between grades 1 and 6. Always start with the ancients and progress to the moderns over four years.

If you're teaching more than one child, you can certainly adjust your history lessons so that both students are covering the same period. Grammar skills, spelling, writing, and math should be taught individually, but both a first and third grader could study ancient history. Expect more writing, more discussion, and more outside reading from the third grader.

HOW TO DO IT

To study history and geography, you'll need a 3-inch three-ring notebook with lots of paper, a three-hole punch, art supplies, the *Usborne Book of World History*, the *Kingfisher Illustrated History of the World*, geography resources (a globe, a wall map of the world, and maps to color—see Resources for ordering information) and a library card.

The history notebook will contain your child's pictures, compositions, and narrations about history, and will organize the child's history study for grades 1 through 4.

Make four dividers:

Ancients, 5000 B.C.–A.D. 400 Medieval/Early Renaissance, 400–1600 Late Renaissance/Early Modern, 1600–1850 Modern, 1850–Present Day

In Chapter 5, we introduced you to narration, reading to the child (or giving the child a reading assignment) and then asking him to tell you what he's just read. You'll be using this technique extensively in the study of history.

When you open the *Usborne Book of World History*, you'll find that each one- or two-page segment tells a "story" about a civilization, an event, or a place. For each story in this history book, you should follow these four steps:

- Make a narration page. After your first or second grader tells you about what you've just read, write his version down on this page for him (by the end of second grade, the child should be writing down his own narrations).
- 2. Ask the child to illustrate what he's just read, and help him make a caption for the page.
- 3. Find the geographical area under discussion on the globe and map, and color the appropriate black-line map.
- 4. Go to the library to find out more about the subject.

First Grade: Ancients (5000 B.C.-A.D. 400)

During first grade, aim to spend at least three hours per week on history.

Use common sense. History is important, but the first grader is learning all sorts of foundational skills from scratch: reading, writing, putting sentences together, keeping track of the dates, telling time, adding, subtracting, and so forth. If the child misses some ancient history in first grade, he'll pick it up in fifth grade, or in ninth grade, or in independent reading *before* fifth grade. If he doesn't learn to read, write, and do basic mathematical operations, he'll be hampered for years. So in the early grades, give priority to reading, grammar, spelling, writing, and math. History and science follow on these basic abilities.

Ideally, you'll do history three days per week for an hour each day, or two days for a slightly longer period; or you'll do math, grammar, writing, and reading four days a week and devote the fifth to history and science. (See the Epilogue, "The Grammar Stage at a Glance," pages 224–228, for several sample schedules.)

In the Usborne Book of World History, each double-page spread covers a different topic in history. If you open the book to the first page, you'll find an illustration of an archaeological mound and the caption "Digging Up History." These two pages tell you how archaeologists find out about ancient cultures. Now you'll follow the four steps given above—writing a narration, drawing a picture, finding the location on the globe and map, and then going to the library.

Sit down on the sofa with your first grader and read the page to him. Let him ask questions. Take plenty of time; most of this vocabulary will be new to him. When you've read the double-page spread, move to a writing surface (a desk or the kitchen table). Get out a sheet of notebook paper, and give it the same title as the double-page spread ("Digging Up History"). Then ask the child to describe what you've just read. Prompt him with questions, if necessary.¹ Write his narration down in your neatest printing you want him to be able to read it. When this page is finished, ask the child to read it back to you. Then put it into the notebook.

Now ask the child either to draw a picture of something on the page that strikes his fancy or to color a picture from one of the historical coloring books listed in Resources, at the end of this chapter. Although the child should have fun, don't let him do sloppy work; ask him to draw or color carefully. Coloring history books neatly "within the lines" is an exercise in historical realism and fine motor skills, not a vehicle for artistic impression. When this is finished, write a caption for the page. (By the end of first grade, write out the caption on another sheet of paper, and ask the child to

¹See Chapter 5, page 83, for a discussion of the narration method. You'll progress, over the first- and second-grade years, from writing what the child dictates to you, to writing his words out and requiring him to copy it over in his own writing, to helping the child write his own original sentences without a written model in front of him. copy it onto the drawing; by the end of second grade, he should be writing his own captions.) Then put it in the notebook as well. Keep these pages in chronological order. By the end of the year, this notebook will contain the child's own story of ancient history.

Only careful work goes into the notebook. A composition placed in the notebook should be a final draft without spelling errors. Handwriting, cut edges, labels, and coloring should all be the child's best effort.

For actual history, the Usborne Book of World History gives map details. Find this detail on the globe. Most children enjoy putting their finger on their own location and then traveling to the ancient country under discussion. Then go to the wall map, which is larger and more detailed than the globe, and find the location there. As you study each region of history, also have the child color the black-line map from *Maps: The World and United States* (see Resources, at the end of this chapter). Punch holes in the colored map, and put it into the notebook as well.²

You may finish this process in one lesson; you may want to stretch it over two. When the narration and the drawing have been completed, it's time to go to the library. Find books in the children's section about anything on the page that strikes the child's interest. (You can buy books, too; we've recommended a number of titles in Resources, at the end of this chapter.) Bring the books home, and read them to the child; ask him to read easier books on his own.

The "Digging Up History" page has paragraphs about modern archaeology, the Rosetta stone, tree-ring dating, and radiocarbon dating. A look through the library catalog might reveal several children's books about archaeology, one with pop-up models of archaeological sites, and a first-grade reader about the Rosetta stone. Check them out, and read them at home.

Then move on to the next topic in the history book.

As you continue, you'll find that some pages provide no topics for extra reading (we couldn't find anything about Ur written for children), while others will lead you to shelves filled with wonderful books (when we arrived at ancient Egypt, we read only a tiny fraction of the available titles

²For first graders, looking up the location on a globe will probably be sufficient. You can skip the map coloring for three reasons: first graders may not have the patience or coordination to color small spaces; they may not be able to understand an isolated map (say, of Europe) without seeing its place on the earth as a whole; and the boundaries of ancient nations are fluid and ever-changing. Start the map coloring in earnest when you reach the second-grade level. about mummification and pyramids). Use your common sense. You don't have to do a library visit for every page. By the end of first grade, you want to cover through A.D. 400, if possible—about ninety pages in the *Usborne Book of World History*. Don't labor to find books on obscure topics. Do a narration, a drawing, and move on. If the child's imagination is sparked by the invention of writing, the first catapult, or Stonehenge, let him read library books about it for a couple of weeks before moving on. You can hurry over (or even skip) some pages without injury.

Keep the following tips in mind as you study history:

Don't limit yourself to books the child can read on his own. Most children's history books are written on a third- to seventh-grade reading level. Check them out, and read them to your young student. Soon he'll be reading them on his own.

You'll never read every good book in the library, so don't even try. At the beginning, you may find it easier to go to the library on your own and bring books home. By second grade, however, you'll want to take your child with you at least part of the time so that he can learn to find books in the catalog and then locate them on the shelf. (A children's librarian will be glad to show him—and you—how the catalog works.)

Use hands-on projects as well as books. We've recommended several resources for history projects: treasure chests with Egyptian beads inside, ancient Chinese games, books that tell you how to make Greek clothing or Roman food.

You'll want the child to make notebook pages about some of the library books and projects he does. Use your judgment. As with reading, don't make him do a page for every book, or the fun of discovery will quickly become drudgery.

A tip for recording history projects. Veteran home schoolers continually wonder what to do with all the maps, projects, crafts, and activities their children produce. We suggest that when you finish a project, you take a picture of it (Polaroids are fun, if the budget permits), tape the picture to a notebook page, and record the date. The project has thus been immortalized. Eventually, you can disassemble it or throw it away.

Pay special attention to biographies. Try to make a page for all the great men and women you encounter (Sargon, Moses, Hammurabi, Hatshepsut, Tutankhamen, Alexander the Great, Julius Caesar, . . . the list goes on). These biographies can be wonderful "pegs" to hang the progression of history on. You may not remember much about ancient history, but you probably remember that Alexander cried when he found no more worlds to conquer. We've supplied a list of great men and women at the end of this chapter, for your reference.

Again, don't feel that you have to read a biography of every historical figure. The elementary years are not the time to develop comprehensive knowledge, but to see how history progresses. First graders are not only learning how to record information, but the information itself, so you'll move slowly at first. If you spend a lot of time on the first Olympic games and end up skipping the Scythians, nothing dreadful will happen. Your child will come across this period again in fifth grade, when he's reading and writing and already has a basic grasp of ancient history.

Remember, file all these pages in the history notebook chronologically. By the end of fourth grade, the history notebook will be crammed with fascinating information; the student's first trip through the entire expanse of world history, organized and recorded in his own hand (and yours).³

What about testing?

Formal testing is unnecessary at this level. If the child can tell you what you've read to him, he's been listening. If he reads several books on the same subject, the information will be fixed in his mind. Once a month, sit down with the child and read through the pages he's already done so that he can review the history he's covered.

Memorization

The history notebook should be accompanied by a certain amount of memorization. Dates, personalities, and wars serve as pegs on which to hang incoming information. (Alexander Graham Bell invented the telephone in 1876. Quick: Was this before or after the Civil War?)⁴

You can pick your own "pegs." Almost any series of major events or personalities will do, but these "mental pegs" will be most useful if they correspond to the child's interest. In first grade, people and events will probably be more meaningful than dates. A first grader could memorize the pharaohs of Egypt and the first twenty emperors of Rome. (Any six year old who can say tyrannosaurus can learn to say Amenhotep or

³The notebooks are also useful for evaluation at testing time (see Part IV for more on testing).

⁴After. The Civil War was fought from 1861 through 1865.

Pertinax.)⁵ The *Kingfisher Illustrated History of the World* has a "Ready Reference" section in the back of the book that lists names of Egyptian dynasties, principal pharaohs, Chinese dynasties, kings of Rome, and emperors of the Roman Empire. Aim to memorize at least two of these lists by the end of the first-grade year. A first grader who reads a list out loud every day will have it memorized within weeks.

Suggested Schedule

A good rule of thumb is to try to cover two one-page topics or one two-page topic per week. For example, in the *Usborne Book of World History*, the rise of Babylon and Mesopotamian myths each take one page; you should be able to do both in one week. The Canaanites and Philistines cover a two-page spread; spend a week on this topic. The section on ancient Egypt is extensive—an entire spread on houses and furniture—so that you could move quickly over some of this material.

If you're studying history on Mondays, Wednesdays, Fridays:

Monday	Read two pages in the Usborne Book of World History. Look
	up locations on the globe. Make a narration page, and put
	it in the history notebook.
Wednesday	Ask the child to look back over Monday's pages and make
	a drawing of something that interests him. Help him to
	caption it. Read one or two library books on the subject
	out loud together. (You've selected these books ahead of
	time, either on last week's library trip with the child or on
Friday	Dead one to three library books on the subject out loud
Friday	Read one to three library books on the subject out loud
	together. Or do a history project/activity. Go over memory
	WORK.

If you're studying history on Tuesdays and Thursdays:

Tuesday Read two pages in the *Usborne Book of World History*. Look up locations on the globe. Make a narration page, and put it in the history notebook.

⁵Memorization tip: read the names onto a tape, and have the child listen to the taped list every morning; he'll have them down in no time.

Thursday Ask the child to look back over Tuesday's pages or make a drawing of something that interests him. Help him to caption it. Go over memory work. Read two to four (depending on length) library books on the subject out loud together. Or read one to two books, and do a history project or activity. Take a picture of the project, and store it in the history notebook.

Second Grade: Medieval-Early Renaissance (400-1600)

Using narration, picture drawing, globe work, and library trips, the second grader will cover history from about 400 to 1600 (in the *Usborne Book of World History*, this corresponds to pages 92–145). You'll be able to spend more time this year on each page, which is good. And each double page will yield a number of library possibilities. Pages 104–105, for example, are entitled "Village Life, AD 1000 to AD 1450." After making a narration page and a drawing page on this section and locating Europe on the globe, you could follow up on any of the topics mentioned: feudal life, the Church in the Middle Ages, the Black Death, village fairs, medieval farming techniques, medieval buildings. The next page, "Towns and Trade," introduces medieval charters, trade guilds, sewage arrangements in the Middle Ages (not pretty), mystery plays, the first banks, trade with India and China, and bandits.

At the beginning of second grade, write half of the child's narration, and ask him to write (or copy from your model) the other half. Aim to have him writing his own narrations by the end of the year. Again, don't do these narrations for all the books he reads; this would tie his reading skills to his writing skills, which are typically slower to develop. If he writes the narration for the *Usborne* pages, he can dictate other narrations to you (or draw pictures).

Don't forget to review once a month, and look back at those first-grade pages several times during the year.

Memorization

A second-grader should memorize the rulers of England from Egbert through Elizabeth I, along with each ruler's family allegiance (Saxon, Dane, Norman, Plantagenet, Lancaster, York, Tudor); this information is found in the back of the *Kingfisher Illustrated History*. Other options, depending on the child's interest and background, are the rulers of Scotland from Malcolm II through James VI, the later Holy Roman Emperors, or the rulers of other medieval countries—Françe, Spain, Japan, Russia. Second graders could also memorize the major wars and major discoveries (listed at the back of the *Kingfisher* book). Aim for two lists: the rulers of England plus one other set of rulers, wars, or discoveries.

Certain pieces of "source literature" — original writings—should also be committed to memory. Second graders should memorize the first paragraphs of the Magna Carta (your local library should have copies).

Suggested Schedule

Aim to spend a week on each two-page section. If you find yourself getting behind, skip a few library visits; the history book itself is stuffed with information. You'll want to follow the same daily schedule as in first grade. But don't forget to add map coloring to the day that you do your globe work.

Third Grade: Late Renaissance-Early Modern (1600-1850)

Third graders will cover the time periods from approximately 1600 to 1850 (pages 146–189 in the *Usborne Book of World History*). In several sections, the *Usborne* book touches briefly on the twentieth century (see, for instance, "The West, 1810–1914" or "Life under the Tsars, 1762–1914"). In third grade, even though you're studying the years 1600 to 1850, don't try to study "The West" only up to 1850 and leave the rest for fourth grade. Just follow the *Usborne* divisions, even if it means that you're getting a jump start on the twentieth century.⁶

Continue with narration (these narrations should now begin to resemble one- to two-paragraph compositions—see Chapter 5 for more details), drawings, globe study, and library visits. This is the shortest section of the *Usborne* book, which means that you can spend several weeks on each double-page segment. Such sections as "Machines and Factories," which

⁶The 1850 division between third- and fourth-grade history becomes more important in the logic and rhetoric stages, where 1850 breaks English literature and scientific discovery into two manageable chunks. covers the industrial revolution, James Watts's invention of the steam engine, eighteenth-century coal mines, child labor, and the Luddites, should give you material for at least three library visits.

By third grade, you can require the child to make several pages per week for his history notebook. Writing should become easier and easier; illustrations should be more detailed.

Memorization

During the third-grade year, the student should memorize at least the beginning of the Declaration of Independence (most children can master the entire document, given enough time and repetition). The third grader should also memorize the first twelve presidents of the United States and the major wars for the period 1600 to 1850 (these lists are in the back of the *Kingfisher Illustrated History*). You can assign other lists—rulers of other countries, important discoveries and explorations—at your own discretion.

Note: The Usborne Book of World History covers the Civil War very briefly. The Civil War should actually be studied at the beginning of the fourthgrade year, but the follow-up volume—the Usborne History of the Twentieth Century—starts at the century's turn. We suggest that you study the Civil War briefly now and then return to it at the beginning of the fourth-grade year, where it will serve as a bridge between the two years' history study. For the Civil War, see Resources, at the end of this chapter.

Suggested Schedule

The third grader will need to cover one two-page spread or two one-page sections per week. Do *not* spend extra time on the Civil War; simply read this section and move on. Follow the same weekly schedule as first grade. The third grader should be reading more books himself, but you should still plan to read aloud those books that may be over your child's reading level.

Since your third grader may enjoy doing all his history work in one morning, you could schedule Friday morning as "history day." On this day, you could do history for three hours, perhaps from 9:30 until lunch: readings in the *Usborne Book of World History*, preparation of a narration (a one-page composition), a drawing or project/activity, and the reading of two to three relevant books. See the sample schedules in Chapter 38.

Fourth Grade: Modern (1850-Present)

The fourth grader will use the Usborne History of the Twentieth Century for his study. Follow the same pattern: narration (now short compositions of two to three paragraphs), illustrations, globe work, and library visits. The Usborne History of the Twentieth Century is longer and more detailed than comparable sections in the Usborne Book of World History, so you won't want to visit the library for every subject. Let the child pick the subjects that interest him—with input from you, of course. Some of the subjects (the beginnings of World War I) are worth a library visit; others (the development of Superman) aren't.

Because the Usborne History of the Twentieth Century begins after the Civil War, we suggest that you take three to four weeks at the beginning of the school year to study the Civil War, using the Civil War Literature Pack designed for home schoolers. It consists of six Civil War books for young readers, summaries, facts, discussion questions, and projects. Move from this to the Usborne History of the Twentieth Century.

The fourth grader should do extra map work on the United States. Use one of the coloring or geography resources listed in Resources under "Modern: 1850–Present (Fourth Grade)" at the end of this chapter. By the end of this year, the fourth grader should be able to locate states on a map of the United States.

Also, plan to spend the last two weeks of the year studying the history of your own state. Your public library should carry several series of books about the states. Look for the From Sea to Shining Sea series; each state has its own heavily illustrated book with easy-to-read text on history, geography, and culture. The America the Beautiful series is on a higher reading level. Advanced fourth graders could use this, but most children will be better off with the From Sea to Shining Sea books.

Memorization

Fourth graders should know the Preamble to the Constitution, the Gettysburg Address, and the purpose (if not the exact words) of the amendments to the Constitution. Also, plan to finish memorizing the list of presidents from 1850 to the present, the dates of the major wars since 1850 (this list is in the *Kingfisher Illustrated History of the World*), and the capitals of the fifty states. At the end of this chapter, we've suggested songs, games, flash cards, and coloring books to help with this memory work.

Suggested Schedule

For a thirty-six-week school year, try to adhere to this schedule:

Weeks 1–4	Civil War Literature Pack
Weeks 5–34	Usborne History of the Twentieth Century
Weeks 35–36	State history

The twentieth century is a busy one. You'll need to read through an average of six pages per week in the *Usborne History of the Twentieth Century*. Select one or two major events or personalities to read more about. (Don't try to study it all.) As in third grade, you can use the following schedules or do all history work on one morning.

For the Civil War, you could follow this Monday-Wednesday-Friday schedule:

Monday	Spend 1 hour reading from one of the Civil War books.
Wednesday	Continue reading for ½ hour. Then stop and discuss the
	material, using the discussion questions and facts
	provided in the Civil War Literature Pack. Create a
	one-page narration from this discussion.
Friday	Do Civil War projects or activities.

If you're studying history Tuesdays and Thursdays:

Tuesday	Read from the Civil War books.
Thursday	Discuss the material; create a one-page narration
	covering material; conclude by working on a project or
	activity.

For the *History of the Twentieth Century*, if you're studying history on Mondays, Wednesdays, and Fridays:

Monday Read six pages in the Usborne Book of World History. Look up locations on the globe. Make a narration page Seventy Centuries in Four Years: History and Geography 139

covering the major events of the reading—this page can look like an outline or a composition, depending on the amount of material covered.

- Wednesday Color maps. Read one or two additional books on a selected event covered in Monday's reading. Draw a picture of some aspect of this event, caption it, put it into the notebook.
- Friday Read one or two additional library books on Wednesday's event or on another selected event. *Optional:* do a history project/activity. Go over memory work.

If you're studying history Tuesday and Thursdays:

Tuesday	Read six pages in the Usborne Book of World History.
	Look up locations on the globe. Color maps. Make a
	narration page covering the major events of the
	reading—this page can look like an outline or a
	composition, depending on the amount of material
	covered. Select one or two events to cover in greater
	depth.
Thursday	Read two or three additional library books on selected
	events; draw a picture of these events, or do a history
	project/activity. Go over memory work.

For state history, spend your history periods reading through a selected state history book. Stop at the end of each chapter, and make a narration page. Use the last two hours of state history to color the state flag and the state map (see Resources for more information). Making a scrapbook of your own state might be an interesting project for weekends or summer afternoons; state chambers of commerce and places of historical interest will give you brochures to cut and paste.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. The titles we list are only a few of the many available. Plan on exploring library and bookstore shelves for yourself. One of the best ways to find good history books is to call for the catalogs listed in Chapter 46 and browse through the history sections (particularly those in the American Home-School Publishing and Greenleaf Press catalogs).

During first and second grades, you should plan on reading many of these biographies and histories aloud. We have suggested a few simple books that young children can read alone.

Basic texts for the four-year grammar stage are listed first. A supplementary list is provided for each year of study. The first section for each year lists books that provide general information about the historical period, including coloring books and other project resources. The second section lists biographies alphabetically by subject.

Because the Usborne Book of World History tends to be short on personalities up until about 1600, we have supplied first- and second-grade chronological lists of famous people (remember that you don't have to study them all). For third and fourth grade, we have listed historical topics for you to explore; third and fourth graders should have no difficulty finding famous people on their own.

Basic Texts

Civil War Literature Pack.

\$34.75. From Rainbow Resource Center. Includes the following seven books, which can also be found separately at bookstores or bought through Greenleaf Press:

Cassidy, Janet. The Civil War: Literature Units, Projects and Activities. New York: Scholastic, 1995.

\$10.95. This book includes summaries for the other six texts, facts, discussion questions, projects, and a play. Use it as your curriculum guide for the Civil War.

Cox, Clinton. Undying Glory: The Story of the 54th Regiment. New York: Scholastic, 1993.

\$3.99. The story of the first African-American Union regiment. Fleischman, Paul. *Bull Run*. Illus. David Frampton. New York: HarperTrophy, 1995.

\$4.95. The story of sixteen characters whose paths meet at Bull Run. This will be too difficult for many fourth graders, but it's worth reading out loud.
Freedman, Russell. *Lincoln: A Photobiography*. New York: Clarion, 1989.\$7.95. This Newbery Medal winner not only tells Lincoln's story, but shows him aging through a sequence of profiles.

Hunt, Irene. Across Five Aprils. New York: Berkeley, 1991.

\$4.95. 1965 Newbery Honor book about Jethro Creighton, a young boy who lived during the Civil War.

Murphy, Jim. The Boys' War: Confederate and Union Soldiers Talk about the Civil War. New York: Clarion, 1993.

\$7.95. The original letters and journals of boys under sixteen who fought in the war.

Reit, Seymour V. Behind Rebel Lines: The Incredible Story of Emma Edmonds, Civil War Spy. New York: Harcourt Brace, 1991.

\$6.00. The story of a young female spy.

Evans, Charlotte, gen. ed. *The Kingfisher Illustrated History of the World*. New York: Kingfisher Books, 1992.

\$39.95. Order through a bookstore or from Rainbow Resource Center. You'll use this for the logic stage, but buy it now if possible. The *Kingfisher Illustrated History* has time lines, short biographies, maps, and beautiful illustrations. It's an encyclopedia of history in one volume.

Hopkinson, Christina, et al. The Usborne History of the Twentieth Century. Tulsa, Okla.: E.D.C. Publishing, 1994.

\$18.95. Order from American Home-School Publishing.

Tyler, Jenny, et al. The Usborne Book of World History. Tulsa, Okla.: E.D.C. Publishing, 1986.

\$24.95. Order from a bookstore, an Usborne representative, or Rainbow Resource Center.

Basic Geography Resources

A globe is best bought at a local school or office supply store. Try to find one with raised mountains if possible.

Maps: The World and United States. Teachers Friend Publications, 1991.

\$8.95. Order from Rainbow Resource Center. This set of black-line maps covers the entire world in varying degrees of detail. You can color these or reproduce them and color the copies. Each map has a labeled and unlabeled version.

A world map (hemispherical progression) can be purchased at any school supply store or ordered from Rainbow Resource Center. If you subscribe to *National Geographic*, you'll get an updated world map each year.

Ancients, 5000 B.C.-A.D. 400 (First Grade)

List of Great Men and Women to Cover Cheops, pharaoh of Egypt (2700-2675 B.C.) Abraham (c. 2100 в.с.) Hammurabi (c. 1750 в.с.) Queen Hatshepsut of Egypt (c. 1480 B.C.) Moses (c. 1450 B.C.) Tutankhamen (c. 1355 B.C.) Nebuchadnezzar (1146–1123 B.C.) King David (c. 1000 B.C.) Homer (с. 800 в.с.) Romulus (753–716 в.с.) Sennacherib (705-681 B.C.) Lao-tse (Chinese philosopher, b. 604 B.C.) Pythagoras (581–497 B.C.) Confucius (K'ung Fu-tsu) (551–479 B.C.) Buddha (Siddhartha Gautama) (550-480 B.C.) Socrates (470-399 B.C.) Plato (427-347 B.C.) Aristotle (384–322 в.с.) Alexander the Great (356–323 B.C.) Hannibal (fought with Rome c. 218–207 B.C.) Cicero (106–43 в.с.) Julius Caesar (100–44 B.C.) Virgil (70–19 в.с.) Caesar Augustus (c. 45 B.C.-A.D. 14) Jesus Christ (c. 4 B.C.-A.D. 33) Saint Paul (c. A.D. 45) Nero (died A.D. 68) Constantine the Great (ruled A.D. 306-337)

General Information

Ancient China Treasure Chest. Philadelphia: Running Press, 1996. \$19.95. Order from the Education Connection. A small treasure chest containing a brush and ink set, lessons on how to draw Chinese characters, coins, a fan, charts, stickers, and a booklet about Taoism, Chinese dynasties, and archaeological discoveries. Some of the work is difficult for first graders, so plan on helping out.

Ancient Egypt Treasure Chest. Philadelphia: Running Press, 1994.

\$19.95. Order from the Education Connection. A small treasure chest containing (among other things) Egyptian jewelry, hieroglyphic stamps, papyrus, and a board game. Some of the work is difficult for first graders, so plan on helping out.

Chelepi, Chris. Growing Up in Ancient Greece. Mahway, N.J.: Troll Associates, 1992.

\$4.95. Order from Troll Communications or from American Home-School Publishing. Easy reading about daily life in the ancient world.

Chisholm, Jane. Living in Roman Times. Tulsa, Okla.: E.D.C. Publishing, 1985.

\$4.50. Order from an Usborne representative or from Greenleaf Press. Second- to fourth-grade reading level.

Who Built the Pyramids? Tulsa, Okla.: E.D.C. Publishing, 1996.
\$4.95. Order from an Usborne representative or from Greenleaf Press.
First- to third-grade reading level.

A Coloring Book of Ancient Egypt. Santa Barbara, Calif.: Bellerophon Books, 1988.

\$4.95. Order from Greenleaf Press. Museum-shop-quality coloring book with designs and images from Egyptian tombs and monuments.

A Coloring Book of Ancient Greece. Santa Barbara, Calif.: Bellerophon Books, 1985.

\$4.95. Order from Greenleaf Press. Museum-shop-quality coloring book with designs from Greek pottery, frescoes, temples, and tombs.

A Coloring Book of Ancient Rome. Santa Barbara, Calif.: Bellerophon Books, 1988.

\$4.95. Order from Greenleaf Press. Museum-shop-quality coloring book with Roman art depicting Caesars, senators, chariot races, and scenes.

Cox, Phil Roxbee. Who Were the Romans? Tulsa, Okla.: E.D.C. Publishing, 1996.

4

\$4.95. Order from an Usborne representative or from Greenleaf Press. First- to third-grade reading level.

David, Rosalie. Growing Up in Ancient Egypt. Mahway, N.J.: Troll Associates, 1993.

\$4.95. Order from Troll Communications or from American Home-School Publishing. Easy reading about daily life in the ancient world.

Green, John. Life in Ancient Egypt. New York: Dover, 1989.

\$2.95. Order from the Education Connection. An artist's detailed drawings of Egyptian life.

\$2.95. Order from the Education Connection. An artist's detailed drawings of Greek life.

——. Life in Ancient Rome. New York: Dover, 1997.

\$2.95. Order from the Education Connection. An artist's detailed drawings of Roman life.

Payne, Elizabeth. The Pharaohs of Ancient Egypt. New York: Random House, 1998.

\$4.95. Order from Greenleaf Press. Each chapter tells about one pharaoh. Fourth- to fifth-grade reading level but easily read aloud. Covers Egypt's history from the beginning to its conquest by Greece and Rome.

Queen Nefertiti Coloring Book. Santa Barbara, Calif.: Bellerophon Books, 1992.
\$2.50. Order from Greenleaf Press. Museum-shop-quality coloring book with actual images from tombs and monuments in Egypt.

Teague, Ken. Growing Up in Ancient China. Mahway, N.J.: Troll Associates, 1993.

\$4.95. Order from Troll Communications or from American Home-School Publishing. Easy reading about daily life in the ancient world.

Verges, Gloria, et al. Journey through History: Prehistory to Egypt. New York: Barrons, 1988.

\$6.95. Order from Greenleaf Press. This is a beautifully illustrated history with child-centered stories, on a second- to third-grade reading level. We highly recommend it.

Medieval/Early Renaissance, 400-1600 (Second Grade)

List of Great Men and Women to Cover Saint Augustine (writing c. 411) Attila the Hun (c. 433-453) King Arthur (probably killed in 537 at the Battle of Camlan) Mohammed (570-632) Charlemagne (ruled 768-814) Alfred the Great (849–899) Leif Ericsson (discovered America c. 1000) Edward the Confessor (1042-1066) Genghis Khan (b. 1155) Dante Alighieri (1265-1321) Geoffrey Chaucer (c. 1340-1400) Jan van Eyck (c. 1390-1441) Johannes Gutenberg (c. 1396-1468) Christopher Columbus (1451–1506) Leonardo da Vinci (1452-1519) Amerigo Vespucci (1454–1512) Nicolaus Copernicus (1473–1543) Michelangelo (1475–1564) Ferdinand Magellan (1480-1521) Martin Luther (1483-1546) Raphael (1483-1520) Nostradamus (1503-1566) John Calvin (1509-1564) Hernando Cortés (entered Mexican capital, 1519) Tycho Brahe (1546–1601) Walter Raleigh (1554–1618) William Shakespeare (1564–1616) Galileo Galilei (1564-1642)

General Information

Ancient Aztecs Treasure Chest. Philadelphia: Running Press, 1996.
\$19.95. Order from the Education Connection. The chest contains Aztec crafts, a board game, a pottery flute, a model of the Great Temple, and various information about Aztec daily life and language.

Anderson, John K., et al. A Coloring Book of the Middle Ages. Philadelphia: Bellerophon, 1985.

\$3.95. Order from Greenleaf Press. Pictures of knights, kings, castles, and monks adapted from medieval manuscripts, paintings, carvings, and il-lustrations.

Chisholm, Jane. *Who Were the Vikings?* Tulsa, Okla.: E.D.C. Publishing, 1995. \$4.95. Order from an Usborne representative or from Greenleaf Press. First- to third-grade reading level.

Clare, John. The Italian Renaissance: Living History. San Diego, Calif.: Gulliver Books, 1995.

\$16.95. Order from Greenleaf Press. This beautiful book is illustrated with photographs of actors posing as historical figures.

Copeland, Peter F. Columbus Discovers America Coloring Book. New York: Dover, 1988.

\$2.95. Order from the Education Connection.

——. Indian Tribes of North America. New York: Dover, 1988.

\$2.95. Order from the Education Connection.

Cox, Phil Roxbee. What Were Castles For? Tulsa, Okla.: E.D.C. Publishing, 1995.

\$4.95. Order from an Usborne representative or from Greenleaf Press. First- to third-grade reading level.

Gee, Robyn. Living in Castle Times. Tulsa, Okla.: E.D.C. Publishing, 1983.
\$4.50. Order from an Usborne representative. Part of the Usborne First History series, this features a child who guides the reader through daily life. Second- to fourth-grade reading level.

Green, John. Life in a Medieval Castle and Village Coloring Book. New York: Dover, 1991.

\$2.95. Order from the Education Connection.

Knights Treasure Chest. Philadelphia: Running Press, 1995.

\$19.95. Order from the Education Connection. The treasure chest contains heraldic insignia—sealing ring, seals and clay, stencils, and a coat of arms—as well as a model catapult, a Gothic window craft, and more. Lindow, John, et al. Myths and Legends of the Vikings Coloring Book. Philadelphia: Bellerophon, 1985.

\$3.95. Order from Greenleaf Press. Adapted from from the monuments of ancient Nordic art; combines authentic Norse designs from historical sources with a good deal of explanatory text.

Queen Elizabeth I: Paper Dolls to Color. Philadelphia: Bellerophon, 1985.
\$3.95. Order from Greenleaf Press. Paper dolls of Elizabeth I, Sir Walter Raleigh, the earl of Essex, and Mary, queen of Scots, along with text describing some of them by Elizabeth herself. Elizabeth and Mary each have several outfits.

The Renaissance Coloring Book. Philadelphia: Bellerophon, 1985.\$3.95. Order from Greenleaf Press. Images from Renaissance paintings, engravings, and frescoes.

Smith, A. G. Knights and Armor Coloring Book. New York: Dover, 1985.\$2.95. Order from the Education Connection. Drawings of knights and armor at different periods in history.

Medieval Costume Paper Dolls. New York: Dover, 1995. \$3.50. Order from Rainbow Resource Center.

. Story of the Vikings Coloring Book. New York: Dover, 1988.
\$2.95. Order from the Education Connection. An artist's rendition of Viking history to color.

Tierney, Tom. *Knights in Armor Paper Dolls*. New York: Dover, 1996. \$3.50. Order from Rainbow Resource Center.

Tweddle, Dominic. Growing Up in Viking Times. Mahway, N.J.: Troll Associates, 1993.

\$4.95. Order from Troll Associates or from American Home-School Publishing. Easy reading about daily life in the ancient world.

Verges, Gloria, et al. Journey through History: The Middle Ages. New York: Barrons, 1988.

\$6.95. Order from Greenleaf Press. This is a beautifully illustrated history with child-centered stories, on a second- to third-grade reading level. We highly recommend it.

-. Journey through History: The Renaissance. New York: Barrons, 1988.

Biographies

Christopher Columbus

DeKay, James T. Meet Christopher Columbus. New York: Random House, 1989.

\$3.99. Order from American Home-School Publishing. A Step-Up Biography on a second- to fourth-grade reading level.

Greene, Carol, et al. Christopher Columbus: A Great Explorer. Danbury, Conn.: Children's Press, 1989.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Drake, Sir Francis

Gerrard, Ray. Sir Francis Drake: His Daring Deeds. New York: Sunburst, 1989.

Elizabeth I

Greene, Carol, et al. *Elizabeth the First: Queen of England*. Danbury, Conn.: Children's Press, 1990.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Sabin, Francene. Young Queen Elizabeth I. Mahway, N.J.: Troll Associates, 1990.

\$3.95. Buy from Troll Communications or from American Home-School Publishing. From the Troll Easy Biography series, designed for second- to fourth-grade use.

Leif the Lucky

d'Aulaire, Ingri, and Edgar Parin. *Leif the Lucky*. Sandwich, Mass.: Beautiful Feet Books.

\$13.95. Order from American Home-School Publishing.

Late Renaissance/Early Modern, 1600-1850 (Third Grade)

For Civil War resources, see "Modern, 1850–Present (Fourth Grade)" (pages 156–166).

List of Historical Topics to Cover

Your children's librarian can point you to third-grade-level books exploring these major events (listed chronologically):

the Mayflower

early American settlements Russia under Peter the Great and his successors Prussia in the eighteenth century the Enlightenment the agricultural revolution Native American cultures the British in India the French Revolution British-French conflict in Canada the American Revolution the Napoleonic Wars the industrial revolution Simón Bolívar's fight for independence in South America the siege of the Alamo the California gold rush Australia's beginnings as a penal colony.

General Information

American Indians Treasure Chest. Philadelphia: Running Press, 1995.

\$19.95. Order from the Education Connection. The chest includes Indian crafts, games, and a handbook about the culture and traditions of Plains Indian tribes.

Benchley, Nathaniel. *George the Drummer Boy*. New York: HarperTrophy, 1987.

\$3.75. Order from Rainbow Resource Center. Historical fiction on a second- to fourth-grade reading level about the battles at Lexington and Concord.

——. Sam the Minuteman. New York: HarperTrophy, 1987.

\$3.75. Order from Rainbow Resource Center. Historical fiction on a second- to fourth-grade reading level about a Revolutionary War soldier.

Bliven, Bruce. *The American Revolution*. New York: Random House, 1987.\$5.99. Part of the Landmark series, this book tells the story of the Revolution for ages 9–12.

Clare, John. The Italian Renaissance: Living History. San Diego, Calif.: Gulliver Books, 1995.

\$16.95. Order from Greenleaf Press. This beautiful book is illustrated with photographs of actors posing as historical figures.

Copeland, Peter F. Early American Trades. New York: Dover, 1980.\$2.95. Order from the Education Connection. Drawings of the different occupations in colonial America.

_____. Everyday Dress of the America Colonial Period. New York: Dover, 1976.

_____. Story of the American Revolution. New York: Dover, 1990.

_____. Uniforms of the American Revolution. New York: Dover, 1980.

Harness, Cheryl. They're Off! The Story of the Pony Express. New York: Simon & Schuster, 1986.

\$16.00. The story of communications between East and West in the mid-1800s, written on a third- to fourth-grade reading level.

King, David C., and Bobbie Moore. Colonial Days: Discover the Past with Fun Projects, Games, Activities, and Recipes. New York: Wiley, 1997.

———. Pioneer Days: Discover the Past with Fun Projects, Games, Activities, and Recipes. New York: Wiley, 1997.

Steedman, Scott. A Frontier Fort on the Oregon Trail: The Inside Story. New York: Peter Bedrick Books, 1994.

\$10.95. Order from Greenleaf Press. This book is full of double-page, detailed drawings of the inside of a frontier fort. Steedman also describes many aspects of life on the frontier.

Tierney, Tom. American Family of the Early Republic. New York: Dover, 1988.

\$4.95. Order from Rainbow Resource Center. Large, historically accurate paper dolls.

———. American Family of the Pilgrim Periods in Full Color. New York: Dover, 1987.

\$4.95. Order from Rainbow Resource Center. Large, historically accurate paper dolls.

Verges, Gloria, et al. Journey through History: The Renaissance. New York: Barrons, 1988.

\$6.95. Order from Greenleaf Press. This is a beautifully illustrated history with child-centered stories, on a second- to third-grade reading level. We highly recommend it.

Wingate, Philippa, et al. Who Were the First North Americans? Tulsa, Okla.: E.D.C. Publishing, 1996.

\$4.95. Order from Greenleaf Press or from an Usborne representative. This is a Starting Point History title, designed for grades 1–3.

Biographies

Adams, Abigail

Sabin, Francene. Young Abigail Adams. Mahway, N.J.: Troll Associates, 1992.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Wagoner, Jean Brown. Abigail Adams: Girl of Colonial Days. New York: Aladdin, 1992.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Adams, John

Santrey, Laurence. John Adams: Brave Patriot. Mahway, N.J.: Troll Associates, 1986.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Attucks, Crispus

Millender, Dharathula H. Crispus Attucks: Black Leader of Colonial Patriots. New York: Aladdin, 1986.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Bach, Johann Sebastian

Greene, Carol. Johann Sebastian Bach: Great Man of Music. Danbury, Conn.: Children's Press, 1993.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Beethoven, Ludwig van

Greene, Carol. Ludwig van Beethoven: Musical Pioneer. Danbury, Conn.: Children's Press, 1990.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Sabin, Louis. Ludwig van Beethoven: Young Composer. Mahway, N.J.: Troll Associates, 1992.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Black Hawk

Oppenheim, Joan. Black Hawk: Frontier Warrior. Mahway, N.J.: Troll Associates, 1979.

\$3.50. Order from Troll Communications or from American Home-School Publishing. These Native American Biographies are written on a third- to fourth-grade level.

Boone, Daniel

Brandt, Keith. Daniel Boone: Frontier Adventures. Mahway, N.J.: Troll Associates, 1989.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Buffalo Bill

Stevenson, Augusta. Buffalo Bill: Frontier Daredevil. New York: Aladdin, 1991.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Crockett, Davey

Carpenter, Eric. Young Davey Crockett: Frontier Pioneer. Mahway, N.J.: Troll Associates, 1995.

\$3.50. Order from Troll Communications or from Greenleaf Press.

Seventy Centuries in Four Years: History and Geography 153

The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Franklin, Benjamin

Santrey, Laurence. Young Ben Franklin. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Scarf, Maggie. *Meet Benjamin Franklin*. New York: Random House, 1989.\$3.99. Order from American Home-School Publishing. A Step-Up Biography, written on a second- to fourth-grade reading level.

Henry, Patrick

Sabin, Louis. Patrick Henry: Voice of the American Revolution. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Hadyn, Franz Joseph

Greene, Carol. Franz Joseph Haydn: Great Man of Music. Danbury, Conn.: Children's Press, 1994.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Jackson, Andrew

Sabin, Louis. Andrew Jackson: Frontier Patriot. Mahway, N.J.: Troll Associates, 1986.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Jefferson, Thomas

Barrett, Marvin. *Meet Thomas Jefferson*. New York: Random House, 1989.\$3.99. Order from American Home-School Publishing. A Step-Up Biography, written on a second- to fourth-grade reading level.

Greene, Carol. Thomas Jefferson: Author, Inventor, President. Danbury, Conn.: Children's Press, 1991.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Jones, John Paul

Brandt, Keith. John Paul Jones: Hero of the Seas. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Lafayette, Marquis de

Brandt, Keith. Lafayette: Hero of Two Nations. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Monroe, James

Bains, Rae. James Monroe: Young Patriot. Mahway, N.J.: Troll Associates, 1986.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Mozart, Wolfgang Amadeus

Greene, Carol. Wolfgang Amadeus Mozart: Musical Genius. Danbury, Conn.: Children's Press, 1993.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Sabin, Francene. Mozart: Young Music Genius. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Osceola

Oppenheim, Joan. Osceola: Seminole Warrior. Mahway, N.J.: Troll Associates, 1979.

\$3.50. Order from Troll Communications or from American Home-

School Publishing. These Native American Biographies are written on a third- to fourth-grade level.

Pocahontas

Greene, Carol. Pocahontas. Danbury, Conn.: Children's Press, 1989.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Pontiac

Fleischer, Jane. Pontiac: Chief of the Ottowas. Mahway, N.J.: Troll Associates, 1979.

\$3.50. Order from Troll Communications or from American Home-School Publishing. These Native American Biographies are written on a third- to fourth-grade level.

Revere, Paul

Brandt, Keith. Paul Revere: Son of Liberty. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Stevenson, Augusta. Paul Revere: Boston Patriot. New York: Aladdin, 1986. \$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Sacagawea

Seymour, Flora Warren. Sacagawea: American Pathfinder. New York: Aladdin, 1991.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Sitting Bull

Fleischer, Jane. Sitting Bull: Warrior of the Sioux. Mahway, N.J.: Troll Associates, 1979.

\$3.50. Order from Troll Communications or from American Home-School Publishing. These Native American Biographies are written on a third- to fourth-grade level. Tecumseh

Fleischer, Jane. Tecumseh: Shawnee War Chief. Mahway, N.J.: Troll Associates, 1979.

\$3.50. Order from Troll Communications or from American Home-School Publishing. These Native American Biographies are written on a third- to fourth-grade level.

Washington, George

Greene, Carol. George Washington: First President of the United States. Danbury, Conn.: Children's Press, 1991.

\$3.95. Order from Rainbow Resource Center. A Rookie Biography on a first- to third-grade reading level.

Heilbroner, Joan. Meet George Washington. New York: Random House, 1989.

\$3.99. Order from American Home-School Publishing. A Step-Up Biography, written on a second- to fourth-grade reading level.

Santrey, Laurence. George Washington: Young Leader. Mahway, N.J.: Troll Associates, 1989.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Washington, Martha

Wagoner, Jean Brown. Martha Washington, America's First Lady. New York: Aladdin, 1986.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Modern, 1850–Present (Fourth Grade)

List of Historical Topics to Cover

Your children's librarian can point you to fourth-grade level books exploring these major events (listed chronologically). For state history, also write your state's Chamber of Commerce and request materials to study your state's history, geography, and commerce.

Africa under European control the Indian mutinies the Crimean War the Victorian era the War between the States (Civil War) exploration of the American West Euro-American conflict with the Native American tribes the Boxer Rebellion World War I the Russian Revolution the Soviet Union the Great Depression the New Deal civil war in Spain the Axis and the Allies World War II Nazi Germany/Hitler the Holocaust Zionism/the Jews' return to Palestine apartheid/South African segregation China under Mao the Korean War the civil-rights movement the Vietnam War landing on the moon

General Resources

Archambault, Alan. Black Soldiers in the Civil War Coloring Book. Santa Barbara, Calif.: Bellerophon, 1995

\$3.95. Order from Greenleaf Press. A museum-shop-quality coloring book of Civil War–era images.

-------. Civil War Heroes: A Coloring Book. Santa Barbara, Calif.: Bellerophon, 1991.

\$3.95. Order from Greenleaf Press. A museum-shop-quality coloring book of contemporary Civil War portraits.

157

Bernhard, Annika. State Birds and Flowers Coloring Book. New York: Dover, 1990.

\$2.95. Order from the Education Connection.

A Coloring Book of Our Presidents, Washington through Clinton. Santa Barbara, Calif.: Bellerophon, 1988.

\$4.50. Order from Rainbow Resource Center. Contemporary portraits of each president.

Copeland, Peter F. Civil War Uniforms Coloring Book. New York: Dover, 1980. \$2.95. Order from Greenleaf Press.

——. From Antietam to Gettysburg. New York: Dover, 1983.

\$2.95. Order from Greenleaf Press. A history to color.

——. Story of the Civil War. New York: Dover, 1991.

\$2.95. Order from the Education Connection. A detailed coloring book of Civil War history.

Feinberg, Barbara Silberdick. *The Cabinet*. Breckenridge, Col.: Twenty-First Century Books, 1995.

\$18.95. This simple primer explains what cabinet members do and how they have related to presidents throughout history.

———. Constitutional Amendments. Breckenridge, Col.: Twenty-First Century Books, 1996.

\$18.95. Explains all twenty-seven amendments.

Fit-A-State Puzzle.

\$15.50. Order from Rainbow Resource Center. This large crepe-rubber puzzle has the name and capital of each state beneath its puzzle piece.

Flags of the U.S.: Blacklines to Color.

\$7.50. Order from Rainbow Resource Center. A set of plain, black-line state flags to copy and color.

Fradin, Dennis Brindell. From Sea to Shining Sea series. Danbury, Conn.: Children's Press.

This series includes one title for each state and is written on a simple second- to fourth-grade reading level. Great Plains Indian Action Set. New York: Price Stern Sloan Publications, 1992.

\$6.95. Order from Rainbow Resource Center. Contains over 50 full-color paper punch-out figures and accessories.

Health, David. The Supreme Court of the United States. Mankato, Minn.: Capstone, 1998.

\$19.00. Explains the Supreme Court for ages 9 through 12. For good readers.

Heinrichs, Ann. America the Beautiful series. Danbury, Conn.: Children's Press.

This series includes one title for each state and is slightly more difficult than the From Sea to Shining Sea series.

Holling, Holling C. Minn of the Mississippi. New York: Houghton Mifflin, 1978.

\$8.50. Order from American Home-School Publishing. The history of the Mississippi told through the adventures of a snapping turtle.

——. Paddle-to-the-Sea. New York: Houghton Mifflin, 1980.

\$8.50. Order from American Home-School Publishing. A Caldecott winner about an Indian boy's toy canoe and its journey from the Great Lakes to the Atlantic.

——. Tree in the Trail. New York: Houghton Mifflin, 1990.

\$8.50. Order from American Home-School Publishing. The history of the Great Plains and Sante Fe Trail, centered on a cottonwood tree.

King, David C., and Bobbie Moore. Civil War: Discover the Past with Exciting Projects, Games, Activities, and Recipes. New York: Wiley, 1999.

Moore, Kay. If You Lived at the Time of the Civil War. New York: Scholastic, 1994.

\$4.95. Order from American Home-School Publishing. Simple reading level.

Presidents of the United States Flash Cards.

\$4.50. Order from Rainbow Resource Center. All the presidents on cards: portraits, signatures, brief biographies, and trivia.

Rickman, David. Cowboys of the Old West. New York: Dover, 1986.

\$2.95. Order from the Education Connection. A detailed coloring book.

Smith, A. G. Civil War Paper Soldiers in Full Color. New York: Dover, 1986.\$5.95. Order from Greenleaf Press. One hundred small soldiers, from both sides.

. Confederate Army Paper Soldiers. New York: Dover, 1995. \$5.95. Order from Greenleaf Press. Twenty-four large soldiers.

------. Union Army Paper Soldiers. New York: Dover, 1995. \$5.95. Order from Greenleaf Press. Twenty-four large soldiers.

Song of the U.S. Presidents Set.

\$9.95. Order from Rainbow Resource Center. The set includes a song cassette, five placemats with presidents on them, and a game.

States and Capitals Flash Cards.

\$4.50. Order from Rainbow Resource Center. This pack of 50 cards drills all sorts of information—date of statehood, flower, nickname, bird, industries, and more.

States and Capitals Songs. Newport Beach, Calif.: Audio Memory, 1998.\$8.50. Order from Audio Memory. The kit includes a tape with states and capitals songs, plus a large poster.

Sullivan, George. Campaigns and Elections. New York: Silver Burdett, 1991.

\$12.95. This long (144 pages) book for ages 9 through 12 explains American presidential politics. For good readers.

U.S.A. Press and Peel Map.

\$6.50. Order from Rainbow Resource Center. Vinyl states stick onto U.S. map.

Verges, Gloria, et al. Journey through History: The Contemporary Age. New York: Barrons, 1988.

\$6.95. Order from Greenleaf Press. This is a beautifully illustrated story of the late twentieth century that includes a parent/teacher guide in the back. We highly recommend it.

-----. Journey through History: Modern Times. New York: Barrons, 1988.

\$6.95. Order from Greenleaf Press. Major themes of the late nineteenth and early twentieth century.

Waters, Kate. The Story of the White House. New York: Scholastic, 1992.
\$4.95. Order from Greenleaf Press. A picture book that explains the history, design, construction, and use of the president's office and residence. Lots of pictures and simple text.

Biographies

Alcott, Louisa May

Santrey, Laurence. Louisa May Alcott: Young Writer. Mahway, N.J.: Troll Associates, 1986.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Anthony, Susan B.

Monsell, Helen Albee. Susan B. Anthony: Champion of Women's Rights. New York: Aladdin, 1986.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Barton, Clara

Bains, Rae. Clara Barton: Angel of the Battlefield. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Stevenson, Augusta. Clara Barton: Founder of the American Red Cross. New York: Aladdin, 1986.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Blackwell, Elizabeth

Sabin, Francene. *Elizabeth Blackwell: The First Woman Doctor*. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press.

The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Douglass, Frederick

Santrey, Laurence. Young Frederick Douglass: Fight for Freedom. Mahway, N.J.: Troll Associates, 1991.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Earhart, Amelia

Sabin, Francene. Young Amelia Earhart: Adventure in the Sky. Mahway, N.J.: Troll Associates, 1989.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Edison, Thomas

Guthridge, Sue. *Thomas Edison: Young Inventor*. New York: Aladdin, 1988.
\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Einstein, Albert

Hammontree, Marie. Albert Einstein: Young Thinker. New York: Aladdin, 1986.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Eisenhower, Dwight D.

Hudson, Wilma J. Dwight D. Eisenhower: Young Military Leader. New York: Aladdin, 1992.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Ford, Henry

Aird, Hazel B. *Henry Ford: Young Man with Ideas*. New York: Aladdin, 1986. \$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Gandhi, Mohandas

Bains, Rae. *Gandhi: Peaceful Warrior*. Mahway, N.J.: Troll Associates, 1990.
\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Houdini, Harry

Sabin, Louis. The Great Houdini: Daring Escape Artist. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Hughes, Langston

Montrew, Durham. Langston Hughes: Young Black Poet. New York: Aladdin, 1995.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Juárez, Benito

Bains, Rae. Benito Juárez: Hero of Modern Mexico. Mahway, N.J.: Troll Associates, 1992.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Keller, Helen

Sabin, Francene. The Courage of Helen Keller. Mahway, N.J.: Troll Associates, 1998.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Kennedy, John F.

Frisbee, Lucy Post. John F. Kennedy: America's Youngest President. New York: Aladdin, 1988.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

King, Martin Luther, Jr.

Millender, Dharathula H. Martin Luther King, Jr. New York: Aladdin, 1983.
\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Lee, Robert E.

Bains, Rae. Robert E. Lee: Brave Leader. Mahway, N.J.: Troll Associates, 1981.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Monsell, Helen Albee. Robert E. Lee: Young Confederate. New York: Aladdin, 1986.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Lincoln, Abraham

Brandt, Keith. Abraham Lincoln: The Young Years. Mahway, N.J.: Troll Associates, 1989.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Lincoln, Mary Todd

Wilkie, Katharine E. Mary Todd Lincoln: Girl of the Bluegrass. New York: Aladdin, 1992.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Pasteur, Louis

Sabin, Francene. Louis Pasteur: Young Scientist. Mahway, N.J.: Troll Associates, 1983.

\$3.50. Order from Troll Communications or from Greenleaf Press.

The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Pitcher, Molly

Stevenson, Augusta. *Molly Pitcher: Young Patriot*. New York: Aladdin, 1986.
\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Roosevelt, Eleanor

Weil, Ann. Eleanor Roosevelt: Fighter for Social Justice. New York: Aladdin, 1989.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Roosevelt, Theodore

Sabin, Louis. Teddy Roosevelt: Rough Rider. Mahway, N.J.: Troll Associates, 1986.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Ruth, Babe

Brandt, Keith. Babe Ruth: Home Run Hero. Mahway, N.J.: Troll Associates, 1989.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Stevenson, Robert Louis

Sabin, Francene. Robert Louis Stevenson: Young Storyteller. Mahway, N.J.: Troll Associates, 1992.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Truman, Harry S.

Hudson, Wilma J. Harry S. Truman: Missouri Farm Boy. New York: Aladdin, 1992.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade

level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

Tubman, Harriet

Bains, Rae. Harriet Tubman: The Road to Freedom. Mahway, N.J.: Troll Associates, 1990.

\$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Twain, Mark

- Mason, Miriam E. Mark Twain: Young Writer. New York: Aladdin, 1991.
 \$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.
- Sabin, Louis. Young Mark Twain. Mahway, N.J.: Troll Associates, 1989.
 \$3.50. Order from Troll Communications or from Greenleaf Press. The Troll Easy Biography books are 32-page paperbacks, designed for readers aged 7–12.

Wright, Wilbur and Orville

Stevenson, Augusta. Wilbur and Orville Wright: Young Fliers. New York: Aladdin, 1986.

\$4.95. Order from Greenleaf Press. Written on a third- to fifth-grade level, these imaginative biographies focus on the childhood of each subject. Highly recommended.

MAKING SENSE OF THE World: Science

8

SN/1

All the world is a laboratory to the enquiring mind. —Martin H. Fischer

SUBJECT: Beginning science

TIME REQUIRED: An average of 2 to 3 hours per week, 60–90 minutes twice per week

For the next four years, the beginning science student gets to explore the physical world: animals and people (biology), the earth and the sky (earth science and astronomy), the way the elements work together (chemistry), and the laws that govern the universe (physics).

We divide the four years of science into subjects that roughly correspond to the history periods. First graders, who are studying the Ancients, learn about those things that the Ancients could see—animal life, the human body, and plants. They make collections, take nature walks, and sprout beans in jars.

Second graders collect facts about the earth and sky, a division designed

to go along with the medieval–early Renaissance period, when Copernicus and Tycho Brahe observed the heavens.

Third graders work on basic chemistry—atoms and molecules, what elements are and how they interact. They're also reading history from the period spanning 1600 to 1850, the years when the first great chemists lived—Robert Boyle, Georg Ernst Stahl, Antoine Lavoisier, John Dalton.

Fourth graders, studying modern times, learn basic physics and are introduced to the elements of computer science.

These divisions—the study of life, the study of earth and sky, the study of chemistry, the study of physics—correspond to the child's growing ability to think abstractly. A six year old can collect and classify plants and animals; a seven year old, who is a little more mature, can understand something about the vastness of space; an eight year old can comprehend atoms, even though she can't see them; and a nine year old can begin to understand what light and sound are made of.

Don't forget—these are years to explore. As usual, we'll recommend some memory work. But don't be afraid to take off on tangents. There's no way you're going to cover the entire animal kingdom or every chemical reaction in one year's study, let alone the entire scope of physics. The foundation you lay now has to do with basic facts (the differences between insects and spiders, the names of constellations, the way different chemicals interact, the parts of an atom). But it also involves *enthusiasm*. Have fun.

PRIORITIES

The classical education is organized around reading and writing, arithmetic skills, and history. Especially in the early years, science tends to take a secondary place. A second grader who doesn't finish learning her constellations won't be permanently hampered later on. But a second grader who doesn't grasp the concept of writing complete sentences instead of fragments will be hobbled until she figures this out.

Some classical academies go so far as to leave science out of the pollparrot stage altogether. We don't think this is a good idea. Grades 1 through 4 are a time of discovery—why leave science out of the equation?

But it's true that the elementary student—especially a first or second grader—will spend a large percentage of her time and energy on basic skills.

Because of this, you'll want to schedule science study only two days per week, and you may want to introduce science for the first time several weeks into the first-grade year, after the six year old has settled into her reading, writing, and math routifie.

TEXTBOOKS

The only books more boring than basic history textbooks are standard science textbooks. And, on the whole, science textbooks lack coherence. They cover, in hit-or-miss fashion, everything from rain forests to diet and nutrition in no particular order. And they never devote more than six weeks or so to any one topic before moving on to the next. The basic idea seems to be that the child will encounter the same subjects at each grade level for a short time and at slightly greater depth.

Every elementary science textbook we examined leaped from subject to subject in six-week chunks. It takes time for a child to develop interest in a new subject, to understand its boundaries and its purposes, and to see what new fields of exploration it opens up. If you use a standard science textbook, you'll move on to the next unit just as this is beginning to take place.

Instead, we suggest you cover the basic sciences thoroughly, one year at a time, without jumping around from subject to subject. It makes a lot more sense. A classical education is, above, all, orderly.

Instead of using a single text, then, you'll be using one book as a guide and supplementing it with a number of different science books designed to make science clear and interesting for children. To organize your study, you'll need four science notebooks (one for each subject), notebook paper, a three-hole punch, and art supplies—construction paper, colored pencils, stickers, glue. You'll be making notebook pages on the information you read and the observations you make.

HOW TO DO IT

First Grade: Life Science (Animals, Human Beings, Plants)

For first grade, label your three-ringed notebook "Life Science," and divide it into three sections: "Animals," "The Human Body," and "Plants."

Your basic text for this year should be a nature encyclopedia. We like the *Usborne Illustrated Encyclopedia of the Natural World,* a handbook that covers the animal and plant worlds.

This year, you and your six year old will be studying living things—animals, humans, and plants. Your job will be to help the child *examine* and *describe* living things. In a thirty-six-week school year, you'll spend approximately twenty weeks on the animal kingdom, ten weeks on the human body, and the last six weeks on the plant kingdom.

For each reading the student does in the science text, she'll make two kinds of pages: "What We Read," which is a narration page (see Chapter 5 for a description of the narration process) summarizing the information she's read, and "What We Did," a page that records the outcome of an experiment or the details of observing a specimen.

Important Instructions. As you work through first-grade science, don't forget that you can stop at any time and dig deeper into a subject. If the child develops a sudden devouring interest in mushrooms or guinea pigs or the skeleton, that's fine. Spend three weeks collecting pictures, checking books out of the library, and making detailed pages. *The purpose of the first-grade notebook is not to "complete" the study of life on earth somehow*. It's to develop the child's curiosity, research skills, reading and writings skills, and concentration span. Your goal is simple: when biology comes around again in fifth grade, you want to hear your child say, "Oh, good. I *love* biology!"

The Animal Kingdom

Use each section of the base text—the *Usborne Illustrated Encyclopedia of the Natural World*—as a springboard for further reading. Read the basic information provided, make up a narration page on it, and then go to the library for more first-grade-level books about the animals discussed.

The twenty weeks you'll spend studying the animal kingdom isn't nearly long enough to get through the entire *Illustrated Encyclopedia*. Instead, you'll want to cover ten sections, spending two weeks on each. Although you are free to choose your own sections, steer clear of such summary pages as "Reptiles," "Mammals," and "Insects" in favor of the more specific pages covering *types* of reptiles ("Turtles and Tortoises"), mammals ("Tigers and Lions"), and insects ("Bees and Wasps"). The summary pages are too complex and too general for the first grader's developing comprehension—she needs graspable specifics.

Instead of choosing ten sections, you can also follow our suggested schedule below:

Look for books					
Topic	Pages*	about	Time spent		
Worms	14	Earthworms, leeches, bristle worms, roundworms, tapeworms, flukes	2 weeks		
Butterflies, moths	18–19	Any types; <i>see also</i> insects, monarchs, caterpillars, metamorphosis	2 weeks		
Bees, wasps	20	Any types; <i>see also</i> insects, social insects, hornets, honeybees	2 weeks		
Ants, termites	21	Any types; <i>see also</i> wood ants, leaf cutters	2 weeks		
Spiders, mites, scorpions	22–23	Any types; <i>see also</i> arachnids, black widows, tarantulas, spider webs, bird eaters, ticks	2 weeks		
Snakes, lizards, tuataras	32–33	Any types; <i>see also</i> reptiles, rattlesnakes, cobras, boas, pythons, coral snakes, Komodo dragons, geckos, iguanas, flying lizards	2 weeks		

*Refers to pages in the Usborne Illustrated Encyclopedia of the Natural World.

6.

Frogs, toads, salamanders	34–35	Any types; <i>see also</i> amphibians, arrow poison, frogs, tree frogs	2 weeks
Birds	36–37	Any types; <i>see also</i> bird song, types of nests, kinds of eggs, types of wings, eagles, vultures,	2 weeks
Lions, tigers, wild cats	42–43	Any types; <i>see also</i> carnivores, predators, cheetahs, leopards, jaguars, pumas	2 weeks
Bears, pandas, raccoons	46-47	Any types; <i>see also</i> black bears, brown bears, giant pandas, polar bears, red pandas	2 weeks

Of course, you can personalize this list by taking into account the child's interests—for instance, substituting bats for bears or sharks for snakes. We chose these topics because of the abundance of decent elementary books about these animals and because the child has a good chance of finding live specimens in the backyard and in the local zoo.

For each section, read the material in the *Illustrated Encyclopedia* to the child. Ask her which animals she finds the most interesting. Make a list to take to the library. Then go browse through the juvenile science books. You'll find scores of titles with spectacular pictures and clear, simple text. Read through these together. You don't have to make a narration page for every book, but for each section in the *Illustrated Encyclopedia*, try to make at least two narration pages (entitled "What We Read") based on this outside reading. The child can illustrate the narration pages with pictures she's drawn, photocopied, or cut out of magazines. We've recommended several coloring books in our Resources list; you can punch holes in these pages and put them into the science notebook for illustrations.

Dedicate one science lesson per section to hands-on science. The *Illustrated Encyclopedia* suggests a few simple experiments. We suggest you invest in two other science experiment books: *More Mudpies to Magnets: Science for Young Children* and *Everybody Has a Body.* The "Animal Adventures" section of *More Mudpies to Magnets* provides first-grade experiments in zoology (you'll also use this book for second grade).

On experiment day, you'll create a "What We Did" page. You can record the results of an experiment by following this form:

> What We Used: What We Did: What Happened: What We Learned:

At this level, you'll do most of the writing as the child dictates to you. If you make a worm farm as the *Usborne* book suggests, your "What We Did" page might look like this:

What We Used: A glass jar, dirt, leaves, worms, and paper.

What We Did: We put the dirt in different layers. We put worms and leaves on top of the dirt. We put paper around the jar to keep the light out. Then we left the jar alone for three days.

What Happened: The worms mixed up all the layers of dirt together. *What We Learned:* Worms keep the dirt healthy by mixing it up.

You can also do simple observation for experiment day. If the time of year is right, go outside and hunt for worms, butterflies, or spiders. Put your specimens in jars. Label a plain piece of paper "What We Did." Ask the child to draw a picture of the specimen. Then write down the answers to the following questions:

Does it have a backbone? Does it have fur? Does it have wings? What does its skin feel like? How many feet does it have? What do its feet look like? How many legs does it have? What do the legs look like? What does its body look like? What does it eat? Where does it live? How big is it? What do its babies look like? Is it domesticated (tamed by man) or wild? Is it endangered?

For a worm observation, the questions and answers might look like this:

Does it have a backbone? No backbone.

Does it have fur? No fur.

Does it have wings? No wings.

What does its skin feel like? Soft and slimy.

How many feet does it have? What do its feet look like? No feet.

How many legs does it have? What do the legs look like? No legs.

What does its body look like? Round and soft, with segments.

What does it eat? Rotting plant and animal matter.

Where does it live? In dirt all over the world.

How big is it? The smallest are ¼ inch long; in Australia, some earthworms grow up to 11 feet long [we got this out of the Illustrated Encyclopedia].

What do its babies look like? We don't know. [Where can we find out?]

- Is it domesticated (tamed by man) or wild? [Have you ever seen a tame worm?]
- *Is it endangered?* [Ask the child how many earthworms she's seen. Are they in any danger of disappearing from the earth?]

This process introduces the scientific method—the child is *observing* the animal in an attempt to answer certain questions about it and deducing from what she sees.

A word about classification.

The *Illustrated Encyclopedia* provides the *phylum* and *class* of each type of animal, referring the reader back to the summary sections for fuller definitions. You, the parent/teacher, should familiarize yourself with the summary sections ("Reptiles" gives the distinctive characteristics of reptiles; "Mammals" reminds you that all mammals have fur and feed their babies milk). You should also look at the easy-to-read chart on page 88 of the encyclopedia, which lists the major divisions of the animal kingdom.

As you begin science study, explain to your child what classification is. *Classification is organizing things into groups*. For an example, use types of stores: grocery stores, hardware stores, toy stores, and clothes stores all sell different kinds of things. Help the child think through the differences between groceries, hardware, toys, and clothes. Then explain that the *kingdoms* (animal and plant) are like stores for organizing different types of living things—animals and plants.

You can play this game with your house as well. Why do you keep certain things in the bedroom, certain things in the kitchen, and certain things in the living room? Each room can represent a kingdom, where different types of household items are kept.

Go on to explain that within each kingdom, things are divided into smaller groups. The grocery store is the food kingdom. But the grocery store doesn't just put all the food into one big heap—meat is in one place, cereal in another, fresh vegetables in another. Use your next grocery trip as a classification exercise, and see if the two of you can figure out why food is classified as it is: Why do eggs, milk, and cheese all belong together?

Once the child understands this concept, you can explain the different *groups* (phyla) within the animal kingdom. When you read the section on worms, explain that earthworms are in the annelid group because they have bodies divided into segments, but that flatworms belong to another group because they have no segments. Explain that insects have bodies divided into three parts (head, thorax, and abdomen), six legs, and wings; spiders, therefore, aren't insects because they have only two body parts (head and abdomen), eight legs, and no wings. (Don't worry—all this information is clearly laid out in the book.) As you make your narrative pages, try to note the group (phylum) to which each animal belongs.

Plan on doing science two days per week. Your schedule for each section might look like this:

Tuesday Read the Illustrated Encyclopedia section. Talk about the reading. Decide what group (phylum) the animals belong to. Talk about the distinguishing characteristics of the phylum. Decide which animals look interesting for further research. Make a library list (and schedule a library visit).
 Thursday Read one or more library books. Make one narration page ("What We Read").

Tuesday Read one or more library books. Make one narration page ("What We Read").
Thursday Do hands-on science—an experiment or observation of a specimen. Make a "What We Did" page.

The Human Body

After twenty weeks on the animal kingdom, you'll move on to the human body. For this, we suggest *The Human Body: A First Discovery Book*, which is a colorful book about the human body designed for four to eight year olds. It contains explanations, diagrams, experiments and games, and seethrough sections that allow the child to peel back transparent layers, revealing one body system at a time.

Spend ten weeks studying the human body; you can divide *The Human Body* into ten sections and do one section per week or simply progress at a comfortable pace. As you study the human body, continue to make note-book pages. First, read the week's pages and make a "What We Read" page summarizing the information. Then do any experiments included on the pages, and make a "What We Did" page about your discoveries.

After you've done this, you have two choices. You can go to the library and check out more books on the human body, then read these books together and make a page about what you learned. Or you can learn through experimentation, using Robert E. Rockwell's *Everybody Has a Body*, and make another "What We Did" page about your work. Best of all, combine the two, doing experiments one week and library reading the next.

We suggest that you take one week for each body system. If you do, your weekly schedule might look like this:

Tuesday	Read from The Human Body. Make a "What We Read" page.			
	Do the experiments. Make a "What We Did" page.			
Thursday	Read one or more library books. Make a "What We Read"			
	page.			
	or .			
	Do one or more experiments from Everybody Has a Body.			
	Make a "What We Did" page.			

If, for example, you're studying the circulation section of *The Human Body*, you'll spend Tuesday reading these pages out loud and summarizing them
in a narration ("What We Read"). Then you'll listen to each other's heart, feel your pulse, and time your heartbeat. You'll record this information on a "What We Did" page.

On Thursday, you can read from a science book such as Joanna Cole's *The Magic School Bus: Inside the Human Body* and summarize new information on a "What We Read" page ("Blood has three parts: red blood cells, plasma, and white blood cells that fight germs"). Or you could choose a blood/heart experiment from *Everybody Has a Body* such as "Hear a Heartbeat" (page 172). Record the experiment on a "What We Did" page.

The Plant Kingdom

We've saved the plant kingdom for last so that its study will coincide with spring. Learning the difference between monocotyledons and dicotyledons doesn't seem to inspire most six year olds. A better approach to botany is a nature-study one—growing plants and seeing what happens.

Since you've done science all year long and probably have a good feel for the process by now, our suggestions for plant study are general. And, depending on your area, your access to land, trees, and meadows, and your weather, you can customize your course.

You'll need a good basic guide to plants. One of the best is Barbara Taylor's *Extraordinary Plants*, which has beautiful cutaway diagrams of leaves, stems, seeds, and so on. The text is above most first-grade reading levels but simple to understand, if the parent reads out loud.

You have twelve science periods—two days per week for six weeks—to study plants. You can take one of two approaches.

First, if you have trees and land around you, plant a small garden, and keep a weekly record of how it looks:

Tuesday, May 5	We planted sunflowers, tomatoes, and marigolds.
Thursday, May 7	Nothing has come up.
Tuesday, May 12	Something is up, but we don't know what it is.
Thursday, May 14	Some of the plants are marigolds. We think the
	others are weeds.

Use your twelve science periods to care for your garden, and go for nature walks. On these walks, collect leaves, take rubbings of bark, find seeds, pick unusual flowers. When you come back to the house, put the leaves

and rubbings in the notebook, glue the seeds onto notebook pages, press the flowers. Look up your findings in *Extraordinary Plants*. Write descriptions of them ("These are oak leaves because they are shaped like mittens").

Second, if you don't have access to the great outdoors, you can follow the same procedure for plant study that you did for the human body. Read through *Extraordinary Plants*, and make notebook pages about a few of the following topics:

The different shapes of leaves The parts of a flower The parts of a plant What stems do What leaves do The two types of roots What photosynthesis is Why plants need water Carnivorous plants Pollination How seeds are formed Fruit Germination Deciduous trees **Evergreen trees** Cones What tree trunks do

Whichever method of plant study you choose, do a plant experiment from *More Mudpies to Magnets* at least once a week. Record the experiment and results on a "What We Did" page. The experiments in "Roots and Shoots: All about Plants" are a minicourse in botany; you can do them even if you live in an apartment.

Plant books for first graders do *not* tend to be interesting. We recommend that you do as much hands-on science in the six weeks of plant study as you can. This is simply an introduction to botany; the student will do a much more detailed study in fifth grade.

Making Sense of the World: Science 179

	Summary	,
Animal kingdom	20 weeks	Illustrated Encyclopedia of the
		Natural World
		More Mudpies to Magnets
Human body	10 weeks	The Human Body
		Everybody Has a Body
Plant kingdom	6 weeks	Extraordinary Plants

Second Grade: Earth Science and Astronomy

Now that your child has studied life on earth, she's ready to move on to the study of the planet itself.

As before, you should plan on doing science two days per week for an hour to an hour and a half per day. For second-grade science, get a new science notebook and divide it into two sections: "The Earth" and "Sky and Space." You'll spend half the year (eighteen weeks) on earth science, the other half on astronomy.

For base texts, use *Planet Earth* and *Stars and Planets* from the Visual Factfinders series. These books have spectacular illustrations and a clear text, although the text is above the second-grade reading level. Be that as it may, the student should still be able to read parts of it independently; where she has difficulty, read the text to her, just as you did in first grade.

For each major topic, do the following things:

Make a notebook page ("What We Read") with the basic information given in the book. Remember, in second grade, the parent will still be doing much of the writing as the child dictates.

Go to the library, and do additional reading. Make "What We Read" pages for at least one additional source. (We've suggested a few titles at the end of this chapter.)

Select experiments from the books we've recommended: *More Mudpies to Magnets* and the *Spotter's Guide: The Night Sky*. For each experiment, make a "What We Did" page, following the same pattern as in first grade:

What We Used: What We Did: What Happened: What We Learned: For earth science, use the experiments from "Digging in the Dirt: Earth Explorations" (seventeen projects) and "How Hot, How Cold, How Windy, How Wet: Weather Watchers" that correspond to the section you're studying in *Planet Earth*. For astronomy, you can use the "Aerial Acrobatics: Flight and Space" experiments from *More Mudpies to Magnets*, but you should schedule plenty of stargazing with the help of the *Spotter's Guide*. Stargazing can be difficult in urban areas. If you're surrounded by light pollution, plan a nighttime trip out of the city and away from city lights. Most major cities have astronomy clubs that sponsor star parties, with telescopes set up and resident experts on hand. Watch for these in your local newspaper, or call your local museum and ask for information.

We recommend a wonderful book called *The Glow-in-the-Dark Night Sky Book,* written by astronomer Clint Hatchett and illustrated by Stephen Marchesi. Each two-page spread shows the constellations at a different time of the year. One page shows the sky with the constellations connected by lines; on the opposite page, Marchesi has painted the mythical heroes and creatures the constellations portray. Turn off the lights, and the stars glow through the paintings. Take the book outside, and use it as a guide to the night sky. You might want stop here and do notebook pages on the constellations and the myths behind them. A little paperback, *The Stargazer's Guide to the Galaxy* by Querida L. Pearce, shows each constellation and tells the myth behind each one. Use these books to accompany the *Spotter's Guide*.

Each Visual Factfinders book is ninety-two pages long, and you'll be spending one semester on each. We suggest that you do book work for three weeks and then take the fourth week to do hands-on science—experiments or sky gazing relevant to the material you've just read. Try to cover four to six pages per week in the Visual Factfinders books; pick and choose which pages to do. Since some of the concepts are difficult for second graders, feel free to simplify. Don't try to do the entire book each semester.

If you feel the Visual Factfinders books are too difficult, you can use Susan Mayes and Sophy Tahta's *Earth and Space* as an alternative text. This is a much simpler and less complete text, written on a late-first-grade/earlysecond-grade level, that covers basic earth facts, weather, and the solar system. If you decide to choose this book, cover four to five pages per week over the second-grade year. A second grader who is still struggling with reading and writing skills might be overwhelmed by the Visual Factfinders books.

If you're doing science two days a week for sixty to ninety minutes a day using the Visual Factfinders books, your daily schedule should look like this:

For weeks 1-3

- Tuesday Read four to six pages (two double-page spreads) from the Visual Factfinders books. Make at least one "What We Read" page about one topic covered. List topics for further study.
- Thursday Read at least two additional books (one topic for each double-page spread). If possible, make one additional narration page (if the books are long and detailed, this may not be practical).

For week 4

Do two to three experiments on topics from the previous		
three weeks. Make "What We Did" pages for each.		
Do two to three experiments on topics from the previous		
three weeks. Make "What We Did" pages for each.		
or		
Skip daytime science, and stay up an hour or so past your		
bedtime to stargaze with the Spotter's Guide.		

Important Instructions. Don't feel that you have to cover every detail on every page of the Visual Factfinders books. Pick out the topics that excite your second grader. Don't attempt to catalog the earth and sky. Instead, give the seven year old a chance to look up and out, to discover just how much there is to know about the earth. If she gets excited about volcanoes or the sun, let her spend weeks in the library, discovering everything she can.

Remember—you are not giving the child an exhaustive course in earth science and astronomy. The goal of classical education is to teach the student to enjoy investigation and learning. She won't read about the planets only during her science lessons twice per week; she'll check out more books and read them during her spare time.

Summary				
Earth science	18 weeks	Planet Earth		
		More Mudpies to Magnets		
Astronomy	18 weeks	Stars and Planets		
		Spotter's Guide: The Night Sky		
		Supplemental:		
		The Glow-in-the-Dark Night Sky Book		
		The Stargazer's Guide to the Galaxy		

Third Grade: Chemistry

Most elementary science texts ignore chemistry altogether. In fact, no simple, easy-to-follow chemistry text exists for elementary students. But several good chemistry experiment books *do* exist. So in third grade, you'll want to use a chemistry experiment book and a science encyclopedia.

A good basic science encyclopedia that you'll find useful for years is the *Kingfisher Science Encyclopedia*. Alphabetically arranged and beautifully illustrated, it explains basic science concepts and suggests experiments for all branches of science. We'll be urging you to use it for the next few years of science study.

For chemistry experiments, we recommend *Adventures with Atoms and Molecules*, chemistry experiment books that increase in difficulty as you go along. The first two books are well within the abilities of most third graders, providing the children have adult supervision and help. Since the aim of authors Robert C. Mebane and Thomas R. Rybolt is to teach principles of chemistry through experimentation, your third grader will be learning chemistry through experimentation.

Get a fresh notebook for chemistry, and make two dividers. Mark one "Definitions" and the other "Experiments." The Mebane and Rybolt books contain a total of sixty experiments; thus, the student should aim to do two experiments per week—one per science period. One week should also be spent on the Introduction, defining basic chemical terms. This gives you five weeks of flexibility, which you may spend on experiments that are complicated. (And if two experiments a week stress either you or the child, cut back to one.)

Every time the child does an experiment, she should record it on a notebook page in the Experiments section, answering the following:

> What We Used: What We Did: What Happened: What We Learned:

This Experiments page is the first part of her chemistry lesson. The second part involves definitions. All chemical terms in the experiment books are underlined. Whenever the student encounters an underlined word in the experiment book, she should stop, look it up in the *Kingfisher Science Encyclopedia*, and then make a notebook page that contains the term, its definition, and a drawing or diagram that makes the term clear. File this page in Definitions.

The daily schedule, then, looks like this:

Tuesday and Thursday Do the chemistry experiment from *Adventures* with Atoms and Molecules. Record the experiment on a page headed "Experiments." Make one page for each definition, and file the page in Definitions.

For example, the very first chemistry lesson begins with the Introduction to Adventures with Atoms and Molecules, Book I, which explains the most basic concepts of chemistry. The first underlined word in the Introduction is atom, and the text tells us that "atoms are the basic building blocks of all things." The child writes atom at the top of the first Definition page, copies the definition, and then looks up atom in the Kingfisher Science Encyclopedia. She'll find a fuller explanation along with a color illustration of an atom. She can draw a picture of an atom and record any other information that helps her understand the concept. The Introduction goes on to define electrons, protons, neutrons, chemical reactions, molecules, water, and polymers. She spends her first two science periods making Definitions pages for these terms. When the child has finished the Introduction, she'll move on to the experiments. The first experiment is called "Do Molecules Move?" The child uses food coloring and a glass of water to observe food-coloring molecules spread throughout the water. The conclusion? Molecules move—she can *see* it happening.

Her Experiments page will look like this:

Experiment: DO MOLECULES MOVE?

We used food coloring and a glass of water.

We dropped one drop of food coloring into the water and did not move the glass.

The color spread out through the water even though the glass was still. This tells us that the molecules in the water were moving.

She has now learned from experimentation a basic principle of chemistry: molecules are in constant motion. *Adventures with Atoms and Molecules* then confirms this, explaining that molecules in solids move slowly in a very small space, molecules in liquids move slowly in a larger space, and gas molecules move very fast.

There were no underlined words in this particular experiment. Further on in the book, an experiment with yeast explores whether molecules can be broken into smaller molecules. The experiment contains several underlined words: *enzymes, yeast,* and *fermentation*. After doing the experiment, the child writes *enzyme* on a blank notebook page, along with the definition in the book: "Enzymes are complex molecules made by living organisms." When she looks up *enzymes* in the *Science Encyclopedia*, she finds a much fuller explanation plus diagrams, pictures, another experiment, and a list of common enzymes. With your help, she uses this information to make her notebook page and then places it in Definitions.

On the one hand, we wish all this information had been published neatly in one book; on the other, the child is practicing how to look up and record information—a very scientific endeavor. Even if you're science-challenged, don't worry—all these texts are written in plain, easy-to-understand language with lots of pictures.

Don't forget the library. Chemistry books as such are difficult to find, but if the child shows an interest, you can locate simple books on individual topics: atoms, molecules, yeast, fermentation, acids. This isn't a requirement. The two experiment books and the *Science Encyclopedia* are adequate resources for a first chemistry course.

Don't worry if the third grader, doesn't finish both experiment books. Even if she only completes, the thirty experiments in Book I, she'll know more chemistry than 98 percent of American third graders.

Fourth Grade: Physics

Chemistry is the study of the way molecules react to each other to form different substances. Physics is the study of how those substances act in the universe.

Physics is simply the study of the physical world and how it works. The way sound travels, magnetism, the laws of electricity, energy and motion—these are the concepts of physics.

Like third-grade chemistry, fourth-grade physics is experiment-focused. And, as in third grade, we recommend that you use experiment materials instead of a textbook.

Science in a Nutshell provides complete science kits, with all the tools, materials, and explanations you need,¹ for eight areas of physics: *Bubble Science; Charge It!: Static Electricity; Electrical Connections; Energy and Motion; Gears at Work; Magnet Magic; Sound Vibrations; Work—Plane and Simple.* Since each kit is designed to provide nine to twelve weeks of science study, you'll only be able to go through three or four. (Remember, this is an introduction to physics.) We suggest you order two kits and see how long it takes you to get through them. If you're approaching the end of the second by Christmas, order two more; if you're still in mid-kit, order one.

Keep a physics notebook, and divide it in half as you did the chemistry notebook: "Definitions" and "Experiments." As the student progresses through the Science in a Nutshell kits, keep a record of each experiment on an Experiments page; write all definitions on a Definitions page. Whenever you write down a definition, check the *Kingfisher Science Encyclopedia* for additional information.

Many of these experiments-putting together circuits, making a com-

¹Or so they claim. But open the box, and take a look before you sit down for the science lesson—you may find yourself running to the hardware store for something that's missing.

pass—can be done either simply and quickly or with great complexity and more slowly. Instead of outlining a schedule, we suggest that you just do science (as directed by the instructions in the kits) for sixty to ninety minutes twice a week. Stop the project when you get to the end of the time period, and pick it up again at the beginning of the next. (Of course, if the student gets interested and wants to keep going, let her.) Just remember to fill out Experiments and Definitions pages before moving on to the next experiment. As you did in third grade, answer the following on a notebook page in the Experiments section:

> What We Used: What We Did: What Happened: What We Learned:

Which kits should you use? Choose three or four from the following list:

Charge It!: Static Electricity or Bubble Science Sound Vibrations Electrical Connections or Magnet Magic Work—Plane and Simple or Energy and Motion Gears at Work

By the end of the fourth-grade year, your young student will have been introduced to basic concepts of physics. She may even want to study over the summer.

More than that, over the four years of grammar-stage science, she'll have learned something about each kind of scientific endeavor. She'll have basic knowledge of scientific principles and lots of hands-on experience. And she'll have four notebooks filled with information that she's collected and experiments she's done—concrete proof of her scientific accomplishments.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. Each year's resources are divided into basic texts and optional supplementary materials; these are further divided by subject (human body, earth science, astronomy, and so forth) in the order you'll encounter them during the school year.

Life Science: Animals, Human Beings, and Plants (First Grade)

Basic Texts

Perols, Sylvaine, and Gallimard Jeunesse, *The Human Body: A First Discovery Book*. New York: Cartwheel Books, 1996.

\$11.95. Beautifully illustrated and designed for ages 4-8.

Rockwell, Robert E., et al. *Everybody Has a Body: Science from Head to Toe*. Mt. Rainier, Md.: Gryphon House, 1992.

\$14.95. Order from Gryphon House.

Sherwood, Elizabeth A., et al. More Mudpies to Magnets: Science for Young Children. Beltsville, Md.: Gryphon House, 1991.

\$14.95. Order from Gryphon House.

Taylor, Barbara. Extraordinary Plants. New York: DK Publishing, 1997.

\$12.95. Order from a bookstore or a Dorling Kindersley representative.

Watts, Lisa, ed. The Usborne Illustrated Encyclopedia of the Natural World. Tulsa, Okla.: E.D.C. Publishing, 1995.

\$16.95. Order from an Usborne book representative or from a bookstore.

Supplementary Resources

Animals

Audubon, J. J., and Paul E. Kennedy. Audubon's Birds of America Coloring Book. New York: Dover, 1976.

\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

Bernath, Stefan. *Tropical Fish Coloring Book*. New York: Dover, 1990.\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

Green, John. *Wild Animals Coloring Book.* New York: Dover, 1989.\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

Green, John, and Alan Weissman. Birds of Prey Coloring Book. New York: Dover, 1989.

\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

Gundy, Samuel C., and Thomas C. Quirk, Jr. Reptiles and Amphibians Coloring Book. New York: Dover, 1981.

\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

Mayes, Susan, et al. Life on Earth. Tulsa, Okla.: E.D.C. Publishing, 1995.
\$17.95. Order from a bookstore or Usborne representative. This is a combination of a number of Usborne Starting Point Series books, including Why Do Bees Make Honey?, How Do Animals Talk?, How Does a Bird Fly?, and others. Bright, attractive illustrations and simple text.

National Audubon Society Pocket Guides. New York: Knopf. If you're able to go out and search for wildlife while making your lifescience notebook, consider the National Audubon Society Pocket Guides. These are full of beautiful, clear color photographs with full descriptions; above six-year-old level, but a wonderful parent resource. Most libraries carry the field guides, or you can buy them for \$10.95 each.

Farrand, John. Familiar Birds of North America: Eastern Region. 1987.

———. Familiar Birds of North America: Western Region. 1987.

———. Familiar Insects and Spiders of North America. 1988.

———. Familiar Mammals of North America. 1988.

———. Familiar Reptiles and Amphibians of North America. 1988.

Perkins, Simon. Familiar Birds of Sea and Shore. 1994.

- Owen, John. Horses of the World Coloring Book. New York: Dover, 1978.
 \$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.
- Sovak, Jan. Butterflies Coloring Book. New York: Dover, 1992.
 \$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

-----. Insects Coloring Book. New York: Dover, 1994.

\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers. Snakes of the World Coloring Book. New York: Dover, 1995.
\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

Weidensaul, Scott. Birds: National Audubon Society First Field Guide. New York: Knopf, 1998.

\$10.95. A simplified guide for young birdwatchers.

Wilsdon, Christina. Insects: National Audubon Society First Field Guide. New York: Knopf, 1998.

\$10.95. A simplified guide for young insect hunters.

Human Beings

Cole, Joanna. The Magic School Bus: Inside the Human Body. New York: Scholastic, 1989.

\$13.95. Examines the major parts of the body and how they work.

Life-Size Skeleton Poster.

\$19.98. Order from Greenleaf Press. A laminated life-size picture of a skeleton with the bones labeled. Put this on your door, and everyone will know you home-school.

Matt, Margaret. Human Anatomy Coloring Book. New York: Dover, 1981.

\$2.95. Order from Rainbow Resource Center. Includes instructive captions. This is a wonderful way for young children to become familiar with body systems.

Meredith, Susan, et al. You and Your Body. Tulsa, Okla.: E.D.C. Publishing, 1994.

\$17.95. Order from a bookstore or Usborne representative. This is a combination of a number of Usborne Starting Point series books, including *What Makes You Ill?, What's Inside You?, Why Are People Different?,* and others. Bright, attractive illustrations and simple text. This also includes *Where Do Babies Come From?,* which you may want to preview before giving to young children.

Somebody: A Game for Young Children. Aristoplay.

\$21.95. Order from the Education Connection. This game teaches the names, places, and functions of major body parts. The organs are made of vinyl so that the child can place them in proper position on the game board. The publisher designed this for six year olds and thus left out reproductive organs.

Plants

- Arbel, Lil. Favorite Wildflowers Coloring Book. New York: Dover, 1991.
 \$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.
- Bernath, Stefan. *Garden Flowers Coloring Book*. New York: Dover, 1978.\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.
- Carlson, Laurie. Green Thumbs: A Kid's Activity Guide to Indoor and Outdoor Gardening. Chicago: Chicago Review Press, 1995.

\$12.95. Order from the Education Connection. If you have room to do plant study through gardening, this provides planting projects, crafts, and more.

National Audubon Society Pocket Guides. New York: Knopf.

If you're able to go out and search for plants while making your lifescience notebook, consider the National Audubon Society Pocket Guides. These are full of beautiful, clear color photographs with full descriptions; above six-year-old level, but a wonderful parent resource. Most libraries carry the Pocket Guides, or you can buy them for \$10.95 each.

Friedman, Jane. Familiar Trees of North America: Eastern Region. 1987.

———. Familiar Trees of North America: Western Region. 1987.

Katsaras, Peter. Familiar Mushrooms. 1990.

Niering, William. Familiar Flowers of North America: Eastern Region. 1987.

———. Familiar Flowers of North America: Western Region. 1987.

Softer, Ruth. Coral Reef Coloring Book. New York: Dover, 1995.

\$2.95. Order from Rainbow Resource Center. Includes instructive captions and color pictures on the inside covers.

Earth Science and Astronomy (Second Grade)

Basic Texts

Curtis, Neil, et al. Visual Factfinder: Planet Earth. New York: Larousse Kingfisher Chambers, 1993.

\$9.95. Order from Rainbow Resource Center. Covers the earth's movement, the crust, mountains and volcanoes, oceans and rivers, weather, climate, and conservation.

Hatchett, Clint. The Glow-in-the-Dark Night Sky Book. Illus. Stephen Marchesi. New York: Random House, 1988.

\$15.00. Order through a bookstore.

Henbest, N., and E. Harris. Spotter's Guide: The Night Sky. Tulsa, Okla.: E.D.C. Publishing, 1993.

\$4.95. Order from a bookstore or an Usborne dealer.

Mayes, Susan, and Sophy Tahta. *Earth and Space*. Usborne Starting Point Science series. Tulsa, Okla.: E.D.C. Publishing, 1995.

\$17.95. A hardback collection of the Usborne Starting Point Science titles. This is a good simpler option if the Visual Factfinders books look too complicated.

Muirden, James. Visual Factfinder: Stars and Planets. New York: Larousse Kingfisher Chambers, 1993.

\$10.95. Order from Rainbow Resource Center. Covers the solar system, the universe, stars, telescopes, and space exploration.

Pearce, Q. L. The Stargazer's Guide to the Galaxy. Illus. Mary Ann Fraser. New York: Tor, 1991.

\$4.99. Order through a bookstore.

Sherwood, Elizabeth A., et al. More Mudpies and Magnets: Science for Young Children. Beltsville, Md.: Gryphon House, 1991.

\$14.95. Order directly from Gryphon House.

Supplementary Resources

Earth Science

Bramwell, Martyn. The Eyewitness Visual Dictionary of the Earth. New York: DK Publishing, 1993.

You'll have to read the text aloud to second graders, but the illustrations of strata, caves, the atmosphere, and so on are invaluable.

Burns, T. D. Rocks and Minerals. New York: Dover, 1995.

\$2.95. Order from Rainbow Resource Center. This is a high-quality coloring book with instructive captions and color illustrations on the inside colors.

Rocks and Minerals of the U.S.

These are the cheapest rock collections around and include study guides. They can be ordered from Rainbow Resource Center.

Basic Collection, 35 pieces for \$12.00.

Reference Collection, 24 pieces for \$9.50.

Science in a Nutshell series. Nashua, N.H.: Delta Education.

\$29.95. Order from Delta Education or from Rainbow Resource Center (for a discount) These kits provide a complete science experiment and activity center, designed for grades 2–6. Consider sharing the cost with a neighbor since the kits provide materials for two to three students.

Fossil Formations.

The kit includes six actual fossil samples, sand, plaster of Paris, modeling clay, an activity guide, and a journal.

Rock Origins.

Investigate the origins of twenty-two rock and mineral samples. The kit includes the twenty-two actual rock and mineral samples, materials for two to three students, an activity guide, and a journal.

Simon, Seymour. Deserts. New York: Mulberry Books, 1997.

Simon's elementary-science books are available through libraries and at bookstores for \$5.95 in paperback. These texts have spectacular photographs and easy-to-understand texts, written on a first- to third-grade reading level.

——. Earthquakes. New York: Mulberry Books, 1995. This text can also be ordered from Rainbow Resource Center.

———. How to Be an Ocean Scientist in Your Own Home. New York: Lippincott-Raven, 1988.

This text is on a more difficult reading level.

—. Icebergs and Glaciers. New York: Mulberry Books, 1987.

-----. Lightning. New York: Morrow, 1997.

This text is only available in the more expensive hardback version.

------. Mountains. New York: Mulberry Books, 1997.

------. Oceans. New York: Mulberry Books, 1992.

This title is also available from Rainbow Resource Center.

------. Volcanoes. New York: Mulberry Books, 1995.

This title is also available from Rainbow Resource Center.

Astronomy

Ghez, Andrea Mia, and Judith Love Cohen. You Can Be a Woman Astronomer. New York: Cascade Press, 1995.

\$6.00. Dr. Ghez has extensive experience in astronomy, ranging from a Chilean observatory to the Hubble Space Telescope. This title is one of a series depicting real women in science and math careers.

Green, John. Suns, Planets, Stars: Stained Glass Coloring Book. New York: Dover, 1994.

\$1.00. This small coloring book is printed on transparent paper so that the drawings glow when held against the light. Highly recommended.

Kerrod, Robin. Astronomy: Young Scientist Concepts and Projects. Milwaukee, Wis.: Gareth Stevens, 1998.

This book provides a clear and attractive set of projects and ideas for grades 2–4.

Simon, Seymour. Comets, Meteors and Asteroids. New York: Mulberry Books, 1998.

Simon's elementary science books are available through libraries and bookstores for \$5.95 in paperback. These texts have spectacular photographs and easy-to-understand text, written on a first- to third-grade reading level.

—. Galaxies. New York: Mulberry Books, 1991.

-

- ——. Jupiter. New York: Morrow, 1998.
- . Mars. New York: Mulberry Books, 1990.
- ——. Mercury. New York: Mulberry Books, 1998.
- ------. The Moon. New York: Simon & Schuster, 1984.
- This text is only available in the more expensive hardcover version.
- ——. Neptune. New York: Mulberry Books, 1997.
- ——. Our Solar System. New York: Morrow, 1992.
- This text is only available in the more expensive hardcover version.
- _____. Saturn. New York: Morrow, 1998.
- ------. Stars. New York: Mulberry Books, 1989.
- ———. The Sun. New York: Mulberry Books, 1989.
- ------. The Universe. New York: Morrow, 1998.

This text is only available in the more expensive hardcover version.

- ———. Uranus. New York: Mulberry Books, 1990.
- ------. Venus. New York: Mulberry Books, 1998.
- Sky Science: Adventures in Science Kit. Carson, Calif.: Educational Insights.
 \$7.95. Order from Rainbow Resource Center. The kit includes instructions and ingredients to do twenty-one separate experiments. Second graders will need an adult's help.

Chemistry (Third Grade)

Basic Texts

Headlam, Catherine, gen. ed. *The Kingfisher Science Encyclopedia*. New York: Kingfisher Chambers Larousse, 1993.

\$39.95. Order from bookstores. The publisher's price is hefty, but this is a book you'll use for years. Some online book services offer discounts of up to \$12.00.

Mebane, Robert C., and Thomas R. Rybolt. Adventures with Atoms and Molecules, Book I: Chemistry Experiments for Young People. Springfield, N.J.: Enslow, 1985.

\$17.95. You can find this through a bookstore or library.

———. Adventures with Atoms and Molecules, Book II: Chemistry Experiments for Young People. Springfield, N.J.: Enslow, 1987.

\$17.95. You can find this through a bookstore or library.

Supplementary Resources

Edom, Helen. Science with Water. Tulsa, Okla.: E.D.C. Publishing, 1992.
\$4.95. This title is part of the Usborne Science Activities series, designed for grades 1–4. The chemistry experiments overlap with physics concepts.

Goose Eggs. Greensboro, N.C.: The Wild Goose Company.

\$5.00 each. Order from Wild Goose. These affordable minilabs contain three activities each, materials, and illustrated instructions.

Crystal Farming.

Grow crystals.

Micro Mucus. Make slime. Putty Buddies. Experiment with colloids.

Heddle, Rebecca. Science in the Kitchen. Tulsa, Okla.: E.D.C. Publishing, 1992.
\$4.95. This title is part of the Usborne Science Activities series, designed for grades 1–4. The chemistry experiments overlap with physics concepts.

Megalabs. Greensboro, N.C.: The Wild Goose Company.

\$29.99 each. Order from Wild Goose. The Megalabs are scienceexperiment kits with instruction booklets and complete ingredients. Designed for third grade and up; contain real chemicals, so adults must supervise. Expensive, but fascinating.

Crash and Burn Chemistry.

Thermal reactions, precipitation, coagulation.

Microcrystal Chemistry.

Grow a whole variety of crystals.

Oooh Ahhh Chemistry.

Acid-based reactions; make smoke, change the color of liquids, and so forth.

Slime Chemistry.

An introduction to colloids; foam, slime, putty, and other types of goo.

Science of Taste.

\$20.00. Order from Rainbow Resource Center. This kitchen chemistry kit reinforces the student's knowledge of acids and bases through experiments with food.

Physics (Fourth Grade)

Basic Texts

Headlam, Catherine, gen. ed. The Kingfisher Science Encyclopedia. New York: Kingfisher Chambers Larousse, 1993.

\$39.95. Order from bookstores. The publisher's price is hefty, but this is a book you'll use for years. Some online book services offer discounts of up to \$12.00.

Science in a Nutshell minikits. Nashua, N.H.: Delta Education.

\$34.98. Order from Delta Education or from Greenleaf Press. Each kit serves as the basis for nine to twelve weeks of study.

Bubble Science.

Explore the variables affecting the size, shape, color, and durability of bubbles.

Charge It!: Static Electricity.

Investigate positive and negative charges, building up static electricity on a number of different surfaces.

Electrical Connections.

Build simple and complex circuits to investigate current, batteries, and so forth.

Energy and Motion.

Discover how stored energy is converted to motion with weights, marbles, and ramps.

Gears at Work.

Investigate force and motion through gear systems and interaction; this kit includes a journal, activity guide, and lots of gears to interlock and build.

Magnet Magic.

Identify magnetic materials, investigate polar strength, and make a compass.

Sound Vibrations.

Discover how sound travels through various materials.

Work—Plane and Simple.

Use inclined planes to explore work, force, and friction.

Supplementary Resources

Cassidy, John. Explorabook: A Kid's Science Museum in a Book. Palo Alto, Calif.: Klutz Press, 1992.

\$18.95. Order from Greenleaf Press. One-hundred pages on seven subjects like light-wave craziness, magnetism, hair-dryer science, and ouchless physics. Bound directly into the book are most of the tools needed: a mylar mirror, a magnet, two packets of agar growth medium, a diffraction grating, and a Fresnel lens.

Chapman, Philip. *Electricity*. Tulsa, Okla.: E.D.C. Publishing, 1978.\$6.95. Order from a bookstore or an Usborne representative. This title is part of the Young Scientist series, designed for fourth graders.

Doherty, Paul, John Cassidy, and Martin Gardner. *The Klutz Book of Magnetic Magic*. Palo Alto, Calif.: Klutz Press, 1994.

\$11.95. Order from Greenleaf Press. This colorful, fascinating book-andkit set was written by an MIT physicist and two magicians (one of whom is a mathematician). Thirty-one magic activities explore the properties of magnets; includes ten different magnets inside the book.

Glover, David M. The Super Science Book of Sound. Stamford, Conn.: Thomson Learning, 1994.

Griffin-Beale, Christopher, and Robyn Gee. *Television*. Tulsa, Okla.: E.D.C. Publishing, 1992.

\$6.95. Order from a bookstore or an Usborne representative. This title is part of the Young Scientist series, designed for fourth graders.

Hewish, Mark. Jets. Tulsa, Okla.: E.D.C. Publishing, 1977.

\$6.95. Order from a bookstore or an Usborne representative. This title is part of the Young Scientist series, designed for fourth graders.

Parker, Steve. The Random House Book of How Things Work. New York: Random House, 1991.

This "applied physics" book for children examines 300 everyday machines, diagrams their inside workings, and explains the physical principles behind their operation. Wonderful for the curious. Peacock, Graham. The Super Science Book of Light. Stamford, Conn.: Thomson Learning, 1993.

Peacock, Graham, et al. *The Super Science Book of Materials*. Stamford, Conn.: Thomson Learning, 1994.

Wellington, Jerry. The Super Science Book of Energy. Stamford, Conn.: Thomson Learning, 1994.

-------. The Super Science Book of Forces. Stamford, Conn.: Thomson Learning, 1994.

Wood, Robert. *Physics for Kids: Forty-nine Easy Experiments with Acoustics*. New York: Tab Books, 1991.

Try your library or order from a bookstore. Sound experiments, using household objects.

DEAD LANGUAGES FOR LIVE KIDS: LATIN

9

stille .

Docendo discitur.¹ —Seneca

SUBJECT: Latin TIME REQUIRED: 3–4 hours per week, beginning in third grade.

A syou've no doubt noticed, Latin is not the defining element of a classical education. Classical education has to do with setting up solid foundations, with learning how to learn, with mental discipline and intellectual curiosity and a willingness to grapple with the lessons of the past. All of this is much more important than a single foreign-language course.

But you still have to take Latin.

Third graders are perfectly capable of studying Latin. In third and fourth grade, the students do basic memory work—vocabulary and parts of speech—and work on English derivations from Latin words.

¹"One learns by teaching" (something you'll have the opportunity to do as you go through Latin with your third grader).

We've discovered a wonderful, systematic, easy-to-follow Latin course. If you've studied a foreign language, you can probably teach this course to your third-grade child. And you'll have the opportunity to learn along with him.

Consider using a tutor or online tutorial if you find this project overwhelming (more on this later).

WHY LATIN?

Why bother with Latin? It is, after all, a dead language (a pejorative term) no literature is being produced in it, no one's speaking it or doing business in it.

We bother with it for a number of reasons.

Latin trains the mind to think in an orderly fashion. Latin (being dead) is the most systematic language around. The discipline of assembling endings and arranging syntax (grammar patterns) according to sets of rules is the mental equivalent of a daily two-mile jog. And because Latin demands precision, the Latin-trained mind becomes accustomed to paying attention to detail, a habit that will pay off especially when studying math and science.

Latin improves English skills. The grammatical structure of English is based on Latin, as is about 50 percent of English vocabulary. The student who understands how Latin works is rarely tripped up by complicated English syntax or obscure English words. Susan attributes her high standardized test scores (740 in SAT verbal, 800 in GRE verbal) partly to her study of Latin, beginning in third grade.

Latin prepares the child for the study of other foreign languages: French, Spanish, and Italian are all related to Latin. Even non-Latinate languages can be more easily learned if Latin has already been studied. The child who has been drilled in Latin syntax understands the concepts of agreement, inflected nouns, conjugated verbs, and grammatical gender no matter what language these concepts appear in.

Latin guards against arrogance. The study of the language shows the young child that his world, his language, his vocabulary, and his way of expression are only one way of living and thinking in a big, tumultuous, complicated world. Latin forces the student to look at words and concepts anew:

What did this Latin word really mean?

Is this English word a good translation for it?

Doesn't the Latin word express something that English has no equivalent word for?

Does this reveal a gap in my own thinking?

A foreign language, as Neil Postman writes in *The End of Education*, "provides one with entry into a worldview different from one's own.... If it is important that our young value diversity of point of view, there is no better way to achieve it than to have them learn a foreign language."²

HOW DOES LATIN WORK?

The third-grade Latin course we suggest consists almost entirely of vocabulary memorization and word study. But some grammar is introduced toward the end of the course.

Here's what you have to know to get all the way through Martha Wilson's *Latin Primer, Book I* (see page 000).

To understand how Latin works, you have to remember that *word endings are more important than word order*. (And you have to have done first- and second-grade grammar along with your child.)

If I want to say that my husband just planted his shoe in the dog's ribs, I say:

Peter kicked the dog.

(although he would never do such a thing). How do you know that the dog was the receiver of the kick and that Peter was the giver of the kick? Because Peter comes before the verb, and the dog comes after. This tells English

²Neil Postman, The End of Education: Redefining the Value of Schools (New York: Knopf, 1995), p. 147.

speakers that the dog is the *object* (receiver) of the kick and that Peter is the *subject* (the doer) of the kick.

But Latin works slightly differently. Latin has special endings (called *in-flections*) that tell the reader whether a noun is the subject or the object. It's as though, in English, every noun acting as a subject had an s on the end and every noun acting as an object had an o on the end:

Peter-s kicked the dog-o.

If English worked this way, we could reverse the sentence:

The dog-o kicked Peter-s.

and the reader would still realize that Peter had done the kicking and that the dog had received it—because of the ending.

That's how Latin works. Case endings take the place of word order. Case endings tell you whether a word is being used as a subject, object, possessive, and so on.

You also need to know that Latin uses these word endings on verbs to take the place of pronouns. If I say:

I kicked the dog

you know who did the action, because "I" comes before "kicked." But instead of using pronouns *before* verbs, Latin *conjugates* verbs by tacking the pronouns onto the ends of the verbs:

Kicked-I the dog.

Now I could say "The dog kicked-I" and mean the same thing.

There's more to Latin than this, of course, but the above explanations will get you started.

The primer has a pronunciation key in the front, but there's no need to worry about pronunciation. As Douglas Wilson explains,

because microphones were not thrust in August Caesar's face . . . we are not exactly sure what his pronunciation was. . . . There are alternative ap-

proaches to Latin pronunciation [and the simplest method] is called the "Protestant," "Old," or "English" method. It follows out the bright idea of linking Latin pronunciation to the vernacular. In other words, say it as though it were English.³

You can also order pronunciation tapes to make sure you're doing it right.

HOW TO DO ĨT

Order Martha Wilson's *Latin Primer, Book I* and *Latin Primer, Book II* along with the accompanying teacher's guides (see Resources, at the end of the chapter). The teacher's manual for *Book I* has a summary of Latin grammar in the front. Read it over, but don't let it confuse you. With the help of the lesson plans (twenty-seven weekly lessons per year, so that you can spend more than one week on some lessons), you'll probably be able to learn Latin along with your eight year old.

The primer spends the third-grade year on memorization of Latin vocabulary, on exploration of the relationships between Latin words and their English derivatives, and on memorization of case endings (the part of the word that shows whether the word is subject, object, or possessive). You can also spend some time building English vocabulary with the aids listed at the end of this chapter.

Actual Latin syntax (the structure of the language itself) begins, in very simplified form, at the start of fourth grade. If you find yourself lost, you have several options.

If you live near a university, you can call the classics or foreign language department and ask the department chair or Latin professor to recommend a student tutor.⁴ Most student tutors will work with children for \$7.00 to \$10.00 per hour. Even if the school doesn't offer Latin classes, several foreign-language majors are bound to have had three or four years of high-school Latin.

⁴See Chapter 43, below, for caveats about student tutors and advice on finding a reliable one.

.

³Douglas Wilson, Wesley Callihan, and Douglas Jones, *Classical Education and the Home School* (Moscow, Idaho: Canon Press, 1995), p. 32.

One of your local high schools may have a Latin teacher or responsible senior student who would enjoy tutoring.

You can investigate online tutorials. The best place to start would probably be the Classical and Christian Education link form page: http://www. geocities.com/Athens/8259/classic.html. Escondido Tutorial Service is a well-regarded service offering personalized classical tutorials on the Web: http://www.gbt.org. Its mailing address is 2634 Bernardo Avenue, Escondido, CA 92029; phone: 760-746-0980. Latin homework help is offered by Little Venture tutorial service at http://www.compassnet.com/ mrex/index.2htm.

New services are springing up all over. You might do best to use your own search engine and the key words *Latin tutorial* for more sites.

As you investigate Latin tutors, beware of "whole to parts"⁵ Latin instruction. The primer that you are using provides systematic, "parts to whole" instruction: children memorize vocabulary and then learn to use that vocabulary properly; conjugations and declensions are taught all at once rather than incidentally.

Here's what we mean. In Latin, every verb (such as *amo*, "I love") has a *root*, which carries the verb's basic meaning (*am-*, "love"), and *endings*, which serve as pronouns: -*o* means "I," -*as* means "you" singular, and so on. These pronoun endings are the same for every verb the child encounters in the first two years of study. So once the student learns the list of endings for *I*, *you* (singular), *he/she/it*, *we*, *you* (plural), *they* (the endings are -*o*, -*as*, -*at*, -*amus*, -*atis*, -*ant*), he can put them on any verb he wants:

amo	I love	voco	I call
amas	You love	vocas	You call
amat	He/she/it loves	vocat	He/she/it calls
amamus	We love	vocamus	We call
amatis	You love	vocatis	You call
amant	They love	vocant	They call

This is parts-to-whole instruction: first the student learns the parts, *then* he learns how to put them together to form a whole.

Whole-to-parts Latin primers, on the other hand, tell the child that the

 $^5 See$ pages 232–236 for a further explanation of "whole to parts" versus "parts to whole" instruction.

word *amamus* means "we love," never explaining that the word has both a root and a personal ending. Later, the child will meet *vocamus* in a sentence and discover that this word means "we call"—again with no explanation. Sooner or later, he'll figure out that *-amus* means "we." Or he may get frustrated with this apparently patternless language and quit. Either way, he'll have wasted a great deal of time and energy trying to understand how Latin works.

But if he is simply given the list of personal endings to memorize, he will have the power to form any Latin verb he likes as well as the knowledge to decode the Latin words he encounters in his reading. Whole-to-parts Latin instruction is frustrating and counterproductive, and breaks down the very skill that systematic Latin lessons develop—the habit of systematic thinking.

SCHEDULES

Plan on spending about three to four hours per week on Latin. It's more productive to spend forty-five minutes every day than to do one long session or even two shorter ones per week. Three days per week is an absolute minimum; four is better; five is best.

RESOURCES

Basic Texts

Wilson, Martha. Latin Primer, Book I. Moscow, Idaho: Canon Press, 1992.
\$15.00. Order from Canon Press along with the supplementary material. Latin Primer, Book I: Teacher's Text. \$15.00.
Latin Primer, Book I: Pronunciation Tape. \$3.00.

 Latin Primer, Book II. Moscow, Idaho: Canon Press, 1993.
 \$15.00. Order from Canon Press along with the supplementary material. Latin Primer, Book II: Teacher's Text. \$15.00.
 Latin Primer, Book II: Pronunciation Tape. \$3.00.

Supplementary Resources

Rummy Roots. Colville, Wash.: Eternal Hearts.

\$11.95. Order from Eternal Hearts or Greenleaf Press. This vocabulary card game comes with forty-two cards, each representing one Greek or

Latin root word, along with the rules for four different games. Can be used with ages 8 to adult.

More Rummy Roots. Colville, Wash.: Eternal Hearts.

\$11.95. Order from Eternal Hearts or Greenleaf Press. Fifty-one more root word cards to extend your mastery of Greek and Latin roots and English vocabulary words. Ages 8 to adult.

ELECTRONIC TEACHERS: USING COMPUTERS AND VIDEOS

10

NV/

Anyone who tells you computers are more effective than anything else is either dumb or lying.

-Larry Cuban¹

You'll notice that we haven't recommended any videos or computer games in our Resources lists. Yes, we know they exist. We just don't think they ought to be used for teaching grammar-stage students.

> Reading is mentally active. Watching a video is mentally passive. Writing is labor-intensive. Clicking icons is effortless.

Print that stays still and doesn't wiggle, talk, or change colors makes the brain work hard at interpretation. Print that jumps up and sings a song

¹Larry Cuban, quoted in Rumesh Ratnesar, "Learning by Laptop," *Time*, March 2, 1998, pp. 62–63. Stanford University professor Larry Cuban is an expert on technology in American education.

(à la *Sesame Street*) doesn't make the brain work at all. Watch your preschooler's face the next time you sit her in front of *Sesame Street*—the mouth hangs open, the eyes are glazed.

All children prefer ease to effort. It seems reasonable to us to limit their exposure to the easier way until the harder way has been mastered.

There's some scientific evidence to back us up on this. The brain activity created by reading and writing is significantly different from the brain activity created by image-based technologies. Jane Healy, Ph.D. in education psychology and the author of *Endangered Minds*, points out that while reading and writing depend on left-hemisphere brain development, children's television programming depends almost entirely on right-hemisphere stimuli—quickly changing visual images instead of stability; noises (booms, crashes, single-word exclamations) rather than complex sentences; bright colors, rapid movement, and immediate resolutions rather than logical sequencing of actions.²

In the early grades, the brain develops more quickly than at any other time. Connections are made. Neural pathways are established. The grammar stage is a particularly crucial time for verbal development: the brain is mapping out the roads it will use for the rest of the child's life. (This is why foreign languages acquired during early childhood are almost always completely fluent, while languages learned later are never as natural.) It is vital that the child become fluent in reading and writing during the elementary years—and the brain development required for this fluency is markedly different from that used for comprehending video and computer images.

Both software programs and videos are image-centered, not wordcentered. "In print culture," Neil Postman writes in *The End of Education*, "we are apt to say of people who are not intelligent that we must 'draw them pictures' so that they may understand. Intelligence implies that one can dwell comfortably without pictures, in a field of concepts and generalizations."³ Indeed, the higher stages of the classical education require the child to think without pictures—to be so comfortable with nonvisual con-

²See Jane Healy, Endangered Minds: Why Our Children Don't Think and What We Can Do about It (New York: Touchstone, 1990), ch. 10 ("TV, Video Games, and the Growing Brain"), esp. p. 211.

³Neil Postman, The End of Education: Redefining the Value of School (New York: Knopf, 1995), p. 25.

cepts such as responsibility, morality, and liberty that she can ponder their meanings in widely different circumstances.

Word-centered education requires the student to interact with the material—to comprehend it, interpret it, and talk about it. Videos and software don't engage the brain in the same way. A student must be *actively* involved in the learning process in order to benefit; this is why we lay such stress on reading history and science and then writing about the knowledge gained. Videos and software are designed to entertain, not to engage. They promote passive, not active, learning.

Video and software images replace the child's own imagination. Susan once checked out a copy of the children's classic *The Lion, the Witch, and the Wardrobe* for her six-year-old son, Christopher. We'd read the book aloud together, and although he enjoyed the video, he heaved a big sigh when it was over.

"What's wrong?" Susan asked.

"Mommy," he said, "I had another picture of Lucy in my head, and that girl didn't look *anything* like her."

"Well, you can still think of her in your head however you want."

"No," he said. "Now that picture's in my head and I can't get it out." Should you ban all videos and computer games?

No, of course not. You should limit their use to half an hour per day or only on weekends. You should supervise content. As much as possible, steer away from highly visual, quickly changing programs with a constant barrage of sound effects. (Yes, this means *Sesame Street*.) When you have the flu, or when you're trying to teach fractions to your third grader while your four year old sprints around and around the kitchen, or when company's coming and the bathroom hasn't been cleaned, put on a video.

But always ask yourself: What am I giving up? If I didn't put this on, would the kids go play basketball out back, or drag out Chutes and Ladders out of sheer boredom? Would they read a book? Would I be forced to give the four year old a math lesson to keep him happy, too? If my twelve year old doesn't watch this movie, will he go build a model? If my ten year old is told she can't play this computer game, will she wander off and read fairy tales?

As entertainment, educational software beats Nintendo hollow. Just be aware that *software is entertainment*. There's nothing wrong with a computerized phonics program, but it can't replace your work with the child and her primer. It's a game, not school. Use computer software solely as a supplement to your print-based curriculum. For elementary students, computer time should be classified with TV watching and candy eating as treats that must be limited in order to be enjoyed.

Educational videos can be useful in science. We've enjoyed the spectacular photography of the *Eyewitness* science videos, and we watch National Geographic specials with rapt attention (lava flowing down a mountain has to be seen to be believed). But we view videos in the evening—curled up with a bowl of popcorn—not during schooltime. During schooltime, we read books, do experiments, and write about what we're learning. It's hard work, but the more the student reads and writes, the more natural reading and writing become.

Unfortunately, the same is true of TV viewing and computer game playing. The brain becomes expert at whatever it does the most of during the formative years. So limit the young child's lessons with the "electronic teacher." We guarantee you that she won't have any trouble catching up later on.

MATTERS OF FAITH: Religion

11

MIL.

Man is by his constitution a religious animal. —Edmund Burke, Reflections on the Revolution in France

The old classicists called theology the "queen of sciences" because it ruled over all other fields of study. Theology still does, either in its presence or its absence. In its most honest form, the debate over the teaching of creation and evolution in public-school science classes is not about whether the species evolved over unimaginable years or were created in the span of one word. Because evolution is often taught as an undirected, random process, the debate is over the presence or absence of a Creator. This presence or absence has immense implications for every area of the curriculum: Are we animals or something slightly different? Do math rules work because of the coincidental shape of space and time or because God is an orderly being, whose universe reflects his character? Is a man who dies for his faith a hero or a fool?

Public schools, which have the impossible task of teaching children of many different faiths, must proclaim neutrality. We don't deal in matters of faith, the teachers explain. We're neutral.

Think about this for a minute. Arguing for the presence of God is generally considered "biased." Assuming His absence is usually called "neutral." Yet both are statements of faith; both color the teacher's approach to any subject; both make a fundamental assumption about the nature of men and women.

To call this neutrality is intellectually dishonest.

Education cannot be neutral when it comes to faith: it is either supportive or destructive. The topic of education is humanity, its accomplishments, its discoveries, its savage treatment of its own kind, its willingness to endure self-sacrifice. And you cannot learn—or teach—about humanity without considering God.

Let's take biology as an example. Mammals are characterized by, among other things, their tendency to care for and protect their young. Do mothers love their babies because of sheer biological imperative? If so, why do we come down so hard on fathers who neglect their children? It's a rare male mammal that pays much attention to its young. Do fathers love their babies because of the urge to see their own genetic material preserved or because fathers reflect the character of the father God? How should a father treat a defective child? Why?

We don't blame the public schools for sidestepping these sorts of questions. In most cases, it's the only strategy they can adopt.

Yet this separation of religious faith from education yields an incomplete education. We're not arguing that religion should be "put back" into public schools. We'd just like some honesty: an education that takes no notice of faith is, at the very least, incomplete.

Since you're teaching your child yourself, you can rectify this situation. Don't ignore instruction in (at the bare minimum) the facts of the world's major religions. Do try to relate the child's studies to your own faith, to your own religious heritage.

Your child will probably start asking the tough questions in the logic stage (something to look forward to): Why did the Crusades take place? Isn't it wrong to try to change people's religion by forcible means? Well, how about peaceful means? Was the pope wrong to put all of England under an interdict? Why would a medieval scholar risk excommunication? Why did Newton believe in God? And what about that father and his defective child?

The elementary-level student won't be thinking on this level, so you can
relax for a few years. But now is the time to understand the basics of the faiths that have shaped both history and science. Explain Islam and Buddhism and Hinduism and ancestor worship. Discuss the elements of Christianity and Judaism. Teach the Exodus and the Conquest and the Exile and the birth of Christ right along with ancient history. Show how these world religions have collided—why, for example, the English ruling India were so appalled over suttee (widow burning) while the Indians considered it an honorable act. Don't be afraid of "America's Puritan and Dissenter past. And don't fall into the "Thanksgiving trap."¹

If you don't do this now, your child will reach the logic stage badly equipped—unable to understand fully the events of history and why they have unfolded in their present pattern. Religion plays a major role in the formation of any culture. For this reason, it is imperative that the continuing education of the child include how religion has influenced art, music, literature, science, and history itself.

We believe that religion's role in both past and present cultures is best taught by the parents from the strength of their own faith. I (Susan) don't *want* my six year old taught religion in school. That's my job. It is my responsibility to teach my children what I believe, why I believe it, and why it makes a difference.

RESOURCES

For the teaching of religion, use family resources or check with your own religious community for suggestions.

¹Many elementary-school history texts, unwilling to run the risk of lawsuits, tell third graders that the Pilgrims gave thanks at Thanksgiving but never mention God. One particularly bad text informs children that the Pilgrims gave thanks to the Indians.

12

1

FINER THINGS: ART AND MUSIC

Oh, the world is so full of a number of things. —Robert Louis Stevenson

SUBJECT: Art and music TIME REQUIRED: 1–4 hours per week

One of the distinctive traits of classical education is the attention it pays to basics. Classical education takes great care in laying the proper foundations for reading, writing, math, history, and science.

Laying foundations is time-consuming. If you learn these subjects thoroughly and well, you'll find that you don't have a great deal of time for other areas of study at this level.

In the science chapter (Chapter 8), we told you not to try to cover all of the animal kingdom or all of astronomy. The purpose of the elementary years is to accumulate knowledge, yes; but the focus of your teaching should not be sheer amount of material covered. Rather, your child ought to be learning how to *find* information, how to *fit* information together, and how to *absorb* information through narration, notebook pages, and memorization.

What is true for science holds true for the entire elementary curriculum. You will never be able to cover every subject taught in elementary schools. Resist the temptation to spread your instruction too thin. Give the academic basics your best time and teaching energy during these early years.

Having said that, we now go on to say that art and music have great value for elementary students. Instruction in drawing and art appreciation improves muscle coordination and perception skills. Recent studies have shown that piano lessons improve the reasoning skills of preschool children.

We suggest that you try to schedule at least one block of time (an hour or two) per week for art and music appreciation. If you can manage two blocks of time during the week, do art appreciation one day and music appreciation another. If you can only cope with one more teaching period per week, alternate—art appreciation one week, music the next.

ART

Art for elementary students should involve basic training in two areas: learning about art techniques and elements (drawing, color, and so forth) and about great artists.

You can alternate actual art projects and reading books about great artists. For art projects, we highly recommend Mona Brookes's *Drawing with Children*. This is an incredible book for you and your child to use together; you'll be surprised at how much *you* learn about drawing. You can also use *Doing Art Together*, the Metropolitan Museum of Art's parent-child art book that offers painting and paper projects rather than pure drawing. Look at it in the library before you buy it; it's quite detailed and may be overwhelming for a first or second grader.

Alternate art projects with picture study, the method used by Charlotte Mason, the educator who originated narration as a teaching tool. Like narration, picture study requires the student to take in information and then repeat it back to the teacher.

Using the children's art books we've recommended in Resources, ask the child to look intently at a painting for a while—two or three minutes for

younger children, up to ten for fourth graders. Then take the picture away, and ask the student to tell you about it.

At first, you may have to ask leading questions. "What color is ——?" "What is the man at the side doing?" With practice, though, the student will start to notice more and more details and retain them longer and longer.

MUSIC

As with other subjects, music in grades 1 through 4 is a matter of accumulation—getting familiar with what's out there. You can require the child, twice a week, to spend half an hour or so listening to classical music. Most public libraries have a fairly extensive classical music selection available for checkout. Start with music designed for children, such as *Peter and the Wolf*, and then explore together. You can also use the Classical Kids series described in Resources, which will familiarize children not only with great music, but also with the lives of well-known composers and some of their minor works.

We're also recommending the *Color the Classics*, volume 1. Each volume comes with a coloring book and a cassette tape packaged together in a plastic cover. The coloring book is keyed to the music and biographical information on the tape.

The first time the child listens to the piece, have her listen to it two or three times in a row. Then make sure she plays it again at the beginning of her next listening period. Familiarity breeds enjoyment. She can do handwork such as Play-Doh[™] or coloring books about the composer she is listening to (see Resources at the end of this chapter) but nothing that involves words; her attention should be focused on what she hears, not on what she sees.

There's no easy way to "narrate" symphonies. Asking the child how the music made her feel is of dubious value; asking her to hum the melody only works if she can hum and the melody is uncomplicated. We suggest that you simply make sure she listens to the piece at least three times.

Just as math and reading are easier for children who've heard sums and stories all their lives, so music appreciation comes more naturally to children whose parents play music in the house. The best way to follow up on the child's music-appreciation lesson is to play the piece yourself a couple of weeks later and listen to it as a family. Playing lively classical music while doing housework and playing quiet classical music during meals are two ways to have your family become familiar with classical music.

If you can afford them, piano lessons are good. I (Jessie) feel that every child should take two years of piano (all of mine did). My experience has been that if they showed no interest in it after two years of study, keeping them at it was a waste of time and energy, counterproductive to their love and appreciation of music.

If you want to try music lessons at home, we recommend two books published by Usborne. *Book One* and *Book Two* of the *Usborne Piano Course*, are designed for ages seven and up; they introduce note reading and basic piano playing for children (and parents) with no musical experience. *The Usborne First Book of the Recorder*, designed for six year olds and older, is a basic introduction to recorder skills. Both feature lots of pictures and cartoon characters that direct the child as she plays.

Another resource for ages eight and up is the Bastien Piano Basic series, which is a self-teaching course that doesn't require any parental knowledge or skill.

RESOURCES

Pick and choose from among these books and tapes in order to familiarize children with a wide range of art and music skills and styles. Most of these titles (and some of the tapes and CDs) will be at your local library or bookstore. Where we know of a mail-order option, we have supplied it.

Art Appreciation

Dover Art Postcards. New York: Dover.

Order from Rainbow Resource Center. These sets of art postcards provide the cheapest way to study paintings.

Chagall. 24 cards for \$4.95.

Dalí. 6 cards for \$1.00.

Dalí. 24 cards for \$4.95.

Degas Ballet Dancers. 6 cards for \$1.00.

Gaugin. 6 cards for \$1.00.

Great Impressionist and Post-Impressionist Paintings. 24 cards for \$4.95.

Hopper. 6 cards for \$1.00.
Kandinsky. 6 cards for \$1.00.
Masterpieces of Flower Painting. 24 cards for \$4.95.
Mary Cassatt. 24 cards for \$4.95.
Picasso. 6 cards for \$1.00.
Remington. 6 cards for \$1.00.
Renoir. 6 cards for \$1.00.
Toulouse-Lautrec. 6 cards for \$1.00.
Van Gogh. 6 cards for \$1.00.

Martin, Mary, and Steven Zorn. *Start Exploring Masterpieces Coloring Book*. Philadelphia: Running Press, 1990.

\$8.95. Order from the Education Connection. Sixty famous paintings to color, along with the stories behind them.

Muhlberger, Richard. What Makes a New York: Viking.

This series from the Metropolitan Museum of Art has beautiful illustrations and explains the technical distinctions of each artist's work in a way young children can understand.

What Makes a Bruegel a Bruegel? 1993. What Makes a Cassatt a Cassatt? 1994. What Makes a Degas a Degas? 1993. What Makes a Goya a Goya? 1994. What Makes a Leonardo a Leonardo? 1994. What Makes a Monet a Monet? 1993. What Makes a Picasso a Picasso? 1994. What Makes a Raphael a Raphael? 1993. What Makes a Rembrandt a Rembrandt? 1993. What Makes a Van Gogh a Van Gogh? 1993.

Venezia, Mike. Getting to Know the World's Greatest Artists. Chicago: Children's Press.

\$6.95 each. Order from Rainbow Resource Center or check your library. These short, 32-page, children's books provide a neat introduction to some of the most important artists of the Renaissance along with very nice reproductions of paintings. The text is written on a third- to fourthgrade level. Botticelli. 1994. Bruegel. 1994. Mary Cassatt, 1994. Paul Cézanne, 1998. Dalí. 1994. Da Vinci, 1994 Gaugin. 1994. Francisco Gova. 1994. Edward Hopper, 1994. Paul Klee, 1994. Henri Matisse, 1997. Michelangelo. 1991. Monet. 1994. O'Keeffe. 1994. Picasso, 1994. Pollock, 1994. Rembrandt, 1994. Renoir. 1996. Diego Rivera. 1995. Toulouse-Lautrec. 1995. Van Gogh. 1994. Grant Wood, 1996.

Art Skills

Brookes, Mona. Drawing with Children. New York: Jeremy P. Tarcher/Putnam, 1986.

\$16.95. Order through Rainbow Resource Center. This has become a modern classic.

I Can Draw Dinosaurs Drawing Kit: With 32-Page Learn to Draw Book. Laguna Hills, Calif.: Walter Foster Publisher, 1995.

\$12.95. Order from Greenleaf Press. Like the *I Can Draw Drawing Kit*, this is suitable for fourth grade and above.

I Can Draw Drawing Kit: With Instruction Book, Drawing Pad, Eraser, Drawing, Pencil, Pen, Colored Pencils, and Sharpener. Laguna Hills, Calif.: Walter Foster Publisher, 1995. \$14.95. Order from Greenleaf Press. For fourth graders and older, this kit uses a drawing grid to teach observation skills.

Sanchez, Isidro. I Draw, I Paint series. Trans. Edith V. Wilson. New York: Barrons Juvenile.

\$7.95 each. Order from Rainbow Resource Center. For third grade and above, these titles teach about color, care of materials, and how to use each medium.

I Draw, I Paint: Animals. 1993.

I Draw, I Paint: Collage. 1993.

I Draw, I Paint: Colored Pencils. 1991.

I Draw, I Paint: Drawing. 1992.

I Draw, I Paint: Markers. 1992.

I Draw, I Paint: Tempera. 1992.

I Draw, I Paint: Watercolor. 1991.

I Draw, I Paint: Wax Crayons. 1991.

Silberstein-Storfer, Muriel, and Mablen Jones. *Doing Art Together*. New York: Abrams, 1983.

\$19.95. This book is much more project-focused than the Brookes text. It includes sections on painting, collage, murals, sculpture, and so forth.

Smith, Christine. Art Smart series. Milwaukee, Wis.: Gareth Stevens, 1996.\$18.60. Carried by most libraries, this is a good, very basic drawing course for kindergarten through third grade.

How to Draw Dinosaurs. How to Draw Pets. How to Draw Trucks and Cars. How to Draw Wild Animals.

Music Appreciation

Brownell, David. A Coloring Book of Great Composers: Bach to Berlioz. Santa Barbara, Calif.: Bellerophon, 1985.

\$3.95. Order from Greenleaf Press. Portraits to color along with biographical sketches for fifteen composers, including Bach, Handel, Beethoven, and Mozart. ———. A Coloring Book of Great Composers: Chopin to Tchaikovsky. Santa Barbara, Calif.: Bellerophon, 1991.

\$3.95. Order from Greenleaf Press. Portraits to color along with biographical sketches for twenty-nine composers, including Schumann, Liszt, Wagner, Verdi, Brahms, and Grieg.

———. A Coloring Book of Great Composers: Mahler to Stravinsky. Santa Barbara, Calif.: Bellerophon, 1993.

\$3.95. Order from Greenleaf Press. Portraits to color along with biographical sketches for twenty-seven contemporary composers.

Hammond, Susan, producer. Classical Kids series. Toronto: Children's Group.

\$9.95 for tape, \$15.95 for CD. Order from Rainbow Resource Center or check your library. These tapes combine music with history and dramatic storytelling to familiarize children with great composers and their works. Very highly recommended.

Beethoven Lives Upstairs. 1989.

A young boy learns about Beethoven's life through letters to his uncle.

Hallelujah Handel. 1995.

The composer gets involved in a fictional plan to help an orphan boy who sings but won't speak.

Mozart's Magic Fantasy: A Journey through the Magic Flute. 1991.

A young girl is magically transported into the middle of *The Magic Flute*.

Mr. Bach Comes to Call. 1988.

An eight year old practicing the Minuet in G is startled when Bach shows up in her living room. Includes over twenty excerpts from Bach's works.

Tchaikovsky Discovers America. 1993.

The composer arrives in New York in 1891 for the opening of Carnegie Hall.

Vivaldi's Ring of Mystery. 1991.

An orphaned violinist tries to find out more about her family in Vivaldi's Venice. Over twenty-four Vivaldi works are included. Masters of Classical Music series. Los Angeles: LaserLight, 1991.

\$3.95 each. Each sixty-minute recording includes excerpts from major works of each composer. Excerpts are a good way to get young children "hooked" on classical music; they're usually the most tuneful and attractive parts of longer, more complicated works.

Volume 1: *Mozart*. Volume 2: *Bach*. Volume 3: *Beethoven*. Volume 4: *Strauss*. Volume 5: *Wagner*. Volume 6: *Tchaikovsky*. Volume 6: *Tchaikovsky*. Volume 7: *Vivaldi*. Volume 8: *Chopin*. Volume 9: *Schubert*. Volume 10: *Verdi*.

Tomb, Eric. Early Composers Coloring Book. Illus. Nancy Conkle. Santa Barbara, Calif.: Bellerophon, 1988.

\$3.95. Order from Greenleaf Press. From Palestrina through Corelli, with a biographical note and portrait (to color) of each.

Ziarkowski, Carmen. *Color the Classics*. Vol. 1. Illus. Greg Lampkin. Silver Springs, N.Y.: Color the Classics, 1997.

\$12.95. Order from Greenleaf Press. Includes a tape with musical excerpts and a biographical coloring book with pictures of Vivaldi, Bach, Handel, Haydn, and other classical composers.

Music Skills

Bastien Piano Basics series. San Diego, Calif.: Kjos Music Company. \$6.45 each. Order from Sonlight Curriculum.

Primer Level. 1991. Level 1. 1985. Level 2. 1985. Level 3. 1991. Theory: Level 4. 1991. Hawthorne, Philip. *The Usborne First Book of the Recorder*. Tulsa, Okla.: E.D.C. Publishing, 1997.

\$8.95. Order from an Usborné representative or from the Education Connection (which also offers a soprano recorder for \$7.95—these are easy to find in most music stores).

Usborne Piano Course: Book One and Book Two. Tulsa, Okla.: E. D. C. Publishing, 1995.

.

\$6.95 each. Order from a bookstore or from an Usborne representative.

PART I

\$V//

EPILOGUE

The Grammar Stage at a Glance

Guidelines to how much time you should spend on each subject are general; parents should feel free to adjust schedules according to child's maturity and ability.

Kindergarten (Ages Four and Five)

Reading	Spend time every day reading out loud, as much time as
	you can afford. Learn basic phonics for fluent reading.
	Begin with 10 minutes, gradually working up to 30
	minutes. Practice reading easy books.
Writing	Practice printing. Start with 10 minutes, and expand to 20
	minutes as maturity allows. Copy short sentences from a model.
Mathematics	Learn to count from 1 to 100. Use actual objects to understand what numbers mean, 1 to 100. Be able to write the numbers from 1 to 100. Practice skip-counting by 2s, 5s, and 10s. Teach about math as you go about life. If you use a kindergarten math program, plan on 30 minutes a day.

First Grade

Language Do Spelling Workout A and Handwriting . . . : Grade 1 for 10 to 15 minutes per day; begin English for the Thoughtful Child

	for 15 to 20 minutes per day when you begin Spelling
	Workout B; spend 30 minutes per day reading and making
	the notebook page. Spend at least 30 minutes per day
	reading "fun books."
Writing	, Work on simple letters to relatives and friends twice a
	week. Copy short sentences two or three days per week for
	5 minutes each day, working up to 20 minutes each day.
Mathematics	Work on the math lesson (either learning a concept or
	doing a drill) for 30 to 40 minutes per day.
History	Study ancient times (5000 B.CA.D. 400). Read biographies
	and easy history books to the child; ask the child to tell
	you what you've just read; make notebook pages together
	for the history notebook. Do this for 3 hours per week.
Science	Study animals, the human body, and plants, twice a week
	for 60 minutes each session.
Religion	Learn about world religions through the study of history;
	learn the basics of the family's faith for 10 to 15 minutes
	per day as part of "family time."
Art	Do Drawing with Children, art projects, or picture study
	once a week for 1 hour.
Music	Spend 1 hour per week listening to classical music; begin
	the study of an instrument, if possible.
	Second Grade
Language	Do Spelling Workout B or C for 10 to 15 minutes per day;
	begin cursive penmanship; spend 30 minutes per day
	reading or making the notebook page; do English for the
	Thoughtful Child for 20 minutes per day; spend 10 minutes
	per day on memory work. Spend 30 to 60 minutes per day
	reading "fun books" quietly to self.
Writing	Work on simple letters to relatives and friends twice a
	week. Write from dictation 3 days per week for 10 to 20
	minutes each day.
Mathematics	Work on the math lesson (either learning a concept or
	doing a drill) for 40 to 60 minutes per day.
History	Study medieval-early Renaissance times (400-1600). Read
	biographies and easy history books to the child: ask the

4

226 THE GRAMMAR STAGE

	child to tell you what you've just read; make notebook
	pages together for the history notebook. The child should
	begin to do more writing (instead of telling the parent
	what to write). Do this for 3 hours per week.
Science	Study basic earth science and astronomy twice a week for
	60 minutes each session
Religion	Learn about world religions through the study of history.
	learn the basics of the family's faith for 10 to 15 minutes
	per day as part of "family time"
Aut	Spond 1 hour per week doing picture study using
Art	spend 1 nour per week donig picture study, using
	recommended art books for elementary students; of do art
	projects.
Music	Spend I hour per week listening to classical music; begin
	or continue the study of an instrument, if possible.
	Third Cards
Y	Inird Grade
Language	Do Spelling Workout C or D for 15 minutes per day; spend
	30 minutes reading or making the notebook page; do
	English for the Thoughtful Child or formal grammar for 20 to
	30 minutes per day; spend 10 minutes per day on memory
	work. Spend 30 to 60 minutes per day reading "fun books"
	quietly to self.
Writing	Work on longer letters to relatives and friends once a
	week. Write from dictation 3 days per week. Begin the
	Writing Strands program twice per week for 20 to 30
	minutes each day.
Mathematics	Work on the math lesson (either learning a concept or
	doing a drill) for 40 to 60 minutes per day.
History	Study late Renaissance-early modern times (1600-1850).
	Read history books to the child; assign easy biographies
	and histories for the child to read; ask the child to tell you
	what you've just read; make notebook pages together for
	the history notebook. The child should be doing his own
	writing now. Do this for 3 hours per week.
Science	Study basic chemistry twice a week for 60 to 90 minutes
	each session.

- Latin Memorize vocabulary for 45 minutes per day. (Languages should be studied daily; try not to skip days.)
- Religion Learn about world religions through the study of history; learn the basics of the family's faith for 10 to 15 minutes per day as part of "family time."
- Art Spend 1 hour per week doing picture study, using recommended art books for elementary students; or do art projects.
- Music Spend 1 hour per week listening to classical music; begin or continue the study of an instrument, if possible.

Fourth Grade

- Language Do Spelling Workout D, E, or F for 15 minutes per day; spend 30 to 45 minutes per day reading or making the notebook page; study the grammar textbook for 20 minutes per day; spend 10 minutes per day on memory work. Spend 60 minutes per day reading "fun books" quietly to self.
- Writing Work on letters to relatives and friends once every two weeks. Write from dictation two or three days per week.
 Do the Writing Strands program two days per week for 20 to 30 minutes each day.
- Mathematics Work on the math lesson (either learning a concept or doing a drill) for 40 to 60 minutes per day.
- History Study modern times (1850–present). Read history books to the child; assign easy biographies and histories for the child to read; ask the child to tell you what you've just read; make notebook pages together for the history notebook. The child should be doing own writing. Do this for 3 hours per week.
- Science Study basic physics twice a week for 90 minutes each session.

Latin Learn vocabulary and the basic rules of syntax for 45 minutes per day.

6

Religion Learn about world religions through the study of history;

learn the basics of the family's faith for 10 to 15 minutes per day as part of "family" time.

- *Art* Spend 1 hour per week doing picture study, using recommended art books for elementary students; or do art projects.
- MusicSpend 1 hour per week listening to classical music; begin
or continue the study of an instrument, if possible.

Notebook Summary, Grades 1 through 4

Spelling (use the same notebook for grades 1–4) This notebook contains three sections:

- 1. Rules: Start copying rules when you reach Spelling Workout B.
- 2. *Trouble Words:* As soon as you notice that the child is consistently misspelling words, write these into the notebook
- 3. All about Words: Start when you reach Spelling Workout C

Grammar (use the same notebook for grades 1–4) This notebook contains two sections:

- 1. Exercises
- 2. Rules

You'll begin using this notebook when you start *English for the Thoughtful Child* (around second grade) and will continue to use it as you progress into formal grammar.

Reading (use the same notebook for grades 1–4) This notebook contains two sections:

1. *My Reading:* Summaries or illustrations of books from the reading lists in Chapter 5.

2. *Memory Work:* All pieces learned by heart and recited in front of family or friends.

Writing (use the same notebook for grades 1–4) This notebook contains four sections:

- Copying: In first grade, use the Copying section for samples of penmanship; every week or two, put a writing sample in this section. When the child begins copying sentences from great writers, file these in Copying as well.
- 2. *Dictation:* When dictation work begins (around second grade), put all dictation exercises in the Dictation section (you'll no longer be using the Copying section at this point).
- 3. Exercises
- 4. *Compositions:* This section and Exercises, above, will not be used until you start the *Writing Strands* program (usually around third grade). In this way, the notebook will serve as a complete record of the child's writing development in grades 1–4.

History (use the same notebook for grades 1–4)

This notebook contains four divisions; each has pictures, compositions, and historical narrations, arranged in chronological order.

- 1. Ancients
- 2. Medieval-early Renaissance
- 3. Late Renaissance-early modern
- 4. Modern

Science (use a new notebook each year) The life-science notebook (first grade) has three divisions:

- 1. Animals
- 2. The Human Body
- 3. Plants

The earth-science notebook (second grade) has two divisions:

- 1. The Earth
- 2. Sky and Space

.

The chemistry notebook (third grade) has two divisions:

- 1. Definitions
- 2. Experiments

The physics notebook (fourth grade) has two divisions:

.

- 1. Definitions
- 2. Experiments

Whole Language and Phonics: Whole to Parts versus Parts to Whole

Using phonics—the method of teaching children the sounds of letters and combinations of letters—is the best way to teach reading. "Whole language" instruction, popular in many classrooms, is based on an innovation of the 1930s—the so-called "look-say" method.

The inventors of look-say reading thought that teaching children the sounds of letter combinations (phonics) required lots of drill and memorization, resulting in tedium. Couldn't this unnecessary step be eliminated? After all, good readers don't sound a word out from beginning to end; good readers glance at a word and take it all in in one gulp. Children ought to learn this from the start. So a new method of reading took over: "whole word" or "look-say." Instead of learning letter combinations and sounding words out, children were taught each word separately and in isolation.

Whole-word teaching, meant to preserve children from the drudgery of drill, actually increased the amount of drill needed. It also prevented children from reading anything that contained words they hadn't yet learned, which is why it took Theodore Geisel (Dr. Seuss) almost a year to write *The Cat in the Hat.* "That damned *Cat in the Hat* took nine months until I was satisfied," Geisel later wrote. "I did it for a textbook house and they sent me ... two hundred and twenty-three words to use in this book. I read the list three times and I almost went out of my head." Children taught that same list could read *The Cat in the Hat* and practically nothing else.

And parents weren't able to teach whole-word reading.¹ Look-say required expert teachers. You couldn't just start teaching a child words; you had to teach the words in a particular order so that the child could read his lessons. And you had to reinforce this memory work with a complex system of drills and word games.

Look-say is generally acknowledged to have been a disaster. It's true that some children—those whose subconscious was very well stocked with words and sounds because they came from homes where print was important—were able to figure the process out. But many more simply gave up. Whole-word reading might have died a quick and ignoble death but for the phonics teachers, who had been laboring to turn phonics into a science. Instead of learning how to pronounce the alphabet, six year olds in phonics classrooms were taught phonetic notation and drilled on individual sounds for months before they were allowed to read actual sentences.

Eventually, both "scientific phonics" and look-say reading gave way to the "whole language" classroom, where students—rather than being taught to sound out words—are "immersed" in language. Teachers read stories, point to words, talk to the children, and generally surround them with words, as we suggest you do during the preschool years.

Unfortunately, illiteracy is still soaring in states where whole-language classrooms dominate. There are several reasons for this. First, many wholelanguage teachers, while insisting that their methods differ from look-say, are still using look-say drills. They read texts over and over again, pointing to each word and encouraging the children to join in. Children eventually learn to recognize many of the words through sheer repetition. This, of course, does nothing to teach them how to read real literature, which might contain words they haven't seen in the classroom.

Second, most whole-language teachers will insist that they don't rely on look-say alone; they also teach something called "incidental phonics." If, for example, the child has seen the words *smile*, *smoke*, *small*, *smog*, and *smith* over and over again, the teacher will finally point out that *sm* makes the

¹This antiparent mood still has a voice in many "whole language" classrooms, expressed in such phrases (encountered by us in our research) as "No parent should tutor a child without the teacher's knowledge," "Maybe the parent shouldn't be tutoring the child," and "Reading instructional material is not designed for parents." If a teacher has ever told you not to tutor your child in phonics, you've experienced this legacy.

same sound *every time*. Incidental phonics teaches the connections between words and sounds *only* as the child runs across them in texts. Which means that a child who doesn't encounter many words ending in *-ough* could get to sixth grade or so before finding out that *-ough* makes an *f* sound.

This guessing game is labeled "developing phonemic awareness." It's also called "whole-to-parts phonics instruction" because the student is given the "whole" (the entire word) and only later is told about the "parts" (the letter sounds) that make it up. Granted, it's an improvement on pure look-say, which never lets on that there's any connection between words and the letters that make them up. But whole-language teaching still encourages children to guess. They see a familiar combination of letters, but they haven't learned the letters that come after. They see a word that starts with *in*-, but then they have to use *context* to figure out whether the word is *incidental, incident, inside, incite,* and so forth. And unless a teacher is standing over them to help, they have no tools to read the rest of the word.²

But why force the children to guess? Why not simply put them in a systematic phonics program and give them the rules?

A good systematic phonics program does just that—it tells children the rules up front. This is called "parts-to-whole" instruction because the student is taught the parts of words and then shown how they fit together. A good phonics program has the children reading books as soon as possible. Most phonics-taught children can read picture books with easy text after a few weeks. Many move on to chapter books after only a few months of instruction.³

Whole-language teachers want to saturate children with language; the classical education requires it. Yet whole-language philosophy collides with the philosophy of classical education. Whole-language teachers put the highest priority on the child's mental process, not on the information that is on the page. If the child is constructing *a* meaning while reading, that's

²The whole-language method is infamous for suggesting that it doesn't really matter whether the child reads *incite* or *incident* as long as the sentence makes sense to the child.

³And, yes, English is a phonetic language. Rudolph Flesch writes, "About 13 per cent of all English words are partly irregular in their spelling. The other 87 per cent follow fixed rules. Even the 13 per cent are not 'unphonetic,' as Dr. Witty calls it, but usually contain just one irregularly spelled vowel: *done* is pronounced 'dun,' *one* is pronounced 'wun,' *are* is pronounced 'ar,' and so on." (Rudolph Flesch, *Why Johnny Can't Read and What You Can Do about It* [New York: Harper & Row, 1985], p. 13). good enough. It doesn't matter if the meaning may not correspond to what's in front of them. Guessing (whole-language teachers prefer to call this "predicting by context") is perfectly all right. Ken Goodman, professor of education at the University of Arizona and a whole-language proponent, says that "accuracy is not an essential goal of reading."⁴

This attitude is one of the most troubling aspects of whole-language reading. A classical education tries to equip a child to join the Great Conversation, to understand and analyze and argue with the ideas of the past. Those *ideas* are important. Those *words* are important. Aristotle chose his terms with care; the reader must struggle to understand why, not substitute another phrase to simplify matters.

Furthermore, whole-language rejects all drill and repetitive memory work. Granted, drill can be overdone (and has been in many phonics-based classrooms). But the goal of classical education is to show a child how subjects—reading, writing, science, history—are assembled, from the most basic elements to the finished structure. And drill is important because it equips a child's mind with the most basic tools needed for understanding language.

Teaching reading by a pure whole-language approach is like trying to train a house builder by showing him a manor house, explaining to him how to construct those parts that catch his interest—a chimney here, a porch front there—and then leaving him to figure out the rest on his own. A classical approach first explains the properties of brick, wood, concrete, plaster, and steel; then teaches the prospective builder to read a plan; and only then sets him on the task of house building. A builder who knows his work from the bottom up can fix a leak or a sagging floor, instead of staring helplessly at the problem and wondering what went wrong.

In the early grades, all teaching should be parts to whole, rather than whole to parts. Parts-to-whole teaching gives the student all the facts—the building blocks—and then lets him assemble them into a meaningful structure. Whole-to-parts instruction presents the child with the entire structure and then pulls bits and pieces out and explains them, one at a time, as the child encounters them.

Parts-to-whole teaching tells the young historian about the gods and

⁴Art Levine, "Education: The Great Debate Revisited," *Atlantic Monthly*, December 1994, 41.

.

goddesses of ancient Rome and explains how the Romans used omens and auguries to tell the future. Whole-to-parts teaching gives the child stories about Roman religious customs and asks, "What gods did the Romans worship? Why? How is this like modern religion in America? How is this like your own experience with religion?"

Parts-to-whole science informs the budding entomologist that insects have five different types of leg and foot (swimming leg, digging leg, jumping leg, pollen-carrying leg, and food-tasting brush foot), and then asks the student to place the insects he finds into these categories. Whole-to-parts science lays out a trayful of insects and asks, "What differences do you see between these legs and those legs?"

What's the matter with whole-to-parts instruction? Nothing, except that it's immensely frustrating for children who are at the poll-parrot stage. Whole-to-parts instruction requires analytical thought, an ability that is developed later (in our experience, around fourth or fifth grade). And wholeto-parts teaching assumes a certain knowledge base that untaught children don't yet have. Examine the instances above. The history example requires the immature mind to reflect on religious practices about which it knows very little. And the whole-to-parts science assignment can't be done unless the student knows that different insects do different things with their legs.

Learning through deduction and analysis is a valuable method—but in the second stage of the trivium, the logic years, when the student has the accumulated knowledge of the poll-parrot years to build on. Trying to instruct children by deduction and analysis without first laying the foundation of good, solid, systematic knowledge is like building a house from the top down. Many popular school texts are whole to parts in the elementary grades; when you recognize whole-to-parts instruction, avoid it. PART II

THE LOGIC STAGE

Fifth Grade through Eighth Grade

e dan kan Managara

durit total it the

the second in the second second

warmer of the second second

Call Million Participante and an international and a

and the second s

and a second second

an and the second and second

Carpender Formald Education of a second seco

the construction and applied and the participation of participation of the stand " they

a course and the second s

a a statistica da a superior de la superior a contra la superior de la superior de la superior de la superior d La superior de la supe

- rear a superior to an

13

1

THE ARGUMENTATIVE CHILD

The Pert age . . . is characterized by contradicting, answering back, liking to "catch people out" (especially one's elders); and by the propounding of conundrums. Its nuisance-value is extremely high. —Dorothy Sayers, "The Lost Tools of Learning"

Somewhere around fourth grade, the growing mind begins to switch gears. The child who enjoyed rattling off her memorized spelling rules now starts noticing all the awkward exceptions. The young historian says, "But *why* did Alexander the Great want to conquer the whole world?" The young scientist asks, "What keeps the earth in orbit around the sun?" The mind begins to generalize, to question, to analyze—to develop the capacity for abstract thought.

In the second stage of the trivium, the student begins to connect all the facts she has learned and to discover the relationships among them. The first grader has learned that Rome fell to the barbarians; the fifth grader asks why and discovers that high taxes, governmental corruption, and an army made up entirely of mercenaries weakened the empire. The second grader has learned that a noun names a person, place, thing, or idea; the sixth grader discovers that gerunds, infinitives, and noun clauses can also

239

act as nouns. The third grader has learned how to multiply two-digit numbers together to produce an answer; the seventh grader asks, "What if I have only one two-digit number and an answer? Can I discover the missing number if I call it x?"

Now it's time for critical thinking.

"Critical thinking skills" has become the slogan of educators from kindergarten through high school. Critical-thinking books, software, and curricula abound. Catastrophe is predicted for children who miss out on this vital training. "Are you going to wait until schools teach thinking directly?" asks the back cover of one critical-thinking tome. "That may be too late for your children."

But what are these "critical thinking skills," and how are they to be taught?

A quick look through education materials reveals certain phrases popping up again and again: "higher-order thinking," "problem solving," "metacognitive strategies." All these boil down to one simple concept: critical thinking means that the student stops absorbing facts uncritically and starts to ask "Why?": "Why do you multiply the tops and bottoms of fractions?" "Why did the North and South really go to war?" "Why do scientists believe that nothing can go faster than the speed of light?" "Why do words that begin with *pre-* all have to do with something that comes 'before'?" "How do we know that water always boils at two hundred twelve degrees Fahrenheit?"

The student who has mastered "higher-order thinking" and "problemsolving techniques" doesn't simply memorize a formula. ("To find the area of a square, multiply the length of a side by itself.") Instead, she memorizes the formula and then figures out why it works. ("Hmmm . . . the sides of a square are the same, so the area inside the square is always going to measure the same horizontally and vertically. That's why I multiply the side by itself.") Once she knows why the formula works, she can extrapolate from it to cover other situations. ("How would I find the area of a triangle? Well, this triangle is like half a square . . . so if I multiply this side by itself, I'll get the area of a square . . . and then if I take half of that, I'll know how much area the triangle covers. The area of a triangle is this side, times itself, times one-half.")

Some critical-thinking advocates suggest that "thinking skills" can somehow replace the acquisition of specific knowledge. "Traditional teaching" is referred to, with scorn, as "mere fact assimilation" or "rote memorization," an outdated mode of learning that should be replaced with classes in "learning to think." The popular teacher's journal *Education Week* defines critical thinking as "the mental process of acquiring information, then evaluating it to reach a logical conclusion or answer," and adds, "Increasingly, educators believe that schools should focus more on *critical* thinking than on memorization of facts."¹

But you shouldn't consider critical thinking and fact gathering to be mutually exclusive activities. Critical thinking can't be taught in isolation (or "directly," as the above quote from a critical-thinking manual suggests). You can't teach a child to follow a recipe without actually providing butter, sugar, flour, and salt; piano skills can't be taught without a keyboard. And your new focus on the whys and wherefores doesn't mean that your child will no longer learn facts. A math student can't think critically about how to find the area of a triangle unless she already knows the formula for finding the area of a square. A fifth grader can't analyze the fall of Rome until she knows the facts about Rome's decay.

So we won't be recommending workbooks that claim to develop isolated "critical-thinking skills." Instead, as we cover each of the subjects—math, language, science, history, art, music—we'll offer specific instructions on how to teach your middle schooler to evaluate, to trace connections, to fit facts into a logical framework, and to analyze the arguments of others. The middle-grade student still absorbs information. But instead of passively accepting this information, she'll be interacting with it—deciding on its value, its purpose, and its place in the scheme of knowledge.

BUILDING ON THE FOUNDATION

The poll-parrot stage has prepared the middle-grade student for the logic stage in two important ways. First, the middle-grade student should no longer be struggling with the basic skills of reading, writing, and arithmetic. A child must read fluently and well before entering the logic stage; the student who still battles her way through a sentence cannot concentrate on what that sentence means. The logic-stage student will write exten-

¹"Critical Thinking," Education Week on the Web, www.edweek.org.

sively as she evaluates, analyzes, and draws conclusions; the study of grammar and punctuation will continue through high school, but the basic mechanics of spelling, comma placement, capitalization, and sentence construction should no longer act as barriers to expression. The middle-grade child will begin to think of mathematics in terms of concepts and ideas; she can't do this unless the basic facts of arithmetic are rock solid in her mind.

Second, the student has already been exposed to the basics of history, science, art, music, and other subjects. Now she has a framework of knowledge that will allow her to think critically.

On pages 232–236, we discussed the differences between parts-to-whole and whole-to-parts instruction. When you taught bugs in first grade, you used parts-to-whole instruction. You got out all the pictures of bugs (or or used actual bugs) and described the five different types of legs and feet. Then you asked the child to tell you what she just heard, to point out the different types of legs, to write a sentence or draw a picture. In other words, you taught the bits of information—the parts—to the child and then helped her to assemble them into a whole.

The middle grader has already learned something about bugs, though. And her mind has matured and developed beyond the need for spoonfeeding. In the middle grades, you'll move toward a whole-to-parts method of teaching—presenting the student with a piece of information or a phenomenon and asking her to analyze it. When you study biology with a fifth grader, you lay out a trayful of insects and ask: "What differences do you see between these legs and those?" "How would you describe each leg?" "What function does each have?"

In the following chapters, we'll guide you through this type of teaching in the middle-grade curriculum.

LOGIC AND THE TRIVIUM

A classical education isn't a matter of tacking logic and Latin onto a standard fifth-grade curriculum. Rather, logic trains the mind to approach every subject in a particular way—to look for patterns and sets of relationships in each subject area.

But *formal logic* is an important part of this process. The systematic study of logic provides the beginning thinker with a set of rules that will help her

to decide whether or not she can trust the information she's receiving. This logic will help her ask appropriate questions: "Does that conclusion follow the facts as I know them?" "What does this word really mean? Am I using it accurately?" "Is this speaker sticking to the point, or is he trying to distract me with irrelevant remarks?" "Why is this person trying to convince me of this fact?" "Why don't I believe this argument—what do *I* have at stake?" "What other points of view on this subject exist?"

These are questions that very young minds cannot grapple with. A seven year old has difficulty in understanding that (for example) a public figure might twist the facts to suit himself, or that a particular text might not be trustworthy because of the writer's bias, or that newspaper reports might not be accurate. But in the expanding universe of the middle-grade child, these questions will begin to make sense.

You may find yourself indebted to formal logic as well. Any parent of a fifth grader should be able to point out such logical fallacies as the *argumentum ad nauseam* (the incorrect belief that an assertion is likely to be accepted as true if it is repeated over and over again) and the *argumentum ad populum* (if everyone's doing it, it must be okay).

LOGIC IN THE CURRICULUM

In language, the logic-stage student will begin to study syntax—the logical relationships among the parts of a sentence. She'll learn the art of diagramming (drawing pictures of those relationships). The grammar-stage student wrote compositions that summarized information—how the Egyptians wrote, the important battles of the Civil War, the life of George Washington. Now, compositions will begin to focus on questions of motivation, of historical development, of debated fact. How did picture language such as hieroglyphics develop into written language? What were the real causes of the Civil War? Why did George Washington keep slaves? Logic-stage students will also begin to read literature more critically, looking for character and plot development.

Properly speaking, grammar-stage math is concerned with *arithmetic* adding, subtracting, multiplying, and dividing actual numbers. Arithmetic isn't theoretical. Arithmetic problems can be worked out in apples and oranges and pieces of bread. But in the second stage of the trivium, the student begins mathematics proper—the study of the many different relationships between numbers, both real and theoretical (negative numbers, for example). In other words, arithmetic is the foundation for mathematics proper.

History in the logic stage will take on a new character. The student will still be responsible for dates and places, but you'll encourage her to dig deeper into the motivations of leaders, into the relationships between different cultures that existed at the same time, into forms of government and causes of war. Morality should become a matter of discussion as well. Was this action (this war, this threat) justified? Why?

The study of art and music at this point will become synchronized with the study of history. The student will learn about broad developments in society and culture, and will try to understand how these are reflected in the creative works of the times.

HOW TO TEACH THE LOGIC STAGE

For you, the teacher, the teaching process will change slightly. In first through fourth grades, your focus was on memorization—on the learning of rules, dates, stories, and scientific facts. You *told* the student what she needed to learn, either by reading to her or by giving her a little lecture, and you expected her to be able to repeat that information back to you. You used narration and notebook pages to bring this about.

Now, you won't be feeding the child with a spoon. You'll be asking her to dig a little deeper, to do more discovering on her own. Instead of lecturing, you'll concentrate on carrying on a dialogue with your child, a conversation in which you guide her toward the correct conclusions, while permitting her to find her own way. You'll allow the child to disagree with your conclusions, if she can support her points with the facts. And you'll expect her not simply to repeat what she's read, but to rework the material to reflect her own thoughts. Once she's done this, she'll have learned the material once and for all.

Here, one-to-one tutoring has an obvious advantage over the large public-school classroom. Classrooms encourage children to answer questions set to them; one-on-one instruction encourages children to formulate their own questions and then pursue the answers. Even the most dedicated teacher can't allow a class of thirty to dialogue their way to comprehension—the noise would be overwhelming.

As the logic stage progresses, you'll be using more and more original sources, steering away from "textbooks." Many textbooks are boring. And most present information in a way that's actively incompatible with the intent of the logic stage. History, for example, is often given as a series of incontrovertible facts. As Neil Postman observes, there is usually "no clue given as to who claimed these are the facts of the case . . . no sense of the frailty or ambiguity of human judgment, no hint of the possibilities of error."² A textbook leaves nothing for the child to investigate or question; it leaves no connections for the student to discover.

How do you guide this journey toward discovery?

Start with logic. In the next chapter, we'll introduce you to the formal study of logic. In the chapters that follow, we'll guide you in applying the categories and structures of logic to the various subjects.

We cover logic and mathematics first; then, since the middle-grade humanities curriculum is structured around the logic of history, we present history before continuing on to reading, writing, grammar, science, foreign languages, art, and music.

PRIORITIES

The logic-stage student is doing much more independent work than the grammar-stage student and is requiring much less one-on-one attention from you. Home-educated students typically spend an hour in self-directed work for every ten minutes of parental tutoring.

Because of this new time economy, and because the student has now mastered the most basic elements of reading, writing, and math, you'll find that you're able to cover more material. Language, mathematics, logic, history, and science are staples of the logic stage; art and music should be pursued, if possible.

While you won't need to do as much one-on-one teaching with the student, maintain close supervision. Every home-schooling parent has made

²Neil Postman, The End of Education: Redefining the Value of School (New York: Knopf, 1995), p. 115.

the mistake of handing a textbook off to a seemingly mature seventh grader only to find at Christmas that two lessons had been completed. Check assignments on a weekly basis.

By the middle grades, students will often develop a particular fondness for one subject (or a loathing for another). Because home education is flexible, you can structure your academic day to allow a child to follow an interest. If, for example, your seventh grader acquires a passion for King Arthur, let her follow the knights of the Round Table throughout literature and history for several months; don't insist that she move to the Reformation right on schedule. At the same time, though, do insist that the student keep up in each subject area. Don't let math slide for history, or foreign language for math. It's too early for the child to develop a speciality; she still hasn't been exposed to the full range of possibilities.

14

W/.

SNOW WHITE WAS Irrational: logic for the Intuitive

"Captain, that is an illogical conclusion."

-Mr. Spock

SUBJECT: Formal logic and puzzle solving, grades 5–8 TIME REQUIRED: 3 hours per week

Wilson's Introductory Logic, James B. Nance's Intermediate Logic, and Anita Harnadek's Critical Thinking, Book One and Book Two. All are written on a fifth- to seventh-grade reading level, and none requires any previous knowledge of logic.

You'll start *Introductory Logic* in sixth grade. The fifth grade—the first year of the logic stage—is a warm-up for the study of formal logic. A student entering into formal logic must have a good grasp on the parts of speech; if your fifth grader can't tell a subject from a predicate, he won't be able to construct a syllogism. In Chapter 17, we recommend fifth-grade language curricula that will thoroughly prepare him for formal logic.

Furthermore, the student who is beginning a logic course should already have begun to reason his way through problems, rather than simply accepting the solutions you offer him. We recommend that during the fifthgrade year you spend three teaching periods (an hour at a time) per week doing logic puzzles. This will shape and strengthen the child's capacity for abstract problem solving and familiarize both of you with basic logical categories.

The best logic puzzles we've found are in the Mind Benders books. The series begins at the most basic level of deductive reasoning ("Rocky and Terrible are a bird and an elephant. Rocky weighs more than Terrible. Who is what?") and takes the student through increasingly more sophisticated problems, ending with the types of problems found in the analytical sections on both the SATs and GREs. The *Instructions and Solutions* manual provides detailed answers and guidance in how to interpret clues within the problems.

A supplement (not a replacement) especially attractive to good readers is Critical Thinking Press's *A Case of Red Herrings* mystery series. Students have to think deductively in order to solve the story-mysteries, and graphic organizer sheets help them organize their deductions logically. You can use these as companions to the Mind Benders books or do them the following year as an occasional lighthearted break from formal logic.

Some children will be ready for formal logic in sixth grade, after a year of this. Others will need another one or two semesters of preparation. Plan to begin formal logic in sixth or seventh grade, when your child is approaching the Mind Benders and *Red Herrings* with relative ease and without anxiety. Your goal is to complete *Intermediate Logic* by the end of eighth grade.

Our favorite formal logic text is Wilson's *Introductory Logic*, a workbook with complete explanations, exercises, and an answer key. *Introductory Logic* and its sequel, *Intermediate Logic* by Nance, have been mastered by eleven and twelve year olds in classical schools all over the country. *Note:* This publishing house (Canon Press) is very Presbyterian. The logic workbook begins with a quote from Augustine on Hippo's *On Christian Doctrine* (a great classical text) and uses a few Biblical examples.

If you'd rather stick to a secular curriculum, try Critical Thinking Press's two-volume Critical Thinking series. These books introduce basic logical categories and apply the logic to newspapers, ads, speeches, and so on. The
Snow White Was Irrational: Logic for the Intuitive 249

examples and exercises are interesting and practical, but the logic itself focuses primarily on fallacies rather than on logical structures, and the books are neither as rigorous nor as systematic as Canon Press books. (They're also geared toward class discussion, meaning that you'll have to adapt some of the exercises for home use.)

HOW TO DO IT

You'll want to spend three teaching periods of one hour each per week on the study of logic. The basic schedule will look like this for those using Canon Press texts:

Grade 5	60 minutes per day, MWF	Logic puzzles: Mind Benders,
		Red Herrings
Grade 6	60 minutes per day, MWF	Introductory Logic
Grade 7	60 minutes per day, MWF	Intermediate Logic
Grade 8	60 minutes per day, MWF	Critical Thinking, Book One and
		Book Two for review and
		practical application

For those who prefer to use a different text:

Grade 5	60 minutes per day, MWF	Logic puzzles: Mind Benders,	
		Red Herrings	
Grade 6	60 minutes per day, MWF	Critical Thinking, Book One	
Grade 7	60 minutes per day, MWF	Critical Thinking, Book Two	
Grade 8	60 minutes per day, MWF	Mind Benders, set C	

For the student who needs more time to absorb the material:

Grades 56	60 minutes per day, MWF	Logic puzzles: Mind Benders,
		Red Herrings
Grades 6-7	60 minutes per day, MWF	Introductory Logic or Critical
		Thinking, Book One
Grades 7–8	60 minutes per day, MWF	Intermediate Logic or Critical
		Thinking, Book Two

FOR THE LOGICALLY CHALLENGED

What is logic, anyway? Logic is the study of rules of reasoning. Think of the study of logic as a road map that keeps you driving in the correct direction. The road map has no control over where you start, just as the rules of logic won't automatically guarantee that an argument begins with the correct assumptions. If you begin an argument about affirmative action, for example, by stating that one race is naturally inferior to another, logic won't prevent you from arriving at a bigoted conclusion. But if you have your facts straight, the rules of logic will guide you to the correct destination.

Logic has a three-part structure, used to help you examine an argument:

- 1. the premise, the facts you start with-statements
- 2. the argument, the deductions you make from these facts
- 3. the conclusion, your final deduction-another statement

A *fallacy* is a flaw in the process: a lousy premise, an incorrect argument, or an irrelevant statement in the middle.

Let's demystify this with the help of Snow White and the Seven Dwarfs (the Brothers Grimm version). At the beginning of the story, a queen is sitting at her ebony window, looking out at the falling snow. She pricks her finger, and blood falls on the snow. "Ah," she sighs, "I wish I had a child as white as snow, as red as blood, and as black as ebony." Some (unspecified) time later, this does indeed happen. The queen names the baby Snow White and dies immediately after her birth.

Already we've got material to work with here. The story contains a number of *statements*, sentences that tell us something that can be true or false. The first lesson of logic is that statements (which are the foundation of logical arguments) must be distinguished from other types of sentences.

Was the queen happy with her baby?

This isn't a statement. It doesn't give us information, and it can't be classified as true or false, so it can't be used as part of an argument. Neither can a command, such as

Finish reading the story.

Snow White Was Irrational: Logic for the Intuitive 251

Only sentences that give information can be used in a logical argument.

The queen pricked her finger. The queen wished for a white, red, and black baby. Snow White was born after the queen's wish. The queen died after Snow White's birth.

All of these sentences give information, so they pass the test: they're statements (as opposed, say, to questions or commands). Now we have to decide on their *truth value*.

The queen pricked her finger.

is true.

The queen didn't want a baby.

is false.

A valid argument is made up of two types of statements: true statements called *premises*, and a statement of *conclusion*.

Premise A:The queen wished for a white, red, and black baby.Premise B:Afterward, the queen had a white, red, and black baby.Conclusion:Therefore, the queen got her wish.

This is a valid argument. The premises are true, and the conclusion comes directly from information contained in the premises.

But it's unexpectedly easy to trip up. Consider this:

Premise A:	The queen wished for a white, red, and black baby.
Premise B:	Afterward, the queen had a white, red, and black baby.
Conclusion:	Therefore, the queen's wish was granted.

What's the problem? Well, the premises don't say anything about the wish being *granted*. Just because one event follows another event in time (the baby came after the wish), we can't assume that the first event *caused* the second. This fallacy has a nice Latin tag—the *post hoc, ergo propter hoc*—and shows up all the time in politics.

252 THE LOGIC STAGE

Premise A:	I was elected in 1997.
Premise B:	The economy began to improve in 1998.
Conclusion:	My policies caused economic improvement

Notice that both the premises are true, but the conclusion isn't valid because it doesn't come directly from the premises.

This kind of fallacy is called an *inductive fallacy*—the conclusion might be true, but you just don't have enough information in the premises to be sure. Inductive fallacies show up when you make a conclusion (an "induction") on insufficient evidence.

Another type of inductive fallacy is the hasty generalization:

Premise A:	Snow White's stepmother was wicked.
Premise B:	Cinderella's stepmother was wicked.
Premise C:	Hansel and Gretel's stepmother was wicked
Conclusion:	All fairy-tale stepmothers are wicked.

This could well be true (I can't think of any exceptions offhand), but unless you do an exhaustive survey of fairy-tale stepmothers, you can't be sure.

To continue. Snow White's father, misguided man, marries a witch who can't bear any rival to her beauty. Every morning she asks her magic mirror, "Mirror, mirror on the wall, who is the fairest of them all?" And the mirror, which never lies, replies, "You are the fairest of them all." But one day, Snow White surpasses the witch in beauty, and the mirror informs the witch, "You, my queen, have beauty rare, but Snow White is beyond compare." The queen, unable to live with this competition, tells her chief huntsman to take Snow White into the forest, kill her, and bring back her lungs and liver.

The huntsman agrees but has an attack of conscience in the forest and lets Snow White go. He brings back the lungs and liver of a boar as proof that Snow White is dead. According to the Brothers Grimm, the wicked queen then eats the organs for dinner (with salt).

Notice the queen's logic here:

Premise A:	Snow White is more beautiful than I am.	
Premise B:	I believe that I cannot live if anyone is more beautiful that	
	I am.	,
Conclusion:	I cannot let Snow White live.	

Is this a valid argument?

Snow White Was Irrational: Logic for the Intuitive 253

Well, let's start with the premises. After all, one of the first rules of logic is: Be sure of your premises because false premises will always yield a false conclusion.

Premise A:	The earth is a flat surface.
Premise B: 📧	It is possible to fall off the edge of a flat surface.
Conclusion:	It is possible to fall off the edge of the earth.

That's an impeccably valid argument in form, but since the first premise is wrong, the conclusion is useless.

How does the queen's argument look? Premise B is fine; it's called a *self-supporting statement*—a statement that has to be accepted as true. There are three types of self-supporting statements: those that have to be true because they cover all the possibilities ("Snow White is either alive or dead"), those that have to be true because they contain their own definitions ("The mirror reflects"), and those that have to do with personal belief (called "self-reports"). To say "I believe that the sun is blue" has to be accepted as logically valid, even by those who don't agree. I can prove to you that the sun is yellow, but I have to accept as fact that you *believe* it's blue. Premise B is a self-report—it has to do with the queen's feelings. Logically, it's valid.

But notice. We've already encountered one limit of logic. Is it morally acceptable to believe that you have to be the most beautiful person on earth? No, of course not. But logic is concerned with the form of the argument, not its content. You can always discount a valid conclusion if you disagree with one of its premises.

Let's apply this to history for a moment. A typical sixth-grade historybook account of the Civil War might proceed in this way:

Premise A:	Lincoln believed that it was necessary for the federal
	government to stop slavery.
Premise B:	Only a civil war could stop slavery.
Conclusion:	It was necessary for the federal government to fight a civil
	war.

Case closed? Not for the classically trained student, who has learned in his formal-logic class to be wary of self-reports when they show up as premises of arguments. Recast this argument without a self-report as premise A, and the argument appears quite different:

Premise A:	It was necessary for the federal government to stop slavery.
Premise B:	Only a civil war could stop slavery.
Conclusion:	It was necessary for the federal government to fight a civil
	war.

This is still a valid conclusion, but now that premise A is no longer a selfreport, the student cannot automatically accept it as valid. Was it truly necessary for the federal government to stop slavery? This statement has now ceased to be self-supporting and is now a *supported statement*: outside evidence has to be brought in to support it. Premise B is a supported statement as well. Before the sixth grader can accept this argument, he has to investigate other remedies for slavery and conclude that they were inadequate. And once he's done that, he'll understand the Civil War in a new and vivid way.

Now back to Snow White and the egomaniacal stepmother.

If we allow the wicked queen her self-report in premise B, we still have to deal with premise A: "Snow White is more beautiful than I am." This isn't a self-supporting statement: it doesn't cover all the possibilities ("Snow White is either beautiful or not beautiful") or contain its own definition ("Snow White is snow white"), and it doesn't have to do with personal belief. So this statement is a supported statement. There's a hidden argument in this premise:

Premise A:	The mirror always tells the truth.
Premise B:	The mirror says Snow White is more beautiful than I am.
Conclusion:	Snow White is more beautiful than I am.

Because the mirror is magical, premise A is true and the conclusion is valid.

Snow White flees through the forest until she finds the house of the seven dwarfs, where she dines on leftovers and falls asleep in one of the dwarf's beds. The dwarfs come home, discover their things in disarray, and exclaim, "Who's been eating our food? Who's been sitting in our chairs?" in an echo of the Three Bears. When they find Snow White, they decide she can stay as long as she cooks and cleans for them.

Meanwhile, the wicked queen discovers (with the help of her magical mirror) that Snow White is still alive. She disguises herself as an old peas-

ant woman and arrives at the dwarfs' cottage with a poisoned apple—half red, half white, and magically constructed so that all the poison is in the red half. The dwarfs have warned Snow White not to let anyone in while they're at the mines, but Snow White really wants that apple.

"Look here," says the disguised queen. "I'll cut it in half and eat half myself." She eats the white half. And when Snow White sees that the apple seems harmless, she lets the woman in, takes a bite from the red half, and falls down dead. Eventually, a prince comes along and carries her body away, which jolts her so that the poisoned apple falls from her throat, and she wakes up, marries him, and lives happily ever after.

Now, there are any number of logical fallacies—statements that sound like valid arguments but aren't—implied in this story:

- anecdotal evidence fallacy—using a personal experience to prove a point.
 "I've met peasant women before, and none of them ever poisoned me."
- argumentum ad hominem—an attack on the speaker rather than on the argument itself. "Did the dwarfs tell you not to let anyone in? They just want you to keep on cooking their meals and scrubbing their floors."
- argumentum ad misericordiam—appeal to pity. "I'm just a poor peasant woman trying to earn a penny for my sick children, so you have to let me in."
- argumentum ad verecundiam—appeal to authority; it uses the name of a famous person in support of an assertion. "I just sold an apple to the king, and he said it was the best apple he ever ate!" (Unless the king is a noted apple connoisseur, this is irrelevant.)
- argumentum ad lazarum—the assumption that a poor person is automatically more virtuous than a rich person. "I'm just a simple beggar woman, so I'd never hurt you."

Once you've studied these and a host of other logical fallacies, you'll find them everywhere: policy speeches, ad campaigns, election slogans, newspaper editorials, and junior-high history textbooks.

As logic continues, the student will begin to learn that all statements can be placed into one of four categories—the *universal affirmative* ("All stepmothers are witches"), the *universal negative* ("No princes are villains"), the particular affirmative ("Some dwarfs are miners"), and the particular negative ("Some fairy-tale heroines are not intelligent"). These are known as categorical statements.

The syllogism is a type of logical argument used for evaluating categorical statements. Snow White's syllogism probably went something like this:

> My stepmother is a witch. This peasant woman is not a witch. Therefore, this peasant woman is not my stepmother.

Syllogisms have particular rules. For one thing, the first statement in the syllogism

My stepmother is a witch.

ought to describe the last phrase of the conclusion, the so-called *major term*—in this case, "my stepmother."

Also, the second statement in the syllogism

This peasant woman is not a witch.

ought to describe the first phrase of the conclusion, the *minor term*—"this peasant woman."

Furthermore, the syllogism has to have a *middle*—a term that appears in both of the premises, but not in the conclusion. The *middle* in Snow White's syllogism is "witch." So far, so good.

But Snow White's middle has problems. In a syllogism, the middle has to refer to every member of its class in at least one of the premises (this is called a *distributed middle*). Snow White never makes a sweeping statement (a *universal* categorical statement) about witches. She has committed the fallacy of the *undistributed middle*, which always yields a false conclusion.

If she had constructed this syllogism properly, it would have looked like this:

My stepmother is a witch. No peasant woman is a witch. Therefore, this peasant woman is not my stepmother.

In this syllogism, the statement "No peasant woman is a witch" has a *distributed middle* because it says something about *all* witches (none of them is a peasant woman). But if Snow White had made this argument—which is logically valid—she might have hesitated over that middle premise. How does she *know* that no peasant women are witches? Has she met them all?

Snow White pays for her muddled thought: she chokes to death on the apple. Fortunately, she lives in an enchanted forest and so revives and lives happily ever after—something that violates *all* known laws of logic.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). These texts can be obtained directly from the publishers; where we know of a mail-order option, we have provided it. Books in series are listed together in the order you'll want to use them.

A Case of Red Herrings: Solving Mysteries through Critical Questioning. Pacific Grove, Calif.: Critical Thinking Press, 1992.

\$11.95 each. Order directly from Critical Thinking Books and Software. *Book A1.*

Designed for fourth and fifth graders.

Book A2.

Designed for fourth and fifth graders.

Book B1.

Optional text for the student who wants to do more.

Book B2.

Optional text for the student who wants to do more.

Canon Press Logic series. Moscow, Idaho: Canon Press.

This series can be ordered from Rainbow Resource Center or directly from Canon Press.

Wilson, Douglas J. Introductory Logic. 1990.

\$15.00 for the student text.

Introductory Logic Answer Key. \$4.00.

Nance, James B. Intermediate Logic. 1996.

\$23.00 for the student text.

Intermediate Logic Answer Key.

\$6.50 for teacher's manual.

Harnadek, Anita. Critical Thinking series. Pacific Grove, Calif.: Critical Thinking Press, 1981.

You can order this series from Critical Thinking Books and Software or, for a discount, from Rainbow Resource Center.

Critical Thinking, Book One. \$16.95.

Critical Thinking, Book One: Teacher's Manual. \$9.95.

Critical Thinking, Book Two. \$19.95.

Critical Thinking, Book Two: Teacher's Manual. \$10.95.

———Mind Benders series. Pacific Grove, Calif.: Critical Thinking Press, 1981.

Order these books directly from Critical Thinking Books and Software. Mind Benders: Warm-Up.

\$7.95. Designed for grades K–2, but all logic students should start here. The problems are easy, but the book's purpose is to teach the process of deductive learning. Don't skip this level.

Instructions and Solutions.

\$10.95. Unless you're a professor of logic, buy this manual—it will take you through all three levels of Mind Benders.

Mind Benders: A1.

Mind Benders: A2.

Mind Benders: A3.

Mind Benders: A4.

\$7.95 each. These four books will prepare most fifth graders for the Canon Press introductory logic course.

Mind Benders: B1.

Mind Benders: B2.

Mind Benders: B3.

Mind Benders: B4.

\$7.95 each. These intermediate-level books are graded by the publisher as "Grade 6–Adult Ability." Use them as a supplement for the child who finishes *A4* and wants to do more.

Mind Benders: C1.

Mind Benders: C2.

Mind Benders: C3.

\$7.95 each. These are high-school-level problems for the eighth grader who has finished logic and wants to review.

15

11/1

THE LANGUAGE OF REASON: Math

Mathematics possesses not only truth, but supreme beauty—a beauty cold and austere, like that of a sculpture.

-Bertrand Russell

SUBJECT: Mathematics and algebra, grades 5–8 TIME REQUIRED: 45 to 60 minutes per day

During the logic stage, the study of mathematics goes from *arithmetic* (mathematical operations such as adding, subtracting, dividing, multiplying, and so on) to *mathematics* (understanding how numbers relate and why).

The child's mind also makes the transition from the *mental image* mode (picturing objects to go along with numerical symbols) to the *symbolic* mode (using numerals alone). Until this transition is complete, the abstract operations demanded by pre-algebra and algebra are impossible. A problem such as 9×2 simply requires you to picture two sets of nine objects. But a problem such as -5x = -15 requires you to deal with symbols that have no easily pictured reality behind them. If I don't know what x is,

how can I picture it? And what mental image can I make of a negative number?

In math, the fifth- and sixth-grade years complete the transition to symbolic thinking. During these years, the student solidifies her grasp of mathematical operations (addition, subtraction, multiplication, and division). She will also be introduced to more abstract concepts: negative numbers, percentages, probabilities, and decimals. She'll begin to do more complex word problems, ones that will require both logic *and* abstract mathematical reasoning.

The fifth- and sixth-grade math curricula should involve plenty of practice and no use of hand-held calculators. Until the transition to the symbolic mode of thought is complete, the student must continue to practice math operations.

We suggest that you also do some practical, hands-on math work during these years. The middle-grade student grows easily impatient with material that doesn't seem to have any logical connection to real life, which is why the National Council of Teachers of Mathematics suggests that middlegrade math curricula place "math in the context of students' everyday lives ... giving students hands-on activities"¹ and real-life problems to solve.

Most math curricula can be finished in a year if you do four lessons per week and set aside one extra day to do testing, consumer math, a real-life math problem, or math games. We've suggested a few consumer math and math game books at the end of this chapter. Real-life problems might include

- figuring out the family's grocery budget for a week (or a month), or finding the best buys at the grocery store
- figuring out expenses and profits for a kid-run home business—grass cutting, pet tending, baby-sitting, baking
- balancing a checkbook (better now than in college)
- figuring out the monthly and yearly interest on a credit-card debt (ditto)
- calculating the area of a room, a wall, or the entire house for wallpapering, carpeting, or another home project

¹Debra Viadero, "Math Texts Are Multiplying," Education Week on the Web, May 8, 1996, www.edweek.org.

- figuring out the cost of driving the car to and from a special event
- figuring out how much a restaurant meal would cost if it were cooked at home
- calculating the cost in work hours of movie tickets, concert passes, or other types of entertainment
- altering a recipe so that it serves a different number of people—for example, reducing a six-person dish so that it will now serve two or (more complicated) rewriting a four-person recipe so that it will now serve nine or eleven
- working out the itinerary for a family trip, complete with routes, timetables, and scheduled stops

Your own family life will yield plenty of additional problems. Try to stay alert for those times you use numbers, measurements, or calculations, and then ask yourself whether this problem is within the reach of your young math student.

HOW TO DO IT: FIFTH AND SIXTH Grades

Somewhere in the logic stage, you may find yourself stymied as you teach your child mathematics. Math, unlike history or reading, requires the mastery of the language of symbols. If you feel uncomfortable speaking this language, you won't be able to guide your child in its use.

Unless you decide to use the Math-U-See program, with its teaching videos for parents (and the time investment this demands), you may eventually need a mathematics tutor. In Chapter 43, we discuss the numerous tutoring options available to home-school parents: home-school co-ops, local college students, online tutorials, and more.

Whether you use a tutor or teach the material yourself, you'll need to choose a curriculum and supervise overall progress. For fifth and sixth grades, we recommend one of the following:

Saxon Math

In the middle grades, the Saxon texts continue to teach mathematics incrementally, introducing new concepts one at a time, with plenty of drill and application. The middle-grade home study kits include the texts, an answer key for you, and examinations (with answers) that you can give the child throughout the year. The examinations start with *Math 54*, which is typically used in fourth grade; in grades 1 through 3, students complete oral and written assessments that are not formally graded. Home-schooled students need to practice taking examinations without "peeking," begging you for extra help, or getting up for chocolate milk. Without this practice, the transition into college work will be unnecessarily difficult.

Saxon remains our first choice for middle-grade math. The course is systematic, simple to teach, and mathematically excellent. The Saxon publishing company cultivates the home-school market, providing help for home schoolers via E-mail, a Website, and an 800 number. If you used Saxon for grades 1 through 4, you probably finished *Math* 54 at the end of the fourth-grade year. Continue with *Math* 65, the fifth-grade book, and *Math* 76, the sixth-grade book. If you haven't used Saxon before, request the home-study catalog. A diagnostic test is bound into the center of the catalog; the score card will tell you which Saxon level is right for your child.

Math-U-See

The Math-U-See program provides you, the parent, with video instructions that you must watch *before* teaching the lesson. If you've been using Math-U-See, you're probably already in the first *Intermediate Mathematics* book; you can continue with the next two parts, which are fifth and sixth grade. If you're just beginning with this program, start at the beginning of *Intermediate Mathematics*, and aim to finish the program in two years. We don't think Math-U-See provides enough drill. If you use this program, order the A Beka Book drill sheets to go with it (see Resources, at end of the chapter).

A Beka Math

A Beka Book is used by many home schoolers. The program is comprehensive and drill-intensive. As we've noted before, don't try to do all the problems. You must pick and choose among the Beka lessons as well if you want to spend one day per week doing real-life math, as we suggest. *Note:* Beka is a Christian publishing house, so you'll find Psalms interspersed with some lessons.

Schedules

Schedule formal math lessons four days per week, allotting one day to reallife math or math games. Math is generally best done first thing in the morning or at the beginning of your scheduled schooltime.

Sample Schedules

Fifth Grade			
45–60 minutes per day	M, T, W, TH	Math lesson	
60 minutes or more	F	Real-life math	

Sixth Grade45–60 minutes per dayM, T, W, THMath lesson60 minutes or moreFReal-life math

THE SHIFT TO UPPER-LEVEL MATH

Seventh grade begins the real journey into symbolic mathematics. Collegebound students (and seventh grade is too early to cut off the possibility of college) should plan on taking—*as a minimum*—pre-algebra, geometry, and two years of algebra. Most students should try to continue their math studies with a pre-calculus/trigonometry course. The mathematically inclined can then, in their senior year, take an advanced elective such as calculus.

A mastery of algebra has implications that go far beyond successful college admissions. Algebra, even at its most basic level, requires the student to work with unknowns, which means that she cannot memorize set answers and fill them in mechanically. Instead, she must analyze each problem, discover its central point, and then apply knowledge already acquired to its solution. Algebra, like logic, teaches the mind to think straight. It demands not only the memorization of information, but also the ability to apply that information in a number of different situations. *That* is higherorder thinking.

We can't emphasize enough that higher-order thinking requires mastery of those lower-order skills. Calculators in seventh grade are fine, but only if the student has already comprehended basic mathematical operations. Again, we depart from the opinion of the National Council of Teachers of Mathematics, which recommends the use of calculators beginning in fourth grade—a standard that inevitably produces seventh graders with little intuitive understanding of mathematics.

The student who's still shaky on fundamentals should use the summer before seventh grade to review them. Saxon Publishers offers *Saxon Middle Grade Basic Facts*, which should ground any student in the operations necessary for a successful move into pre-algebra.

Once the basic operations are mastered, it's time to prepare for algebra.

Comparing Math Programs

All three of the math programs we've described—Math-U-See, A Beka Book, and Saxon—extend through twelfth grade. Both the A Beka program and the Math-U-See curriculum will do a good job of preparing the student for Algebra I, which is scheduled for ninth grade. The seventh-grade A Beka text, *Basic Mathematics I*, reviews all arithmetic topics and provides plenty of drill in practical application of math to daily life. The eighth-grade book, *Pre-Algebra*, introduces basic algebra concepts and continues to drill the student in word problems. The student who struggles with arithmetic and isn't ready to begin pre-algebra in seventh grade (as the Saxon program does) will do well with this program. As we've mentioned before, the A Beka program provides more drill than most students need; don't feel that you need to do every problem in every set.

For seventh and eighth grades, Math-U-See sells Advanced Mathematics, a program that reviews arithmetic and introduces algebra concepts, and is followed by Basic Algebra and Geometry in ninth and tenth grades. As in Intermediate Mathematics, Advanced Mathematics includes an instruction video that you watch before presenting the lesson to the student, teacher's manuals, student workbooks, and a full set of manipulatives. This is a good program for the highly visual learner. Although it is time-intensive for the parent, if you plan on doing advanced math without a tutor, you may want to have the step-by-step guidance that these videos supply. (A Beka, originally designed for classroom use, doesn't include directions for home-school teachers.)

These are both good programs. For the undecided, though, we still prefer Saxon Math. Saxon is complete, rigorous, and home-school-friendly. It also introduces algebra a year earlier than other programs. The pre-algebra book, *Algebra 1/2*, is excellent preparation for the *Algebra I* book.

The only problem with the Saxon program is that it doesn't have a separate geometry book; the geometry is "integrated" into each year's study. Proofs are introduced in *Algebra II*, and the study of geometry concludes with *Advanced Mathematics*, the book that comes after *Algebra II*. There's nothing wrong with the geometry material itself, but to get the equivalent of a full geometry course, students must stick with Saxon all the way through and in a sequence that differs from standard geometry-separate high-school mathematics (see the table "Comparing Mathematics Programs," below). Math-U-See follows the standard pattern.

Grade	Saxon	Standard
Seventh	Algebra 1/2	Pre-algebra
Eighth	Algebra I	Algebra I
Ninth	Algebra II	Geometry
Tenth	Advanced Mathematics	Algebra II
Eleventh	Calculus	Pre-calculus
Twelve	Elective	Calculus

Comparing Mathematics Programs: Saxon versus Standard

As you can see, Saxon advances the student an entire year by combining geometry with the rest of mathematics. If the student is able to stay with Saxon Math, she'll have more math earlier than if she were involved with other programs. This allows mathematically gifted students to progress further in high-school math. Also, a student going through the Saxon sequence will have completed *Advanced Mathematics* by the time she takes her PSATs and SATs, which will give her a chance at a much higher score.

A problem arises when you deal with students who need to progress more slowly. In recognition that many seventh graders won't be ready to start pre-algebra (*Algebra 1/2*), Saxon provides *Math 87* to serve as a bridge between *Math 76* (the sixth-grade book) and *Algebra 1/2*. If your sixth grader is still stumbling over the concepts in *Math 76*, don't push her into *Algebra 1/2*; use Saxon's alternate sequence (see the table "The Saxon Program," below). *Either sequence is perfectly acceptable for a middle-grade stu*- *dent*. Pushing a child who struggles with math into pre-algebra before she's ready is antiproductive. The child won't "catch up"; she'll get frustrated and develop a long-lasting hatred for math.

	Regular Saxon		Alternate Saxon
Grade	sequence	di d	sequence
Fifth	Math 65		Math 65
Sixth	Math 76		Math 76
Seventh	Algebra 1/2		Math 87
Eighth	Algebra I		Algebra 1/2

The only caution we have about the alternate sequence is that if the student sticks with Saxon throughout, she won't finish geometry until the end of eleventh grade. Standardized tests—PSATs and SATs—are geometry-intensive. PSATs are taken in the fall of the eleventh-grade year, and a good score can bring multiple offers of financial aid—from National Merit Scholarships to in-house offers made by individual schools. It's been our experience that students who take a focused geometry course in tenth grade and then finish Algebra II in eleventh grade test better. (See Chapter 27 for the suggested high-school sequence.) If your child isn't comfortable with arithmetic by the end of sixth grade and isn't ready to begin Algebra 1/2 in seventh grade, you may want to choose A Beka or Math-U-See instead.

Schedules

Advanced math is best done five days per week, first thing in the morning or at the beginning of your scheduled schooltime. You can divide the number of lessons in the course (Saxon's pre-algebra, for example, has 137 lessons) by the number of days in your school year (35 weeks or around 180 days on average). Use the extra days for extra drill, testing, or stretching a difficult lesson over two days. And use common sense. If your child flies through pre-algebra, start her on algebra—there's no reason to make her wait.

50–60 minutes per day	Seventh Grade M, T, W, TH, F	Algebra 1/2 or Math 87
60 minutes per day	Eighth Grade M, T, W, TH, F	Algebra I or Algebra 1/2

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). We suggest that you contact these publishers of math materials and examine their catalogs closely before deciding on a curriculum. Most will aid you in placing your child in the most appropriate level. We have listed basic curricula first and supplementary materials second.

Math Curricula

A Beka Book Traditional Arithmetic series. Pensacola, Fla.: A Beka Book. Order from A Beka Book. A Beka Book also offers a wide range of mathematics teaching aids. Ask for a copy of their home-school catalog. Parents don't need the curriculum/lesson-plan books for each level; these give tips for classroom teaching.

Arithmetic 5. \$10.80.

Arithmetic 5, Teacher Key. \$13.40. Student Speed Drills and Tests. \$4.25.

Teacher Speed Drills/Test Key. \$8.60.

Arithmetic 6. \$10.80.

Arithmetic 6, Teacher Edition. \$13.40. Student Speed Drills and Tests. \$4.25.

Teacher Speed Drills/Test Key. \$8.60.

Basic Mathematics I (seventh grade). \$15.15. Basic Mathematics I, Teacher Key. \$19.40. Student Test and Quiz Book. \$5.95. Teacher Test/Quiz Key. \$8.60.

Pre-Algebra (eighth grade). \$18.50. Pre-Algebra, Teacher Key. \$23.50. Student Test and Quiz Book. \$5.95. Teacher Test/Quiz Key. \$8.60. Math-U-See. Virginia Beach, Va.: Math+Plus.

This program has a number of different levels and workbook/video/manipulative combinations.

Intermediate Mathematics, Grades 4-6.

\$125.00 for the basic curriculum; supplementary materials are additional.

Advanced Mathematics, Grades 7-8.

\$150.00 for the basic curriculum. If you've done the Math-U-See intermediate curriculum, the price is \$90.00 (you already own the manipulatives you'll need).

Saxon Middle and Secondary Mathematics. Norman, Okla.: Saxon Publishers. Order from Saxon, from the Education Connection, or from Rainbow Resource Center. If you decide to use Saxon, call Educational Teaching Aids to ask about Saxon-compatible manipulatives. The Saxon homestudy catalogs include a diagnostic test. Request a catalog and test from Saxon Publishers, or send an E-mail message by visiting the Saxon Website at www.saxonpub.com.

Math 65 (fifth grade), 2d ed. 1995. \$48.95.

Math 76 (sixth grade), 3d ed. 1997. \$49.95.

Math 87. 1997. \$49.95

This is the transitional book for seventh-grade students who aren't ready to begin pre-algebra. If your sixth grader went through *Math* 76 without unusual difficulty, you can skip *Math* 87 and go straight into *Algebra* 1/2.

Algebra 1/2, 2d ed. 1997. \$51.95.

Pre-algebra for seventh grade. Used by eighth graders who did the *Math 87* book in seventh grade.

Algebra I, 2d ed. 1990. \$51.95.

For eighth grade. Used by ninth graders who did *Algebra 1/2* in eighth grade.

Supplementary Resources

For drill, consumer math, and hands-on math.

Hake, Stephen. Activity Guide for Middle Grades Series. Norman, Okla.: Saxon Publishers, 1990.

\$25.00. Order from Saxon. Designed for use with the Saxon *Math* 54 and above, this book provides lots of practical problem-solving activities.

Harnadek, Anita. Cranium Crackers. Pacific Grove, Calif.: Critical Thinking Press, 1997.

\$19.95 each for books 1–4. Order from Critical Thinking Press. Book 1 begins on a third-grade level; by Book 4, the problems are adult-level difficult. The kinds of problems are varied—logic puzzles, word problems, analogy problems, number-pattern problems, and more. But the explanations are clear, and the problems (most of them) are interesting. However, the books are overpriced.

Hive Alive! Ann Arbor, Mich.: Aristoplay, 1994.

\$12.00. Order from Aristoplay. Players have to infiltrate an enemy hive and capture the queen bee; and, to defeat the enemy hierarchy, they have to understand fractions and decimals.

Holey Cards.

\$1.00 each. Order from Greenleaf Press. These cards fold in half around a blank sheet of white paper. The student writes the answer to each problem on the bit of white paper visible through the hole. The goal is for the student (with practice) to be able to write the correct answer to all the problems in less than two minutes. Each card has fifty-two problems that address one skill. Good for middle-grade review.

Addition Facts. Division Facts. Multiplication Facts. Subtraction Facts.

Moneywise Kids. Ann Arbor, Mich.: Aristoplay, 1994.

\$15.00. Order from Aristoplay. A game that requires kids seven and up to budget and dispose of a hypothetical paycheck.

Saxon Middle Grade Basic Facts. Norman, Okla.: Saxon Publishers.

\$5.00. Order from Saxon. These 230 cards review all arithmetic facts. They are particularly useful if you're just starting in Saxon after another program.

Stanmark, Jean, et al. Family Math. Berkeley, Calif.: Equals, 1996.\$18.95. Order from a bookstore, Rainbow Resource Center, or the

Lawrence Hall of Science Museum Store. Published by the Family Math program at the Lawrence Hall of Science, this series is designed for use by the entire family (K–6 especially). It contains hands-on math activities, games, and reference charts. A good guide to real-life math problems.

Thompson, Virginia, et al. Family Math: The Middle School Years, Algebraic Reasoning and Number Sense. Berkeley, Calif.: Equals, 1998.

\$18.95. Order from a bookstore or from the Lawrence Hall of Science Museum Store. The sequel to *Family Math*, this book provides more family-oriented math activities, including some that reinforce algebra skills.

True Math. Ann Arbor, Mich.: Aristoplay, 1994.

\$25.00. Order from Aristoplay. Nine hundred math questions based on real-world situations; a good family game (for ages 10 to adult). Questions cover logic, money use, numbers, and size/scale.

16

WHY 1492? HISTORY AND GEOGRAPHY

All things from eternity are of like forms and come round in a circle. —Marcus Aurelius, *Meditations* II.14

SUBJECT: History and geography, grades 5-8

TIME REQUIRED: 3 hours of intensive study, 90 minutes per day, two days per week, or 60 minutes per day, three days per week, plus as much additional time as possible to be spent in free reading.

ORGANIZING THE MATERIAL

During the logic stage, the student learns how to find connections. In formal logic, he discovers connections between a set of propositions and a conclusion. In math, he's taught the connections between the parts of an equation.

In history, he'll concentrate on finding connections between world events. Instead of simply reading the story of Rome's fall, the fifth grader will look at what happened before that fall—the events that led to the empire's destruction. Instead of studying the Revolutionary War as a single event, the seventh grader will read about the early days of the colonies and ask: What happened to make Americans discontent? What happened after the war that allowed America to stay independent as a nation? In the logic stage, history changes from a set of stories into one long, sequential story filled with cause and effect.

Beginning in the logic stage, the study of history becomes the backbone of classical education. Reading, art, music, and even science to some degree are organized around the outline provided by history. History is the training ground where the student learns how to organize and evaluate information. And that's the goal of the classical education—to produce an adult who can take in new knowledge, evaluate its worth, and then discard it or put it to good use.

In Part I, we referred to the mind of an elementary student as a storeroom that must be stocked with all sorts of images and words. Imagine what would happen to that storeroom if you kept cramming in more and more stuff without ever stopping to organize it. Greek history, Chinese fairy tales, biological classifications, the life of Bach, the concentration camps of the Third Reich—all lie stacked together. The student who can't get beyond this point will never realize that the laws of Hammurabi, the Magna Carta, and the Bill of Rights are linked. The information will remain jumbled together and ultimately unusable. And unless the student is given the mental skills to sort through and classify all this knowledge, he'll become an adult with (in the words of classical schoolmaster David Hicks) a "cluttered, disorderly mind—helpless to make the fundamental connections between basic ideas, or to . . . participate intelligently in the public debate over the great issues confronting his nation and his times."¹

How does the student sort through and classify all this material?

He'll still make up history notebooks as he did in the elementary grades. But the study of history will now incorporate four elements:

- 1. creating a time line
- 2. outlining

¹David Hicks, Norms and Nobility: A Treatise on Education (New York: Praeger, 1981), p. 132.

- 3. using and evaluating primary sources
- 4. organizing this information using the history notebook

Each of these activities has a separate role in the mind's development. Creating a time line teaches the student to trace chronological connections; outlining trains the student to look past rhetorical smoke and mirrors in order to find the "bare bones" argument of a speech or essay; the use of primary sources teaches the student to interpret material himself instead of relying on "experts"; organizing information into the divisions of the history notebook helps the student to classify similar events and historical trends together.

The Time Line

The time line is simply a piece of paper long enough to stretch along one (or more) walls of the student's room. (Hallways are also good places for time lines.) You can tape sheets of oversized construction paper together or use Art Kraft rolls of art paper (see Resources section for ordering information).

Time lines help the student make visual connections between events. A young historian could study the conquests of Genghis Khan, Francis of Assisi's founding of the Franciscan order, and the death of Richard the Lionhearted without realizing that these events all occurred within the same decade²—until he saw them marked on a time line.

The time line should begin with a reasonable date in ancient history. We suggest 5000 B.C.,³ when farming begins in earnest in China, Mesopotamia, and the Nile River valley. Make the time line as long as you can, measure

²Richard the Lionhearted was killed in France in 1199. He was succeeded by King John. The year after John's accession, Genghis Khan defeated his greatest rival in 1203 and was crowned chief prince of the Mongols in 1206. John himself was excommunicated in 1209, the same year that the Franciscan order was founded.

³Western civilization has traditionally divided time into the centuries before Christ's birth (B.C.) and the centuries after Christ's birth (A.D., or *anno domini*—the "year of our Lord"). Some people prefer to use the abbreviations c.E. ("Christian Era") and B.C.E. ("before the Christian Era" or "before the Common Era"). As Westerners, we're accustomed to B.C. and A.D.

it, and divide it by the number of centuries you'll be studying that year. You'll be repeating the divisions you used during the grammar stage:

Ancients -	5000 в.са.д. 400
Medieval-early Renaissance	400–1600
Late Renaissance-early modern	1600–1850
Modern	1850-present

During the first year of logic-stage history, since you'll be covering fiftyfour centuries, you'll want to divide the time line into 54 equal parts and label each one. Don't forget that years B.C. run backward, while A.D. years run forward:



(A peculiarity of chronology: there's no year 0. Dating goes from 1 B.C. to A.D. 1 without a break.)

Try to make the century divisions as long as possible. There's not much going on between 5000 and 3000 B.C., but resist the temptation to make the early centuries short just to save space—*the time line must be kept in proportion*. Each year's time line should have centuries of equal length. The 3500–3400 B.C. space may remain bare, compared with the crowded space between 300 and 200 B.C. But part of the time line's purpose is to give some sense of the quickening pace of recorded history.

The time line can be simple (birth and death dates recorded in red pencil, political events in green, scientific discoveries in purple, and so forth). Or it can be as complicated as the student likes (adorned with drawings and cutout pictures: notebook-paper-sized inserts hung above or below a particular date to allow for expansion—for example, a month-by-month account of the Civil War or a year-by-year description of the Arab conquests of the seventh century). You can purchase published time lines, but the student should make his own. Writing up the dates is part of the learning process.

We suggest that you leave two spaces at the beginning of the Ancients time line, one marked "before 9000 B.C." and the other marked "9000–5000

B.C." You can put in these two spaces the small amount of information provided about very early civilizations and ages or your religious teachings about origins.



The time line will not only be an at-a-glance reference tool, but it will also act as a synthesizer of areas of knowledge. Birth and death dates of great writers, scientific advances made in biology and chemistry, dates of symphonies, paintings, and cathedrals—all will be recorded on the time line. Astronomers, poets, kings, wars, discoveries, and publication dates will appear, breaking down the walls between science, history, and literature. Since the stories of the Old Testament have influenced so much of Western thought, you may want to integrate them with recorded secular history. The history texts we recommend place Old Testament events in the flow of ancient history.

The Outline

You'll use outlining as an exercise at least once a week. In the elementary grades, the student created narrations—at first telling you what he'd just read while you wrote it down, and then writing the narration down himself. This process developed the student's comprehension skills and taught him how to tell the difference between irrelevant details and important elements of plots or argument.

But as texts grow more complex, the simple narration process will no longer be adequate. Instead of doing narrations, the student will begin to outline what he's read. Eventually, he'll be able to pick out the central idea from a chapter in any book and distinguish it from supporting ideas. This is an invaluable skill for note taking during college lectures; it also prepares the student to do advanced research. Once he can write a good, succinct précis of a scholarly work, he'll be ready to tackle the research paper without thrashing around in masses of unnecessary information.

Outlining simply involves finding the main ideas of a work and listing the supporting ideas beneath it. In fifth grade, the student will begin to develop this skill by simply summarizing each paragraph he reads. By eighth grade, he'll be able to condense a book chapter into Roman-numeral outline form. He'll also learn to use these outlines as the basis for short original compositions. We lay out the how-tos of outlining for each grade in the sections that follow.

The logic-stage history text should be a world history that the student can outline easily. As in the grammar stage, the student will supplement this with outside readings and other resources. We suggest the *Kingfisher Illustrated History of the World*, a beautifully organized book that covers major events on every continent and provides a running chronology on each page.

Primary Sources

In the logic stage, the child will still use paraphrases of difficult works such as the *Aeneid*, the *Odyssey*, and *The Canterbury Tales*. But he'll also begin to explore *primary source material*—original letters, reports, engravings, journals, and essays. Use of primary sources is vital to logic-stage history; the student can't evaluate historical events unless he has firsthand knowledge of them.

In the Resources at the end of this chapter, we've listed primary sources for each historical period. A primary source is anything that has its origins in the actual time under study. The *Epic of Gilgamesh*, for example, is a primary source if you read it in a good translation (a retelling in picture-book form wouldn't be a primary source because the story has been substantially changed and simplified). The Magna Carta, the poetry of Henry VIII, Martin Luther's journals, the Declaration of Independence, and the letters of Civil War soldiers are all primary sources. (A book about the Magna Carta, a biography of Henry VIII or Martin Luther, or the story of the creation of the Declaration would be a secondary source.)

Whenever the student encounters a primary source, he needs to evaluate it. As he studies history, he will develop his own ways of evaluating primary sources. To start, we suggest that the student go through the following checklist whenever he finishes reading a primary source:

- What does this source say? (Content)
- Who is the author? (Social position, profession, political affiliations, age, any other relevant personal detail)
- What is the writer's purpose?

- What does he/she have to lose or gain by convincing others of his/her position?
- What events led to this piece of writing?
- What happened as a result of this writing?

For each primary source, have the student head a sheet of notebook paper with the name of the source ("The First Amendment to the Constitution") and answer the above questions. In this way, he will learn how to ask critical questions of historical documents. File these sheets of paper in the history notebook.

The Notebook

Logic-stage history involves both *synthesis* (fitting information into one overall framework) and *analysis* (understanding individual events). The time line will be the student's tool for synthesis. To help in analysis, he'll be creating another history notebook—a fat three-ring binder full of notebook paper. Label this notebook with the period under study (for example, "Ancients: 5000 B.C. to A.D. 400"), and divide it into nine sections:

- 1. Outlines
- 2. Great Men and Women
- 3. Wars, Conflicts, and Politics
- 4. Inventions and Technology
- 5. Religion
- 6. Daily Life
- 7. Cities and Settlements
- 8. Primary Sources
- 9. The Arts and Great Books

Basic resources for the logic stage of history are the *Kingfisher Illustrated History of the World*, an atlas, a wall map, and a globe. We also like the *Eyewitness Atlas of the World*.⁴ History and geography fall naturally together; every time you study an event or person, you'll want to look up the location on the globe, on the wall map, and in the atlas (which will give you not

⁴Our edition is *The Eyewitness Atlas of the World* (New York: Dorling Kindersley, 1994), revised and updated for 1996. Make sure you get the most recent update since political borders change almost daily in some parts of the world.

only political borders, but also a brief history of the region). *Note:* Don't neglect the use of a globe—all wall maps and atlases distort land masses by laying them out flat.

Encyclopedias are expensive, but consider investing in a set for your middle-grade student; the encyclopedia is an invaluable first stop for research. The standards are *World Book* and *Britannica*. *World Book* is readable and nicely illustrated; *Encyclopaedia Britannica* is more complex but also more comprehensive.

Memorization

During each year, you should review the lists of important dates in the back of the *Kingfisher Illustrated History*—monarchs, wars, dynasties, and explorations. As you progress through history, mark in red on the time line the dates you think the student should memorize (we've made suggestions for each grade, but the final decision is up to you). Ask the student to go over these dates once per week—Fridays perhaps. By the end of the year, he'll have them down.

Now the student is ready to begin. For the next four years, he'll follow the same basic pattern. He will

- 1. read and outline a section from the *Kingfisher Illustrated History of the World*.
- 2. mark all dates on the time line.
- 3. find the region under study on the globe, on the wall map, and in the atlas.
- 4. do additional reading from the library or from the Resources list.
- prepare summaries of information on at least two of the above topics and file them in the history notebook. In fifth grade, they will be simple outlines; by eighth grade, they will be compositions, two to four pages long.

HOW TO DO IT

Fifth Grade: Ancients (5000 B.C.-A.D. 400)

Let's assume that your fifth grader opens his Kingfisher Illustrated History of the World to the section entitled "The Phoenicians." These two pages con-

tain basic information about the Phoenicians, a map of the Mediterranean, and illustrations.

(1) The student will begin his assignment by reading and outlining this section from the *Kingfisher* history. In fifth grade, outlining takes the form of making a list of sentences, one per paragraph. The section about the ancient Phoenicians in the *Kingfisher Illustrated History of the World* reads:

The Phoenicians

The Phoenicians were merchants, pirates, and the greatest seafarers of the ancient world. They lived along the coastal strip at the eastern end of the Mediterranean Sea, often known as the Levant, and now part of Syria, Lebanon, and Israel. Their language was related to Babylonian and Hebrew.

They were originally called Canaanites, because they lived in the land of Canaan. From about 1200 BC they were called Phoenicians from the Greek word *phoinos*, or red, because they produced a wonderful reddishpurple dye.

The Phoenicians' main port was Tyre, which according to tradition they founded 4,750 years ago. The city had close links with Israel. Hiram, king of Tyre, supplied Solomon with cedar wood and craftsmen to build the Temple in Jerusalem, and Ahab, king of Israel married Jezebel, Princess of Tyre.

The Phoenicians were skilled craft workers, making glassware, weapons, jewelry, and cloth. They traded these goods all along the Mediterranean coasts and imported goods from such faraway places as Britain.

Their trading helped to spread scientific knowledge and technology. They set up many colonies, the most important being Carthage (now in Tunisia). Other colonies were Marseilles (France), Cadiz (Spain), and Malta, Sicily, and Cyprus.⁵

The fifth grader's outlining assignment is to boil down each of these paragraphs into one sentence. To do this, he'll need to locate the most important fact in each paragraph and put it into his own words. Each sentence

⁵Charlotte Evans, gen. ed., *The Kingfisher Illustrated History of the World* (New York: Kingfisher Books, 1993), pp. 56–57. The *Kingfisher Illustrated History* provides other bits of information in boxes and underneath illustrations. But don't include these in the outlining process since they don't fit into the writer's development of his topic.

should form a separate paragraph. A good final outline of this selection might look like this:

Thé Phoenicians

The Phoenicians were seagoing people who lived on the eastern Mediterranean coast.

At first, they were called Canaanites, but around 1200 B.C. they became known as Phoenicians.

Their main port was the city of Tyre.

They traded crafts and weapons throughout the Mediterranean.

They spread science and technology, and founded cities in North Africa, France, Spain, Malta, Sicily, and Cyprus.

This outline should be placed in the history notebook under Outlines (the first section), which will serve as a running summary of historical facts.

(2) Now it's time to mark dates on the time line. The text supplies the following date:

1200 B.C. The Canaanites became known as Phoenicians.

The running time line at the right side of the text page provides these additional dates:

1020 в.с.	Samuel anoints Saul king of the Israelites.
1000-774 в.с.	Phoenicia: great period of Tyre.
1000–950 в.с.	The Western Zhou dynasty sets up its capital at Hao.
1000 в.с.	Saul is killed and succeeded by David.
	The Hindu Rig-Veda is compiled.
	The Phoenicians begin to use a full alphabet.
	Greeks colonize the Aegean islands.
1000-600 в.с.	The Villanova culture flourishes in Italy.
994 в.с.	David makes Jerusalem his capital.
	Teutonic tribes move to the Rhine.
961 в.с.	David is succeeded by Solomon.

The student should put these dates on the time line as well, along with brief explanatory captions. This exercise shakes him out of absorption with a single culture and teaches him to think across country borders.

(3) Once these dates have been placed on the time line, the student

should compare the map of the Mediterranean found in the *Kingfisher* history with his globe, his wall map, and his atlas. Make sure he finds the modern locations of ancient cities. The book map depicting the Phoenician travel routes shows Carthage in northern Africa; when the student looks up northern Africa in his atlas, he'll find that this area is now known as Tunis.

(4 and 5) Now the student is ready to do extra reading. The *Kingfisher Illustrated History of the World* mentions the following topics in the text we've reprinted:

Phoenician trading routes Production of reddish-purple dye Tyre Hiram, king of Tyre Jezebel, princess of Tyre Phoenician crafts—glass, weapons, jewelry, cloth Colonies at Carthage, Marseilles, Cadiz, Malta, Sicily, Cyprus

In additional boxes and in captions to illustration, the text also brings up

Phoenician warships The first alphabet Dido's founding of Carthage The Phoenician invention of glassblowing Tyrian purple, a rare dye made from the murex, or sea snail

Additional topics (Old Testament history, the Rig-Veda, the Zhou dynasty) are covered in the time line that runs down the side of one page.

At first, you may need to read through the section and help the student pick out these topics, but fifth graders will soon be doing this independently. The student should choose several topics and use his outside reading to prepare notebook pages on them. He can begin his investigations in the encyclopedia. Or he can go to the library. If, for example, he's interested in Phoenician crafts, he can look for books on ancient dyes and glasswork. And he can search the library's catalog—the children's librarian will be glad to help.⁶ After the student has done additional reading, ask him to write several sentences about how the Phoenicians made dyes or how they

⁶The learning of library skills—how to use the catalog, find books, and so forth—is a bonus when using this method.

first began to blow glass.⁷ If he has trouble extracting the relevant facts, look through the book with him and ask questions: Where did the snails come from? How did the Phoenicians get the dye out? What did it smell like? Was the process difficult to do? Remember, in the logic stage, conversation becomes your primary teaching tool. *Talk* to the student about what he's reading; encourage him to talk to you.

If the student is artistically inclined, he can illustrate his pages with drawings or cutout pictures. (However, notebook pages ought to be neatly written, even if they remain undecorated.) Help him to choose an appropriate title for his pages (nothing fancy—"Phoenician Dyes" is fine), and place them in the notebook under the appropriate heading—for Phoenician dyes, Inventions and Technology.

Follow this process for any topic that interests the student. The development of the alphabet would be filed under Inventions and Technology, the life of Jezebel would go under Great Men and Women, the founding of Carthage by Dido should be placed under Cities and Settlements, and so on. The pages on Greece might lead to short compositions on Athena (Religion), the battles of Marathon and Thermopylae (Wars, Conflicts, and Politics), Greek coinage (Daily Life), and Homer's *Odyssey* (The Arts and Great Books).

Pay special attention to biographies. Try to make a page for all the great men and women you encounter (personalities act as memorable "pegs" to hang the progression of history on). Actual names will be in short supply at first. But by the time you get to 3000 B.C., you'll be finding many great individuals (mostly men). For the centuries between 3000 and 2500, for example, you'll have the pharaohs Zoser, Cheops (Khufu), and Khafre (the sphinx was built to guard Khafre's pyramid) as well as Gilgamesh, who reigned in Sumer around 2700 B.C.

As in the early grades, some topics (Egyptian pharoahs and life in ancient Rome) will turn up dozens of useful library books, while others will produce nothing. Don't waste time digging for obscure details. If our resource list is silent and the library catalog yields no useful titles, move on.

For primary source work, we suggest using the Jackdaws resource packs—portfolios of primary source material coupled with study guides, activities, and topics for further research (see page 303). Take at least a week

⁷The Writing Strands curriculum, which we recommend in Chapters 5 and 17, will have prepared him for this sort of short composition.

(preferably two) to study each Jackdaw Portfolio. For fifth grade, we recommend several: Tutankhamen and the Discovery of the Tomb; Ancient Athletic Games: Heracles and the Olympics; Inspirational Women: Muses and Women in Antiquity; Many Faces of the Hero: Odysseus, Theseus and Jason; China; Arabs. Choose your favorite, and do one (or more) at the appropriate time in your history study. Be sure to file in the Primary Sources section of the notebook any extra work inspired by the Jackdaw Portfolios.

The Arts and Great Books section of the notebook will be filled with pages done during language study and art study. Whenever you run across a writer, musician, or artist—Homer, Virgil, Cicero, Praxiteles—make a biographical page listing his or her works and details about his or her life. Although these pages will be filed under Great Men and Women, those notebook pages covering the books, paintings, and compositions themselves will be created outside of the history lesson (see Chapters 17 and 21 for further details).

By the end of fifth grade, the student will have created two historical resources: a time line that synthesizes all of his knowledge about historical events, personalities, and achievements; and a notebook that shows him at a glance the development of specific areas of human endeavor. He can flip through the Wars, Conflicts, and Politics section of his notebook and see the progression of conflict from the war uniting Upper and Lower Egypt, through the Greek siege of Troy, all the way to the wars of Alexander the Great and the Punic Wars. Or he can trace world religions from Osiris and Ra through the spread of Christianity.

Memorization

Fifth graders should know the principal pharaohs of Egypt; the dates of the Republic of Rome (the dictatorships of Sulla, Pompey, and Julius Caesar, as well as the First and Second Triumvirates); the first fifteen emperors of Rome; the dates of reign for Constantine I and Constantine II; the dates of the Peloponnesian War and the three Punic Wars. All of these are found in the "Ready Reference" section of the *Kingfisher Illustrated History of the World*.

Suggested Schedule

We suggest that you begin formal history study with Mesopotamia and Sumer, 5000 B.C. Read over the introductory pages covering 40,000 to 5000
B.C., but begin actual work with the sections covering 5000 to 3500 B.C. For ancient history, you'll need to go through A.D. 400, approximately 120 pages or 60 sections. A good rule of thumb is to try to cover 2 sections (or 4 pages) per week. In a 36-week school year, this will give you 6 extra weeks to spend on special topics; take at least 1 of those weeks to do a Jackdaw, such as the *Tutkahamen* (after you've covered "Egypt, the New Kingdom"). Use the other 5 weeks to do additional reading and/or activities and Jackdaws, perhaps on major civilizations such as Greece, Rome, China, or Japan.

And, remember, *if you can't keep up this pace, slow down*. You don't have to finish all of ancient history in one year. If you get behind, skip some sections. Or take a week now and then to spend history study time doing nothing but reading (no compositions, outlines, or outside reading) in order to catch up.

If you're studying history Mondays, Wednesdays, and Fridays:

Monday	Read 4 pages (2 sections) in the Kingfisher Illustrated History
	of the World. Outline each section (1 sentence per
	paragraph), and place the outlines in the history notebook.
	Mark all dates on the time line.
Wednesday	Find locations on the globe, the wall map, and in the atlas.
	Do additional reading from library books or from books
	recommended in the Resources list-one per section or
	two from the same section. (This means you'll need to go
	to the library on Tuesday or prepare for your library trip by
	looking ahead 1 week in the history book.)
Friday	Finish reading the additional sources. Prepare written
	summaries of the information on at least two of the above
	topics, and file them in the history notebook.

If you're studying history on Tuesdays and Thursdays:

Tuesday Read 4 pages (2 sections) in the *Kingfisher Illustrated History* of the World. Outline each section (1 sentence per paragraph), and place the outlines in the history notebook. Mark all dates on the time line. Find locations on the globe, the wall map, and in the atlas. Choose topics for additional reading. Thursday Do additional reading from library books or from books recommended in the Resources list—one per section or two from the same section. Prepare written summaries of the information on at least two of the above topics, and file them in the history notebook.

A note to busy parent-teachers: Logic-stage history involves a great deal of reading and writing. The classical curriculum is centered around reading and writing as the primary means of knowledge. If you're wondering how time-consuming all this is, note that you'll be spending several hours per week helping the child find topics and locating library books, in addition to providing assistance in composition and checking over the finished work. But home schoolers inevitably find that the time parents need to spend in one-on-one instruction decreases dramatically in the middle grades. Your fifth grader may spend an hour reading history on Wednesdays, but that's not time-intensive on your part; you'll spend ten minutes at the beginning of the period giving directions and guidance, and ten minutes at the end talking to him about what he's read so that he can put the facts down in a composition.

Sixth Grade: Medieval-Early Renaissance (400-1600)

For the years 400 to 1600, you'll be following the same basic pattern as you did in the fifth grade (see pages 279–286).

The Time Line

Begin the school year by creating a time line that covers the medieval–early Renaissance period—twelve centuries, or twelve equal divisions. You'll have much more space for each century, which is good—the centuries are crowded.



The Outline

The sixth grader will read his history pages and outline them. But now, instead of simply condensing the reading into one sentence per paragraph, he'll identify one main point and two to four subpoints for each paragraph. These will be written out in proper outline form, using Roman numerals and uppercase letters. Even though he's already learned this in fifth-grade grammar (see Chapter 17), it bears repeating:

- I. First main point
 - A. First supporting point
 - B. Second supporting point
- II. Second main point
 - A. First supporting point
 - B. Second supporting point
 - C. Third supporting point

and so on. In this type of outlining, two short paragraphs covering the same subject can be combined together; a long paragraph can be broken in half, if it begins a new thought halfway through. The goal: to create an outline that lays out the logical development of the text.

In a good outline, each supporting point is related to the main point. Let's take as an example the *Kingfisher Illustrated History of the World*'s section on medieval Italy. The beginning of this section reads:

Italy

At this time Italy was divided into small states. Many of them were large cities, such as Florence, Venice, and Rome. Others were ducal courts such as Mantua, Urbino, and Ferrara. Most of these states were ruled by families who had grown rich on trade and commerce in the late Middle Ages.

The most powerful family of the day was the Medicis of Florence who had made a great fortune in the 14th century through banking and moneylending. The best-known is Lorenzo, who became joint ruler of Florence with his brother in 1469. He was a clever statesman and also a patron of writers, artists, and scientists. He was keen to promote his family and saw his second son become pope. Under his influence, Florence became one of the most beautiful and prosperous cities in Italy, as well as a center of the Renaissance. Lorenzo had a large art collection of his own and, through his writings, helped to make the form of Italian spoken in Florence into the language of the whole country.

Another famous family was the Borgias. In 1455, Alfonso Borgia became Pope Calistus III. His nephew, Rodrigo, was later made Pope Alexander VI. He had many illegitimate children and wanted them all to be rich and powerful; but, on his death, the family's power collapsed. In contrast to the Borgias, Federigo, Duke of Urbino, spent much of his money on building churches, schools, and hospitals. Like Lorenzo de Medici, he was interested in the arts and had a famous library built in his palace. Federigo was popular with his subjects and did not need a bodyguard, unlike other Italian rulers of the time.8

A good outline of this might read:

Italy

- Medieval Italy was divided into small states. I. A. Some were large cities: Florence, Venice, Rome. B. Others were ducal courts: Mantua, Urbino, Ferrara. C. Most states were ruled by rich families.
- The most powerful family was the Medici of Florence. II. A. Lorenzo and his brother were joint rulers (1469). B. Lorenzo was a statesman, writer, and art collector.

 - C. One of his sons became pope.
- III. The Borgia were a famous Italian family.
 - A. Alfonso Borgia became pope in 1455.
 - B. Alfonso's nephew, Rodrigo, became Pope Alexander VI.
- Federigo, duke of Urbino, was another powerful ruler. IV.
 - A. He spent his money on charity and the arts.
 - B. He was popular and didn't need a bodyguard.

Notice that the third long paragraph changes subjects in the middle-from the Borgia to Federigo of Urbino. The outline properly begins a new main point here.

This is not a difficult skill to acquire, but it does take practice. Initially, you may need to sit down with the sixth grader and talk the material through. Ask him: What is this sentence about? Does it tell you more about your main point, or does it begin a new subject? Remember that each point on the outline should be a complete sentence with proper punctuation.

Once the section is outlined, the student will enter the dates on the time line (as in fifth grade) and then choose which topics he'd like to do more reading about. In the passage above, the Borgia and Medici could be researched to create a notebook page for the Great Men and Women section; the accession of two Borgia to the position of pope could provide material for a page to be filed in Religion; the city of Florence could be covered for a page in Cities and Settlements. These short compositions should follow the rules for composition writing taught in *Writing Strands*, which the student should be using concurrently. Aim for one-half to one full page for each one. If the student does full-page compositions, don't expect more than one notebook page per week.

Primary Sources

The student will continue to use primary sources, evaluating them by asking himself the same questions he did in fifth grade (see pages 277–278). Four Jackdaw Portfolios of primary sources are particularly good for the sixth-grade year: the *Magna Carta* pack (study this along with the "Charter and Parliament" section of the *Kingfisher Illustrated History of the World*), the *Elizabeth I* collection (use with "Elizabethan England"), the *Martin Luther* portfolio ("The Reformation"), and *Columbus and the Age of Explorers* ("European Exploration"). We think all four in one year would be overwhelming; you could pick two (the *Magna Carta* ought to be one). You'll probably want to do the others when you pass through medieval–early Renaissance history again in tenth grade. (You will find a full list of available Jackdaws in Resources at the end of the chapter. Substitute other topics if you wish.)

Doing a Jackdaw should take the place of outside reading and notebookpage creation for as long as it takes to complete the project—one to three weeks.

The Notebook

Using a new three-ring binder, label it "Medieval–Early Renaissance: 400–1600," and divide it into the same nine sections as in fifth grade (see page 278). The student will complete the same five steps: reading and outlining, marking dates, finding locations, doing extra reading, filing summaries in the history notebook.

The Kingfisher Illustrated History of the World covers the years 400 to 1600 in two hundred fifty pages, which means that you'll need to complete approximately six to eight pages of history reading per week. The pages are heavily illustrated, though, and many sections run three to four pages; others won't require you to do any library research (one section is devoted to the Songhay Empire, another to the Safavid dynasty of Persia).

If you find yourself getting behind, skip a few sections, or cut out extra library reading until you get caught up. (Don't let the textbook oppress you—it's marvelous; but try to think of it as a springboard, not a prison.)⁹

On the other hand, if you've only progressed a hundred years from September to Christmas, you may need to reevaluate. Is the student dawdling? Does he need remedial writing or reading work? Do you need to drop back to the elementary history text for a while? Or are you letting other things—phone calls, jobs, visits from friends, housework—crowd out school? If so, you may need to adjust the child's daily schedule.

Memorization

Sixth graders should know the order of the rulers of England from Egbert to Elizabeth I; the dates for rulers from William I through Elizabeth I; the dates of Charlemagne's rule; the dates of each of the Crusades, the Hundred Years' War, the War of the Roses, and the French religious wars; and the dates of the voyages of Magellan, Marco Polo, Vasco da Gama, Leif Ericsson, Christopher Columbus, and Hernando Cortés (all in the "Ready Reference" section of the *Kingfisher Illustrated History of the World*). Sixth graders should also memorize the text of the Magna Carta.

Suggested Schedule

For medieval–early Renaissance history, you'll need to cover 6 to 8 pages (2 to 3 sections) per week. Go quickly through the numerous summary pages ("War in the Renaissance," "People and Clothing," and so forth) and minor topics ("The Hanseatic League" and so on). If you get behind, skip a few pages.

If you're studying history Mondays, Wednesdays, and Fridays:

Monday Read 6 to 8 pages (3 to 4 sections) in the *Kingfisher Illustrated History of the World*. Outline each section, and place the outlines in the history notebook.

⁹This is a key to successful home tutoring. You're the boss. You set the schedules. *Use common sense*. If the child spends three hours outlining his history lesson, you're doing too much. Start skipping sections. Or don't finish the book. How many textbooks did your teacher actually finish in high school or college?

- Wednesday Mark all dates on the time line. Find locations on the globe, the wall map, and in the atlas. Do additional reading from library books or from books recommended in the Resources list—one topic per week is plenty, two is ambitious.
- Friday Finish reading the additional sources. Prepare a written composition on at least one topic, and file it in the history notebook.

If you're studying history Tuesdays and Thursdays:

Tuesday Read 6 to 8 pages (3 to 4 sections) in the *Kingfisher Illustrated History of the World*. Outline each section, and place the outlines in the history notebook. Mark all dates on the time line. Find locations on the globe, the wall map, and in the atlas. Choose a topic for additional reading.

Thursday Do additional reading from library books or from books recommended in the Resources list on one or two topics per week. Prepare a written composition on at least one topic, and file it in the history notebook.

Seventh Grade: Late Renaissance–Early Modern (1600–1850)

The Time Line

For the years 1600 to 1850, you should create a new time line. Divide this one into ten twenty-five-year segments:



The Outline

The seventh grader should continue the sixth-grade method of outlining until he is comfortable with it. He can try to introduce yet more supporting points than before:

> I. First main point A. First supporting point

- 1. First subpoint
- 2. Second subpoint
- B. Second supporting point
 - 1. First subpoint
 - 2. Second subpoint
- II. Second main point
 - A. First supporting point
 - B. Second supporting point
 - C. Third supporting point

The seventh grader should only begin to do this when the sixth-grade method has become easy. This point may be reached at any time during the seventh-grade year or at the beginning of the eighth-grade year.

Each subpoint must relate to the supporting point it follows. A good three-level outline on the section entitled "Revolt in Latin America" might look like this. The original text reads:

Revolt in Latin America

Ever since Portugal and Spain had divided the rich New World between them in 1494, they had both ruled vast colonies in Central and South America. Although there had been many disagreements between colonists and governments, the colonies had not managed to break free.

In 1807, Napoleon marched into Portugal and, in 1808, he invaded Spain. For the next five years, Spain became a battleground, as British, Spanish, and Portuguese troops fought against French soldiers. This period of confusion gave the colonies the chance they had been waiting for. They began their fight for independence in 1808 by refusing to accept Napoleon's brother Joseph as the new king of Spain.

Argentina declared itself free from Spanish rule in 1810, followed by Paraguay in 1811. Peru became independent from Spain in 1821, as did Mexico, and Brazil broke free from Portugal in 1822. The Brazilians invited Dom Pedro, son of the Portuguese king, to be their first emperor. Venezuela finally gained its independence in 1830.

The South American independence movement owed a great deal to its two energetic leaders, Simón Bolívar and José de San Martín. In 1819, inspired by the French Revolution, Bolívar and other Venezuelan aristocrats defeated Spanish troops in New Granada (now Colombia) and Peru. In 1824, Bolívar met up with San Martín who had marched across the Andes to liberate Chile. In 1826, Bolívar proclaimed the Republic of Gran Colombia (which included Venezuela, Colombia, Ecuador, and Panama), but the republic soon broke up. In 1825, Upper Peru took the name of Bolivia in his honor. Both Bolívar and San Martín had faced great hard-ship, and fought in very difficult conditions. But, in spite of independence, conditions in the former colonies did not really improve.¹⁰

Three-level outline:

Revolt in Latin America

- I. Portugal and Spain ruled colonies in Central and South America.
 - A. They divided the New World between them in 1494.
 - B. The colonies were discontent.

II. Napoleon's invasions gave the colonies a chance to rebel.

- A. Napoleon invaded Portugal in 1807 and Spain in 1808.
 - 1. The British, Spanish, and Portuguese fought against the French.¹¹

B. The colonies used the confusion to rebel.

- 1. The colonies refused to accept Joseph as the king of Spain in 1808.
- 2. Argentina declared independence from Spain in 1810.
- 3. Paraguay declared independence from Spain in 1811.
- 4. Peru and Mexico declared independence from Spain in 1821.
- Brazil declared independence from Portugal in 1822 and asked Dom Pedro to be emperor.
- 6. Venezuela gained independence in 1830.
- III. Simón Bolívar and José de San Martín led the South American fight for independence.
 - A. Bolívar and Venezuelan aristocrats defeated the Spanish in 1819.

¹⁰Evans, pp. 536–537.

¹¹Most guides to outlining will tell you that you should never have an A unless you also have a B, and that you should never use 1 unless you also use 2. Don't enforce this rule while the child is learning to outline history texts—it makes the new skill too complicated.

- B. San Martín liberated Chile in 1824.
- C. In 1826, Bolívar proclaimed the Republic of Gran Colombia.1. This republic soon broke up.
- D. In 1825, Upper Peru was renamed Bolivia.
- E. Conditions in the former colonies did not improve.

Notice that in II, subpoints 1, 2, and 3 give extra details about the supporting point B, which itself tells more about the main point. This outlining process teaches the student to organize information into a logical sequence. Each supporting point in an outline *must* be related to a main point; the outline forces the student to sort out irrelevant details.

If the student is frustrated by this extra level of complexity, introduce it again later in the year. Your goal is to have the student using three-level outlines by the eighth grade.

Primary Sources

Primary sources for this period can be easily examined using four Jackdaw Portfolios: *The Mayflower and the Pilgrim Fathers* (which corresponds to the *Kingfisher Illustrated History of the World* section entitled "Colonial America"), *The American Revolution* (which corresponds to "American Independence"), *The Making of the Constitution* (a particularly good collection; use with the "American Constitution"), and *Lewis and Clark Expedition* (since Lewis and Clark get short shrift in the *Kingfisher Illustrated History*, which mentions them only in passing, try to fit this portfolio into your schedule). Jackdaw projects, when used, can replace library reading and notebook-page creation. The student should continue to make evaluation pages for these primary sources (see pages 277–278) and file them in the Primary Sources section of the history notebook. As before, we have listed optional Jackdaws in Resources. You may substitute at your discretion.

Critical-Thinking Resources

We strongly suggest that during the seventh-grade year you use the Critical Thinking in United States History series from Critical Thinking Press. Book One, *Colonies to Constitution*, and Book Two, *New Republic to Civil War*, supply the student with information about historical events and mysteries and ask him to draw conclusions. Did Pocahontas really rescue John Smith? What caused the Salem witch hysteria? What caused the American Revolution? Use these two books as supplements to the *Kingfisher* readings; they are invaluable in helping the student evaluate historical evidence. Each book begins with a "Guide to Critical Thinking," which reviews the basics of logic: fallacies, proper use of sources, generalizations, and so on. The table of contents clearly identifies the historical event on which each lesson is based ("Was the Stamp Act Justified?" "Foreign Views of the Constitution"). Have the student complete these lessons when he reaches the corresponding historical event in the *Kingfisher*.

The Notebook

Using a new three-ring binder, label it "Late Renaissance–Early Modern: 1600–1850," and divide it into the same nine sections as in fifth and sixth grades (see page 278).

The *Kingfisher Illustrated History of the World* covers the years 1600 to 1850 in about 180 pages.¹² Complete four to six pages of history reading per week. This period is heavy on wars—the Glorious Revolution, the annexation of Ireland, the Great Northern War, the Seven Years' War, the American Revolution, the French Revolution, the Napoleonic Wars, and the War of 1812. You will find a great deal of material in the library on these topics as well as on the creation of the Declaration of Independence and on the persons who defined early American political life. The industrial revolution also takes place during this period.

Memorization

Seventh graders should know the rulers of England and their dates from James I and Charles I through the Commonwealth, the Protectorate (both Cromwells), and the Restoration, on to Queen Victoria; the dates of service for the prime ministers Sir Robert Walpole, William Pitt the Younger, the duke of Wellington, Viscount Melbourne, and Sir Robert Peel; the dates of rule for the French monarchs of the House of Bourbon: the dates of Napoleon's Republics; the tsars of Russia from Peter the Great through Nicholas I; the presidents of the United States from George Washington through Zachary Taylor; the dates of the English Civil War, the American

¹²Note that the book's divisions aren't necessarily in twenty-five-year increments. Note also that we've (arbitrarily) chosen the Crimean War (1853) as the dividing point between early modern and modern history (seventh and eighth grades). Revolution, and the Napoleonic Wars (all in the "Ready Reference" section of the *Kingfisher Illustrated History of the World*). Seventh graders should also memorize the Declaration of Independence and the Preamble to the Constitution.

Suggested Schedule

For late Renaissance–early modern history, you'll need to cover 4 to 6 pages (1 to 3 sections) per week. Try to do 6 pages when possible; this will give you extra time to work on the Jackdaw Portfolios and the Critical Thinking Press books.

For Monday-Wednesday-Friday and Tuesday-Thursday schedules, see the sixth-grade year (pages 290–291).

Eighth Grade: Modern (1850-Present)

Again, the student will read and outline a section of the *Kingfisher Illustrated History of the World* (three-level outlines should be in use by eighth grade), mark all dates on the time line, find locations on the globe/wall map/atlas, do additional reading, and prepare notebook pages.

The Time Line

Since the *Kingfisher Illustrated History of the World* covers this time period in about 170 pages, you'll be able to slow your reading down to four pages per week. This should allow you to study the wars and technological advances of the twentieth century in depth.

Create a new time line. Divide this one into fifteen ten-year segments since you'll be recording a number of events that occur close together. In the case of World War II, for example, you may need to mark a series of events taking place over a matter of months. The time line should look like this:



The Outline

The student will make three-level outlines of each section of the Kingfisher Illustrated History that he has read. Remember, topics mentioned in the book's time line may also be used as research and reading projects. Some important events such as President Kennedy's assassination aren't covered in depth in the *Kingfisher*—they're only mentioned in the time line.

Primary Sources

The best Jackdaw Portfolio for this period is *The Civil War*, a collection of posters, military documents, and letters. Use this with "The American Civil War." Also look for some of the resources listed at the end of this chapter.

Since the Civil War was one of the earliest wars photographed, look in the adult nonfiction section of the library for books of Civil War photos. They bring the conflict to life as nothing else can.

We have listed a number of additional Jackdaw Portfolios in the Resources section. Other primary sources for the modern period are not difficult to find. Letters and speeches of world leaders—Queen Victoria, Abraham Lincoln, Winston Churchill, Benito Mussolini, Adolf Hitler, just to name a few—abound. Check the library for juvenile and young adult nonfiction on the great men and women of the modern age; many of these books will contain primary information. (We've listed a few suggestions in our Resources.) Whenever the student encounters a primary document such as the Gettysburg Address or Edward's VIII abdication speech, he should fill out the primary-source evaluation and file it in Primary Sources.

As you move into the twentieth century, you should be making use of another type of primary source—oral history. Whenever the student encounters a major event in the twentieth century, make an effort to bring him into contact with someone who lived during that time. If you're fortunate enough to have grandparents (or great-grandparents) and great-uncles or great-aunts nearby, send the child over to interview them. What was rationing like during World War II? Did you have to look out for airplanes? Did you get to eat chocolate? What were cars like in 1950? How much did you pay for rent in 1952? What music did you listen to? As you come closer to modern times, these recollections will become easier to find: friends may be willing to tell about tours of duty in Vietnam; older relatives and neighbors might recall the days of segregation; and most people born in the fifties will remember the first moon landing and where they were when they heard of Kennedy's assassination.

These oral histories should be written down and filed in Eyewitness Accounts (see "The Notebook," page 298). If you can't find friends and rel-

atives to fill in these accounts, you might consider a trip to a retirement community or nursing home; the staff should be able to direct you toward residents who can tell stories about the early twentieth century. Once you reach the 1930s and 1940s, try to conduct an oral-history interview at least twice per month, even if you have to sacrifice some library time to do so.

The oral-history project has two purposes. It develops the student's ability to "do" history by recording events and stories firsthand instead of relying on the written work of others. And it brings recent history to life—the student is able to connect the stories in books to real people's lives for the first time. Reading about the Holocaust is powerful; discovering that a nursing-home resident has a tattoo on her forearm is explosive.

We've supplied a list of questions at the end of this book (see Appendix 1, pages 683–685). Although the student can use these questions to give oral-history interviews direction, he shouldn't feel tied to them.

As in fourth grade, you should plan to take one to two weeks at the end of the year to read through the history of your own state (see Resources, page 325).

Critical-Thinking Resources

As in seventh grade, you should use the Critical Thinking Press series Critical Thinking in United States History—Book Three, *Reconstruction to Progressivism*, and Book Four, *Spanish-American War to Vietnam War*. The exercises, done when the student encounters the historical facts on which they are based, will help the student evaluate primary sources and draw conclusions.

The Notebook

Using a new three-ring binder, label it "Modern Times: 1850–Present," and divide it into the same nine sections as in fifth through seventh grades (see page 278). Add one additional section: Eyewitness Accounts.

Memorization

Eighth graders should know the dates of service for British prime ministers Benjamin Disraeli, William Gladstone, Stanley Baldwin, Neville Chamberlain, Winston Churchill, Margaret Thatcher, and John Major; the German rulers of the Weimar Republic (Friedrich Ebert and Paul von Hindenburg); the dates of the Third Reich; the dates of Charles de Gaulle and François Mitterrand of France; the tsars of Russia from Alexander II through Nicholas II; the "effective rulers" of the USSR from Vladimir Lenin through Mikhail Gorbachev; the presidents of the United States from Millard Fillmore through the present; the dates of the Crimean War, the American Civil War, World War I, World War II, the Six Day War, the Korean War, the Vietnam War, and the Iran-Iraq war; and the dates of the first orbiting of the earth by a man-made satellite and the first moon landing (all in the "Ready Reference" section of the *Kingfisher Illustrated History of the World*). Eighth graders should also memorize the Gettysburg Address. Optional memory work might be done on the Emancipation Proclamation, the amendments to the Constitution, the wartime speeches of Winston Churchill, the speeches of Martin Luther King, Jr., or anything else the student finds and likes.

Suggested Schedule

For modern history, you'll need to cover 4 pages (1 or 2 sections) per week. Most eighth graders will be reading and outlining well and fairly quickly by this point, so you should have plenty of time to devote to extra reading, the Critical Thinking Press exercises, notebook-page preparation, and oralhistory interviews.

For Monday-Wednesday-Friday and Tuesday-Thursday schedules, see the sixth-grade year (pages 290–291). As an alternative, you might take one week to do reading, outlining, and map work on 8 pages of history and then devote a full week to reading, research, and oral-history taking. An alternate schedule might look like one of the following.

If you're studying history Mondays, Wednesdays, and Fridays:

Week 1

Monday, Wednesday	Read 8 pages (3 to 4 sections) in the Kingfisher
	Illustrated History of the World. Outline each
	section, and place the outlines in the history
	notebook.
Friday	Mark all dates on the time line. Find locations on
	the globe, the wall map, and in the atlas. Choose
	topics for extra reading and notebook-page
	preparation.

300 THE LOGIC STAGE

Week 2

Monday, Wednesday	Do additional reading, study primary sources, or
	do oral-history interviews.
Friday	Prepare notebook-page summaries or primary-
	source evaluations, or write up oral-history
	interviews; file them in the history notebook.

If you're studying history on Tuesdays and Thursdays:

Week 1

Tuesday, Thursday Read 4 pages (3 to 4 sections) in the *Kingfisher Illustrated History of the World*. Outline each section, and place the outlines in the history notebook. Mark all dates on the time line. Find locations on the globe, the wall map, and in the atlas. Choose topics for extra reading and notebook-page preparation.

Week 2

Tuesday, Thursday

Do additional reading, study primary sources, or do oral-history interviews. Prepare notebookpage summaries or primary-source evaluations, or write up oral-history interviews; file them in the history notebook.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. The titles we list are only a few of the many available. Plan on exploring library and bookstore shelves for yourself. One of the best ways to find good history books is to call for the catalogs listed in Chapter 46 and browse through the history sections (particularly those in the American Home-School Publishing and Greenleaf Press catalogs).

Basic texts for the four-year logic stage are listed first, followed by basic geography resources. A three-part supplementary list is provided for each year of study. The first section for each year lists, in chronological order, great men and women (for grades 5 and 6) or major events (for grades 7 and 8) that you might want to cover during the year—this is simply a checklist to help you organize your history study. The second section lists primary sources—books and texts written during the period under study. The third section lists books that provide general information about the historical period, including coloring books and other project resources.

Many of the resources recommended in Chapter 7 are still suitable for middlegrade students, particularly the Bellerophon coloring books and the Running Press Treasure Chests. Older students may also enjoy reading the elementary-level biographies as a refresher. Check the Resources section at the end of Chapter 7 for details.

Basic Texts

Evans, Charlotte, gen. ed. *The Kingfisher Illustrated History of the World*. New York: Kingfisher Books, 1993. (See note at end of Resources section, page 327.)

\$39.95. Order from a bookstore or from Rainbow Resource Center.

O'Reilly, Kevin. Critical Thinking in United States History series. Pacific Grove, Calif.: Critical Thinking Press, 1990.

\$19.95 for each student book; the teacher's guides (which you'll find helpful) are \$15.95 each. Order from Critical Thinking Books and Software.

Book One: Colonies to Constitution (seventh grade).

Book Two: New Republic to Civil War (seventh grade).

Book Three: Reconstruction to Progressivism (eighth grade).

Book Four: Spanish-American War to Vietnam War (eighth grade).

Basic Geography Resources

Bown, Deni. The Eyewitness Atlas of the World, rev. ed. New York: Dorling Kindersley, 1994.

\$24.95. Order from a bookstore or from Dorling Kindersley. A new edition will be available shortly; make sure you get the most recent edition since political borders change almost daily.

A globe is best bought at a local school or office supply store. Try to find one with raised mountains if possible.

Kapit, Wynn. *Geography Coloring Book*, 2d ed. Reading, Mass.: Addison-Wesley Publishing, 1998.

\$10.50. Order from Rainbow Resource Center. This detailed, junior-high-

level coloring book covers the United States and the world. A good memory aid.

Maps: The World and United States. Teachers Friend Publications, 1991.
\$8.95. Order from Rainbow Resource Center. This set of black-line maps covers the entire world in varying degrees of detail. You can color these or reproduce them and color the copies. Each map has a labeled and unlabeled version.

A world map (hemispherical progression) can be purchased at any school supply store or ordered from Rainbow Resource Center. If you subscribe to *National Geographic*, you'll get an updated world map each year.

Ancients, 5000 B.C.-A.D. 400 (Fifth Grade)

List of Great Men and Women Cheops, pharaoh of Egypt (2700–2675 B.C.) Abraham (c. 2100 B.C.) Hammurabi (c. 1750 в.с.) Queen Hatshepsut of Egypt (c. 1480 B.C.) Moses (c. 1450 B.C.) Tutankhamen (c. 1355 B.C.) Nebuchadnezzar (1146–1123 B.C.) King David (c. 1000 B.C.) Homer (c. 800 B.C.) Romulus (753–716 B.C.) Sennacherib (705-681 B.C.) Lao-tse (Chinese philosopher, b. 604 B.C.) Pythagoras (581–497 B.C.) Confucius (K'ung Fu-tsu) (551-479 B.C.) Buddha (Siddhartha Gautama) (550-480 B.C.) Darius I of Persia (522–485 B.C.) Socrates (470-399 B.C.) Hippocrates (b. 460 B.C.) Plato (427–347 B.C.) Aristotle (384–322 B.C.) Alexander the Great (356-323 B.C.) Shi Huangdi (first emperor of unified China, 221-207 B.C.)

Hannibal (fought with Rome c. 218–207 B.C.) Judas Maccabaeus (c. 168 B.C.) Cicero (106-43 B.C.) Julius Caesar (100-44 B.C.) Virgil (70–19 в.с.) Caesar Augustus (c. 45 B.C.-A.D. 14) Jesus Christ (c. 4 B.C.-A.D. 33) Caligula (died A.D. 42) Saint Paul (c. A.D. 45) Nero (died A.D. 68) Marcus Aurelius (ruled A.D. 161-180) Constantine the Great (ruled A.D. 306–337)

Primary Sources

Jackdaw Portfolios. Amawalk, N.Y.: Jackdaw Publications.

\$37.00 each. Order from Jackdaw Publications; some are also available from Rainbow Resource Center at a small discount. Jackdaws contain facsimiles of primary documents, essays (called Broadsheets) that combine relevant research into a single narrative, along with photos; annotated notes about the background of each primary source; transcripts of anything that might be hard to read; and study guides with activities, vocabulary, writing activities, reading ideas, debate, and drama ideas. You can pick and choose among these portfolios:

Ancient Athletic Games: Heracles and the Olympics.

Arabs. China. Hadrian's Wall. Inspirational Women: Muses and Women in Antiquity. Major Temples and Famous Statues of Deities. Many Faces of the Hero: Odysseus, Theseus and Jason. Oracles and Sibyls: Telling the Future in the Past. Tutankhamen and the Discovery of the Tomb.

Plato. The Last Days of Socrates. Trans. Hugh Tredennick. New York: Penguin, 1995.

\$10.95. Order from a bookstore or Greenleaf Press. For good readers, this primary source contains two dialogues-"On Piety" and "The Death of Socrates." You and your middle-grade student could enjoy reading these together; the dialogue is often funny, and the ideas are thought-provoking.

General Information

Aldred, Cyril. A Coloring Book of Tutankhamun. Santa Barbara, Calif.: Bellerophon, 1995.

\$3.50. Uses actual images from the ancient world to tell the story of Tutankhamun's reign and burial. Detailed and challenging.

Amery, Heather, et al. Rome and Romans. Tulsa, Okla.: E.D.C. Publications, 1998.

\$6.95. Order from Greenleaf Press. Part of the Usborne Time-Traveler series, this is written at a lower reading level (approximately fourth grade) and would be good for students who find reading difficult.

Anderson, John K. Alexander the Great Coloring Book. Santa Barbara, Calif.: Bellerophon, 1981.

\$3.95. Order from Greenleaf Press. These illustrations of Alexander the Great are taken from Greek art, from Persian and Indian drawings, and from the art of medieval Europe. Includes biographical material.

Art, Suzanne Strauss. Early Times series. Concord, Mass.: Wayside Publishing.

Art, an ancient history teacher, wrote this series because she couldn't find history texts for fifth graders that covered the ancient world in a systematic way, while still providing plenty of interesting details. These books are wonderful—clear, readable, gripping, and full of projects, maps, writing assignments, personality profiles, and suggested readings.

Early Times: The Story of Ancient Egypt. 2d ed. 1993.

Early Times: The Story of Ancient Greece. 2d ed. 1994.

West Meets East: The Travels of Alexander. 1996.

Early Times: The Story of Ancient Rome. 1993.

Ashman, Iain. Make This Egyptian Temple. Tulsa, Okla.: E.D.C. Publications, 1990.

9.95. Order from Greenleaf Press. This kit, 23×18 inches, is a punchout-and-assemble temple that includes obelisks, courtyard, sanctuary, priest's adjacent house, and lots of art. ------. Make This Model Trojan Horse. Tulsa, Okla.: E.D.C. Publications, 1994.

\$9.95. Order from Greenleaf Press. An Usborne Cut-Out Model; the wheels turn and the hatch opens to show where the Greeks hide.

Make This Roman Villa. Tulsa, Okla.: E.D.C. Publications, 1990.
 \$9.95. Order from Greenleaf Press. A 23 × 18 punch-out-and-assemble model, including house, gardens, stables, and servants' quarters.

Baker, Charles F., III, and Rosalie F. Baker. *The Classical Companion*. Peterborough, N.H.: Cobblestone Publishing, 1988.

\$14.95. Order from Greenleaf Press or Cobblestone Publishing. Spanning ancient Persia through the fall of Rome, this readable paperback is full of interesting history, profiles, projects, puzzles, mythological tidbits, Greek and Latin roots, and snippets of trivia.

-------. Classical Ingenuity. Peterborough, N.H.: Cobblestone Publishing, 1993.

\$14.95. Order from Cobblestone Publishing. Articles, projects, research topics, activities, writing assignments, and debate topics all dedicated to examining the ways that Greek and Roman architecture, art, and inventions have affected modern civilization. Fun reading, challenging projects—wonderful for the child who is beginning to think logically.

By Jove. Ann Arbor, Mich.: Aristoplay, 1994.

\$19.95. Order from Aristoplay or from Rainbow Resource Center. A board game for two to six players, in which mortals are at the mercy of the unpredictable gods and the decrees of the Oracles.

Chattington, Jenny. The Ancient Greeks: Activity Book. London: Thames & Hudson, 1995.

\$5.95. Order from American Home-School Publishing. Detailed drawings to color, cartoons, maps, mysteries, fashions, monsters, and weapons.

Connolly, Peter. Roman World series. New York: Oxford University Press. Order from American Home-School Publishing. These books combine history with a fictional "eyewitness" account. They're absorbing, accurate, full of illustrations and fasincating explorations of religion, archaeology, geography, warfare, and daily life. About sixth grade in reading level. The Legionary. 2d ed. 1998. \$12.95. The Calvaryman. 2d ed. 1998. \$12.95. The Roman Fort. 2d ed. 1998. \$9.95. Pompeii. 1994. \$12.95.

Corbishley, Mike. What Do We Know about Prehistoric People? New York: Peter Bedrick Books, 1995.

\$18.95. An illustrated collection of information about early civilizations.

Doxey, Denise M. Ancient Egypt Explorer's Kit. Philadelphia: Running Press, 1996.

\$18.95. Order from Greenleaf Press. A 64-page handbook with instructions on how to make Egyptian clothes, paintings, and hieroglyphics. Includes three buried talismans, which you excavate from a block of clay and then restore.

Eyewitness Books series. New York: Knopf.

\$19.00–\$24.95 each. These books, designed by Dorling Kindersley, are available in libraries, bookstores (you may need to special-order them, but all are in print), and online book services (such as Barnes & Noble Online and Amazon.com). The pictures, designs, and layouts are beautiful, and the books will give you more information than you'll ever need. Consider keeping these on hand for several months, referring back to them as you progress through the time line.

Ayo, Yvonne, et al. *Ancient Africa*. 1995. Cotterell, Arthur, et al. *Ancient China*. 1994. Hart, George, et al. *Ancient Egypt*. 1990. James, Simon, et al. *Ancient Rome*. 1990. Pearson, Anne, et al. *Ancient Greece*. 1992. Putnam, James, et al. *Pyramid*. 1992. Tubb, Jonathan N., et al. *Bible Lands*. 1991.

Grant, Neil. The World of Odysseus. Jersey City, N.J.: Parkwest Publications, 1992.

\$8.95. Order from American Home-School Publishing. A BBC Fact Finder with great illustrations and lots of quotes from the ancients themselves.

Green, John. *Egyptian Stained Glass Coloring Book*. New York: Dover, 1995. \$3.50. Order from Rainbow Resource Center. Color on translucent paper with crayons or colored pencils and end up with a beautiful stained-glass effect. (You can also order the *Little Coloring Book* for \$0.90 for little brother or sister.)

Harrison, Steve, and Patricia Harrison. Ancient Greece. Jersey City, N.J.: Parkwest Publications, 1995.

\$8.95. Order from American Home-School Publishing. A BBC Fact Finder with great illustrations and lots of quotes from the ancients themselves.

. Egypt. Jersey City, N.J.: Parkwest Publications, 1992.

\$8.95. Order from American Home-School Publishing. Another BBC Fact Finder.

How Would You Survive . . . ? series. Danbury, Conn.: Franklin Watts, 1996.

\$7.95 each. Order from Rainbow Resource Center. This series gives you a new identity and sends you back in time for an adventure. Books contain time spiral, maps, and a quiz to check out your performance. These are heavy on the daily-life aspect of ancient history.

Ganeri, Anita, et al. How Would You Survive as an Ancient Roman?

This book includes a recipe for flamingo with dates.

Macdonald, Fiona, et al. How Would You Survive as an Ancient Greek?

This book gives you dual identities, as a wealthy citizen and as a slave.

Morley, Jacqueline, et al. How Would You Survive as an Ancient Egyptian?

Knill, Harry. A Coloring Book of the Trojan War: The Iliad. Santa Barbara, Calif.: Bellerophon, 1994.

\$3.95. Order from Greenleaf Press. These detailed drawings, taken from Greek sculpture and architecture, can be turned into real works of art.

———. A Coloring Book of the Olympics and Other Ancient Games. Santa Barbara, Calif.: Bellerophon, 1984.

\$3.95. Order from Greenleaf Press. Events of the ancient Olympics described and illustrated with actual Greek images.

Langley, Andrew, et al. *The Roman News*. New York: Candlewick Press, 1997.
\$15.99. Order from Greenleaf Press. Headline stories from ancient history, along with lots of facts, quotes, news flashes, and even want ads. Entertaining and informative; written for fifth graders.

Macauley, David. City: A Story of Roman Planning and Construction. Boston, Mass.: Houghton Mifflin, 1983.

\$7.95. Order from Greenleaf Press. All the stages of construction in a Roman city. Fascinating for the mechanically minded. Incorporates history and culture into descriptions of the construction process.

—. Pyramid. Boston, Mass.: Houghton Mifflin, 1982.

\$7.95. Order from American Home-School Publishing. Incredibly detailed drawings and explanations of pyramid construction.

McCord, A. The Visual Dictionary of Prehistoric Life. New York: Dorling Kindersley, 1995.

\$15.95. An Eyewitness guide to early human civilizations.

Payne, Elizabeth. *The Pharaohs of Ancient Egypt*. New York: Random House, 1998.

\$4.95. Order from Greenleaf Press. Each chapter tells about one pharaoh on a fifth-grade reading level. Covers Egypt's history from beginning to its conquest by Greece and Rome.

Powell, Anton, and Philip Steele. *The Greek News*. New York: Candlewick Press, 1997.

\$15.99. Order from Greenleaf Press. Headline stories from ancient history, along with lots of facts, quotes, news flashes, and even want ads. Entertaining and informative, written for fifth graders.

Queen Nefertiti. Santa Barbara, Calif.: Bellerophon, 1992.

\$2.50. The story of one of the great women of the ancient world, told through a coloring book that uses complex images from Egyptian art itself.

Roehrig, Catharine. Fun with Hieroglyphs. New York: Penguin, 1990.

\$22.50. Order from Greenleaf Press. Designed by the New York Metropolitan Museum of Art, this set includes rubber stamps, an ink pad, and a key.

Savage, Stephen A. Ancient Greek Monuments to Make. Owings Mill, Md.: Stemmer House, 1996.

\$6.95. Order from Greenleaf Press. Two card-stock models to color, cut out, and assemble: the Parthenon and the theater of Dionysus.

Steedman, Scott, ed. *The Egyptian News*. New York: Candlewick Press, 1997.
\$15.99. Order from Greenleaf Press. Headline stories from ancient history, along with lots of facts, quotes, news flashes, and even want ads. Entertaining and informative, written for fifth graders.

Medieval/Early Renaissance, 400-1600 (Sixth Grade)

List of Great Men and Women

This list includes a few early rulers of major countries up until about 1050. After Edward the Confessor, any ruler of England, Holy Roman Emperor, ruler of France, emperor of Japan, or emperor of China is worth making a notebook page on; we don't list them here (there are simply too many). Check the encyclopedia for complete listings.

Saint Augustine (writing c. 411) Attila the Hun (c. 433-453) King Arthur (probably killed in 537 at the Battle of Camlan) Gregory of Tours (540-594) Mohammed (570-632) the Venerable Bede (672-735) Charles Martel (688-741) Charlemagne (ruled 768-814) Alfred the Great (849-899) Leif Ericsson (discovered America c. 1000) Omar Khayyam (1027–1123) Edward the Confessor (1042-1066) Chrétien de Troyes (1144-1190) Genghis Khan (b. 1155) Thomas Aquinas (1225–1274) Dante Alighieri (1265–1321) Geoffrey Chaucer (c. 1340-1400) Thomas à Kempis (1380-1471) Jan van Eyck (c. 1390-1441) Johannes Gutenberg (c. 1396–1468) Sandro Botticelli (1444-1510) Christopher Columbus (1451–1506) Leonardo da Vinci (1452-1519) Amerigo Vespucci (1454-1512)

Erasmus (1465-1536) Nicolaus Copernicus (1473–1543) Michelangelo (1475-1564) Titian (1477-1576) Thomas More (1478-1535) Ferdinand Magellan (1480–1521) Martin Luther (1483-1546) Raphael (1483-1520) Ignatius Loyola (1491-1556) Correggio (1494-1534) Giovanni Angelo de' Medici (1499-1565) Thomas Wyatt (1503–1542) Nostradamus (1503-1566) John Knox (1505–1572) John Calvin (1509-1564) Hernando Cortés (entered Mexican capital, 1519) Pieter Brueghel (1520–1569) Palestrina, Giovanni Pierluigi da (1525-1594) Tycho Brahe (1546–1601) Philip Sidney (1551–1586) Walter Raleigh (1554–1618) William Shakespeare (1564-1616) Galileo Galilei (1564-1642) Jan Brueghel (1568–1625) John Donne (1572-1631) Inigo Jones (1573–1652) René Descartes (1596-1650)

Primary Sources

Jackdaw Portfolios. Amawalk, N.Y.: Jackdaw Publications, various dates. \$37.00 each. Order from Jackdaw Publications; some are also available from Rainbow Resource Center at a small discount. Jackdaws contain facsimiles of primary documents, essays (called Broadsheets) that combine relevant research into a single narrative with photos; annotated notes about the background of each primary source; transcripts of anything that might be hard to read; and study guides with activities, vocabulary, writing activities, reading ideas, debate, and drama ideas. You can pick and choose among these portfolios: 1066.

The Black Death. Byzantine Empire. Columbus and the Age of Explorers. Elizabeth I. Magna Carta. Martin Luther. The Plague and Fire of London.

General Information

Anglo-Saxon Helmet Cut-Out Model. Jersey City, N.J.: Parkwest Publishing, 1993.

\$4.95. Order from American Home-School Publishing.

Ashman, Iain. Make This Model Crusader Castle. Tulsa, Okla.: E.D.C. Publications, 1996.

\$9.95. Order from Greenleaf Press. Based on the Krak des Chevaliers in Syria, this cut-out-and-assemble castle includes knights to defend and attack.

-----. *Make This Viking Settlement*. Tulsa, Okla.: E.D.C. Publications, 1994. \$9.95. Order from Greenleaf Press. The settlement includes forty cutout figures.

Usborne Cut-Out Models. Tulsa, Okla.: E.D.C. Publications, 1988.
\$9.95 per set. Each set is designed to fit together with the other three into one large model.

Make This Model Castle. Make This Model Cathedral. Make This Model Town. Make This Model Village.

Birmingham, Duncan. The Maya, Aztecs, and Incas Pop-Up. Jersey City, N.J.: Parkwest Publishing, 1985.

\$8.95. Order from American Home-School Publishing. This high-quality series from Parkwest offers interesting text and great pop-up pictures.

Chorzempa, Rosemary A. Design Your Own Coat of Arms: An Introduction to Heraldry. New York: Dover, 1987.

\$3.50. Order from Rainbow Resource Center. Explains the symbolism and history of coats of arms so that you can design your own.

- Civardi, Anne. *The Viking Raiders*. Tulsa, Okla.: E.D.C. Publications, 1998.
 \$6.95. Order from Greenleaf Press. Part of the Usborne Time-Traveler series, this is written at a fourth-grade level and would be good for students who find reading difficult.
- Clare, John D., ed. Living History series. New York: Harcourt Brace. \$16.95 each. Order from Greenleaf Press. The Living History books use miniatures and actors in costume to illustrate excellent text with striking photographs. The paperbacks are published by Gulliver Books and cost \$10.95 each; these should be ordered through a bookstore.

The Vikings. 1992.

Fourteenth Century Towns. 1996.

Knights in Armor. 1992.

The Renaissance. 1995.

This is a particularly good book; interesting and clear information with striking photographs.

Corbishley, Mike. *The Celts Activity Book*. London: Thames & Hudson, 1993.
\$5.95. Order from American Home-School Publishing. This British Museum Press Activity Book includes detailed drawings to color, cartoons, maps, mysteries, fashions, monsters, and weapons.

Davis, Courtney. Celtic Stained Glass. New York: Dover, 1993.

\$3.95. Order from Greenleaf Press. The Dover stained-glass coloring books reproduce medieval windows on translucent paper. Color them, and put them against a window for a beautiful effect.

Duncan, Deborah, and Keith A. James. *The Vikings: With Standup Scenes to Cut Out and Glue Together*. London: Thames & Hudson, 1997.

\$4.95. Order from American Home-School Publishing. This British Museum Press Activity Book includes detailed drawings to color, cartoons, maps, mysteries, fashions, monsters, and weapons.

Dyson, John, et al. Westward with Columbus. New York: Scholastic, 1993.
\$6.95. Order from Greenleaf Press. One of the Time Quest series, this book uses photos and illustrations to combine a 1990 reenactment of Columbus's voyage with an accurate account of the real one in 1492.

Eyewitness Books. New York: Knopf, various dates. \$19.00-\$24.95 each. These books, designed by Dorling Kindersley, are available in libraries, bookstores (you may need to special-order them, but all are in print), and online book services (such as Barnes & Noble Online and Amazon.com). The pictures, designs, and layouts are beautiful, and the books will give you more information than you'll ever need. Consider keeping these on hand for several months, referring back to them as you progress through the time line.

Baquedano, Elizabeth, et al. Aztec; Inca and Maya. 1993.

Brightling, Geoff, et al. Medieval Life. 1996.

Byam, Michelle, et al. Arms and Armor. 1988.

Gravett, Christopher, et al. Castle. 1994.

------. Knight. 1993.

Margeson, Susan M., et al. Viking. 1994.

Grant, Neil. *Explorers and Discoverers*. Jersey City, N.J.: Parkwest Publishing, 1993.

\$8.95. Order from American Home-School Publishing. A BBC Fact Finder.

Green, John. Cathedrals of the World Coloring Book. New York: Dover, 1995.\$3.50. Order from Rainbow Resource Center. Over forty great cathedrals.Floor plans, overhead, interior, and exterior views.

Griffiths, David. The Pop-Up Paris. Jersey City, N.J.: Parkwest Publishing, 1986.

\$8.95. Order from American Home-School Publishing. This high-quality series from Parkwest offers interesting text and great pop-up pictures. This title surveys the history of the city of Paris.

Hall, Jerry, and Christie Jones. Roman Britain. Jersey City, N.J.: Parkwest Publishing, 1997.

\$8.95. Order from American Home-School Publishing. A BBC Fact Finder, this provides a colorful guide to the lives, beliefs, and achievements of ancient peoples. Great illustrations and quotes from the ancients themselves.

Henry VIII and His Wives Coloring Book. New York: Bellerophon, 1989.\$3.95. Order from Greenleaf Press. Paper dolls to color; detailed and attractive. Includes all six wives with several outfits for Henry.

Hindley, J. Knights and Castles. Tulsa, Okla.: E.D.C. Publications, 1998.
\$6.95. Order from Greenleaf Press. Part of the Usborne Time-Traveler series, this is written at approximately fourth-grade level and would be good for students who find reading difficult.

Inside Story series. New York: Peter Bedrick Books.

\$10.95 each. Order from Greenleaf Press. These beautiful books are filled with cutaway illustrations and fascinating text. Each includes sections on food and drink, family life, sports, trade, and wars.

Humble, Richard. A Sixteenth Century Galleon: The Inside Story. Illus. Mark Bergin. 1995.

Macdonald, Fiona. A Sixteenth Century Mosque: The Inside Story. Illus. Mark Bergin. 1994.

- ——. A Medieval Castle: The Inside Story. Illus. John James. 1994.
- ———. A Medieval Cathedral: The Inside Story. Illus. John James. 1991.
- ——. A Samurai Castle: The Inside Story. Illus. John James. 1995.
- ——. A Viking Town: The Inside Story. Illus. Mark Bergin. 1995.
- Morley, Jacqueline. A Renaissance Town: The Inside Story. Illus. John James. 1996.

Lindow, John. Viking Ships to Cut Out and Put Together. Santa Barbara, Calif.: Bellerophon, 1992.

\$5.95. Order from Greenleaf Press. Paper models of the Skuldelev wreck, the Gokstad ship, and the Oseberg ship, along with explanations of Viking design and construction.

Loverance, Rowena. *The Anglo-Saxons*. Jersey City, N.J.: Parkwest Publishing, 1993.

\$8.95. Order from American Home-School Publishing. A BBC Fact Finder, this provides a colorful guide to the lives, beliefs, and achievements of ancient peoples. Great illustrations and quotes from the ancients themselves.

Macauley, David. Castle. Boston, Mass.: Houghton Mifflin, 1977.

\$8.95. Order from the Home School. Macauley's books are engrossing, with detailed drawings and explanations of how things work. Fascinating for the mechanically minded. This book traces the social, cultural, and political role of a castle through its construction.

Cathedral. Boston, Mass.: Houghton Mifflin, 1973.
\$8.95. The story of a cathedral's construction, beginning in a French town in 1252.

-. Ship. Boston, Mass.: Houghton Mifflin, 1995.

\$8.95. A fifteenth-century Spanish wooden sailing ship is built, shipwrecked, and then discovered. The story switches from the present day to the fifteenth century and back again.

A Medieval Alphabet to Illuminate. New York: Bellerophon, 1985.
\$4.95. Order from Greenleaf Press. Ornate capital letters from medieval alphabets. Each is a full-page drawing, ready to be colored.

Morley, Jacqueline, et al. *How Would You Survive as a Viking?* Danbury, Conn.: Franklin Watts, 1996.

\$5.95. Order from Rainbow Resource Center. This book gives you a new identity and sends you back in time for an adventure. Contains a time spiral, maps, and a quiz to check your performance.

Nicole, David. Paper Soldiers of the Middle Ages. Santa Barbara, Calif.: Bellerophon, 1992.

\$3.95 each. Order from Greenleaf Press. Each set contains sixty to seventy detailed, two-sided figures to be colored.

The Crusades.

Includes Byzantine, Mongol, and Iranian cavalry, Moslem soldiers, crusader knights, and even Richard the Lionhearted.

The Hundred Years War.

Includes knights, archers, kings, queens, and peasants.

Queen Elizabeth I. New York: Bellerophon, 1985.

\$4.95. Order from Greenleaf Press. Paper dolls to color; detailed and attractive. Includes Sir Walter Raleigh; the earl of Essex; and Mary, Queen of Scots.

Reeve, John, et al. *The Anglo-Saxons*. London: Thames & Hudson, 1993.
\$4.95. Order from American Home-School Publishing. This British Museum Press Activity Book includes detailed drawings to color, cartoons, maps, mysteries, fashions, monsters, and weapons.

Sibbet, Ed. Cathedral Stained Glass. New York: Dover, 1979.
\$4.50. Order from Greenleaf Press. The Dover stained-glass coloring books reproduce medieval windows on translucent paper. Color them, and put them against a window for a beautiful effect.

Smith, A. G. *Cut and Assemble a Medieval Castle*. New York: Dover, 1984.\$9.95. Order from Greenleaf Press. A full-color model of Caernarvon Castle, built by Edward I in 1283.

Steele, Philip, ed. The Aztec News. Cambridge, Mass.: Candlewick Press, 1997.

\$15.99. Order from Greenleaf Press. Headline stories from ancient history, along with lots of facts, quotes, news flashes, and even want ads. Entertaining and informative, written on a fifth-grade level.

Wild, Anne. *The Pop-Up London*. Jersey City, N.J.: Parkwest Publishing, 1985.
\$8.95. Order from American Home-School Publishing. This high-quality series from Parkwest offers interesting text and great pop-up pictures; this title surveys the history of the city of London.

Wingate, Philippa, et al. *The Viking World*. Tulsa, Okla.: E.D.C. Publications, 1994.

\$10.50. Order from the Home School. Part of the Usborne Illustrated World History series, this is an appealing reference book with pictures, maps, and charts. Written for fifth grade and up.

——. The Usborne Book of Kings and Queens. Tulsa, Okla.: E.D.C. Publications, 1995.

\$8.95. Order from American Home-School Publishing. This survey of royal lives from Ramses to Elizabeth I contains portraits, maps, illustrations, and stories of victories and defeats.

Wright, Rachel, ed. The Viking News. Cambridge, Mass.: Candlewick Press, 1998.

\$16.99. Order from Greenleaf Press. Headline stories from ancient history, along with lots of facts, quotes, news flashes, and even want ads. Entertaining and informative, written on a fifth-grade level.

Late Renaissance/Early Modern, 1600–1850 (Seventh Grade)

List of Topics to Explore

the *Mayflower* early American settlements Russia under Peter the Great and his successors Prussia in the eighteenth century

the Enlightenment

the agricultural revolution

Native American cultures

the British in India

the French Revolution

British-French conflict in Canada

the American Revolution

The Napoleonic Wars

the industrial revolution

Simón Bolívar's fight for independence in South America

the siege of the Alamo

the California gold rush

the Lewis and Clark expedition

the U.S. acquisition of North American territories

Australia's beginnings as a penal colony

Primary Sources

Jackdaw Portfolios. Amawalk, N.Y.: Jackdaw Publications.

\$37.00 each. Order from Jackdaw Publications; some are also available from Rainbow Resource Center at a small discount. Jackdaws contain facsimiles of primary documents, essays (called Broadsheets) that combine relevant research into a single narrative along with photos; annotated notes about the background of each primary source; transcripts of anything that might be hard to read; and study guides with activities, vocabulary, writing activities, reading ideas, debate, and drama ideas. You can pick and choose among these portfolios:

The American Revolution. California Gold Rush—1849. French Revolution. Lewis and Clark Expedition: 1804–1806. The Making of the Constitution. The Mayflower and the Pilgrim Fathers. Nat Turner's Slave Revolt—1831. Rise of Napoleon. Salem Village and the Witch Hysteria. Slavery in the United States. Women in the American Revolution. Roop, Connie, and Peter Roop, eds. Pilgrim Voices: Our First Year in the New World. New York: Walker, 1998.

\$16.95. Order from Greenleaf Press. These are actual writings of the Pilgrims themselves, including Bradford, edited into short selections. Written on a fairly easy reading level.

Zeinert, Karen, ed. The Memoirs of Andrew Sherburne: Patriot and Privateer of the American Revolution. North Haven, Conn.: Linnet Books, 1993.

\$16.95. Order from American Home-School Publishing. Zeinert has edited Sherburne's actual first-person account of his service in the colonial navy during the American Revolution.

General Information

Anderson, J. K. Castles to Cut Out and Put Together. Santa Barbara, Calif.: Bellerophon, 1987.

\$4.95. Order from Greenleaf Press. These are models of the Tower of London and Château Gaillard, with all the turrets, towers, and walls. They need to be colored before assembly.

Anderson, J. K., and Nick Taylor. Castles of Scotland to Cut Out and Put Together. Santa Barbara, Calif.: Bellerophon, 1990.

\$3.95. Order from Greenleaf Press. Doune Castle and Caerlaverock Castle. To be colored and assembled.

Bliven, Bruce. *The American Revolution*. New York: Random House, 1987.
\$6.50. Order from Greenleaf Press. This history for young people was first published in 1958. It gives a very detailed account of the struggle for independence and of George III's misdeeds.

Blos, Joan W. A Gathering of Days: A New England Girl's Journal 1830–32. New York: Aladdin, 1990.

\$3.95. Order from American Home-School Publishing. This is a Newbery award-winning novel, not a history book (the story is told through the journal of a teenage girl in colonial New Hampshire). But it provides a well-researched look into everyday life in colonial America.

Brownell, David, ed. A Coloring Book of Kings and Queens of England. Santa Barbara, Calif.: Bellerophon, 1985.

\$4.95. Order from Greenleaf Press. All the kings and queens, from before Edward the Confessor to Elizabeth II, with text about each. Great for the student memorizing those kings and queens.

Cooper, Donna, and Bill Clifflands. Tudors and Stuarts. Jersey City, N.J.: Parkwest Publishing, 1997.

\$8.95. Order from American, Home-School Publishing. A BBC Fact Finder—colorful guides to the lives, beliefs, and achievements of various people.

Copeland, Peter F. Early American Crafts and Occupations Coloring Book. New York: Dover, 1994.

\$2.95. Order from Rainbow Resource Center. Historically accurate, detailed drawings with interesting text.

Early American Trades Coloring Book. New York: Dover, 1980. \$2.95. Order from Rainbow Resource Center.

. Everyday Dress of the American Colonial Period. New York: Dover, 1992. \$2.95. Order from Rainbow Resource Center.

-------. Indian Tribes of North America Coloring Book. New York: Dover, 1990. \$2.95. Order from Rainbow Resource Center.

—. Lewis and Clark Expedition Coloring Book. New York: Dover, 1983.\$2.95. Order from Rainbow Resource Center.

\$2.95. Order from Rainbow Resource Center.

Eyewitness Books. New York: Knopf.

\$19.00–24.95 each. These books, designed by Dorling Kindersley, are available in libraries, bookstores (you may need to special-order them, but all are in print), and online book services (such as Barnes & Noble Online and amazon.com). The pictures, designs, and layouts are beautiful, and the books will give you more information than you'll ever need. Consider keeping these on hand for several months, referring back to them as you progress through the time line.

Eyewitness staff. *Renaissance*. 1999. Holmes, Richard, et al. *Battle*. 1995. Matthews, Rupert O., et al. *Explorer*. 1991. Murdoch, David, et al. *North American Indian*. 1995. Platt, Richard, et al. *Pirate*. 1995.

Hakim, Joy. A History of US series. New York: Oxford University Press.\$10.95 each; teacher's guides for each volume are \$6.95. Order from the Home School. This series is immensely popular among history fans; it's

readable, written in story format, and interesting. You can buy teacher's guides with overviews of each chapter and teaching strategies, but you probably don't need them. The volumes are in the process of revision, so look for the latest edition.

Volume 1: The First Americans (Prehistory–1600), 2d rev. ed. 1998. Volume 2: Making Thirteen Colonies (1607–1732), 2d rev. ed. 1998. Volume 3: From Colonies to Country (1710–1791), 2d rev. ed. 1998. Volume 4: The New Nation (1789–1850). 1994.

Knill, Harry, and Nancy Conkle. A Coloring Book of the American Revolution. Santa Barbara, Calif.: Bellerophon, 1987.

\$3.95. Order from Greenleaf Press. Based on a set of eighteenth-century caricatures.

Made for Trade. Ann Arbor, Mich.: Aristoplay, 1994.\$24.95. Order from the Education Connection. Learn about history and economics through this game of early American bartering.

Spier, Peter. *The Star-Spangled Banner*. New York: Yearling Books, 1992.
\$9.95. Order from American Home-School Publishing. An illustrated national anthem, with historical notes and maps describing the War of 1812, and a history of the anthem's composition.

Steedman, Scott. A Frontier Fort on the Oregon Trail: The Inside Story. Illus. Mark Bergin. New York: Peter Bedrick Books, 1994.

\$10.95. Order from Greenleaf Press. Filled with cutaway illustrations of fascinating text.

Waters, Kate. The Day series. Illus. Russ Kendall. New York: Scholastic. Order from Greenleaf Press. The Kate Waters series on early American life uses reenactors and interpreters at Plymouth Plantation for photographic illustration. Excellent information.

On the Mayflower. 1996.

\$16.99 (hardback only). Shows what sailing on this tiny boat was really like.

Samuel Eaton's Day. 1996.

\$5.99 (paperback). A typical day for a young boy at Plymouth. Sarah Morton's Day. 1993.

\$5.99 (paperback). The daily life of a young girl in Plymouth colony.
Tapenum's Day. 1996.

\$16.99 (hardback only). The daily life of an Indian boy living near Plymouth.

Woodhouse, Jayne. The Victorians. Jersey City, N.J.: Parkwest Publishing, 1995.

\$8.95. Order from American Home-Schoøl Publishing. A BBC Fact Finder.

Modern, 1850–Present (Eighth Grade)

List of Topics to Explore

Africa under European control the Indian mutinies the Crimean War the Victorian era the War between the States (Civil War) exploration in the American West Euro-American conflict with the Native American tribes the Boxer Rebellion World War I the Russian Revolution the Soviet Union the Great Depression the New Deal civil war in Spain the Axis and the Allies World War II Nazi Germany/Hitler the Holocaust Zionism/the Jews' return to Palestine apartheid/South African segregation China under Mao the Korean War the civil-rights movement the Vietnam War landing on the moon

Primary Sources

Aten, Jerry. Our Living Constitution, Then and Now. Good Apple, 1986.

\$10.95. Order from Rainbow Resource Center. The original text of the Constitution in one column, interpretation in another column. Comes with games and writing activities.

Frank, Anne, et al. *The Diary of a Young Girl: The Definitive Edition*. New York: Bantam, 1997.

This classic journal is a good place to begin discussions of the Holocaust.

Jackdaw Portfolios. Amawalk, N.Y.: Jackdaw Publications.

\$37.00 each. Order from Jackdaw Publications; some are also available from Rainbow Resource Center at a small discount. Jackdaws contain facsimiles of primary documents, essays (called Broadsheets) that combine relevant research into a single narrative along with photos; annotated notes about the background of each primary source; transcripts of anything that might be hard to read; and study guides with activities, vocabulary, writing activities, reading ideas, debate, and drama ideas. You can pick and choose among these portfolios:

Atomic Bomb. Black Voting Rights.

Century of Smoking and Tobacco.

The Civil War.

The Cold War.

Computers.

The Depression.

Early Industrialization of America.

The New Deal.

The 1920s: America Enters the Modern Age. World War I: 1914–1918.

World War II: The Home Front.

Mulvey, Deborah. We Had Everything but Money. Greendale, Wis.: Reiman Publications, 1992.

\$14.95. Order from American Home-School Publishing. Personal recollections of those who lived through the Great Depression, in their own words. Black-and white photos.

Murphy, Jim. The Boy's War: Confederate and Union Soldiers Talk about the Civil War. New York: Clarion Books, 1993.

\$7.95. Order from American Home-School Publishing. Journal entries and letters from boys sixteen and under who fought in the Civil War. Sepia photographs.

Schroder, Walter K. Stars and Swastikas: The Boy Who Wore Two Uniforms. Hamden, Conn.: Archon Books, 1997.

\$28. Order from American Home-School Publishing. Very expensive (try your library), but this story of a German soldier who joined the U.S. Army after Hitler's defeat should start some interesting discussions about loyalty and patriotism.

General Information

Archambault, Alan. Black Soldiers in the Civil War Coloring Book. Santa Barbara, Calif.: Bellerophon, 1995.

\$3.95. Order from Greenleaf Press. The story of the Massachusetts Fiftyfourth as well as other units.

Archambault, Alan, and Jill Caron. *Civil War Heroes: A Coloring Book*. Santa Barbara, Calif.: Bellerophon, 1991.

\$4.95. Order from Greenleaf Press. Twenty-four of the most important figures from both sides, each with a full-page drawing and a one-page biography.

Biggs, Bradley. The Triple Nickles: America's First All-Black Paratroop Unit. Hamden, Conn.: Archon Books, 1994.

\$17.50. Order from American Home-School Publishing. Accurate history about honor, courage, and racism among the troops of World War II. (The price is high, so you might want to try your library.)

Clare, John D., ed. Growing Up in the People's Century: Children's Eyewitness Accounts of the Twentieth Century. Jersey City, N.J.: Parkwest Publishing, 1998.
\$23.95. First-person accounts of daily life during all the decades of this century.

—. Living History series. New York: Harcourt Brace.

\$16.95 each. Order from Greenleaf Press. The Living History books use miniatures and actors in costume to illustrate excellent text with striking photographs. The paperbacks are published by Gulliver Books and cost \$10.95 each; these should be ordered through a bookstore.

The First World War. 1995. The Industrial Revolution. 1994.

Coloring Book of Our Presidents. Santa Barbara, Calif.: Bellerophon, 1988.
\$4.95. Order from Greenleaf Press. From George Washington to Bill Clinton; full-page portraits, each from a historical source (paintings, campaign posters, and so forth). Great memory aid.

Cooper, Michael. From Slave to Civil War Hero: The Life and Times of Robert Smalls. New York: Lodestar Books, 1994.

\$13.95. Order from Greenleaf Press. The biography of Robert Smalls, who rose from slavery to serve in the United States Congress.

Copeland, Peter F. Naval Battles of the Civil War Coloring Book. New York: Dover, 1996.

\$2.95. Detailed and historically accurate drawings along with a narrative.

Eyewitness Books. New York: Knopf.

\$19.00–24.95 each. These books, designed by Dorling Kindersley, are available in libraries, bookstores (you may need to special-order them, but all are in print), and online book services (such as Barnes & Noble Online and Amazon.com). The pictures, designs, and layouts are beautiful, and the books will give you more information than you'll ever need. Consider keeping these on hand for several months, referring back to them as you progress through the time line.

Coiley, John, and Mike Dunning. *Train*. 1992. Cribb, Joe, et al. *Money*. 1990. Murdoch, David, et al. *Cowboy*. 1993. Nahum, Andrew, et al. *Flying Machine*. 1990. Stott, Carole, et al. *Space Exploration*. 1997.

Freedman, Russell. *Lincoln: A Photobiography.* New York: Clarion, 1989.\$7.95. Order from Greenleaf Press. The personal and public story of Lincoln, with a series of profiles that shows him aging during his terms in office. A Newbery Medal winner.

———. Wilbur and Orville Wright: How They Invented the Airplane. New York: Holiday House, 1994.

\$9.95. Order from Greenleaf Press. Uses the brothers' own photographs along with a readable account of their achievements. Lots of quotes from the Wrights' own writings. Hail to the Chief Game. Ann Arbor, Mich.: Aristoplay, n.d.

\$24.95. Order from the Education Connection. Become president by answering questions about former presidents, the Constitution, history and geography, and state capitals.

Hakim, Joy. A History of US series. New York: Oxford University Press.
\$10.95 each; teacher's guides for each volume are \$6.95. Order from the Home School. This series is immensely popular among history fans; it's readable, written in story format, and interesting. You can buy teacher's guides with overviews of each chapter and teaching strategies, but you probably don't need them. The volumes are in the process of revision, so look for the latest edition.

Volume 5: Liberty For All? (1828-1860). 1994.

Volume 6: War, Terrible War. 1994.

Volume 7: Reconstruction and Reform (1865-1890). 1994.

Volume 8: An Age of Extremes, 2d rev. ed. 1998.

Volume 9: War, Peace, and All That Jazz (1915-1945). 1995.

Volume 10: All the People (1945-Present), 2d ed. rev. 1998.

Hayman, Leroy. The Death of Lincoln: A Picture History of the Assassination. New York: Scholastic, 1990.

\$2.95. Order from Greenleaf Press. Great for mystery fans—examines the circumstances around the assassination with photos, engravings, and paintings.

Heinrichs, Ann. America the Beautiful series. Danbury, Conn.: Children's Press.

This series includes one title for each state and will provide the eighthgrade student with a good basic review of state history (required by most state educational boards).

Macauley, David. Mill. Boston, Mass.: Houghton Mifflin, 1989.

\$8.95. The detailed history of a fictional New England mill, its construction, operation, and place in social and political change.

Maybury, Richard. Whatever Happened to Penny Candy? Shingle Springs, Calif.: Bluestocking Press, 1992.

\$9.95. Order from Rainbow Resource Center. A simple, clear introduction to economic theory: origin of money, history of the dollar, inflation, recession, the federal debt. Miles, Lisa. The Usborne Illustrated Atlas of the Twentieth Century. Tulsa, Okla.: E.D.C. Publications, 1997.

\$12.95. A good supplement to the *Kingfisher Illustrated History of the World*, which occasionally dismisses important twentieth-century events and people by covering them in one sentence. Good maps; focuses on cause and effect.

Presidential Rummy. Washington, D.C.: The Smithsonian Institution. \$5.95. Order from the Education Connection. An old standby. Forty-one presidents, each with his home state, political party, First Lady, vice president, and vital facts. Play and learn.

States and Capitals Flash Cards.

\$4.50. Order from Rainbow Resource Center. States, capitals, dates of statehood, state birds and flowers, main industries, attractions.

Sullivan, George. The Day Pearl Harbor Was Bombed—a Photo History of World War II. New York: Scholastic, 1991.

\$5.95. Order from Greenleaf Press. The story of December 7 and the entire war in photographs and newspaper headlines. Fairly simple but a good introduction.

———. The Day We Walked on the Moon—a Photo History of Space Exploration. New York: Scholastic, 1992.

\$5.95. Order from Greenleaf Press. From John Glenn through Neil Armstrong and the *Challenger* astronauts.

Time Quest series. New York: Scholastic.

\$16.95 for hardbacks, \$6.95 for paperbacks. Order from Greenleaf Press. This series explores mysteries of the recent past, with lots of illustrations and historical detail.

Ballard, Robert D. *Exploring the Bismarck*. Illus. Ken Marshall. 1993. The story of the World War II battleship and the discovery of the wreck nearly fifty years later.

------. Exploring the Titanic. Illus. Ken Marshall. 1993.

Written by the man who actually discovered the famous ship. With photos from the 1985 expedition.

Beattie, Owen, et al. Buried in Ice. 1993.

The mystery of a failed nineteenth-century expedition to find the Northwest Passage.

Tanaka, Shelley. The Disaster of the Hindenburg: The Last Flight of the Greatest Airship Ever Built. 1996.

The narrator is a cabin boy who tells the story of the voyage and the crash. Illustrations and archival photographs.

After this book had gone to press, Larousse Kingfisher Chambers allowed *The Kingfisher Illustrated History of the World* to go out of print and replaced it with *The Kingfisher History Encyclopedia*, which is very similar in content and in format and can be substituted for the *History of the World* without difficulty.

THINKING STRAIGHT: SPELLING, GRAMMAR, READING, AND WRITING

17

SN/A

Grammar: The fundamental rules of each subject. Logic: The ordered relationship of particulars in each subject. Rhetoric: How the grammar and logic of each subject may be clearly expressed.

—Douglas Wilson, Recovering the Lost Tools of Learning

SUBJECT: Spelling, grammar, reading, and writing, grades 5–8 TIME REQUIRED: 5 to 10 hours per week

In the grammar years, your child learned to spell, to name the parts of speech and assemble them into properly punctuated sentences, to gather information through reading, and to write simple compositions—letters, descriptive paragraphs, book reports. She absorbed the basic rules and skills of language use.

Now, in grades 5 through 8, she will shift focus. Acquiring information is still important, but instead of simply absorbing facts about language use, the middle-grade student will learn to *analyze* language. Now that she knows "the fundamental rules" of language, as Douglas Wilson puts it, she'll start to learn language's "ordered relationships"—the way the language fits together. She'll ask why, instead of simply memorizing rules. She'll pull English apart and find out how it works. And when she's finished, she'll be prepared to use language with precision and eloquence—she'll be ready for rhetoric.

Grammar-stage language study was organized around four subjects: spelling, grammar, reading, and writing. In the logic stage, the student will make the transition from spelling (learning how words are put together) to word study (discovering why words are formed the way they are). She's already studied the names and qualities of parts of speech; now she'll concentrate on how those parts of speech are put together. She'll begin to look at her reading assignments with a more critical eye: Why did this character act the way he did? How did the writer construct this particular plot? Is the argument in this essay sound? And in writing, she'll begin to construct longer compositions—well-reasoned essays, stories with coherent plots.

Like the elementary student, the middle-grade student will spend a good part of her study time working with the English language. Plan on a minimum of an hour per day, with extra time allotted for writing at least twice a week (often this writing will overlap with history or science work) and a separate time for imaginative reading.

HOW TO DO IT

Organize the middle-grade student's work in a 3-inch three-ring English notebook.

For fifth grade, divide this notebook into eight sections:

- 1. Spelling
- 2. Word Study
- 3. Grammar: Rules
- 4. Grammar: Diagramming
- 5. Reading
- 6. Memory Work
- 7. Dictation
- 8. Writing: Compositions

For sixth, seventh, and eighth grades, divide the notebook into eight sections:

- 1. Spelling
- 2. Word Study

- 3. Grammar: Rules
- 4. Grammar: Diagramming
- 5. Reading
- 6. Memory Work
- 7. Writing: Creative Assignments
- 8. Writing: Compositions

You'll still need plenty of art supplies, but as the child grows older, you'll shift away from stickers and glitter, and lean toward high-quality colored pencils, watercolors, and other "real art" materials.

As in the grammar stage, students may be at different levels in spelling and word study, grammar, reading, and writing. We'll discuss each language skill separately, providing a year-by-year schedule at the end of the chapter.

SPELLING AND WORD STUDY

Try to follow this pattern for spelling and vocabulary:

Fifth grade	Spelling Workout F and G
Sixth grade	Spelling Workout G and H
Seventh grade	Vocabulary from Classical Roots A and B
Eighth grade	Vocabulary from Classical Roots C and D

The fifth grader should already be familiar with the basic rules of spelling and the common exceptions. In the logic stage, she'll begin to study words that are unusual because they come from outside the English spelling system—they're derived from other languages. Spelling these words correctly requires an understanding of their meaning and origin.

At first, you'll continue with the *Spelling Workout* books, just as you did in fourth grade. By fifth grade, you should be doing (or be close to doing) *Spelling Workout F.* Spend fifteen minutes per day working through the lessons. Continue to keep a list of frequently misspelled words in the Spelling section of the notebook, and copy any new spelling rules into this section.

Be aware that many of the rules in the more advanced Spelling Workout

books are concerned not with spelling, but with meaning. "The prefixes em and en," begins one rule in Spelling Workout F, "mean in, into, cause to be, or to make." Any fifth grader who's studied Latin already knows this; she can also figure out that embitter (one of the spelling words for this lesson) means "to make bitter."

Because of this, when you begin *Spelling Workout F*, start keeping a list of prefixes, suffixes, and their meanings in the Word Study section of the notebook. Entitle a notebook page "Prefixes and Suffixes," and structure your list like this:

Prefixes and Suffixes			
Prefix	Suffix	Meaning/function	Language (if given)
contra-		opposite, against	
	-able	makes an adjective out of a noun	
mal-		bad	Latin
pan-		all	Latin
myria-		countless	Greek

Spelling Workout G introduces Latin, French, and Spanish word roots; Spelling Workout H adds Greek roots and origins. List these as well, but on a separate page headed "Word Roots." Follow this pattern:

Word Roots		
Root	Meaning	Language
functio	to perform	Latin
cedere	to go forward	Latin
polis	city	Greek
annu	year	Latin

Whenever you make a new English notebook, transfer the lists of spelling rules, the "Prefixes and Suffixes" list, and the "Word Roots" list into the Word Study section of the new notebook. And continue to fill out these lists of prefixes and suffixes and word roots with their meaning and language of origin.

Aim to get at least through *Spelling Workout* F by the end of the fifthgrade year; start on G if possible. Ideally, you'll finish *Spelling Workout* H by the end of the sixth-grade year, which will free up the seventh- and eighthgrade years for the study of advanced vocabulary and word roots. (But if you're still in *Spelling Workout H* in seventh grade, simply finish it before going on to the vocabulary-development series that comes next.)

As the student moves into *Spelling Workout G* and *H*, she'll be spending less time on spelling rules and more on word derivations. *Spelling Workout H* is more of a vocabulary workbook than a spelling manual, covering word roots, prefixes, and suffixes from Latin, Greek, and French.

When you finish *Spelling Workout H*, you'll have covered all the common spelling rules for English words. Now—somewhere around the seventh-grade year—vocabulary study will replace spelling as a formal subject. And the best way to build a good vocabulary is by reading a large variety of things. But while your seventh grader is reading, she should also study word origins and meanings to reinforce and sharpen her word skills.

Educators Publishing Service publishes a five-book series called *Vocabulary from Classical Roots*. These are part reference book and part workbook; they use classical quotes, definitions and exercises to build vocabulary skills. Each book is sixteen lessons long. If you do one lesson per week, you can easily complete two books per year.

The Vocabulary from Classical Roots series provides exercises, but they aren't extensive. Instead of doing word study for fifteen minutes a day, as you did for spelling, we suggest that you follow this pattern:

Monday	30–45 minutes	Read through the word roots,
		definitions, and sample
		sentences; make 3-by-5-inch
		flash cards for each Latin root
		and unfamiliar English word.
Tuesday–Thursday	5–10 minutes	Drill with flash cards.
Friday	10 minutes	Review flash cards; complete
		exercises; check.

Continue to list all new word roots provided on the Word Roots page in the Word Study section of the notebook.

Also, the student should still keep a list of frequently misspelled words in the Spelling section of the notebook. Apart from this, you won't be doing formal spelling; but transfer the Spelling Rules list into the seventh-grade English notebook to act as a ready reference.

Thinking Straight: Spelling, Grammar, Reading, and Writing 333

Aim to do one lesson per week from *Vocabulary from Classical Roots*. If you're able to begin *Vocabulary from Classical Roots* in seventh grade, you'll complete *A* and *B* in the seventh-grade year, and *C* and *D* in the eighthgrade year. If you don't finish the *Spelling Workout* texts until the middle of the seventh grade (or later), just stick to this same pattern—one lesson per week.

GRAMMAR

Try to follow this pattern:

Fifth grade	A Beka: God's Gift of Language B or G.U.M.: Level C
Sixth grade	A Beka: God's Gift of Language C or G.U.M.: Complete
	Middle Level Program
Seventh grade	A Beka: Grammar and Composition I or Stewart English
	Program, Book 1: Principles Plus or The Holt Middle
	School Workbook, Level B
Eighth grade	A Beka: Grammar and Composition II or Stewart English
	Program, Book 2: Grammar Plus or The Holt Middle
	School Workbook, Level C

The fifth grader knows what elements make up a sentence (nouns, pronouns, verbs, adverbs, adjectives) and how to string them together (proper punctuation, capitalization, word use). Now she's ready to study relationships between words—how they combine into clauses and how those clauses relate to form sentences.

These relationships are governed by rules. And as the student encounters these rules, she should memorize them. She should also learn to draw a picture of the rule—through diagramming.

We don't think diagramming sentences ought to be optional. Sentence diagrams reveal the logic of sentence structure, just as syllogisms reveal the logic of arguments. Diagramming is a hands-on grammar activity. Visual learners will benefit from "seeing a picture" of grammatical structure, and drawing the diagram will help kinesthetic learners to understand the abstractions of grammar. Most importantly, diagramming prevents the child from simply parroting back rules that she doesn't fully understand. She may be able to quote the definition of a dependent clause, but if she can't properly diagram a sentence that contains dependent clauses, you'll know that she doesn't really comprehend how they work. And until she understands how dependent clauses work, she won't be able to use them as she writes and talks. The study of grammar has as its goal the creation of a clear, persuasive, forceful, fully equipped speaker and writer.

Don't be intimidated by diagramming. It starts simply—writing a subject and a verb on a horizontal line and drawing a vertical line between them. Each sentence part has its own place on the diagram. But both you and your fifth grader will get plenty of practice in identifying those parts before you start diagramming them. (And you'll have the teacher's book!)

In the middle grades, you should plan to spend forty to sixty minutes per day, working through a grammar text and its accompanying exercises.

Which grammar texts are best?

Although we've reviewed a number of grammar programs, we think that the texts produced by the Christian textbook publisher A Beka Book remain the most rigorous, most comprehensive, and easiest to do at home. *God's Gift of Language B* (grade 5) and *C* (grade 6) build on the fourth-grade book we recommended in Chapter 5. The seventh grader can continue her studies with *Grammar and Composition I*, followed by the eighth-grade text *Grammar and Composition II*.

The A Beka texts give clear rules, explanations, and plenty of exercises. Don't feel that you have to complete every exercise. If your child understands the concepts and is able to do ten or twelve sentences in an exercise correctly, there's no need to be compulsive about finishing the page. Jessie found that a successful method was to let the student do a few sentences, self-check with the teacher's edition, self-correct in red pencil, close the teacher's edition, and do four or five more sentences, repeating the process. This way the student wouldn't do a whole exercise wrong, reinforcing her error. And if she got the first eight or ten sentences right, she could stop.

The A Beka Book texts incorporate writing exercises into grammar study. Although these are generally good (especially the sections on writing topic sentences and paragraphs and on outlining), the note-taking method taught as preparation for the research paper is too complicated. Skip these sections, and follow the *Writing Strands* method instead. If you're using *Writing Strands* along with the A Beka Book texts (as we recommend), omit the A Beka Book writing exercises, or choose only those that will strengthen the child where she is weakest. This way, she won't be overwhelmed.

The outlining lessons taught in A Beka Book are excellent and will equip your logic-stage student to do the outlining exercises recommended in the history chapter.

Since A Beka Book texts are produced by Christians, the sentences frequently refer to Christian ideas. If you prefer a nonsectarian text, the best we've found is Zaner-Bloser's Grammar, Usage and Mechanics (*G.U.M.*) series. These grammar workbooks cover all the bases in an acceptable manner. The exercises aren't as rigorous or as lengthy as those found in the A Beka Book texts, so a child having trouble with a particular concept won't have as much chance to practice. Also, both diagramming and paragraph construction are reserved for the sixth-grade book, which we think is a little late. (And *G.U.M.* doesn't teach outlining at all, so you'll have to rely on our descriptions in Chapter 16.)

If you choose this system, use *Level C* for fifth grade. When you finish *C*, go directly to the *Complete Middle Level Program*. A child who's followed the English program we outlined in Part I can easily finish the *Complete Middle Level Program* by the end of the sixth-grade year, which is what you should plan to do.

If your fifth grader is struggling with *Level C*, though, you could continue onto *Level D* for extra drill and practice before progressing to the *Complete Middle Level Program*.

Once you've finished the *Complete Middle Level Program*, you'll have to turn to another curriculum for seventh and eighth grades. You have two choices.

(1) If your student has finished the *Complete Middle Level Program* in sixth grade and isn't having difficulty with grammar, you should probably move on to the *Stewart English Program* for seventh and eighth grades. This program is our first choice for the seventh grader. It's writing-oriented and strongly academic, a definite step up in difficulty from Zaner-Bloser's *G.U.M.* series. The two books—Book 1, *Principles Plus* . . . (seventh grade) and Book 2, *Grammar Plus* . . . (eighth grade)—cover grammar, usage, common mistakes, and complex sentence structure, using examples from great literature. For seventh grade, you'll want to cover three to four pages of Book 1 per week.

The student who enters ninth grade with the Stewart English Program under her belt will sail through high-school composition assignments with ease. However, the *Stewart* program may be too challenging for students who struggled with fifth- and sixth-grade grammar or who are still working their way through the *Complete Middle Level Program* at the beginning of seventh grade. If you need a simpler grammar program, try our second option.

(2) Go directly into the middle-grade version of the course we recommend for high school—the Holt, Rinehart and Winston grammar series based on the now out-of-print classic written by Warriner. For seventh grade, you'll need the *Holt Middle School Handbook* and its accompanying workbook, the *Holt Middle School Workbook*, Level B. (Level A is for the sixth grade, which you can skip if you've done the G.U.M. Complete Middle Level Program.) For eighth grade, you'll use the same Holt Middle School Handbook, but now with the Holt Middle School Workbook, Level C.

Although the Holt program is good, it isn't as writing-oriented, as challenging, or as complete as the *Stewart English Program*. Also, the workbooks spend a fair amount of space on spelling rules and word roots, which your seventh grader will already know. But if you need a slow, systematic, confidence-builder, the Holt series is the best choice.

These grammar texts are largely self-directing. Follow the directions, and work through the exercises.

As you do grammar, keep two kinds of records in the notebook.

First, every time you encounter a definition or rule ("A noun is the name of a person, place, thing, or idea"), write it down in the Grammar: Rules section of the notebook. This way, you'll end each year with a handy reference section of definitions and grammar rules.

Second, diagramming exercises are generally done on separate sheets of paper. Once these are corrected, file them in the Grammar: Diagramming section of the notebook. This will allow the student to glance back over the growing complexity of her diagrams, noting where her trouble areas are.

READING

Follow this schedule:

Fifth grade	Ancients (5000 B.CA.D. 400)
Sixth grade	Medieval-early Renaissance (400-1600)
Seventh grade	Late Renaissance-early modern (1600-1850)
Eighth grade	Modern (1850–present)

During the logic stage, plan to spend 30 to 60 minutes, four days per week, reading and creating narration pages and reports.

As in the grammar stage, reading is keyed to the historical period being studied. The student should place narrations of historical novels and other imaginative literature in the Reading section of the notebook.

However, she should put narrations of any great books—original literature written *during* the historical period under study—in The Arts and Great Books section of the history notebook. If she reads a novel about the Borgia in seventh grade, she should put it in the English notebook under Reading. But if she reads *Gulliver's Travels*, she should put this in her history notebook. In a way, it's a primary source, written by an eyewitness to the history she's working on.

You shouldn't feel that you have to confine the child to stories during her reading time. Although the fifth grader should be reading tales from ancient Egypt, if she shows interest in a biography of Tutankhamen, let her read that, too. She needs to read a version of the *Iliad* and *Odyssey*, but she can also read nonfiction books about Homer or Socrates or the wars of Alexander the Great. Reading and history will inevitably overlap. Just try to keep a balance: at least one work of imagination for every biography or book of history. Historical novels are fine, but make sure that the child also reads versions of the classics, if not the classics themselves.

During the logic stage, you're preparing the child to think critically about literature by *conversing* with her about it—carrying on a dialogue about what is or isn't important in plots, about whether characters are heroes or villains, about the effects that books have on readers.

Does this mean you have to read the book yourself? Yes.

We've done our best, in this book, to guide you toward books and work texts that don't demand unnecessary preparation. But if you're going to discuss books with your child, you must (at the very least) skim through the story yourself. (You don't have to do this with every book the child reads, just with those for the "structured reading" of language study.) During the logic stage, your conversations with the student will guide her as she begins, for the first time, to think critically about what she reads. (And think of all the great literature you'll catch up on.)

What questions should you ask?

There's nothing wrong with relying on the summaries and questions provided by *Cliffs Notes*, that great college standby (for a complete listing, call a local bookstore). Most fifth graders won't be reading on a *Cliffs Notes* level yet, but glancing through the review questions at the end of the booklets can help you formulate your own questions. You can also use any question from the following list to begin your dialogue. As you grow more comfortable with the process, you'll think of others.

For a novel or story:

Whom is this book about? (central character[s]) What do the central characters want? What keeps them/him/her from getting it? How do they/him/her get what they want? Do they have an enemy or enemies? Is there a villain? What does the villain want? What do you think is the most important event in the story? What leads up to this event? How are the characters different after this event? What is the most important event in each chapter? How many different stories does the writer tell?

For a biography:

What kind of family did the subject come from? What were his parents like? Where did he go to school? What did he want the most as a child? As a grown-up? How did he go about getting it? Name three or four important people in his life. Did he get married? To whom? When? Did they have children? What was the most important event in his life? Name three other important events in his life. Did he get what he wanted in life? Why or why not? Why do we still remember this person?

For evaluation:

What was the most exciting part of the book? What was the most boring part of the book? Did you like the character[s]? Why or why not? Did you hope that she would get what she wanted? Did any part of the book seem particularly real? Did any part of the book seem unlikely to you? Did you hope it would end in another way? How? Would you read this book again? Which one of your friends would enjoy this book?

You should aim to spend at least four days per week, 30 to 60 minutes per day, on reading-that is, reading the books, talking about them, constructing a narrative, and then writing up that narrative in the child's best handwriting.

Throughout the logic stage, don't forget to provide a full hour (at least) some other time during the day for free reading. Children need to be encouraged to read for fun on a regular basis-and they should not have to report on every book they read. Visit the library regularly (many homeschooling families make library visits a weekly school activity), and help your fifth grader choose good novels and nonfiction books on interesting subjects. Consider requiring your child to pick out two science books and two history books on each library trip.

We're strong believers in parental censorship. Realize that not all Caldecott or Newbery winners are suitable for all children. Skim through books you aren't familiar with; just because a book is recommended by a librarian doesn't mean that it will provide age-appropriate entertainment.

And steer your logic-stage student away from "McBooks." Juvenile horror books and teen romances are written in three-page bites to hold short attention spans; challenging vocabulary and sentence structure are avoided; moral themes are nonexistent. These books do not improve reading skills. Instead, they train a young reader to favor books that are easily grasped, consumed in an hour, and tossed away. The child who has developed an R. L. Stine habit may find A Little Princess or Little Women indigestible.

A good annotated list of books for young readers is found in Books Children Love by Elizabeth L. Wilson (Wheaton, Ill.: Crossway Books, 1987), available at most bookstores. Many libraries keep their own lists of recommended books for middle-grade readers; ask your librarian.

Fifth Grade: Ancients (5000 B.C.-A.D. 400)

The fifth grader returns to the Ancients. In first grade, you read myths and fairy tales to your beginning reader. Now she can read them for herself. She'll begin the year with tales of ancient Egypt and end the year with the works of the Romans. Plan on spending a minimum of thirty minutes—sixty is better—on reading. Since her history curriculum is also centered on the Ancients, the history and reading curricula will reinforce and strengthen each other.

As in the grammar stage, avoid "reading textbooks." Go to the library, and check out the many middle-grade versions of classic literature—myths, legends, the works of Plato and Confucius, the tales of Homer and Virgil. At the end of this chapter, we've listed a number of adaptations suitable for fifth graders. We've also listed historical novels that can give the student an excellent picture of the ancient world.

Don't limit yourself to our suggestions, though. Go to the library catalog or children's librarian with the following chronological list, suitable for fifth to eighth graders (adaptations, biographies, and historical novels):

> Confucius Chinese folktales Japanese folktales ancient Chinese poetry ancient Japanese poetry myths of ancient Egypt tales of the pharoahs the Bible Moses Abraham David Solomon Esther Ruth Homer Buddha Socrates

Plato Aristotle Alexander the Great Roman emperors the *Iliad* and the *Odyssey* Greek and Roman myths Aesop's fables Indian folktales African folktales Cicero Virgil

The fifth grader should continue to write one-half-page to one-page summaries of each book read during reading time. As she moves on to longer and more complex books, she may take a week or so to read a single book and write a one-page summary. Try to enforce the one-page limit even though this is difficult for longer books (the child typically wants to include every detail in her summary). Before she writes, talk to her about the book. Ask her to tell you the story (or relate the information, in the case of a nonfiction book). Help her to evaluate each detail by asking questions: "Is that important later on?" "Would the story still makes sense if you left that part out?" "Does that character show up again at the end of the book?" "What does he do?" "If you leave him out of your report, will the story end the same way?" Talk about the book together until the child has pinpointed the most important events and is able to weave them into a narration.

At the end of the narration, ask the child to write a one- or two-sentence evaluation of the book that includes *specific* reasons why she did or didn't like the book. "I liked the *Odyssey* because Odysseus came back home to Penelope and she didn't have to marry someone she hated" is acceptable; "I liked the *Odyssey* because it was interesting" is not. Again, talk through this paragraph with your child. Ask: "What was your favorite part?" "Who was your favorite character?" "Why?" "Did you find this boring?" "How could it have been more interesting?"

This process of selecting, evaluating, and criticizing will move the fifth grader from grammar-stage reading (where she simply repeats what she reads back to you) into logic-stage reading. During the logic stage, the student *thinks* about what she's read: "What makes it interesting?" "What parts of it are most important?" "Why do I react the way I do?"

As the logic stage continues, *Writing Strands* and other texts will help the child's developing critical faculties.

Sixth Grade: Medieval-Early Renaissance (400-1600)

In sixth grade, the student will concentrate on literature from and about the Middle Ages and early Renaissance, a period that coincides with her study of history. If she's a good reader, she can tackle a few originals this year (many sixth graders are capable of reading some Malory, Chaucer, and *Beowulf* in modern English translation as well as scenes from Shakespeare).

Sixth grade is the first year the student will actually complete a reading list. Aim to read the following works in the following chronological order:

- Robert Nye, *Beowulf: A New Telling* (New York: Laurel Leaf, 1982). A good (and very exciting) adaptation for sixth graders.
- Sir Gawain and the Green Knight, verse translation by J. R. R. Tolkien (New York: Ballantine, 1988).

Not a scholarly standard, but wonderful verse.

3. Geoffrey Chaucer, *The Canterbury Tales*, retold by Geraldine McCaughrean, Oxford Illustrated Classics series (New York: Oxford University Press, 1995).

A prose retelling, with illustrations.

4. Geoffrey Chaucer, "Prologue" to *The Canterbury Tales*. A good modern English version, easily available, is published by Penguin Classics (translated by Neville Coghill) 1989. The explanatory notes, annoyingly, are at the back of the book.

5. Dante Alighieri, Inferno, Cantos I-V.

The standard translation is Allen Mandelbaum's, but for reading aloud we like the new translation by former poet laureate Robert Pinsky (New York: Noonday Press, 1996).

 Edmund Spenser, Saint George and the Dragon, from The Fairie Queene. A fun edition is Margaret Hodges retelling (New York: Little Brown, 1990), which is really too simple for sixth-graders. But

Thinking Straight: Spelling, Grammar, Reading, and Writing 343

Geraldine McCaughrean's retelling is unfortunately out of print (check your library for it—you might get lucky).

- 7. Thomas Malory, a version of Le Morte d'Arthur.
 - Malory himself is pretty thick even for high-school students, but choose one (or more) of the following:
 - a. The Boy's King Arthur: Sir Thomas Malory's History of King Arthur and His Knights of the Round Table, edited by Sidney Lanier, original illustrations by N. C. Wyeth (New York: Atheneum, 1989). Pardon the sexist title, but this is a classic adaptation of Malory, and the Wyeth illustrations are spectacular.
 - b. Rosemary Sutcliff, The Sword and the Circle: King Arthur and the Knights of the Round Table (New York: Puffin, 1994). Paperback retelling of Malory.
 - c. T. H. White, *The Sword in the Stone* (New York: Philomel, 1993). This is the first in T. H. White's four-novel adaptation of Malory. All four are collected together into *The Once and Future King* (New York: Ace, 1987). A classic in its own right.
- 8. Leon Garfield, *Shakespeare Stories* (Boston: Houghton Mifflin, 1998). These narrative retellings of twelve plays include much of the original dialogue.
- 9. If your sixth grader is a good reader, also include a Shakespeare play. Choose one of the following Shakespeare plays, using the Oxford School Shakespeare editions, Oxford University Press—wonderfully clear texts (see the discussion below on selecting the first Shakespeare play): Macbeth, Henry V, A Midsummer Night's Dream.

The above are excellent introductory texts. Try to find the editions we've specified (nothing turns a reader from Shakespeare faster than a wrinkled, tiny-print edition with no explanatory footnotes). Our recommended editions should be readily available at libraries and bookstores (see Resources for mail-order information).

For Sir Gawain and the Green Knight, the "Prologue" to The Canterbury Tales, and the introduction to the Inferno, we strongly recommend reading the texts aloud with your child (poems that seem obscure on the page come to life when read out loud). We've also listed some good audio versions of the classics in the Resources at the end of this chapter; the whole

-

family might enjoy Derek Jacobi's reading of *Le Morte d'Arthur* on a long drive.

What about Shakespeare?

Sixth grade is the earliest that Shakespeare is taught. If you think your sixth grader is ready, try an original play. Otherwise, stick with the Garfield retellings, *Shakespeare Stories* (which should be read in any case). Rely on your own judgment, and don't force an unready sixth grader to read Shakespeare. The goal of early Shakespeare studies is to create love, not loathing.

When you tackle Shakespeare for the first time, follow this three-step process:

- Read a summary of the play's plot. For each play, the Oxford School Shakespeare editions provide a synopsis, a summary of each act, and a character list.
- Now that you know what's going on, go to or watch at least one staged production. Shakespeare was written to be watched. Rent a video, and eat popcorn.
- 3. Now read the text.

Which play should you choose?

Romeo and Juliet is the high-school standard, but the sexual elements make it unsuitable for many sixth graders, who will be either embarrassed or bored. We suggest you choose *Macbeth* (tragedy), *Henry V* (history), or *A Midsummer Night's Dream* (comedy). *A Midsummer Night's Dream* is the easiest of the comedies to follow, but the video versions are so-so. Good video versions of *Macbeth* and *Henry V* are available, and the plays are about equal in terms of difficulty. Both require a fair amount of background historical knowledge (provided in the Oxford School Shakespeare editions). Susan leans toward *Henry V* because the Kenneth Branagh movie is one of the best introductions to Shakespeare for any young student—it's got sword fighting, romance, comedy, and moral dilemmas. (See Resources for available video versions of the plays.)

Continue to discuss these books, as outlined under "Fifth Grade," and to prepare one-page summaries and evaluations. You can also use the *Writing Strands* method for book reports and evaluations (taught in Lesson 6 of book 6—see pages 352–353). Because these books actually originated in the time period under study, file the summaries and book reports in the history notebook under The Arts and Great Books.

Besides following the list above, you should explore the library. Consult the catalog or ask your librarian for sixth- to-eighth-grade books (adaptations, biographies, historical novels) by and about these writers and thinkers (listed chronologically):

Saint Augustine Geoffrey Chaucer Erasmus Edmund Spenser Sir Thomas More John Donne William Shakespeare Martin Luther Sir Thomas Wyatt (try stories of Henry VIII and Anne Boleyn) Dante Alighieri Sir Thomas Malory John Knox John Knox

Search for adaptations or versions of these specific works:

Beowulf Sir Gawain and the Green Knight The Canterbury Tales The Fairie Queene (including "Saint George and the Dragon") Inferno Le Morte d'Arthur ("The Death of Arthur") or anything based on this work the plays of Shakespeare

In sixth grade, try to spend at least four days per week, forty to sixty minutes per day, on reading—reading the books, talking about them, writing about them. As in fifth grade, provide an extra full hour (at least) during the day for free reading of a work that the child chooses herself.

Seventh Grade: Late Renaissance–Early Modern (1600–1850)

The seventh grader will read literature from the late Renaissance through the early modern period.¹

With an extra year under her belt, the seventh-grade student can read even more originals than she did in sixth grade, starting with the simpler novels of the writers she'll meet again in eleventh grade. Specific editions are important only where we've noted it; otherwise, an easily located edition such as a Penguin Classic or Dover Thrift will do. Try to complete the following reading list in order:

- Miguel de Cervantes, Don Quixote, retold by Michael Harrison, illus. Victor D. Ambrus (Oxford: Oxford University Press, 1995). Reworked for seventh graders.
- 2. Charles Perrault et al., *The Complete Fairy Tales of Charles Perrault* (New York: Clarion, 1993).

This edition has all eleven tales, a brief biography of Perrault, and a couple of pages covering the history and origin of each story.

- Jonathan Swift, "A Voyage to Lilliput" and "A Voyage to Brobdingnag," from *Gulliver's Travels* (New York: Dover, 1995). The Dover Thrift edition is only \$2.00.
- 4. John Bunyan, The Pilgrim's Progress.

Any edition is fine, but a decent paperback is put out by Barbour (1993). If your seventh grader finds Bunyan tough going, try *The Pilgrim's Progress: A Retelling,* by Gary D. Schmidt (Grand Rapids, Mich.: Eerdmans, 1994).

 Daniel Defoe, *Robinson Crusoe* (Penguin Classic paperback, 1995). Or read the more expensive hardback with N. C. Wyeth's illustrations, published by Atheneum (1983).

¹Although some of the titles in this list were written after 1850, we've placed them in the early modern period if most of the author's life passed before mid-century.

6. William Wordsworth, "We Are Seven," "Lines Written in Early Spring," "Lines Composed a Few Miles above Tintern Abbey," "Lucy Gray," "Composed upon Westminster Bridge, September 3, 1802," and "I Wandered Lonely As a Cloud," in *Favorite Poems* (New York: Dover, 1992).

Try the Dover Thrift edition for \$1.00.

- Samuel Taylor Coleridge, "The Rime of the Ancient Mariner," in *The Rime of the Ancient Mariner and Other Poems* (New York: Dover, 1992). Buy the Dover Thrift edition for \$1.00.
- 8. Washington Irving, The Legend of Sleepy Hollow and Rip Van Winkle (New York: Dover, 1995).

Dover Thrift edition, \$1.00.

 Robert Browning, "The Pied Piper of Hamelin," in Selected Poems (New York: Dover, 1994).

Dover Thrift edition, \$1.00.

- 10. Jacob and Wilhelm Grimm, Grimm's Fairy Tales (New York: Puffin Classics, 1996).
- 11. Benjamin Franklin, "The Way to Wealth," in Benjamin Franklin: The Autobiography and Other Writings (New York: Penguin, 1986).
- 12. Christina Rossetti, "Goblin Market," "A Birthday," "Sister Maude,"
 "No, Thank You, John," in *Selected Poems* (New York: Dover, 1994). Dover Thrift edition, \$1.00.
- 13. Lewis Carroll, Alice's Adventures in Wonderland. Any edition.
- 14. Jane Austen, *Pride and Prejudice.* Any edition.
- 15. Mark Twain, The Adventures of Tom Sawyer. Any edition.
- 16. Jules Verne, 20,000 Leagues under the Sea. Any edition.
- 17. Charles Dickens, A Christmas Carol (New York: Dover, 1991). Dover Thrift edition, \$1.00.
- 18. Alfred, Lord Tennyson, "The Lady of Shalott" and "The Charge of the Light Brigade."

Any edition.

19. Edgar Allan Poe, "The Raven." Any edition.

- 20. Peter Christen Asbjrnsen, East o' the Sun and West o' the Moon: Fiftynine Norwegian Folk Tales (New York: Dover, 1970).
- 21. Frederick Douglass, Narrative of the Life of Frederick Douglass, an American Slave, Written by Himself (New York: Laurel Leaf, 1997).

Most seventh graders will find that this list ranges from fairly simple to extremely challenging. As always, use your common sense. If you glance over a book and think it's too difficult or if the student begins it and struggles for more than a couple of chapters, skip it and move on. Good readers can certainly go on to explore the more difficult works of Dickens, Austen, Twain, and any of the writers listed below. Slower readers can simply skip some of these titles.

Where a particularly affordable and/or readable edition exists, we've listed this as top option; you can also browse through the literature section of your local bookstore and pick up the edition that appeals to you. Keep an eye out for the Dover Thrift editions, which are cheap and readable (but minus scholarly footnotes, which no seventh grader really needs anyway) and cost only \$1.00 to \$2.00. Most bookstores carry a good selection and can order any title in the series.

Continue to discuss these books and to prepare one-page summaries and/or book reports. File the book reports in the history notebook under The Arts and Great Books. Also explore the library for seventh- to ninthgrade-level books, adaptations, biographies, and historical novels by and about these writers and thinkers listed here in chronological order:

> Daniel Defoe Jonathan Swift John Bunyan Alexander Pope John Milton William Blake Alfred, Lord Tennyson William Wordsworth Robert Browning Elizabeth Barrett Browning Charles Dickens

Jane Austen Edward Lear Percy Bysshe Shelley Mary Shellev Christina Rossetti Lewis Carroll Mark Twain James Fenimore Cooper Frederick Douglass **Jules** Verne Herman Melville

This is a bare outline—any literary figure encountered during the student's exploration of the years 1600 through 1850 is acceptable. Aim to spend at least four days per week, forty to sixty minutes per day, on reading the books, talking about them, writing about them.

Continue to require a full hour (at least) of free reading (no video games or computer projects or anything other than print on a page).

Eighth Grade: Modern (1850-Present)

The eighth grader will read literature from the modern period. A complete reading list for this period would take a lifetime to work through, so consider the following a skeleton that you can clothe with any number of additional authors and books. The goal of the list is to introduce the student to a wide range of genres-adventure, poetry, mystery, science fiction, short stories—spanning a century and a half. Each list (fiction, poetry, and drama) is organized in chronological order. The more challenging works (and more difficult authors) of this period will be read in the senior year of high school, when the student encounters this period for the last time. We haven't suggested specific editions since these titles are so widely available, but we've provided several mail-order sources in Resources, at the end of this chapter.

Classical education demands a great deal of reading-ideally, the eighth grader will read every title on the list. But because the list is long, we've divided it into fiction, poetry, and drama. If you're unable to complete the entire list, make sure you select titles from each category.

349

Fiction

- 1. Robert Louis Stevenson, Kidnapped or Treasure Island
- 2. Edward E. Hale, "The Man without a Country"
- 3. Louisa May Alcott, Little Women
- 4. Arthur Conan Doyle, any of the Sherlock Holmes stories or The Hound of the Baskervilles
- 5. Rudyard Kipling, The Jungle Book
- 6. H. G. Wells, The Time Machine or The War of the Worlds
- 7. Jack London, The Call of the Wild
- 8. G. K. Chesterton, any of the Father Brown stories
- 9. Baroness Orczy, The Scarlet Pimpernel
- 10. O. Henry, any of the short stories
- 11. Lucy Maud Montgomery, Anne of Green Gables
- 12. Agatha Christie, Murder on the Orient Express
- 13. Dorothy Sayers, Strong Poison
- 14. Margaret Mitchell, Gone with the Wind
- 15. Marjorie Kinnan Rawlings, The Yearling

Poetry

- 1. Henry Wadsworth Longfellow, "The Song of Hiawatha"
- 2. Robert Frost, "The Road Not Taken" and other poems
- 3. E. E. Cummings, collected poems
- 4. Walter de la Mare, Poems 1919-1934, any selections
- 5. Langston Hughes, The Dream Keeper and Other Poems or The Block: Poems

Drama

- 1. Oscar Wilde, The Importance of Being Earnest
- 2. George Bernard Shaw, Pygmalion
- 3. Arthur Miller, The Crucible
- 4. Robert Bolt, A Man for All Seasons

Discuss these works with your student. After you've talked through them, ask her to prepare one- to two-page book reports, and file them under The Arts and Great Books in the history notebook.

Although this list ought to keep you busy all year, you can also look for biographies on and works by the following writers listed chronologically:

Beatrix Potter Laura Ingalls Wilder Frances Hodgson Burnett J. D. Wyss Gerard Manley Hopkins Alexandre Dumas Willa Cather Wilfred Owen Thomas Hardy Carl Sandburg A. A. Milne W. Somerset Maugham T. S. Eliot Ezra Pound F. Scott Fitzgerald Sinclair Lewis Amy Lowell **Ernest Hemingway** W. B. Yeats Pearl S. Buck Robert Lowell Isaac Asimov Isaac Bashevis Singer Toni Morrison

The eighth grader should plan on spending an hour per day, four or five days per week, reading, discussing, and writing about literature.

Free reading should continue. This is a good time for the student to go on with the novels of Agatha Christie, Thomas Hardy, Isaac Asimov, or another newly discovered writer she enjoys.

Memory Work

Each year, ask the student to select and memorize three to five favorite poems or passages from her reading. She should recite these for you before the end of the school year. Keep a page entitled "Memory Work" at the back of her notebook; write down the names of the pieces she has memorized and the dates she recited them for you. Fifth graders can choose English translations of classical poems or dramatic passages; sixth graders, passages from Chaucer or Dante; seventh graders have a wide range of choices, including poems of Wordsworth, Rossetti, and Poe, as well as Lewis Carroll's "Jabberwocky"; eighth graders have the entire range of modern poetry to choose from. Allow flexibility—the student ought to be able to memorize something that interests and attracts her.

WRITING

This is an ideal schedule. But the actual speed at which the student progresses through *Writing Strands* can vary widely:

Fifth grade	Dictation
	Writing Strands 5
Sixth grade	Writing Strands 6
Seventh grade	Writing Strands 7
Eighth grade	Writing Exposition

The logic-stage student writes narrations, outlines, and reports for reading, history, and science. In addition, she will formally study the skill of writing.

In fifth grade, continue with dictation twice per week. Use more complex sentences, and progress to short paragraphs as soon as the student is writing well-crafted complex sentences. Choose sentences from the books she's reading, either novels or her history and science books. File these assignments in Dictation.

Also continue with *Writing Strands*. Do these assignments two or three days per week on the days when you don't do dictation. The fifth grader should use *Writing Strands 5*, which starts with an analysis of narrative voices (a fundamental critical-analysis skill) and continues through sentence structure, organization, dialogue, voice, and point of view. You'll find that *Writing Strands*, the logic and critical-thinking resources, and grammar exercises will interlock to improve the child's writing skills, and history and narration assignments will become more and more polished.

In sixth grade, you can stop dictation. Original writing and analysis will take up all of the student's writing time. The sixth grader should finish

Thinking Straight: Spelling, Grammar, Reading, and Writing 353

Writing Strands 5 and move on to 6. This book is invaluable for both creative and expository writing, using details, tense, dialogue, organization, character creation and evaluation, letter writing, and more. Do Writing Strands assignments three days per week; file them under either Writing: Creative or Writing: Compositions (for expository writing). If you finish Writing Strands 6 by the end of the year, there's no need to start Writing Strands 7.

The seventh grader can go on to *Writing Strands, 7* three days per week. File assignments in either Writing: Creative or Writing: Compositions. *Writing Strands 7*, the final level in the series is long and complete, and requires the student to produce well-argued expositions and fully developed creative scenarios. Plan on taking a full year to complete this book.

If you haven't finished *Writing Strands 7* in seventh grade, devote the beginning of the eighth-grade year to finishing the book. Preparation for the next stage of the classical education—the rhetoric stage—concludes with the *Writing Strands* wrap-up volume, *Writing Exposition*. These thirteen lessons prepare the student for college-writing assignments (story analysis, reaction papers, term papers, evaluations). *Writing Exposition* also reviews logic in writing (propaganda technique), library use, comparison and contrast, use of the first person in formal writing, and the SAT II writing test. Go to this book when *Writing Strands 7* is complete.

Even though a number of the examples used in *Writing Exposition* are drawn from senior-high papers, this is a course that can be used any time from eighth grade to early college. Take the whole eighth-grade year to finish the thirteen lessons, using three weeks for each lesson. The assignments are demanding (the propaganda lesson requires the student to recognize and understand eleven different propaganda techniques as well as to write a piece of propaganda and analyze several others. Do *Writing Strands* for forty-five to sixty minutes, three days per week. If necessary, carry the *Writing Exposition* lessons over into the ninth-grade year.

SCHEDULES

Daily Schedule

Fifth Grade

15 minutes

Spelling/word study

Continue with the *Spelling Workout* books (by this time,

		you should be finishing up E or beginning F and G).
Grammar	40–60 minutes	For the study of formal
		grammar, use G.U.M.: Level C or
		D, or God's Gift of Language B.
Reading	30–60 minutes	Do structured reading for four
		days (schedule an hour for
		imaginative reading at another
		time); you are returning to
		ancient myths and legends,
		classics, and books about the
		ancient writers. Memorize and
		recite poems or passages, three
		to five for the year.
Writing	30–60 minutes	Do Writing Strands and essay
		writing two or three times per
		week, dictation twice per week,
		letters to friends and relatives at
		least twice per month.
	Sixth Gr	ade
Spelling/word study	15 minutes	Continue with the Spelling
		Workout books (by this time,
		you should be finishing up F or
		G and moving toward H).
Grammar	40-60 minutes	For the study of formal
		grammar, use G.U.M.: Complete
		Middle Level Program or God's Gift
		of Language C.
Reading	40–60 minutes	Do structured reading (schedule
		an hour for imaginative reading
		at another time); read medieval
		and Renaissance literature and
		begin to use some originals.
		Memorize and recite poems or
		passages, three to five for the
		year.

Writing

30-60 minutes Do Writing Strands three times per week, a history or science essay once per week, letters to friends and relatives at least twice per month.

Seventh Grade

Spelling/word study	45 minutes	Continue with the Spelling
	one day;	Workout books (aim to
	review 5	finish <i>H</i> by the end of this
	minutes	year); then go on to Vocabulary
	other days	from Classical Roots A.
Grammar	40–60 minutes	For the study of formal
		grammar, use Grammar and
		Composition I, or the Holt Middle
		School Handbook, or the Stewart
		English Program, Book 1:
		Principles Plus
Reading	40–60 minutes	Do structured reading (schedule
		an hour for imaginative reading
		at another time); read late
		Renaissance through early
		modern literature. Memorize
		and recite poems or passages,
		three to five for the year.
Writing	30-60 minutes	Do Writing Strands three times
		per week, letters to friends and
		relatives at least twice per
		month.
	Eighth Gr	ade
Word study	45 minutes	Continue with Vocabulary from
	one day;	Classical Roots B and C or C
	review 5	and D.
	minutes	
	other days	

40–60 minutes For the study of formal

.

Grammar

		grammar, use Grammar and
		Composition II, or the Holt Middle
		School Handbook, or the Stewart
		English Program, Book 2:
	Υ	Grammar Plus
Reading	60 minutes	Do structured reading (schedule
		an hour for imaginative reading
		at another time); read literature
		from 1850 to the present.
		Memorize and recite poems or
		passages, three to five for the
		year.
Writing	45-60 minutes	Do Writing Exposition three times
		per week, letters to friends and
		relatives at least twice per
		month.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. Where noted, resources are listed in chronological order (the order you'll want to use them in). Books in series are listed together.

Spelling/Word Study

Fifer, Norma, and Nancy Flowers. Vocabulary from Classical Roots series. Cambridge, Mass.: Educators Publishing Service, 1994.

Student books are \$6.90 each; *Teacher's Guide and Answer Key* books are \$4.00 each. Order from Educators Publishing Service.

Vocabulary from Classical Roots A. Teacher's Guide and Answer Key A. Vocabulary from Classical Roots B. Teacher's Guide and Answer Key B. Vocabulary from Classical Roots C. Teacher's Guide and Answer Key C. Vocabulary from Classical Roots D.
Teacher's Guide and Answer Key D. Vocabulary from Classical Roots E. Teacher's Guide and Answer Key E.

Modern Curriculum Press Spelling Workout series. Cleveland: Modern Curriculum Press, 1994.

\$7.25 for each student edition, \$6.95 for each Teacher's Edition. Order from Modern Curriculum Press.

Spelling Workout E.

Teacher's Edition E.

Spelling Workout F.

Teacher's Edition F.

Spelling Workout G.

Teacher's Edition G.

Spelling Workout H.

Teacher's Edition H.

Grammar

A Beka Book Grammar and Composition series. Pensacola, Fla.: A Beka Book.

Order directly from A Beka Book, Inc. Note: A Beka Book includes testing materials. You should begin administering tests during fifth grade to check your student's comprehension and to help her practice the skill of test taking. Emphasize that these tests are diagnostic tools, not intelligence tests.

God's Gift of Language B (fifth grade) (\$11.65).

Teacher's Edition (\$20.55).

Student Test Book (\$3.75).

Teacher Test Key (\$6.05).

God's Gift of Language C (sixth grade) (\$11.65).

Teacher's Edition (\$20.65).

Student Test Book (\$3.75).

Teacher Test Key (\$6.05).

Grammar and Composition I (seventh grade) (\$12.45).

Teacher Key (\$14.75).

Student Test and Quiz Book (\$4.90).

Teacher Test/Quiz Key (\$8.60).

357

Grammar and Composition II (eighth grade) (\$12.45). Teacher Key (\$14.75). Student Test and Quiz Book (\$4.90). Teacher Test/Quiz Key (\$8.60).

G.U.M.: Grammar, Usage and Mechanics series. Columbus, Ohio: Zaner-Bloser.

Order directly from Zaner-Bloser.

Student editions

Level C (grade 5) (\$9.77).

Level D (optional: for extra practice) (\$9.77).

Complete Middle Level Program (sixth grade) (\$11.77).

Teacher's editions

Level C (grade 5) (\$14.95).

Level D (optional: for extra practice) (\$14.95).

Complete Middle Level Program (sixth grade) (\$18.95).

Holt Middle-Grade Language Program. Austin, Tex.: Holt, Rinehart and Winston.

Order directly from Holt, Rinehart and Winston.

Holt Middle School Handbook, Pupil's Edition (\$21.00).

You'll use this hardback handbook for both seventh and eighth grades.

Holt Middle School Workbook, Level B (grade 7) (\$6.00).

Holt Middle School Workbook, Level C (grade 8) (\$6.00).

Teacher's Notes with Answer Keys (\$5.10).

Covers both grades.

Stewart English Program. Cambridge, Mass.: Educators Publishing Service. Order directly from Educators Publishing Service.

Book 1, Principles Plus ... (grade 7) (\$6.00).

Book 1, Teacher's Guide (\$3.00).

Book 2, Grammar Plus . . . (grade 8) (\$7.15).

Book 2, Teacher's Guide (\$3.00).

Reading

These are listed in order of use. Remember, you don't have to read all of these. But you can choose reading assignments from among the following names. Note that this list—especially the early-modern and modern sections—is merely a starting place. There are many other authors and books worth reading, and you'll discover them as you explore your library. Rather than organizing these books and authors alphabetically, we have listed them in chronological order, and we suggest that you read them in this order; we have also included a few historical novels where appropriate. In most cases, you can find various versions of these stories. We have suggested a few specific editions that we particularly like.

For fifth grade, we have provided a number of different retellings of Greek myths and stories; pick one or several. From sixth grade on, the lists are divided into two parts. The first part, the formal reading list that we describe in detail in the chapter itself, is listed in chronological order. The supplementary list, containing books and novels that you can use to support the reading list, is listed alphabetically by author.

Ancients, 5000 B.C.-A.D. 400 (Fifth Grade)

Work through these books and authors in the following order.

- Green, Roger Lancelyn. *Tales of Ancient Egypt*. New York: Puffin, 1996.\$4.50. Order from American Home-School Publishing. A minor classic in its own right. Green's retelling is clear and vivid.
- McGraw, Eloise Jarvis. *The Golden Goblet*. New York: Viking, 1990. A young Egyptian boy solves the mystery of a goblet stolen from the City of the Dead.

——. Mara, Daughter of the Nile. New York: Viking, 1990.

An Egyptian slave girl gets involved with rivals who battle over the throne.

Birch, Cyril. Chinese Myths and Fantasies. New York: Oxford University Press, 1993.

Part of the Myths and Legends series. Engrossing and well-written stories.

McAlpine, Helen, and William McAlpine. Japanese Tales and Legends. New York: Oxford University Press, 1989.

Part of the Myths and Legends series. Engrossing and well-written stories.

Gray, J. E. B. India's Tales and Legends. New York: Oxford University Press, 1989.

Part of the Myths and Legends series. Engrossing and well-written stories.

Arnott, Kathleen. African Myths and Legends. New York: Oxford University Press, 1990.

Part of the Myths and Legends series. Engrossing and well-written stories.

Coolidge, Olivia. Greek Myths Boston, Mass.: Houghton Mifflin, 1949.\$14.95. Order from American Home-School Publishing. A classic retelling.

Colum, Padraic. The Golden Fleece and the Heroes Who Lived before Achilles. New York: Aladdin, 1983.

\$9.95. Order from American Home-School Publishing. A classic retelling.

Green, Roger Lancelyn. *Tales of the Greek Heroes*. New York: Puffin, 1995.\$4.50. Order from American Home-School Publishing. A minor classic in its own right. Green's retelling is clear and vivid.

Evslin, Bernard. Monsters of Mythology series. Broomall, Pa.: Chelsea House.

These books retell stories from Greek myths and epics in a way sure to appeal to most fifth graders (the illustrations are too frightening for most elementary-aged students). At most libraries. Evslin's tales are a wonderful way to learn about some of the more obscure Greek myths. Pick from the following list:

Amycus. 1989. Antaeus. 1988. The Calydonian Boar. 1989. Cerberus. 1987. Chimaera. 1988. The Cyclops. 1987. The Dragon of Boeotia. 1987. The Furies. 1989. Geryon. 1987. Harpalyce. 1993. Hecate. 1988. The Hydra. 1989. Ladon. 1990. Medusa. 1987. The Minotaur. 1987. The Nemean Lion. 1990. Procrustes. 1987. Scylla and Charybdis. 1989. The Sirens. 1987. The Spear-Birds. 1993. The Sphinx. 1991.

Green, Roger Lancelyn. *The Tale of Troy*. New York: Puffin, 1995.\$4.50. Order from American Home-School Publishing. A minor classic in its own right. Green's retelling is clear and vivid.

—. The Luck of Troy. New York: Puffin, 1997.

\$4.50. Order from American Home-School Publishing. A minor classic in its own right. Green's retelling is clear and vivid.

Coolidge, Olivia. *The Trojan War.* Boston, Mass.: Houghton Mifflin, 1990.\$6.95. Order from American Home-School Publishing. A classic retelling.

Colum, Padraic. The Children's Homer: The Adventures of Odysseus and the Tale of Troy. Illus. Willy Pogany. New York: Aladdin, 1982.

\$8.50. Order from American Home-School Publishing. A classic retelling.

Sutcliff, Rosemary. Black Ships before Troy: The Story of the Iliad. Illus. Alan Lee. New York: Delacorte Press, 1993.

\$19.95. Order from Greenleaf Press. An excellent retelling with eerie, vivid illustrations.

———. The Wanderings of Odysseus: The Story of the Odyssey. Illus. Alan Lee. New York: Delacorte Press, 1995.

\$22.50. Order from Greenleaf Press. A lovely version of this story.

McGovern, Ann. Aesop's Fables. New York: Scholastic, 1990.

\$2.95. Order from Greenleaf Press. A good retelling of sixty fables, illustrated.

Plato. The Last Days of Socrates. Trans. Hugh Tredennick. New York: Penguin, 1995.

\$10.95. Order from Greenleaf Press. Contains the two dialogues "On Piety" and "The Death of Socrates." Most fifth graders can read this if you take one of the parts.

Coolidge, Olivia. Caesar's Gallic Wars. North Haven, Conn.: Linnet Books, 1991.

\$20.95. Order from American Home-School Publishing. Based on Julius Caesar's *Commentaries*, the story of Caesar's wars in Gaul, 58–51 B.C. The only retelling of Caesar we've ever seen. Highly recommended.

Vennema, Peter. *Cleopatra*. Illus. Diane Stanley. New York: Mulberry Books, 1997.

Well-researched and beautifully illustrated life of the Egyptian queen.

Speare, Elizabeth George. *The Bronze Bow*. Boston, Mass.: Houghton Mifflin, 1997.

A Jewish rebel in first-century Galilee encounters the itinerant preacher Jesus. A Newbery Medal winner.

Sutcliff, Rosemary. Outcast. New York: Sunburst, 1995.

A Roman infant is rescued from a shipwreck and raised in a British village.

——. The Eagle of the Ninth. New York: Sunburst, 1993.

In A.D. 119, a Roman legion disappears in the wilds of Britain. Fifteen years later, the commander's son sets out to find the missing company.

—. The Silver Branch. New York: Sunburst, 1993.

In the sequel to *The Eagle of the Ninth*, Saxons raid Britain, and the Roman provinces fight for their land.

O'Faolain, Eileen. Irish Sagas and Folk-Tales. New York: Oxford University Press, 1986.

Part of the Myths and Legends series. Engrossing and well-written stories.

Wilson, Barbara Ker. Scottish Folk-Tales and Legends. New York: Oxford University Press, 1990.

Part of the Myths and Legends series. Engrossing and well-written stories.

Reeves, James. English Fables and Fairy Stories. New York: Oxford University Press, 1989.

Part of the Myths and Legends series. Engrossing and well-written stories.

Jones, Gwyn. Scandinavian Legends and Folk-Tales. New York: Oxford University Press, 1992.

Part of the Myths and Legends series. Engrossing and well-written stories.

Picard, Barbara Leonie. French Legends, Tales and Fairy Stories. New York: Oxford University Press, 1992.

Part of the Myths and Legends series. Engrossing and well-written stories.

------. German Hero-Sagas and Folk Tales. New York: Oxford University Press, 1994.

Part of the Myths and Legends series. Engrossing and well-written stories.

Downing, Charles. Russian Tales and Legends. New York: Oxford University Press, 1989.

Part of the Myths and Legends series. Engrossing and well-written stories.

Medieval/Early Renaissance, 400–1600 (Sixth Grade)

Formal Reading List

Work through this in order.

Nye, Robert. *Beowulf: A New Telling*. New York: Laurel Leaf, 1982. A good (and very exciting) adaptation for sixth graders.

Tolkein, J. R. R. Sir Gawain and the Green Knight. New York: Ballantine, 1988.
\$5.99. Order from Greenleaf Press. Not a scholarly standard, but a wonderful verse translation of the original. Fans of Tolkein will enjoy echoes of The Hobbit and The Lord of the Rings.

McCaughrean, Geraldine. *The Canterbury Tales*. Oxford Illustrated Classics series. New York: Oxford University Press, 1995.

\$18.95. Order from American Home-School Publishing. Part of the Oxford Illustrated Classics series.

Chaucer, Geoffrey. "Prologue" to *The Canterbury Tales*. New York: Penguin, 1989.

This edition is in modern English.

Alighieri, Dante. The Inferno. Trans. Robert Pinsky. New York: Noonday Press, 1996.

We like this free translation by the former poet laureate. Another standard is Allen Mandelbaum's translation (New York: Bantam Books, 1992). Read Cantos I–V.

Hodges, Margaret. Saint George and the Dragon. New York: Little Brown, 1990.

\$7.95. Order from Greenleaf Press. From Spenser's *The Fairie Queene*. A better rendition is Geraldine McCaughrean's retelling, but it is out of print and difficult to find.

Malory, Thomas. Versions of Le Morte d'Arthur:

Lanier, Sindey, ed. The Boy's King Arthur: Sir Thomas Malory's History of King Arthur and His Knights of the Round Table. Illus. N. C. Wyeth. New York: Atheneum, 1989.

\$23.75 from American Home-School Publishing; also try your library.

Sutcliff, Rosemary. The Sword and the Circle: King Arthur and the Knights of the Round Table. New York: Puffin, 1994.

White, T. H. The Sword in the Stone. New York: Philomel, 1993.

White's reworking of Malory is marvelous; a "must read."

——. The Once and Future King. New York: Ace, 1987.

The entire saga of the Round Table. For good, mature readers. Most students will want to read this in high school.

Garfield, Leon. *Shakespeare Stories*. Boston, Mass.: Houghton Mifflin, 1998. \$24.95. Buy from the Writing Company. A good introduction to Shakespeare.

Shakespeare, William. Oxford School Shakespeare series. Ed. Roma Gill. New York: Oxford University Press.

\$8.50 each. Order from American Home-School Publishing.

A Midsummer Night's Dream. 1994.

Henry V. 1995.

Macbeth. 1993.

Supplementary Resources

The Chaucer Coloring Book. Santa Barbara, Calif.: Bellerophon Books, 1991. \$3.95. Order from Greenleaf Press. Contains the "Prologue" to The *Canterbury Tales* in the original Middle English, along with woodcuts from the earliest published editions. A nice introduction to Middle English.

Chute, Marchette Gaylord. *Stories from Shakespeare*. New York: NAL, 1991. Order from the Writing Company. All thirty-six plays in story form; gives a straightforward plot summary along with famous lines from each play. Good for reading along with the plays themselves.

Columbus, Christopher. First Voyage to America: From the Log of the Santa Maria. New York: Dover, 1991.

The actual log, abridged for ages 9–12.

de Angeli, Marguerite. *The Door in the Wall.* New York: Yearling Books, 1990. A historical novel. The 1950 Newbery winner about a crippled boy who longs to be a knight.

de Trevino, Elizabeth Borten. *I, Juan de Pareja*. New York: Farrar Straus and Giroux, 1984.

A novel about the painter Velázquez and his African slave.

French, Allen. *The Story of Rolf and the Viking Bow.* Fort Collins, Col.: Ignatius Press.

A classic novel (first published around 1900 and still in print) about a young Viking boy's search for justice for his murdered father.

Fritz, Jean. Brendan the Navigator: A History Mystery about the Discovery of America. New York: Coward McCann, 1998.

\$14.95. Order from Greenleaf Press. Imaginative biography of the Irish monk who sailed to the New World in A.D. 590.

Gray, Elizabeth. Adam of the Road. New York: Viking, 1987.

In 1294, a young minstrel searches for his stolen dog—and his father. A Newbery award-winning novel.

Green, Robert Lancelyn. The Adventures of Robin Hood. New York: Puffin, 1995.

\$3.99. Order from Greenleaf Press. Read this classic retelling when you study the Crusades in history.

—. Myths of the Norsemen. New York: Puffin, 1994.

A minor classic. Read this when you study the Vikings in history.

Kelly, Eric P. The Trumpeter of Krakow. New York: Aladdin, 1992.

A Newbery Medal winner about a young fifteenth-century Polish boy and a mysterious jewel.

Picard, Barbara Leonie. *Tales of the Norse Gods*. New York: Oxford University Press, 1994.

Part of the Myths and Legends series. You can use this as imaginative reading when you study the Vikings in history.

Pyle, Howard.

Howard Pyle wrote a series of modern classics—young adult novels of Arthurian and medieval times. If you can't find them in a bookstore, you can order them from Greenleaf Press for \$8.95 each.

The Merry Adventures of Robin Hood. New York: Dover, 1985. Otto of the Silver Hand. New York: Dover, 1967. The Story of King Arthur and His Knights. New York: NAL, 1994. The Story of Sir Launcelot and His Champions. New York: Dover, 1991. The Story of the Champions of the Round Table. New York: Dover, 1968. The Story of the Grail and the Passing of Arthur. New York: Dover, 1993.

- Shakespeare Coloring Book. Santa Barbara, Calif.: Bellerophon Books, 1985.\$4.95. Order from Greenleaf Press. Historical illustrations of famous scenes. A good memory aid.
- Sperry, Armstrong. *Call It Courage*. New York: Simon & Schuster, 1983. A novel about Mafatu, the son of a Polynesian chief, who must prove that he isn't a coward.
- Sutcliff, Rosemary. *The Lantern Bearers*. New York: Sunburst, 1994. A historical novel. In 450, a Roman soldier in Britain fights against invading Angles and Saxons.

Willard, Barbara. Augustine Came to Kent. Warsaw, N.D.: Bethlehem Books, 1997.

Order from Greenleaf Press. A historical novel. The story of a Saxon boy who accompanies Augustine on his mission to England.

Late Renaissance/Early Modern, 1600-1850 (Seventh Grade)

Formal Reading List

Work through this in order. Unless otherwise noted, these are standard editions available at most bookstores or from Amazon.com. Harrison, Michael. Don Quixote. New York: Oxford University Press, 1995.\$19.95. Order from Greenleaf Press. Part of the Oxford Illustrated Classics series.

Perrault, Charles, et al. The Complete Fairy Tales of Charles Perrault. New York: Clarion, 1993.

Swift, Jonathan. "A Voyage to Lilliput" and "A Voyage to Brobdingnag." From *Gulliver's Travels*.

The Dover Thrift edition (New York: Dover, 1995) is cheapest, but any edition will do.

Bunyan, John. The Pilgrim's Progress.

Any edition is fine, but a decent paperback is the Barbour 1993 edition. You can also use *The Pilgrim's Progress: A* Retelling by Gary D. Schmidt (Grand Rapids, Mich.: Eerdmans, 1994) if the original seems too difficult.

Defoe, Daniel. Robinson Crusoe. New York: Penguin, 1995. You can also order the hardback with N. C. Wyeth's illustrations (New

York: Atheneum, 1983) from American Home-School Publishing for \$23.75.

Wordsworth, William. Favorite Poems. Try the Dover Thrift edition (New York: Dover, 1992) for \$1.00.

Coleridge, Samuel Taylor. "The Rime of the Ancient Mariner." Found in most collections. You can buy the Dover Thrift edition of this poem and other works for \$1.00 (New York: Dover, 1992).

Irving, Washington. The Legend of Sleepy Hollow and Rip Van Winkle. Dover Thrift edition. New York: Dover, 1995.

Browning, Robert. "The Pied Piper of Hamelin."

This is contained in the Dover Thrift edition of Browning, Selected Poems (New York: Dover, 1994), \$1.00.

Grimm, Jacob, and Wilhelm Grimm. Grimm's Fairy Tales. New York: Puffin Classics, 1996.

Franklin, Benjamin. "The Way to Wealth." In Benjamin Franklin: The Autobiography and Other Writings. New York: Penguin, 1986.

Rossetti, Christina. "Goblin Market," "A Birthday," "Sister Maude," "No, Thank You, John." All are contained in the Dover Thrift edition, Selected Poems (New York: Dover, 1994), \$1.00.

- Carroll, Lewis. *Alice in Wonderland*. Any edition.
- Austen, Jane. Pride and Prejudice. Any edition.
- Twain, Mark. The Adventures of Tom Sawyer. Any edition.
- Verne, Jules. 20,000 Leagues under the Sea. Any edition.

Dickens, Charles. A Christmas Carol.

Any edition. The Dover Thrift edition (New York: Dover, 1991) is \$1.00. Make sure you don't get an abridged version by accident—this book is often abridged.

Tennyson, Alfred, Lord. "The Lady of Shalott" and "The Charge of the Light Brigade."

In any Tennyson collection.

Poe, Edgar Allan. "The Raven." In any collection or anthology.

Asbjrnsen, Peter Christen. East o' the Sun and West o' the Moon: Fifty-nine Norwegian Folk Tales. New York: Dover, 1970.

Douglass, Frederick. Narrative of the Life of Frederick Douglass, an American Slave, Written by Himself. New York: Laurel Leaf, 1997.

Supplementary Resources

- Brady, Esther Wood. *Toliver's Secret*. New York: Random House, 1993. A teenaged girl disguises herself as a boy to carry a message from New York to the American rebels in New Jersey.
- Brink, Carol Ryrie. *Caddie Woodlawn*. New York: Aladdin, 1990. The novel of a pioneer girl and her family, who have to decide whether to stay in America or return to an inherited title in England.
- Collier, James Lincoln. *My Brother Sam Is Dead*. New York: Scholastic, 1989. The novel of a Connecticut family divided by the Revolutionary War.

Dalgliesh, Alice. *The Courage of Sarah Noble*. New York: Aladdin, 1991.A Newbery award-winning novel about a young girl in the Connecticut wilderness, 1707.

Field, Rachel. *Hitty: Her First Hundred Years*. New York: Yearling Books, 1990. This Newbery winner tells the story of the first hundred years in a doll's life.

Forbes, Esther. America's Paul Revere. Boston, Mass.: Houghton Mifflin, 1990.

A novel of the life and adventures of Paul Revere by the Newbery awardwinning author.

——. Johnny Tremain. New York: Yearling Books, 1987.

The classic story of a silversmith's apprentice caught in the Revolutionary War.

Ludwig, Charles. *Queen of the Reformation*. Lebanon, Tenn.: Greenleaf Press, 1996.

\$9.95. Order from Greenleaf Press. The story of Katie Luther, Martin Luther's long-suffering wife.

Speare, Elizabeth George. *Calico Captive*. New York: Yearling Books, 1973. The story of a young girl, captured by Indians in 1754 and sold to the French. Based on an actual eighteenth-century diary.

———. The Sign of the Beaver. New York: Yearling Books, 1994. A novel about a boy who learns survival skills from Indians in eighteenthcentury Maine.

——. The Witch of Blackbird Pond. New York: Laurel Leaf, 1978.

A Puritan girl in Connecticut makes friends with a suspected witch.

Vernon, Louis. *The Beggar's Bible*. Grand Rapids, Mich.: Herald Press, 1971.\$6.95. Order from Greenleaf Press. The biography of Bible translator John Wycliffe.

. The Man Who Laid the Egg. Lebanon, Tenn.: Greenleaf Press, 1996. \$7.95. Order from Greenleaf Press. The story of Renaissance scholar Erasmus.

Yates, Elizabeth. Amos Fortune, Free Man. New York: Viking, 1989. The 1951 Newbery award-winning novel about an African prince brought to the United States as a slave.

370 THE LOGIC STAGE

Modern, 1850–Present (Eighth Grade)

Formal Reading List

These are available in standard editions at bookstores or from Amazon.com. Read each section in the order listed.

FICTION

Stevenson, Robert Louis. *Kidnapped* or *Treasure Island*.You can order the Puffin Classic editions of both (New York: Puffin, 1995 and 1994, respectively) from American Home-School Publishing.

Hale, Edward E. "The Man without a Country."

Alcott, Louisa May. Little Women.

You can order the Puffin Classic edition (New York: Puffin, 1997) from American Home-School Publishing.

Doyle, Arthur Conan. Any of the Sherlock Holmes stories or *The Hound of the Baskervilles*.

Kipling, Rudyard. The Jungle Book.

You can order the Puffin Classic edition (New York: Puffin, 1995) from American Home-School Publishing.

Wells, H. G. The Time Machine or The War of the Worlds.

London, Jack. The Call of the Wild.

Chesterton, G. K. Any of the Father Brown stories.

Orczy, Baroness. The Scarlet Pimpernel.

Henry, O. Any of the short stories.

Montgomery, Lucy Maud. Anne of Green Gables.

You can order the Puffin Classic edition (New York: Puffin, 1996) from American Home-School Publishing.

Christie, Agatha. Murder on the Orient Express.

Sayers, Dorothy. Strong Poison.

Hurston, Zora Neale. Their Eyes Were Watching God.

Thinking Straight: Spelling, Grammar, Reading, and Writing371Mitchell, Margaret. Gone with the Wind.

Rawlings, Marjorie Kinnan. The Yearling.

POETRY

Longfellow, Henry Wadsworth. "The Song of Hiawatha."

Frost, Robert. "The Road Not Taken" and other poems.

Cummings, E. E. Collected poems.

de la Mare, Walter. Poems 1919-1934. Any selections.

Hughes, Langston. The Dream Keeper and Other Poems. New York: Knopf, 1994. Or The Block: Poems. New York: Viking, 1995.

DRAMA

Wilde, Oscar. The Importance of Being Earnest.

Shaw, George Bernard. Pygmalion.

Miller, Arthur. The Crucible.

Bolt, Robert. A Man for All Seasons.

Supplementary Resources

Burnett, Frances Hodgson. *Little Lord Fauntleroy*. New York: Puffin, 1996. A children's classic; worth reading.

------. A Little Princess. New York: Puffin, 1995. Another much-loved classic.

Gipson, Fred. Old Yeller. New York: HarperTrophy, 1990. A fourteen year old tries to run the family farm in Texas after the Civil

War. (Much better than the movie.)

Hunt, Irene. *Across Five Aprils*. New York: Berkley, 1991. Jethro Creighton comes of age during the turbulent years of the Civil War.

Keith, Harold. *Rifles for Watie*. New York: HarperTrophy, 1989. A sixteen year old chooses sides in the Civil War.

Lowry, Lois. Number the Stars. New York: Yearling Books, 1990.

A Newbery award-winner. A Danish girl and her family work to save their Jewish friends and neighbors from the invading Nazis.

- O'Dell, Scott. *Sing Down the Moon*. New York: Yearling Books, 1992. The story of a Navajo girl captured by Spanish soldiers in 1864.
- Taylor, Mildred D. *Roll of Thunder, Hear My Cry.* New York: Puffin, 1991. A sharecropper's family deals with prejudice and povery in Depressionera Mississippi.
- ten Boom, Corrie. *The Hiding Place*. New York: Bantam, 1984. The ten Boom family was arrested for hiding Jews. This is Corrie's firstperson account of the concentration camps. May be too intense for some eighth graders (read it first).

Wyss, J. D. The Swiss Family Robinson. New York: Puffin, 1996.

MORE IMAGINATIVE READING

Ask your local librarian for lists of recommended titles. But also look for these authors, who produced classic tales that have been loved by gerations of young readers.

Aiken, Joan Alexander, Lloyd Brink, Carol Ryrie Bulla, Clyde Robert Burnett, Frances Hodgson Carroll. Lewis Cleary, Beverly Cooper, Susan de Angeli, Marguerite Enright, Elizabeth Estes. Eleanor Fisher, Dorothy Canfield George, Jean Henry, Marguerite Holling, Holling Clancy Irving, Washington Juster, Norton

Kipling, Rudvard Kjelgaard, Jim Lawson, Robert L'Engle, Madeline Lewis, C. S. (Narnia series) Little, Jean Norton, Mary Nesbit. E. O'Brian, Robert C. O'Dell. Scott Sewell, Anna Sharp, Margery Sobel, Donald J. White, E. B. Wiggin, Kate Douglas Wilder, Laura Ingalls

Writing

Writing Strands, Challenging Writing Programs for Homeschoolers series. Niles, Mich.: National Writing Institute, 1995.

The *Writing Strands* program can be purchased directly from the National Writing Institute or, at a small discount, from Rainbow Resource Center. The books aren't cheap, but they aren't consumable either; you do all the assignments on notebook paper, so you can reuse these books for another child or resell them.

Writing Strands 5 (\$19.25).

Writing Strands 6 (\$19.25).

Writing Strands 7 (\$21.00).

Writing Exposition (\$21.00).

Evaluating Writing (\$17.95).

This booklet for parents/teachers reviews common problems and how to fix them. It also includes an IBM PC program to improve your editing. A good parent resource.

373

18

MAKING DEDUCTIONS: SCIENCE

- 1. State the question.
- 2. Form a hypothesis.
- 3. Test the hypothesis through experimentation.
- 4. Draw conclusions.

—The scientific method

SUBJECT: Science: biology, astronomy and earth science, chemistry, physics

TIME REQUIRED: 3 hours per week—90 minutes per day, two days per week—plus additional time working on independent experimentation

I n logic-stage science, the student begins to make connections—among the branches of science, between science and history, between the scientific method and the rules of logic. The middle-grade student will begin to mark scientific discoveries and the birth and death dates of scientists on his time line, bringing history and science closer together. He'll use the logic of the scientific method, testing his new knowledge through experiments.

Grammar-stage science was a time of discovery. During the logic stage,

the young scientist digs below the surface of the discoveries made in the earlier grades. The first grader learned about animals; the fifth grader will learn about the cells that make up an animal's body. The second grader memorized the constellations; the sixth grader will learn about the birth and death of stars. The third grader experimented with food coloring and water; the seventh grader will study the atoms and molecules that make up water itself. The fourth grader did experiments with weights and planes; the eighth grader will learn about the laws of motion and the journey from Newton to Einstein.

YOUR GOALS

We warned you in the grammar stage against attempting a systematic study of any field of science. Scientific discovery hurtles forward while students pick their way carefully through new material. Middle-grade students have more maturity and better reading and writing skills than elementary students, but they still can't be stuffed with an exhaustive knowledge of science.

Your goal in the early grades was to foster enthusiasm for science and to expose the child to basic facts about each field. In the middle grades, your goal is to equip the child with a good working knowledge of the building blocks of each scientific field.

In every field, the student should know how the scientist—the biologist, the astronomer, the chemist, the physicist—conducts experiments.

For biology, the student should learn about cells and their functions; about the physical systems that bring living things nutrients and air; about the ways living creatures reproduce; and about the different characteristics that divide the animal and plant kingdoms into phyla, classes, orders, and families. He should know the way living things relate to each other—the food chain.

The student of astronomy and earth science should know about the makeup of earth and space; about the different types of materials that constitute the earth, the types of objects found in space, and their composition; about the way the earth behaves and the rules that govern planetary motion. He should learn about the earth's relationship to the moon, the solar system, and the rest of the universe.

The young chemist should know the basic elements of the physical universe and how they interact. He should be able to relate this knowledge to biology, astronomy, and earth science. What elements make up living things? the earth? the stars?

The beginning physicist should know not only what the universe is made of, but how that matter behaves in different circumstances (heated, chilled). He should know how molecules behave, how the four forces (gravity, electromagnetism, weak and strong nuclear forces) affect matter. He should know the basic properties of light.

TEXTS

Generally, the logic-stage student will study science by preparing reports on scientific topics, sketching important diagrams (the parts of a cell, the structure of an atom), and doing experiments.

For the first half of middle-grade science—fifth and sixth grades—you'll be using a series of books published by Reader's Digest that combine information and experiments all in one. The fifth-grade text is *How Nature Works*; the sixth-grade texts are *How the Universe Works* and *How the Earth Works*. For seventh and eighth grades, you'll make a transition to a more difficult series: *Eyewitness Science*. These books cover the basics of science with copious illustrations and explanations, describe the history and development of each branch of science, and provide pocket biographies of great scientists. The companion videos can be checked out of most libraries.

Because the student will need additional science resources "on the spot" to prepare reports, we think you should invest in several home-reference works: the *Kingfisher Science Encyclopedia* (which we recommended for elementary science as well) and a standard set of encyclopedias: *World Book* or *Britannica Junior. Note:* You can get along without the set of encyclopedias, but try to provide the *Kingfisher Science Encyclopedia*.

For each year, we also suggest books you might want to keep on hand either purchased by you or borrowed from the library (although you might have to return them before you're done with them). If you're on a budget, you'll need to plan ahead, glancing over your student's science text several weeks in advance so that you can have the right library books on hand.

SCHEDULE

Plan on doing science two days per week for an hour and a half per day. The student will spend the first science period reading through his assigned science pages and preparing a report; he'll spend the second making any sketches and then doing an experiment and recording its outcome. He should plan on spending some extra time in the evenings viewing science videos and working on science projects.

Your weekly schedule for each year, then, will look like this:

- Day 1 Spend ninety minutes reading the assigned pages; recording dates; preparing the science report, using the text, the *Kingfisher Science Encyclopedia*, and library books.
- Day 2 Make any sketches; do the experiment, and record the results.

THE NOTEBOOK

You'll be using a new science notebook to organize each year's study. The notebook will have six sections:

- 1. Dates
- 2. Reports
- 3. Sketches
- 4. Experiments
- 5. Memory Work
- 6. Extra Activities

Dates

In the front of the science notebook, place four sheets of paper, and on each sheet, write one of the divisions from history: "Ancients (5000 B.C.–A.D. 400)," "Medieval–Early Renaissance (400–1600)," "Late Renaissance–Early Modern (1600–1850)," and "Modern (1850–Present)." Whenever the student encounters dates of important scientific discoveries

or events and the birth and death dates of scientists, he should write them on the appropriate sheet. In addition, the student should enter on the time line those dates that fall within the historical period he's currently studying.

Reports

Reports will grow progressively more complicated. The fifth grader will write science reports of two to three paragraphs; the sixth grader, a page; the seventh grader, a page and a half; the eighth grader, two pages.

Sketches

Sketches should be done carefully, with colored pencils, and with all the parts labeled in clear print.

Experiments

In all the sciences, the student will do experiments, using the scientific method to test and confirm his newfound knowledge.

Experiments should be recorded on a page following these questions:

- 1. What question am I trying to answer? (state the question)
- 2. What could the answer be? (form a hypothesis)
- 3. How will I test this answer? (the steps of the experiment)
- 4. What result did I get?
- 5. Does this agree with the answer I thought I would get? If not, what answer should I give instead?

Memory Work

It isn't necessary to test at this level. The student is constantly reading, writing, and experimenting; and all of these activities will serve to fix the new knowledge in his mind.

At the end of the description for each grade, though, we've listed some information that the student should memorize, if possible. Set some time aside once every couple of weeks to review these lists.

Extra Activities

As time and interest permit, periodically plan extra activities and "field trips" to science museums or local science exhibits. Many areas also have science clubs (nature, astronomy, computer, and so forth) that welcome student and family participation. When possible, coordinate the activity with the subject under study each year.

Participating in a science fair is a great-motivator for young science students. As a home schooler, you have two options: (1) to call your local school system and ask whether home schoolers can participate in the local school fair (in many cases, the answer will be yes); or (2) to call your state home-school organization and ask what exhibition opportunities are available for home schoolers. Organizations such as 4-H and the Boy or Girl Scouts also give students opportunities to show off science projects. And don't forget national science competitions (listed in Appendix 3). At the end of this chapter, we've suggested several science-project idea books to get the creative juices flowing.

Keep track of the activities in the notebook. You can simply write:

- 1. Visited science museum. Saw special history of machines exhibit, September 10.
- 2. Attended computer club, October 11.
- 3. Went on nature walk in park to identify trees, October 15.
- 4. Entered Science Fair with my project, "The Orbit of Jupiter," November 12.

and so on.

HOW TO DO IT

Fifth Grade: Biology

In first grade, you divided the study of life into animals, the human body, and plants. In fifth grade, the study of life is more unified. You'll study the basic cell structures that all living things possess, learn about the environments that they share, and then branch out into the study of classification.

David A. Burnie's How Nature Works: One Hundred Ways Parents and Kids

Can Share the Secrets of Nature will serve as your basic text.¹ The book consists of seven sections. Try to divide your school year like this:

Section	Topics	No. of weeks
Looking at life	Cell structures, classification, ecology, food chain	3
Plants and fungi	Flowering plants, trees, simple plants, fungi	6
Life in water	Freshwater life (amphibians, fish), life on the seashore (shells, coral reefs, seaweed)	6
Insects and other invertebrates	Grasshoppers, butterflies and moths, ants and termites, bees and wasps, earthworms	5
Birds	Flight, feathers, eggs, nests	4
Reptiles	Snakes, crocodiles, alligators, lizards, turtles, tortoises	3
Mammals	Skeletons, muscles, body systems, the senses (including the human body), wild mammals, reproduction, nightlife	9

The Study of Biology: Fifth Grade

¹This book, like most of the science texts we recommend, assumes evolution as fact. If you're teaching creation, skip the double-page spreads on evolution and natural selection. The rest of the book is excellent. Skip the two-page "What Is Life," which is too complicated (but you, the parent-teacher, should read it).

Notebook

Fifth graders vary widely in their ability to read quickly, comprehend, and write. Each section contains more material than you'll be able to get through in the allotted weeks; at the beginning of each section, sit down and decide what's a reasonable amount for the student to cover. Aim for four pages per week; you may need to drop back to two pages for particularly fact-filled sections. This will allow the student to cover most of each section. Flip through the book together, and decide which pages to leave out.

Say that the student is in the "Plants and Fungi" section of *How Nature Works*. He's planning on covering four pages this week. On Tuesday, he'll sit down and read pages 48–51—two double-page spreads. The first spread, "Studying Flowers," contains an introductory paragraph, three experiments ("Transpiration," "Preserving flowers by drying," and "Preserving flowers by pressing"), and a brief biography of Gregor Mendel. The second spread, "Fruits and Seed Dispersal," has more text: explanations of different kinds of fruit and different types of seed, and the way various plants spread their seeds.

Dates Once the student has read through this material, he'll write "Gregor Mendel, born 1822" in the notebook on the sheet entitled "Late Renaissance–Early Modern (1600–1850)." He'll also write "Gregor Mendel, died 1884" on the sheet entitled "Modern (1850–Present)." Since he's studying the Ancients this year and his time line stops at A.D. 400, he won't write anything on the time line.

Reports Then he'll decide what topic to use for a short science report. He should save the topics covered by the experiments for day 2. On day 1, he can write about "Gregor Mendel," "Types of Fruit," or "How Seeds Disperse." He'll look up his topic in the *Kingfisher Science Encyclopedia* and any other reference works or library books that are on hand. Then he'll write a report of two to three paragraphs (which the *Writing Strands* exercises have prepared him for).

An acceptable fifth-grade report might read like this:

How Seeds Disperse

Plants spread their seeds in five different ways. Many seeds, such as maple seeds and dandelion seeds, are spread by the wind. Other plants use water. Trees such as the tulip tree grow near rivers and drop their seeds into the current.

Some plants use mechanical dispersal. These plants, such as the cranesbill geranium, actually throw their seeds out into the air. Some types of cucumbers explode and scatter their seeds! Other plants use animals to carry their seeds. These seeds have hooks and spines that latch onto the fur of passing animals.

Conifers drop cones containing ripe seeds on the ground. When the cones decay, the seeds sink into the earth.

This completes day 1's work.

Sketches The section has one diagram—a cross section of an apple with the stalk, core, seed, remains of a blossom, and receptacle labeled. On day 2, the student should make a sketch of this diagram and file it in the science notebook.

Experiments The student should then pick one of the experiments on pages 48–49: "Transpiration," "Preserving flowers by drying," or "Preserving flowers by pressing." Since the last two are really projects, not experiments, if he chooses one of them, he won't have much to record on his experiment sheet. If he does the "Transpiration" experiment, his sheet will look like this:

- 1. What question am I trying to answer? (state the question) How does water get to the top of a flower?
- 2. What could the answer be? (form a hypothesis) Veins in the plant carry it up to the top.
- 3. How will I test this answer? (the steps of the experiment)
 - a. I split a flower stem in two, halfway up the flower. I put some tape around the middle to keep it from splitting more.
 - b. I put half the stem in plain water and the other half in water with red food dye in it.
- 4. What result did I get?

Half of the flower turned red. The other half stayed the same.

5. Does this agree with the answer I thought I would get? If not, what answer should I give instead?

Yes. This shows that the flower sucked water up the stem all the way to the flower at the top.

Don't be tied to this outline if you're doing one of the project-type experiments such as pressing flowers, making an aquarium, or creating a worm farm.

As a nature-experiment supplement, we highly recommend Sally Stenhouse Kneidel's *Creepy Crawlies and the Scientific Method*, a book of nature experiments designed to teach the scientific method in five steps (question, hypothesis, methods, result, and conclusion). If you don't feel comfortable directing experiments, this book will ground both you and the student in proper method.

Remember, any four pages in *How Nature Works* contain much more information than the child will be able to write about. He should pick just one topic per week and not worry about the rest. And he shouldn't try to do every experiment. If the student spends the suggested time on each section of the book, he'll gain a good working knowledge of biological principles.

In our Resources section, we've suggested several experiment books, science-project resources, and biology resources you might want to have on hand.

Memory Work Choose among the following information:

- The basic phyla of the animal kingdom and their characteristics (Chordata, Echinodermata, Arthropoda, Mollusca, Annelida, Nematoda, Platyhelminthes, Coelenterata, Porifera).
- Plant-kingdom memory work, which should include lists of important structures—for example, the parts of a flower (receptacle, petals, sepals, nectaries, stamens, pistil); the types of compound leaves (palmate, trifoliate, ternate, pinnate, bipinnate); the types of root (taproot, fibrous root, adventitious root, aerial root, prop root). Keep your eyes open for other lists as you study.
- Human-body memory work, which could include the bcdy systems (skin, skeletal system, muscular system, digestive system, respiratory system, circulatory system, urinary system, reproductive system, endocrine system, and nervous system); major bones (cranium, mandible, clavicle, scapula, rib cage, ulna, radius, pelvis, carpus, femur, patella, fibula, tibia); the components of blood and what each does (red blood cells carry oxygen, white blood cells fight disease, platelets stop

bleeding); the types of teeth (incisors, premolars, molars, wisdom teeth).

Extra Activities Record all field trips, club activities, and so forth.

Sixth Grade: Astronomy and Earth Science

In sixth grade, the student will revisit astronomy and earth science, first studied in second grade. The two texts *How the Universe Works* and *How the Earth Works* could each yield a full year's study. Plan on spending eighteen weeks per book, picking and choosing among the subjects. Ideally, the sixth grader will boost his reading assignment to six pages per week, selecting one topic to write a one-page report on. If this is too much reading, stick with four pages per week.

Say, for example, that you've done earth science for eighteen weeks and you're beginning on astronomy, using *How the Universe Works*. You can skip the first section, "Spaceship Earth," since it covers the basics about our planet (something you've already done). This leaves you with five sections: "The Moon," "The Solar System," "The Sun," "The Stars," and "The Cosmos." Divide your eighteen weeks among these five topics. Again, you won't be able to cover the topics exhaustively. It's okay to skip a few pages.

Notebook

Follow the general pattern of study outlined on page 377.

Dates On day 1, the student should read from the text—perhaps the section about the discovery of Saturn's rings—recording dates. Any dates that fall within the historical period under study (Medieval–Early Renaissance, 400–1600) should also be entered in the appropriate place on the time line.

Reports The student should then prepare a one-page report (using the methods taught in *Writing Strands*) on Saturn's rings.

Sketches On day 2, the student should make sketches—in this case, of Saturn and the rings surrounding it.

Experiments The book suggests making the pattern of the rings in talcum powder on a cake plate. The child should follow the instructions and record the results.

Memory Work

- The planets of the solar system, in the proper order.
- The elements of the earth's crust (oxygen, silicon, aluminum, iron, calcium, sodjum, potassium, magnesium).
- The parts of the earth (crust—oceanic and continental; mantle—litho-sphere and asthenosphere; outer core; inner core).
- The continents.
- The plates (North American, Cocos, Caribbean, South American, Nazca, African, Eurasian, African, Indo-Australian, Pacific).
- Types of clouds.
- Types of stars and their characteristics (red giants, white dwarfs, variable stars, supernovas, pulsars, binary stars, black holes, neutron stars).

Extra Activities In the second half of the year, schedule a few stargazing evenings (see second-grade science for tips on how to do this). If you don't already have the second-grade astronomy guides on hand (*The Glowin-the-Dark Night Sky Book, The Stargazer's Guide to the Galaxy,* and *Spotter's Guide: The Night Sky*), invest in them now. Also, add a star wheel that helps you locate constellations at any time of year and night.

You can also visit available geographical sites—caverns, mountains, small islands, and so forth—and collect and classify rocks.

Seventh Grade: Chemistry

In seventh grade, you'll switch to the more difficult *Eyewitness Science* books. You'll still follow the same pattern of recording dates, reading and writing, sketching, and doing experiments. But the *Eyewitness Science* books provide more information on a more complex level.

If you haven't yet invested in a set of encyclopedias, you'll probably need to; or plan on spending more time in the library. The *Kingfisher Science Encyclopedia* is a good basic reference work, but as students continue to study, some may outgrow it.

Seventh-grade chemistry will involve intensive study of chemical principles (the *Eyewitness Science: Chemistry* text) and experimentation. Alternate text and report-writing days with experimentation days. *Eyewitness Science: Chemistry* covers twenty-nine topics, each on a doublepage spread. The topics are fairly complex, weaving together chemical concepts, the history of chemistry, and practical chemistry (the makeup of nylon, how candles work, the principles behind photographic development). The student should aim to cover one spread per week; seven of the topics can be extended over two weeks.²

A good resource to have on hand is the Elements series from Grolier. Each book covers one or more of the elements, the text is simple, and practical applications are on every page. If you plan ahead, you can find them at your local library.

Notebook

Dates On day 1, have the student write dates on the sheets of paper in the front of the science notebook. And any dates between 1600 and 1850 should be recorded on the time line.

Reports Also on day 1, the student will read a double-page spread, record dates, and write a report of one to one and a half pages on one of the topics studied. For example, when covering "Investigating compounds," possible topics include the types of bond between atoms, making compounds, the types of crystal, and the work of chemist Dorothy Hodgkin. The encyclopedia will be invaluable for this.

Sketches On day 2, the student will make sketches of the diagrams in the *Eyewitness Science: Chemistry* book (a chart of the elements in the earth's crust and the makeup of a water molecule).

Experiments The rest of the time during day 2 will be spent in doing a chemistry experiment. Since *Eyewitness Science: Chemistry* doesn't include experiments, the student will work through two chemistry experiment books by Janice P. VanCleave: *Chemistry for Every Kid* and *A*+ *Projects in Chemistry*, a slightly harder set of experiments that you can also use for science projects. Don't worry about corresponding the experiments to the readings; since the books intersect at a number of places, by the year's end the student will have covered the basic concepts of chemistry through both study and experimentation.

²Good topics to spread over two weeks: "Atoms and molecules," "The elements," "Investigating compounds," "Discovering nonmetals," "Looking at air," "Acids and bases," "Organic synthesis." In the Resources list, we've recommended several chemistry kits that you can substitute for the VanCleave books if you prefer your chemistry to come with all ingredients included. The *Science of Taste* focuses on acids and bases; *Slime Chemistry* covers colloids; *Oooh Ahhh Chemistry* is based on acid reactions; *Crash and Burn Chemistry* covers thermal reactions.

Keep track of the experiments, filling out the experiment outline sheet you used for grades 5 and 6.

Memory Work At the very least, cover the following:

- Atom: the basic building blocks of all things; made up of a nucleus surrounded by electrons.
- Molecule: a combination of atoms, tightly bound together by electrical charges.
- Electron: small particle with a negative charge that spins around the nucleus.
- Proton: small particle in the nucleus; has a positive charge.
- Neutron: small particle in the nucleus; has a negative charge.
- Nucleus: the center of an atom; made up of protons and neutrons.

Also consider having the student memorize the basic makeup of common elements (water: H_2O) encountered in his study.

Extra Activities Along with science-fair projects, try to visit places where chemistry is at work: industrial plants that manufacture products, bakeries (we have a cookie factory near us), swimming pools (ask the staff how the chlorine and other chemicals are kept in balance), car-repair centers (ask how oil, used freon, and other chemicals are disposed of), and so forth.

Eighth Grade: Physics

For physics, you have a choice of three Eyewitness Science books: *Time and Space, Electricity,* or *Force and Motion.* The last two are oriented toward practical physics, *Electricity* on inventions and *Force and Motion* on machines. *Time and Space* is the most theoretical and, thus, the most difficult of the three. Any one of these books will reintroduce the basic concepts of physics learned through experimentation in fourth grade.

Notebook

Study one double-page spread per week. Cover at least one of the Eyewitness Science texts during the eighth-grade year, using the extra weeks to study the more difficult double-page spreads, which introduce a number of topics. Alternatively, you could complete one of the texts and begin another; the student who covered the twenty-nine topics in *Force and Motion* in twenty-nine weeks would have seven weeks to investigate *Electricity* or *Time and Space*.

Dates Record any dates (the work of Marie Curie, the discovery of elements). Put dates between 1850 and the present on the time line as well.

Reports Prepare a one-and-a-half- to two-page report, exploring one of the topics presented. The student will definitely need to use the *Kingfisher Science Encyclopedia* and a set of encyclopedias; the *Writing Strands* program will have prepared him to take notes on sources and write a short expositional essay. For a double-page spread such as "The ultimate law of nature" (in *Time and Space*), the student could choose to write about entropy, the second law of thermodynamics, the cooling of the sun, or Lord Kelvin's scientific discoveries.

Sketches As in chemistry, the student will use the second day of science study every week to make sketches of diagrams (the path of a pendulum, the structure of a dynamo, the way light bends around a black hole).

Experiments The student will then do an experiment and record its outcome. We suggest using Janice VanCleave's *Physics for Every Kid*, a book of 101 physics experiment that will teach and reinforce the concepts learned in study. If the student develops a particular interest in some area of physics, you can supplement the VanCleave book with an Adventures in Science kit. For a reasonable price, you get a twenty-one-experiment kit with instructions and all materials. The kits include *Electricity* (building a galvanometer, a telegraph, and more), *Color and Light* (periscope, kaleidoscope, a model of the eye, and so forth), *Magnetism* (compass, electromagnet, various magic tricks, and more), and *How Things Work* (general machines—friction, levers, pulleys, and so on). These kits encourage the practical application of physics.

Memory Work This memory work should center around physics facts collected by the student as he studies. These will differ, depending on which area of physics he's chosen to pursue. A few options:

- The speed of light.
- The speed of sound.
- The three gas laws.
- The boiling point of water, both Celsius and Fahrenheit.
- The laws of thermodynamics.
- Isaac Newton's three laws of motion.
- The definition of a solar day.
- The colors in the spectrum.
- Direct current versus alternating current.
- The definitions of ampere, ohm, volt, and watt.

Extra Activities Visit physical-science exhibits at local museums. Spend extra time on the physics projects (building machines and so forth) found in the resources we recommend.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. Each year's resources are divided into basic texts and optional supplementary materials; these are further divided by subject (human body, earth science, astronomy, and so forth) in the order you'll encounter them during the school year. You can still use some of the resources listed in Chapter 8, particularly the detailed Dover coloring books and the experiment kits.

Reference Materials for All Four Years

Brock Magiscope. Maitland, Fla.: Brock Optical.

\$149.00. If you want better optics than those provided by the \$24.95 microscope (see Science Tech microscope, below), you can order the Brock Magiscope—tough, reliable, easy to use, great magnification—from Let's Get Growing.

Headlam, Catherine, et al. The Kingfisher Science Encyclopedia. New York: Kingfisher Books, 1993.

\$39.95. Order from bookstores or from online book services for a discount.

Science Tech microscope. Los Angeles, Calif.: Bowen Hill.

\$24.95. Order from the Education Connection. Although you can get through logic-stage science with just a magnifying glass, your range of experiment possibilities will expand if you buy a microscope. *Note:* You can also buy a basic set of prepared slides (produced by Learning Resources, Vernon Hills, Ill.) that include animals, plants, insects, textile fibers, tiny creatures, pollens, and spores for \$17.95. This, too, is available from the Education Connection.

Life Science: Animals, Human Beings, and Plants (Fifth Grade)

Basic Texts

Burnie, David A. How Nature Works: One Hundred Ways Parents and Kids Can Share the Secrets of Nature. New York: Reader's Digest, 1991. \$24.00.

Kneidel, Sally Stenhouse. Creepy Crawlies and the Scientific Method: Over One Hundred Hands-On Science Experiments for Children. Golden, Col.: Fulcrum Publications, 1993.

\$15.95. Order from Greenleaf Press. Shows parents how to teach children the five steps of the scientific method: question, hypothesis, methods, result, and conclusion.

VanCleave, Janice. *Biology for Every Kid.* New York: Wiley, 1989. \$11.99. Order from the Education Connection.

Supplementary Resources

Animals

Alden, Peter, and Fiona Reed. Mammals. Boston, Mass.: Houghton Mifflin, 1987.

\$5.95. Order from Rainbow Resource Center. This coloring book based on the Petersen's Field Guide series contains detailed drawings with information about each specimen.

AntLantis. Santa Cruz, Calif.: Let's Get Growing.

\$16.95. Order from Let's Get Growing. This ant ranch contains an aquagel environment so that you can see the ants tunnel and eat from all sides. Also, you don't need to add food or water—the gel is nutritious. Parker, Steve, and Philip Dowell. *Eyewitness Books: Pond and River*. New York: Knopf, 1988.

\$19.00. A good reference book to have on hand for the study of fish, amphibians, and reptiles.

Petersen, Roger Tory, et al. Butterflies Coloring Book. Boston, Mass.: Houghton Mifflin, 1983.

\$5.95. Order from Rainbow Resource Center. This coloring book, based on the Petersen's Field Guide series, contains detailed drawings with information about each specimen.

———. A Field Guide to Reptiles and Amphibians Coloring Book. Boston, Mass.: Houghton Mifflin, 1983.

\$5.95. Order from Rainbow Resource Center. This coloring book, based on the Petersen's Field Guide series, contains detailed drawings with information about each specimen.

------. A Field Guide to the Birds Coloring Book. Boston, Mass.: Houghton Mifflin, 1982.

\$5.95. Order from Rainbow Resource Center. This coloring book, based on the Petersen's Field Guide series, contains detailed drawings with information about each specimen.

Rubenstein, Len, and Ellen Doris. *The Big Book of Nature Projects*. New York: Thames & Hudson, 1997.

\$16.95. Fifty-three activities and experiments from the Children's School of Science. Try this for science-project ideas in both animal and plant science.

VanCleave, Janice. A+ Projects in Biology: Winning Experiments for Science Fairs and Extra Credit. New York: Wiley, 1993.

\$12.95. Includes experiments in both animal and plant science.

Human Beings

Brown, Deni. Eyewitness Visual Dictionary of the Human Body. New York: Dorling Kindersley, 1991.

\$18.95. Big, clear drawings, exploded views, cutaways and sections, all labeled with proper Latin names. A beautiful book.

Cumbaa, Stephen. The Bones Book and Skeleton. Illus. Kim La Fave. New York: Workman, 1992.

\$12.95. Order from Rainbow Resource Center. Assemble a 12-inch, 25piece plastic skeleton with moving joints.

- Matt, Margaret, et al. *Human Anatomy Coloring Book*. New York: Dover, 1981.
 \$2.95. Order from Rainbow Resource Center. Detailed, scientifically accurate drawings of body organs and systems, with charts listing names of body parts.
- Parker, Steve. *How the Body Works*. New York: Reader's Digest, 1994.\$24.00. Extra information and experiments about the human body.

Science in a Nutshell series. Nashua, N.H.: Delta Education.

\$32.98 each. Order from Delta Education or from Rainbow Resource Center (for a discount). These kits provide a complete science-experiment and activity center. Consider going in with a neighbor since the kits provide materials for two to three students.

The Human Machine.

The kit includes experimental materials for the study of bones, muscles, and joints, along with an activity guide and student journal.

A Peek inside You.

Materials, journal, and activity guide for the study of respiration, digestion, and circulation.

Vision and Hearing.

Experiments based on illusions in sight and sound.

Stark, Fred. Start Exploring Gray's Anatomy: A Fact-Filled Coloring Book. Philadelphia, Pa.: Running Press, 1991.

This simplified blackline version of *Gray's Anatomy* is more difficult and more interesting than the Dover coloring book, listed above.

Plants

Bonnet, Bob, and Dan Keen. Environmental Science: Forty-nine Science Fair Projects. New York: Tab Books, 1990.

\$16.95. These experiments are more challenging than those in the VanCleave projects book.

Hydro Greenhouse. Santa Cruz, Calif.: Let's Get Growing.

\$46.95, plus \$2.95 for a pack of nutrient refill. Order from Let's Get Growing. The company sells a number of hydroponic growing systems,
but this is the cheapest and includes a greenhouse incubator, inert growing medium, a guide to hydroponic gardening, and all the supplies you'll need.

Petersen, Roger Tory, et al. A Field Guide to Shells Coloring Book. Boston, Mass.: Houghton Mifflin, 1985.

\$5.95. Order from Rainbow Resource Center. This coloring book, based on the Petersen's Field Guide series, contains detailed drawings with information about each specimen.

———. A Field Guide to Wildflowers Coloring Book. Boston, Mass.: Houghton Mifflin, 1982.

\$5.95. Order from Rainbow Resource Center. This coloring book, based on the Petersen's Field Guide series, contains detailed drawings with information about each specimen.

- Forests. Boston, Mass.: Houghton Mifflin, 1983.

\$5.95. Order from Rainbow Resource Center. This coloring book, based on the Petersen's Field Guide series, contains detailed drawings with information about each specimen.

Earth Science and Astronomy (Sixth Grade)

Basic Texts

Couper, Heather, and Nigel Henbest. *How the Universe Works*. New York: Reader's Digest, 1994.

\$24.00. Available through bookstores and online booksellers.

Farndon, John, and Michael Dunning. *How the Earth Works*. New York: Reader's Digest, 1992.

\$24.00. Available through bookstores and online booksellers.

Supplementary Resources

Earth Science

Bramwell, Martyn. The Eyewitness Visual Dictionary of the Earth. New York: Dorling Kindersley, 1993.

Order from Dorling Kindersley, or try your library. A good resource for report preparation.

Curtis, Neil, et al. Visual Factfinder: Planet Earth. New York: Kingfisher Books, 1993.

\$9.95. Order from Rainbow Resource Center. Covers the earth's movement, the crust, mountains and volcanoes, oceans and rivers, weather, climate, and conservation.

Introductory Earth Science Collection.

\$44.75. Order from Rainbow Resource Center. Seventy-five rock samples, along with a study guide and equipment for testing properties.

Science in a Nutshell series. Nashua, N.H.: Delta Education.

\$32.98 each. Order from Delta Education or from Greenleaf Press (for a discount). These kits provide a complete science-experiment and activity center. Consider going in with a neighbor since the kits provide materials for two to three students.

Fossil Formations.

The kit includes six fossil samples, sand, plaster of Paris, modeling clay, along with an activity guide and student journal packed in a double-sized activity box.

Rock Origins.

Investigating the origins of twenty-two rock and mineral samples. Includes the twenty-two rock and mineral samples, materials for two to three students, an activity guide, and a student journal in a handy tote box.

Smithsonian Giant Volcano Kit. Washington, D.C.: Smithsonian Institution. \$16.99. Order from Let's Get Growing. Build and erupt your own volcano with real volcanic rocks.

VanCleave, Janice. *Earth Science for Every Kid.* New York: Wiley, 1991.\$12.95. Order from the Education Connection. One hundred one experiments.

———. Spectacular Science: Mind-Boggling Experiments You Can Turn into Science Fair Projects series. New York: Wiley.

\$10.95 each. These experiments are more complex (and interesting) than those in the Every Kid series. Suitable for exhibition.

Earthquakes. 1993.

Rocks and Minerals. 1995.

Volcanoes. 1994. Weather. 1995.

Van Rose, Susanna. Eyewitness Science: Earth. New York: Dorling Kindersley, 1994.

\$15.94. Order from Dorling Kindersley, or try your library. A good reference work for report writing.

Astronomy

Curtis, Neil, et al. Visual Factfinder: Stars and Planets. New York: Dorling Kindersley, 1993.

\$10.95. Order from Rainbow Resource Center. The solar system, the universe, stars, telescopes, space exploration.

Green, John. Space Exploration Stained Glass Coloring Book. New York: Dover, 1995.

\$1.00. Order from Tobin's Lab. Drawings on translucent paper to color and put against glass.

------. Sun, Planets, Stars Stained Glass Coloring Book. New York: Dover, 1994.

\$1.00. Order from Tobin's Lab. Drawings on translucent paper to color and put against glass.

Hatchett, Clint. *The Glow-in-the-Dark Night Sky Book*. Illus. Stephen Marchesi. New York: Random House, 1988.

\$15.00. Ask a bookstore to order this if it isn't in stock; we highly recommend it. Beautiful paintings of the mythical figures of constellations are overlaid by dots that glow when you turn the lights out.

Henbest, N., and E. Harris. Spotter's Guide: The Night Sky. Tulsa, Okla.: E.D.C. Publications, 1993.

\$4.95. Order from an Usborne dealer or any bookstore.

Lippincott, Kirsten. Eyewitness Science: Astronomy. New York: Dorling Kindersley, 1995.

\$15.95. Order from Dorling Kindersley, or try your library. A good resource to have on hand, with wonderful pictures. Maynard, Christopher. Stars and Planets: The Usborne Young Scientist. Tulsa, Okla.: E.D.C. Publications, 1989.

\$6.95. Order from Greenleaf Press. A simpler guide to the solar system, on a fifth- to sixth-grade reading level. Includes simple experiments.

Pearce, Q. L. The Stargazer's Guide to the Galaxy. Illus. Mary Ann Fraser. New York: Tor, 1991.

\$4.99 at most bookstores.

Planet poster set.

\$12.95. Order from Tobin's Lab. Twelve posters (just under 12×12 inches) with every planet, the sun, the moon, and a galaxy. Facts listed for each.

Stott, Carole. Night Sky: An Interactive Journey through the Night Sky. New York: Dorling Kindersley, 1994.

\$16.95. A box containing a planet factbook, a press-out model viewer that shows lunar and solar eclipses, a 3-D model of the earth, and glow-in-the-dark stars.

Telescope kit.

\$24.95. Order from Tobin's Lab. Build your own 8× telescope, powerful enough to see the moon's craters and Jupiter's moons.

VanCleave, Janice. *Constellations for Every Kid.* New York: Wiley, 1997. \$12.95. Straightforward astronomy experiments.

Chemistry (Seventh Grade)

Basic Texts

Newmark, Ann. Eyewitness Science: Chemistry. New York: Dorling Kindersley, 1994.

\$15.95. Order from Dorling Kindersley. *Note:* This title is now being sold *only* through Dorling Kindersley, DK's online store, and DK dealers. If you have difficulty in finding it, you can use the chemistry section in the *Dorling Kindersley Science Encyclopedia*, by Heather Couper and Nigel Henbest (New York: Dorling Kindersley, 1998), and follow the same procedures we describe for the *Eyewitness Science* book.

Periodic poster. Nashua, N.H.: Delta Education.

\$10.78. Order from Delta Education. A laminated reference poster of the elements.

Smithsonian Microchem XM3000. Washington, D.C.: Smithsonian Institution.
\$34.99. Order from Let's Get Growing. A good, complete, and safe chemistry set. Optional, but it will simplify your study of chemistry.

VanCleave, Janice. Chemistry for Every Kid; One Hundred One Easy Experiments That Really Work. New York: Wiley, 1989.

\$11.95. Order from the Education Connection.

Supplementary Resources

Cooper, Christopher. Eyewitness Science: Matter. New York: Dorling Kindersley, 1992.

\$15.95. Order from Dorling Kindersley. Same series as the *Chemistry* text. A look at the elements from a slightly different angle. Good to have on hand as a reference work for report writing.

ElementO.

\$26.95. Order from Rainbow Resource Center. In this Monopoly-type game, players collect elements and pay each other with proton and neutron certificates. Keep track with the Periodic Table of Elements in the middle of the board. A great way to memorize the basic properties of chemistry.

Elements series. Danbury, Conn.: Grolier.

\$295.00 for the entire set. Buy directly from Grolier. Most home-school families won't want to invest this much money in a specialized reference work. But if science is a priority, these contain clear and detailed explanations of the elements. Your local library should have a set. Consider reading through at least a couple of these titles, which are listed by the order they appear on the periodic table.

Hydrogen and the Noble Gases. Sodium and Potassium. Calcium and Magnesium. Iron, Chromium and Manganese. Copper, Silver and Gold.

Zinc, Cadmium and Mercury. Aluminum. Carbon Silicon. Lead and Tin. Nitrogen and Phosphorus. Oxygen. Sulfur. Chlorine, Flourine, Bromine, and Iodine. Uranium and Other Radioactive Elements. Explore series. Produced by Scientific Explorer, Inc. \$20.00 each. Order from Rainbow Resource Center. The Science of Taste. An award-winning kitchen chemistry kit focused on acids and bases. The Science of Scent. Combine different chemicals to produce fragrances. Includes a recipe for Cleopatra's favorite perfume. Goose Eggs. Greensboro, N.C.: The Wild Goose Company. \$5.00 each. Order from Wild Goose. These affordable minilabs contain three activities each, materials, and illustrated instructions. Crystal Farming. Grow crystals. Hot Frosty. Changes caused by hot and cold.

Micro Mucus.

Make slime.

Putty Buddies.

Experiment with colloids.

Megalabs. Greensboro, N.C.: The Wild Goose Company.

\$29.99 each. Order from Wild Goose. These contain real chemicals. *Crash and Burn Chemistry*.

Thermal reactions, precipitation, coagulation.

Kitchen Table Chemistry.

Experiments that use around-the-house chemicals.

Microcrystal Chemistry.

Experiments with different types of crystals.

Oooh Ahhh Chemistry.

Acid-based reactions. Make smoke, change the color of liquids, and so forth.

Slime Chemistry.

An introduction to colloids. Foam, slime, putty, and other types of goo.

VanCleave, Janice. A+ Projects in Chemistry: Winning Experiments for Science Fairs and Extra Credit. New York: Wiley, 1993.

\$12.95. These experiments are slightly more complex than those in the Every Kid series. Suitable for exhibition.

. Molecules: Spectacular Science. New York: Wiley, 1992. \$10.95.

Physics (Eighth Grade)

Basic Texts

Adventures in Science kits.

\$7.95 each. Order from Rainbow Resource Center.

Color and Light. Electricity. How Things Work. Magnetism.

Eyewitness Science series. New York: Dorling Kindersley, 1992.

\$15.95 each. Order from Dorling Kindersley or through a bookstore. Gribbin, Mary, and John R. Gribbin. *Time and Space*. Lafferty, Peter. *Force and Motion*. Parker, Steve. *Electricity*.

Science in a Nutshell minikits. Nashua, NH: Delta Education.

\$34.98. Order from Delta Education or from Greenleaf Press. Bubble Science.

Explore the variables affecting the size, shape, color, and durability of bubbles.

Charge It! Static Electricity.

Investigate positive and negative charges, building up static electricity on a number of different surfaces.

Clever Levers.

Learn about levers by building a wheelbarrow, balancing a scale, lifting weights, and more.

Electrical Connections.

Build simple and complex circuits to investigate current, batteries, and so forth.

Energy and Motion.

Discover how stored energy is converted to motion with weights, marbles, and ramps.

Flight! Gliders to Jets.

Build designs for parachutes, gliders, propeller and jet craft. Teaches the principles of air pressure and Newton's third law of motion.

Gears at Work.

Investigate force and motion through gear systems and interaction. This kit includes a journal, activity guide, and lots of gears to interlock and build.

Magnet Magic.

Identify magnetic materials, investigate polar strength, and make a compass.

Pulley Power.

How fixed and movable pulleys reduce the force needed to lift objects.

Sound Vibrations.

Discover how sound travels through various materials.

Work—Plane and Simple.

Uses inclined planes to explore work, force, and friction.

Supplementary Resources

Bonnet, Bob, and Dan Keen. Science Fair Projects: Electricity and Electronics. London: Sterling Books, 1997.

\$8.95 in paperback.

———. Science Fair Projects: Flight, Space and Astronomy. London: Sterling Books, 1998.

\$8.95 in paperback.

Cassidy, John. Explorabook: A Kid's Science Museum in a Book. Palo Alto, Calif.: Klutz Press, 1992.

\$18.95. Order from Greenleaf Press. One hundred pages on seven subjects like light-wave craziness, magnetism, hair-dryer science, and ouchless physics. Bound directly into the book are most of the tools needed to do all the activities described. These include a mylar mirror, a magnet, two packets of agar growth medium, a diffraction grating, and a Fresnel lens.

Challoner, Jack. The Visual Dictionary of Physics. New York: Dorling Kindersley, 1995.

\$18.95. A beautiful book full of complex concepts. Good for the advanced student.

Doherty, Paul, John Cassidy, and Martin Gardner. *The Klutz Book of Magnetic Magic*. Palo Alto, Calif.: Klutz Press, 1994.

\$11.95. Order from Greenleaf Press. Written by an MIT physicist and two magicians (one of whom is a mathematician), this book includes ten magnets and thirty-one magic activities that explore the properties of magnets.

Horemis, Spyros. Visual Illusions. New York: Dover, 1976.

\$2.95. Order from Rainbow Resource Center. You won't know whether the lines are straight or curved until you color them. Finished, the designs are spectacular.

Sato, Koichi. Optical Illusions Coloring Book. New York: Dover, 1995.\$2.95. Order from Rainbow Resource Center. Mind-bending pictures to color. Eighth-grade level.

VanCleave, Janice. *Machines: Spectacular Science*. New York: Wiley, 1993. \$10.95. Science-fair-quality experiments.

Magnets: Spectacular Science. New York: Wiley, 1993. \$10.95.

Physics for Every Kid. New York: Wiley, 1991.
 \$12.95. Simpler experiments than the Spectacular Science series. Deals with motion, heat, light, machines, and sound.

19

LOOKING INTO OTHER Worlds: Latin and Languages

Litterarum radices amarae, fructus dulces.¹

-Anonymous

SUBJECT: Foreign languages (classical and modern) TIME REQUIRED: 3 hours or more per week

The middle-grade student learns how her own language works. But that's not the end of her language study. She must also learn how other languages work.

The elementary student memorized vocabulary. But for the middle-grade student, the study of a foreign language becomes an exercise in logic. Every culture puts words together to form thoughts in different ways. Language study is a way to explore these new ways of thinking. To master the syntax (the grammatical structure) of a foreign language is to discover a fresh way

¹"The roots of language study are bitter, but the fruits are sweet."

of looking at the world. It's become an educational cliché that most European students know several languages, but American students generally learn only their own (if that). The classically educated student isn't limited by knowing only the thought patterns of her own language. She also studies the way other cultures express themselves.

Your goal in the middle grades is to expose the student to both ancient and modern languages. The study of Latin should continue, but the fifthand sixth-grade years are a fruitful time to introduce the child to a modern spoken language such as Spanish or French. The student is still young enough to develop fluency, but she's already been exposed to grammar and to beginning foreign-language work.

TEACHING OPTIONS

Unless you already know Latin, your fifth grader will rapidly move beyond your ability to teach her. And unless you're already fluent in a modern language, you won't be able to teach that either. You have three basic options for middle-grade language studies.

(1) Use a tutor. We suggest some possibilities in Chapter 43—a local high-school teacher, a reliable college student, perhaps even a fluent high-school senior. Using a tutor has drawbacks—cost, getting the student to her lesson—as well as advantages: you don't have to keep up with one more subject, and the student gets a break from your teaching style.

(2) Use an online tutorial service. Classical-language tutorials are easy to find on the Web, and we've listed a few suggestions in the Resources. If you have reliable Internet access, an online tutorial can be both time- and money-efficient. As of this writing, online tutorials are print-based (the student types, the tutor types) rather than conversation-based. This makes online learning an excellent choice for Latin but less appropriate for modern spoken languages.

(3) Use a self-teaching course. This is probably your best at-home option for French, Spanish, or German. The courses we recommend in the Resources are designed for self-teaching and include pronunciation tapes and conversational practice as well as grammatical instruction and reading drills.

WHICH LANGUAGES?

We recommend continuing with Latin until the student has mastered a standard (high-school level) second-year Latin course. At that point, the student who's interested in Greek can switch; the student who's not interested at all can quit. Other students should continue on to the reading of actual Latin texts.

Unless you have a personal reason for choosing another language, we suggest Spanish as the first modern language. A good first experience with modern-language learning is important. Since Spanish is full of Latinate vocabulary and structures, the student who has already studied Latin won't struggle. And Spanish is rapidly becoming the unofficial second language of the United States. The beginning Spanish student can easily find Spanish signs, directions, instruction manuals, children's books, Yellow Pages, and more to exercise her growing skills. And she'll have more opportunity to converse in Spanish than in other languages.

If you do choose another language, try to stick with a Romance language—French, German, or Italian. Romance languages are Latininfluenced and easier for the Latin student to understand. Unless your relatives speak Japanese, Chinese, Polish, Russian, and so forth, you're better off saving these languages for high school.

WHICH TEXTS?

For fifth- and sixth-grade Latin, if you completed Martha Wilson's *Latin Primer Book I* and *Book II* in third and fourth grades, you'll continue on to her *Latin Primer, Book III* in fifth grade and Douglas Wilson's *Latin Grammar* in sixth grade. After completing this sequence, the student should continue on to standard Latin I and II high-school texts. She should be able to breeze through these books in two years (the textbooks often take students with no previous Latin three to four years to complete).

However, if you're just now beginning Latin, we suggest you use instead *The Latin Road to English Grammar*, a new program designed for parents who know no Latin. Written on a fifth- to sixth-grade level, this text makes no assumptions about skills and also reviews English grammar. (The curriculum guide claims that you don't have to study English grammar while using the program. We think this is a mistake since the English grammar in *The Latin Road* is neither systematic nor complete.) Start with *The Latin Road to English Grammar, Volume 1* in fifth grade, and continue with *Volume 2* in sixth grade.

If you would like to self-teach, you could use, instead of Martha Wilson's and Douglas Wilson's books, *The Latin Road to English Grammar, Volume 1* and *Volume 2. Latin Primer, Book III* and *Latin Grammar* are much more affordable, however.

For Latin I and II (seventh and eighth grades or later), you have three choices.

(1) A good set of classic Latin texts is the *Oxford University Latin Course*. This course is best done with a tutor or in cooperation with an online tutorial service, although highly motivated students can probably manage it on their own. Each year's study requires a textbook and teacher's text.

(2) A good self-teaching option is *Artes Latinae*, put out by Bolchazy-Carducci. *Artes Latinae I* and *II* are a complete self-teaching Latin program on CD-ROM. The disks come with books (graded readers, teacher's manuals, and tests), but the actual instruction (including pronunciation) is done on computer. The biggest drawback to *Artes Latinae* is its cost—\$267.00 for *I* and \$277.00 for *II*. The self-teaching course without the CD-ROM is also available and significantly cheaper. Home schoolers who've used this program say that it's challenging. You should probably plan on taking three to four years to complete this.

(3) An affordable Latin text that has stood the test of time is *Wheelock's Latin*, a \$17.00 paperback actually designed for self-study. The text includes grammatical explanations, readings, and self-study exercises with answer key. The only drawback to Wheelock is that it's written for older students—high school or early college—and may be frustrating for seventh graders. A good tutor, though, could easily bring *Wheelock* down to the proper level.²

For modern languages, if you're using a tutor, the tutor will no doubt have his own favorite text. For self-teaching, you have a choice of several different resources.

(1) Popular among home schoolers, the Power-Glide courses give the

²The Schola online tutorial service uses Wheelock.

student a role to play—an undercover agent dropped into a foreign country and desperate to communicate with the natives. The courses are in story format so that the student learns familiar phrases first and gradually begins both to speak the language and to translate it. We do wish that Power-Glide grammar were more rigorous, but the courses are conversationoriented and designed to get the student speaking as quickly as possible. (You can always study the grammar in a more traditional format in high school.) Power-Glide courses are available in Spanish, French, German, Russian, and Japanese. Each course is the equivalent of a two-year language course. Highly recommended.

(2) Available in Spanish, French, German, Russian, Hebrew, Chinese, Czech, and Japanese, the Learnables aim to get students hearing and understanding the language quickly. Each Learnable begins with the student looking at pictures and listening to vocabulary words on cassette. Once basic vocabulary is mastered, the student moves on to the *Basic Structures* books, which introduce sentences. Learnables come in four levels—the equivalent of a two-year course; each level should take about a semester to complete.

The Learnables are focused on hearing and speaking, which may frustrate visually oriented students. If you use this program, consider following up with a standard high-school-level language textbook to reinforce grammar and writing skills. But if fluency and comprehension are most important to you, Learnables will do the job. (After all, the student is also working in Latin, which means that she's learning at least one language traditionally.)

If you're planning on studying Hebrew, Chinese, or Czech, you'll have to use Learnables.

WHEN DO I DO IT?

Ideally, you could study both Latin and a modern foreign language every year, each for three to four hours per week (option 1—see page 408). We realize, though, that a six- to eight-hour commitment per week to foreignlanguage studies may not be possible.

Instead, you might want to study both languages—for example, Spanish and Latin—but progress more slowly through each (option 2—see pages

408–409). Study Spanish on Mondays and Tuesdays, Latin on Wednesdays and Thursdays; take two years to go through each Latin book and four years to complete an entire Power-Glide or Learnables course. (If you're using a language tutor, explain that you only want to go at half speed.) If you do this, the student can still complete *Latin Primer, Book III* and *Latin Grammar* before high school, which will prepare her for Latin I and II or *Wheelock* in ninth and tenth grades. You'll probably find that you don't need the full four years to finish the modern-language courses.

If the student finds two languages overwhelming, you can choose option 3: studying only one language each year, alternating your study (see page 409). To do this, begin your modern-language studies in fifth grade; continue with Latin in sixth grade; go back to your modern-language studies in seventh grade; then do Latin again in eighth grade. This works best if you're studying a Romance language (Spanish, French, Italian, or German) because the similarities between these languages and Latin will prevent the student from forgetting too much during the "year off." Whatever language you choose, be sure to schedule regular review sessions (every two weeks is good; once a month is minimum) for the student to read over the previous year's lessons. If you're studying Spanish in fifth grade, for example, stop every other Friday and review Latin vocabulary and grammar from the fourth-grade Latin primer. If you're studying Latin in sixth grade, use every other Friday to listen to the Spanish tapes and/or read through Spanish lessons from the fifth-grade year.

If at all possible, choose option 2 from the schedules given below. Language skills tend to disappear if they're not constantly used.

Don't simply stop Latin for grades 5 and 6 so that you can study a modern language and then try to pick up Latin again in grade 7. The effects of early exposure will fade almost completely.

And don't wait until seventh grade (when the first basic Latin course ends) to introduce the first modern language. Fifth graders can still pick up conversational skills with ease. By seventh grade, the skills are much harder to acquire.

SCHEDULES

Below are the schedules for each of the three options mentioned above.

Option 1: Schedule for Learning Two Languages Quickly

Latin Primer, Book III or	1 hour per day, three to
Latin Road, Volume 1	four days per week
Modern language	1 hour per day, three to
	four days per week
Latin Grammar or Latin	1 hour per day, three to
Road, Volume 2	four days per week
Modern language	1 hour per day, three to
	four days per week
Latin I (Oxford, Artes	1 hour per day, three to
Latinae, or the first half of	four days per week
Wheelock)	
Modern language	1 hour per day, three to
	four days per week
Latin II (Oxford, Artes	1 hour per day, three to
Latinae, or the second half	four days per week
of Wheelock)	
Modern language	1 hour per day, three to
	four days per week
	Latin Primer, Book III or Latin Road, Volume 1 Modern language Latin Grammar or Latin Road, Volume 2 Modern language Latin I (Oxford, Artes Latinae, or the first half of Wheelock) Modern language Latin II (Oxford, Artes Latinae, or the second half of Wheelock) Modern language

Option 2: Schedule for Learning Two Languages More Slowly

Fifth grade	Latin Primer, Book III, first half, or Latin Road, Volume 1, first half	1 hour per day, two days per week
	Modern Language	1 hour per day, two days per week
Sixth grade	Latin Primer, Book III, second half, or Latin Road, Volume 1, second half	1 hour per day, two days per week
	Modern language	1 hour per day, two days per week
Seventh grade	Latin Grammar, first half, or Latin Road, Volume 2, first half	1 hour per day, two days per week
	Modern language	1 hour per day, two days per week

Looking into Other Worlds: Latin and Languages 409

Eighth grade

Latin Grammar, second half, or Latin Road, Volume 2, second half Modern languagé 1 hour per day, two days per week

1 hour per day, two days per week

Begin Latin I in ninth grade

Option 3: Schedule for Learning Two Languages One at a Time		
Fifth grade	Modern language	1 hour per day, three to four days per week; every other week, use the fourth hour to review <i>Latin</i> <i>Primer, Book II</i> material
Sixth grade	Latin Primer, Book III or Latin Road, Volume 1	1 hour per day, three to four days per week; every other week, use the fourth hour to review modern- language vocabulary and conversation
Seventh grade	Modern language	1 hour per day, three to four days per week; every other week, use the fourth hour to review <i>Latin</i> <i>Primer, Book III</i> or <i>Latin</i> <i>Road, Volume 1</i> material
Eighth grade	Latin Grammar or Latin Road, Volume 2	1 hour per day, three to four days per week; every other week, use the fourth hour to review modern- language vocabulary and conversation.

Begin Latin I in ninth grade

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Latin resources are given first, with modern foreign languages following. Books in a series are listed in order.

Latin

Basic Texts

The Latin Road to English Grammar. Redding, Calif.: Schola Publications, 1997. \$139.00 per volume. Order directly from Schola Publications.

The Latin Road to English Grammar, Volume 1. The Latin Road to English Grammar, Volume 2. The Latin Road to English Grammar, Volume 3.

Morwood, James, and Maurice G. Balme. Oxford University Latin Course. Oxford: Oxford University Press.

Order from American Home-School Publishing. You'll only need these if you plan to do both Latin and modern languages at full speed; otherwise, you won't use these texts until the ninth- and tenth-grade years.

Oxford University Latin Course, Part I. 2d ed. 1996.

Student Text (\$20.95).

Teacher Text (\$14.95).

Oxford University Latin Course, Part II. 2d ed. 1997.

Student Text (\$20.95).

Teacher Text (\$14.95).

Oxford University Latin Course, Part III. 2d ed. 1997.

Student Text (\$20.94).

Teacher Text (\$14.95).

Sweet, Waldo E., et al. Artes Latinae. Wauconda, Ill.: Bolchazy-Carducci Publishers, 1997.

Each set contains a CD-ROM, reference book, reader, and teacher's guide. Order direct from Bolchazy-Carducci. The publisher courts home schoolers; if you call, the company will send you a brochure and a demo disk. This is a very good course. You can buy books, workbooks, teacher's texts, reference notebooks, audio cassettes, and tests separately, without the CD-ROM. Ask for a full listing of materials.

Artes Latinae I (\$267.00).

Artes Latinae II (\$277.00).

Wheelock, Frederick M., and Richard A. Lafleur. *Wheelock's Latin.* 5th ed. New York: HarperCollins, 1995.

\$17.00. A classic Latin course in one book. Widely available, but one vendor you can order from is Canon Press. You will probably also want to buy the *Workbook for Wheelock's Latin* by Paul T. Comeau and Richard Lafleur, 3d ed. (New York: HarperCollins, 1997), for \$14.00. Canon Press also carries this book, which provides valuable exercises and drills.

Wilson, Douglas. Latin Grammar. Moscow, Idaho: Canon Press, 1997.\$20.00. Order from Canon Press, along with the supplementary material.

Latin Grammar: Solution Key (\$8.00).

Wilson, Martha. Latin Primer, Book I. Moscow, Idaho: Canon Press, 1992. \$15.00. Order from Canon Press, along with the supplementary material.

Latin Primer, Book I: Teacher's Text (\$15.00). Latin Primer, Book I: Pronunciation Tape (\$3.00).

-----. Latin Primer, Book II. Moscow, Idaho: Canon Press, 1993.

\$15.00. Order from Canon Press, along with the supplementary material.

Latin Primer, Book II: Teacher's Text (\$15.00). Latin Primer, Book II: Pronunciation Tape (\$3.00).

----. Latin Primer, Book III. Moscow, Idaho: Canon Press, 1997.

\$18.00. Order from Canon Press, along with the supplementary material.

Latin Primer, Book III: Teacher's Text (\$18.00).

Supplementary Resources

Ammondt, Jukka. The Legend Lives Forever: Elvis Songs in Latin. Wauconda, Ill.: Bolchazy-Carducci Publishers, 1995.

\$16.00. Order from Bolchazy-Carducci. A CD with the King's greatest hits.

Groton, Anne H. *Thirty-eight Latin Stories*. 5th ed. Wauconda, Ill.: Bolchazy-Carducci Publishers, 1990.

\$10.00. Order from Bolchazy-Carducci or Canon Press. Prose selections from original sources are matched to the chapters of *Wheelock's Latin*.

Lundquist, Joegil. English from the Roots Up. Seattle, Wash.: Cune Press, 1996.

\$24.95. Order from Greenleaf Press. A vocabulary-building book built around one hundred Greek and Latin root words. Each lesson gives you, on one page, the original definition of the root along with 510 related English words that incorporate the root word. Use this along with Latin to develop a wonderful vocabulary (and to teach your student why Latin is important).

--------. Flash Cards for English from the Roots Up. Seattle, Wash.: Cune Press, 1996.

\$15.00. Order from Greenleaf Press. One hundred already prepared cards with root words on one side and English definitions on the other.

Schlosser, Franz. Latine Cantemus. Wauconda, Ill.: Bolchazy-Carducci Publishers, 1996.

\$15.00. Order from Bolchazy-Carducci. A songbook with sixty popular songs in Latin—from nursery rhymes and Christmas carols to silly folk songs.

Tunberg, Jennifer Morrish, with Terence O. Tunberg. Quomodo Invidiosulus nomine GRINCHUS Christi natalem abrogaverit. Wauconda, Ill.: Bolchazy-Carducci Publishers, 1998.

\$16.95. The Grinch Who Stole Christmas in Latin. Order from Bolchazy-Carducci.

Modern Languages

Basic Texts

Learnables. Kansas City, Mo.: International Linguistics Corporation.

Order the Learnables direct from International Linguistics Corporation. We strongly suggest you use the Grammar Enhancement Books if you study Spanish or German. The following level 1 materials are available in a "combination offer" that includes workbook, tapes, and grammar program:

English (\$95.00). French (\$95.00). German (\$95.00). Hebrew (\$119.00). Russian (\$109.00).

Spanish (\$95.00).

The following level 1 materials are available in a combination of workbook and tapes only—no grammar book available:

Czech (\$55.00).

Japanese (\$55.00).

Mandarin Chinese (\$55.00).

For further levels and more ordering information, call and request the catalog, which describes what books you'll need at what level (you have a number of options).

Power-Glide Language Courses. Provo, Utah: Power-Glide.

Order from Power-Glide, the Education Connection, or Rainbow Resource Center. The following courses are \$89.95 for each basic course (textbook and cassettes); the accompanying *Teachers' Guide/Test Book* is \$29.95 and has lesson plans, games, quizzes, and tests with keys. The teacher's guides and test books aren't necessary to learn the languages, but they'll help you grade and evaluate.

French Course. French Teachers' Guide/Test Book. German Course. German Teachers' Guide/Test Book. Spanish Course. Spanish Teachers' Guide/Test Book. Russian Course (no Russian Teachers' Guide/Test Book available).

The following one-year course costs \$55.95:

Japanese Course.

20

AWAY WITH ABUSIVE FALLACIES! Religion

Homo sine religione sic ut equus sine freno.¹ —Medieval saying

I n history, your middle-grade student will continually ask why. Why was that war fought? Why did this statesman make this decision? Why did the Crusades dominate the religious life of medieval Europe?

These questions cannot be answered unless you take the role of religion in public life seriously. People of faith have influenced history at every turn. Until the student is willing to examine honestly and soberly the claims of religion in the history of mankind, his study will be incomplete.

In the effort to offend none, the public schools have managed to offend practically everyone—either by leaving religion and ethics out of curricula altogether or by teaching them in a way that satisfies neither believers nor skeptics. In sympathy, we'll say that the public schools are in an impossible situation. They are legally bound to avoid the appearance of promoting one

¹"Man without religion is like a horse without a bridle."

religion over another. And in a mixed classroom, how can you take one religion seriously without antagonizing those who don't share it? The inevitable result is summed up by a character in P. D. James's mystery *Original Sin:*

"There were a dozen different religions among the children at Ancroft Comprehensive. We seemed always to be celebrating some kind of feast or ceremony. Usually it required making a noise and dressing up. The official line was that all religions were equally important. I must say that the result was to leave me with the conviction that they were equally unimportant."²

When you're instructing your own child, you have two tasks with regard to religion: to teach your own convictions with honesty and diligence, and to study the ways in which other faiths have changed the human landscape.

Only you and your religious community can do the first. As for the second, in high school the student will make a formal study of ethics. For middle school, we suggest you simply keep the following guidelines in mind as you do your history, science, and literature.

(1) Include religious works in your study of primary sources. As you progress through history, stop and read the Old and New Testaments; they are foundational to Western thought and ought to be treated as serious philosophical documents.

(2) Read about major faiths that have shaped our world: Judaism, Buddhism, Christianity, Islam. Compare them. Ask the most basic questions about them: What do these religions say about the nature of man? the nature of God? the purpose of living?

(3) As you choose biographies for history reading, try to seek out works about those who have changed people's minds and ways of living—not only religious figures such as Confucius and Mohammed, but the theologians and prophets who followed them: Augustine, Anselm, Ibn Ezra, Francis of Assisi, Ignatius of Loyola, Martin Luther (just to name a few).

(4) Watch out for logical fallacies. When writers start talking about religion—especially in books for young children—fallacies abound. Keep your eyes open for the three most common errors: chronological snobbery, which

²P. D. James, Original Sin (New York: Warner, 1994), p. 303.

assumes that people long ago were more stupid than people today (the Virgin Birth was accepted by theologians of the Middle Ages, but no modern scholar can seriously believe in it); the black-and-white fallacy, which assumes that there can be no alternatives between extreme positions (the Catholic Church tried Galileo for heresy because he said the earth wasn't at the center of the universe; therefore the churchmen involved were either blind to the truth, or else hypocritically protecting their own power);³ and the poisoning-the-well fallacy, which discredits an argument by attacking its source rather than its content (that legislator is a religious man, so his opinions are obviously biased by his religious beliefs).

(5) Don't ignore the deep religious faith held by many of the West's greatest scientists. The theism of scientists and mathematicians, from Pascal to Einstein, deeply affected their professional and intellectual pursuits.

(6) Finally, discuss the moral and ethical questions of history with your middle-grade student. Don't shy away from the errors made by religious men and women (every faith has mounted its own version of Holy War at some point), but don't identify the mistakes of religious figures with the requirements of faith itself.

You might start by reading together and discussing stories that bring the rewards and costs of ethical behavior to the forefront. *The Book of Virtues: A Treasury of the World's Great Moral Stories, The Moral Compass: Stories for a Life's Journey,* and *Books That Build Character: A Guide to Teaching Your Child Moral Values through Stories* are three useful starting places. Pick one, and choose an evening once a week to read and talk—as a family—about ethical issues that come up. This will serve as great preparation for the formal study of ethics in high school.

We've also listed a beginning introduction to world religions, *A World of Faith*. This book outlines the beliefs of twenty-eight religious groups. Keep it on hand as a reference while you work through world history.

RESOURCES

These books are easily available through local bookstores, libraries, or online booksellers.

³The alternative is that the churchmen were honestly trying to work out a theological picture of the universe that made proper reference to scientific discovery—something they eventually did manage to do.

Bennett, William J. The Book of Virtues: A Treasury of the World's Great Moral Stories. New York: Simon & Schuster, 1996.

-------. The Moral Compass: Stories for a Life's Journey. New York: Simon & Schuster, 1995.

Kilpatrick, William. Books That Build Character: A Guide to Teaching Your Child Moral Values through Stories. New York: Simon & Schuster, 1994.

Stack, Peggy Fletcher, and Kathleen Petersön. A World of Faith. Salt Lake City, Utah: Signature Books, 1998.

21

1

THE HISTORY OF CREATIVITY: ART AND MUSIC

Music creates order out of chaos; for rhythm imposes unanimity upon the divergent, melody imposes continuity upon the disjointed, and harmony imposes compatibility upon the incongruous.

-Yehudi Menuhin

SUBJECT: Art and music TIME REQUIRED: 1 to 2 hours, once per week per subject

The classical education is distinguished by its emphasis on fine arts not necessarily performance (although classical education has traditionally included drawing as a foundational skill), but certainly appreciation and participation.

You started this process in the grammar stage. The young child studied art by looking at it and music by listening to it.

Now, as the student's mind matures, you'll tie this appreciation more closely to history. She'll study artists and musicians when she encounters them in her history readings; she'll enter birth and death dates and the dates of great artistic achievements on the time line.

As with other subjects, art and music will be subjected to analysis dur-

ing the logic stage. Your middle-grade student will learn about the basic structure of musical pieces, the differences among the instruments of the orchestra, the way paints and other artistic media are used, and the different art movements and their practitioners.

Plan on keeping the same schedule you used during the elementary years. Reserve a one- to two-hour period once a week for music study; reserve the same amount of time on another day for art. In Chapter 12, we suggested the option of scheduling only one period per week and alternating the study of art and music. Now we strongly encourage you to make time for both subjects per week. Remember, much of this work can be done independently by the student. Your job is to supervise and provide resources.

The study of art and music is a good late-afternoon or early-evening project. You might schedule art appreciation for Mondays from 3:30 to 5:00 and music appreciation for Thursdays from 3:30 to 5:00. Or make it an after-dinner assignment, to be completed between 7:00 and 8:30 two evenings per week. (See the sample schedules on pages 424–425 for more options.)

ART

The study of art is twofold: practicing the actual skills of art (drawing, painting, modeling), and learning to understand and appreciate the works of great artists.

You should alternate art skills and art appreciation. During the first week, spend one to one and a half hours on art projects; during the second week, use the time to study paintings and artists.

Art Skills

Art skills fall into three basic categories—drawing, painting, and modeling. During the logic stage, try to spend some time in each category. You can divide each year into three sections (if you're doing art lessons every other week, you'll have approximately eighteen lessons; you'll be able to divide the lessons into six drawing lessons, six painting lessons, and six modeling lessons). Or spend a year on each skill, allowing the child to return in the fourth year to her favorite one. Always begin with drawing, progress to painting, and finish up with modeling.

Your goal isn't to turn out a polished artist. You just want to introduce the child to the basic techniques and possibilities of art. With any luck, her interest will be sparked, and she'll continue working on her own time. But even if this doesn't happen, she'll have gained valuable and increasingly rare skills in a basic human activity.

In Resources, we supply ideas for drawing, painting, and modeling projects. For basic texts, we recommend the following.

Drawing

For elementary art skills, we suggested the Mona Brookes classic *Drawing with Children*. If you didn't use this during the grammar stage, we urge you to get it now. Otherwise, you can use another drawing classic, *Drawing on the Right Side of the Brain* by Betty Edwards. This book teaches logical drawing skills, perfect for the middle-grade student. Work progressively through the lessons in the time that you've scheduled. When you've finished, you can move on to any of the drawing projects (colored pencil, calligraphy, portrait drawing, and so forth) listed at the end of the chapter.

Painting

Start painting with watercolors, which are readily available and easy to clean up. Beginning watercolor books abound. (You can also find instructional videotapes at your library.) A favorite among home schoolers is *Watercolor for the Artistically Undiscovered,* written by children's book illustrator Thacher Hurd with John Cassidy. The book includes the how-to text, forty-eight pages of Italian watercolor paper, a professional-quality six-color box, and a number 5 brush. All you need is water. This will introduce you to all the basics.

Modeling

Hands-On Sculpting, by sculptor Dottie Erdmann, introduces the student to basic modeling techniques, offering clear instructions and line drawings. This book begins with simple figures and progresses to more complicated projects. You'll need to use a clay that can be fired in the oven (see Resources for ordering information).

Art Appreciation

Let your study of history guide your study of art. Whenever the student comes across the name of a great artist during her history readings, she should jot it down. During art-appreciation sessions, she'll follow a fourstep process. She will

- 1. read about the artists she's encountered in history during the previous two weeks,
- 2. enter the birth and death dates of each artist on the history time line,
- 3. prepare a brief biographical sketch for each artist and file it in the history notebook under Great Men and Women,
- 4. spend some time looking at, reading about, and coloring the work of the artists under study.

During this time, the student can use either art books that treat a single artist (such as the Famous Artist Series titles *Michelangelo* or *Cézanne*) or books that cover an entire school (such as the Masters of Art series, which includes *The Impressionists: The Origin of Modern Painting* and *Rembrandt and Seventeenth-Century Holland*). There's no need for the student to write about what she's learning, but she should enter on her time line the dates of famous works of art (the completion of the Sistine Chapel ceiling or the year the *Mona Lisa* was finished). You can be flexible about art appreciation. If the student wants to spend some time learning more about a particular school of painting, don't insist that she read biographies instead.

At the end of this chapter, we've listed a number of art books for young people that include both interesting text and full-color reproductions of paintings. Use them alongside your other historical resources when you study history.

An exception: For the fifth-grade year, we suggest that you buy and use *Learning about Ancient Civilizations through Art*. There aren't too many appropriate art books about ancient times, and you won't encounter many familiar artists between 5000 B.C. and A.D. 400. This book covers Egyptian, Greek, Roman, Chinese, and Assyrian art. When you reach Greece and Rome in history, you can also use your art-appreciation days to study the great buildings—the Colosseum, the Parthenon, and so forth. Architecture is art, too.

MUSIC

Music Skills

If time and your budget make it possible—and if the child shows an interest—private music lessons are great. We think that every student should have two years of piano lessons early in her academic career. After two years, she can quit, switch to another instrument, or keep going. Consult friends and your local newspaper to find private music teachers; if you live near a university or community college, you can call the music department for recommendations.

Jessie adds—from years of experience with kids and music lessons that forcing a reluctant child to keep taking lessons for more than two years is pointless. If interest hasn't developed after two years of study, let the student turn her attention to other things.

Music Appreciation

Whether or not the student is taking music lessons, she should spend one and a half to two hours every week doing music appreciation. As in art appreciation, she'll study composers and pieces as she encounters them in her history readings.

The student will begin, in fifth grade, by investigating the instruments of the orchestra. In sixth grade, she'll start a three-year course in music history—listening to great works, from Gregorian chant to Leonard Bernstein.

We've discovered one text to guide you through all four years—A Young Person's Guide to Music—a beautifully designed, immensely informative book, full of illustrations. The first part provides a basic guide to the orchestra: double-page spreads covering the sections of the orchestra, the role of the conductor, how composers work, and the families of instruments—strings, woodwinds, brass, percussion, keyboards. The guide comes with its own CD, an orchestral piece composed by Poul Ruders (variations on a theme by Purcell). The composition was commissioned to match up with the book; each part of the book is keyed to a different track on the CD so that you can read about plucked strings on pages 26–27 and then follow the instructions:

Play Track 21: Somber plucked chords in the harp's middle and low registers give a melancholy, contemplative atmosphere to the seventh variation.

Track 21 consists of a plucked-string orchestration of the variation.

The fifth grader who works her way through this first part will have learned to listen to music with an educated ear. Since this part has twentyone sections, you can cover one per week during the fifth-grade year with plenty of time to linger. Plan on supplementing this book with CDs checked out of your local library. In the section on woodwinds, for example, clarinets, recorders, and saxophones are discussed; therefore, look in your library's CD stacks for concerti and other pieces featuring these instruments.

As in the early grades, the student doesn't need to write about music. But she should plan on listening to each piece at least twice.

Beginning in sixth grade, the student will begin to listen to music from the periods studied in history: medieval and early Renaissance music (sixth grade), music of the late Renaissance, Baroque, and Classical periods (seventh grade), and music of the Romantic and modern periods (eighth grade). As in art appreciation, whenever the student encounters a great composer in her history reading, she should jot down the name. During music appreciation, she should record the birth and death dates on the time line, prepare a brief biography, and spend the rest of her music-appreciation period listening to the composer's works. (Again, plan on making use of your library's collection.)

Along with her history reading, she should use the second half of *A Young Person's Guide to Music*—a section entitled "The History of Music." It features a time line with the most important works and composers of each musical period clearly marked on it. "The History of Music" will introduce you to the music of Africa, India, and other cultures that get short shrift in most available music materials. It will also guide you toward composers that the *Kingfisher Illustrated History of the World* doesn't mentioned. For example, when the sixth grader reads about the period 1549–1555 in the *Kingfisher Illustrated History*, she'll learn about the Habsburgs and the beginning of Bloody Mary's rule, but no composers are mentioned. On her

music-appreciation day, though, she'll look at the time line in the Young Person's Guide and discover that Italian composer Giovanni da Palestrina (1525–1594) and English composer Thomas Tallis (1505–1585) were both composing during this period. She can then spend her next few music-appreciation periods reading about these composers in the encyclopedia, preparing brief biographical pages (to be filed under Great Men and Women in the history notebook), and listening to their works.

Although you should generally try to keep music appreciation in step with history reading, don't worry if you get a little behind or ahead. When the student encounters a major musical figure—J. S. Bach, Handel, Mozart, Schubert—on the music time line, she can spend several weeks on each figure, even as she's going forward with her history reading.

SCHEDULES

Sample Schedules

Fifth grade	Mondays, 1–2 hrs. Alternate art projects with		
		studying ancient art.	
	Thursdays, 1–2 hrs.	Study the orchestra and its	
		instruments with A Young Person's	
		Guide to Music.	
Sixth grade	Mondays, 1–2 hrs.	Alternate art projects with	
		making biographical pages and	
		studying the works of medieval	
		and early Renaissance artists;	
		enter dates on time line.	
	Thursdays, 1–2 hrs.	Listen to medieval and early	
		Renaissance music; make	
		biographical pages for musicians;	
		enter dates on time line.	
Seventh grade	Mondays, 1–2 hrs.	Alternate art projects with	
		making biographical pages and	
		studying the works of artists	
		from the late Renaissance	
		through the early modern	
		periods; enter dates on time line.	

The History of Creativity: Art and Music 425

Mondays, 1–2 hrs.

Thursdays, 1–2 hrs. Listen to late Renaissance. Baroque, and Classical music: make biographical pages for musicians: enter dates on time line

> Alternate art projects with making biographical pages and studying the works of modern artists: enter dates on time line.

Thursdays, 1–2 hrs.

Listen to Romantic and modern music, including musical theater and light opera; make biographical pages for musicians; enter dates on time line.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books and tapes or CDs can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. These resources are divided into three lists: art skills, art appreciation, and music appreciation (at this stage, music skills should be studied with a professional teacher). For each list, we have given basic texts first, followed by supplementary resources (you can pick and choose among these). You can also use many of the resources listed in Chapter 12.

Art Skills

Basic Texts

Edwards, Betty. Drawing on the Right Side of the Brain: A Course in Enhancing Creativity and Artistic Confidence. New York: Tarcher, 1989.

\$15.95. Easily available at bookstores or through online booksellers.

Erdmann, Dottie. Hands-On Sculpting. Santa Fe, N.M.: Columbine Communications and Publications, 1992.

\$19.95. Buy from Rainbow Resource Center.

Eighth grade

Hurd, Thacher, and John Cassidy. *Klutz Art Book: Watercolor for the Artistically Undiscovered*. Palo Alto, Calif.: Klutz Press, 1992.

\$19.95. Order from Greenleaf Press.

Sculpey. Elk Grove Village, Ill.: Polyform Products.

\$7.95 for a 2-pound pack, \$29.50 for an 8-pound pack. Order from Rainbow Resource Center. Sculpey is an easy-to-work clay that fires in a regular oven in twenty minutes without shrinking. Rainbow also sells Sculpey Glaze, in either matte finish or glossy finish, for \$2.35 per bottle.

Supplementary Resources

Arnosky, Jim. Drawing from Nature. New York: Lothrop, Lee & Shepard, 1987.

\$8.95. Learn how to notice and draw the natural world from the book that inspired a PBS series.

Draw Today kits. Laguna Hills, Calif.: Walter Foster Publishing.

Order from Walter Foster directly or from Greenleaf Press. The kits offer step-by-step instruction in classical drawing technique. Each kit includes all supplies. Creator Walter Foster includes a toll-free 800 number to call if you have specific questions.

Foster, Walter. The Cartoon Animation Kit. 1996.

\$15.95.

———. Marker Mania: An Insanely Fun Drawing Kit. 1998.

\$9.95.

——. The Oil Painting Kit. 1998.

\$24.95.

Foster, Walter, et al. The Calligraphy Kit. 1995.

\$14.95.

-------. Colored Pencil Craze: An Insanely Fun Drawing Kit. 1998. \$9.95.

Franks, Gene. The Pencil Drawing Kit. 1995.

\$14.95.

Keely, Jack. U Can Cartoon! Drawing Kit. 1998. \$14.95.

Light, Duane R., et al. *The Watercolor Painting Kit.* 1995. \$20.95. Wise, Morrell, et al. The Colored Pencil Drawing Kit. 1995. \$14.95.

Reece, Nigel, et al. The Usborne Complete Book of Drawing. Tulsa, Okla.: E.D.C. Publications, 1994.

\$17.95. Buy from an Usborne dealer or from the Education Connection. This is a complete guide to drawing and painting—everything from portraits to cartoons.

Art Appreciation

Basic Texts

Chertok, Bobbi, et al. Learning about Ancient Civilizations through Art. New York: Scholastic, 1995.

\$18.95. Order from Greenleaf Press. Study the art of China, Egypt, Greece, Rome, and more.

Martin, Mary, and Steve Zorn. *Start Exploring Masterpieces: Coloring Book*. Philadelphia, Pa.: Running Press, 1990.

\$8.95. Order from the Education Connection. Sixty famous paintings, done in detail for you to color. The book includes the story behind each painting. A great way to learn about particular works. The work is best done with good-quality colored pencils.

Peppin, Anthea, and Joseph McEwan. The Usborne Story of Painting: Cave Painting to Modern Art. Tulsa, Okla.: E.D.C. Publications, 1980.

\$6.95. Order from Rainbow Resource Center. An introduction to painting styles, techniques, and personalities. A good general guide with lots of color reproductions.

Romei, Francesca, and Gaudenz Giancinto. *The Story of Sculpture*. Salem, Ore.: Publishing Group West, 1995.

\$22.50. Order from Greenleaf Press. One of the acclaimed Masters of Art series—oversized hardbacks with beautiful illustrations and clear, illuminating text. Spreads depicting artists from Donatello to Henry Moore in their studios, illustration of techniques, photographs of dozens of famous sculptures.

Supplementary Resources

The Famous Artists series. Hauppauge, N.Y. Barron's Juveniles, 1994. \$6.95 for each. Order from Greenleaf Press. These provide a neat 32page introduction to each artist, his life, and his major works. Color reproductions.

Green, Jen, et al. Michelangelo. Hughes, Andrew S. Van Gogh. Mason, Anthony, et al. Cézanne. ———. Leonardo da Vinci.

The Great Buildings series. Orlando, Fla.: Raintree Steck-Vaughn Publishers.

\$24.98 each; available at most libraries. Covers basic architecture and plans of ancient buildings. The text will be simple for a fifth grader.

Chrisp, Peter. The Colosseum. 1997.

——. The Parthenon. 1997.

Martell, Hazel Mary. *The Great Pyramid.* 1998. Moorcroft, Christine. *The Taj Mahal.* 1997.

The Masters of Art series.

\$22.50 each. Order from Greenleaf Press. These are oversized books with beautiful illustrations and a text that not only explains the technical aspects of the paintings, but also gives historical, social, political, and religious background to the paintings. You should be able to find these at most libraries.

Corrain, Lucia. Giotto and Medieval Art: The Lives and Works of the Medieval Artists. Salem, Ore.: Publishing Group West, 1995.

Loria, Stephano, et al. Pablo Picasso. New York: Peter Bedrick Books, 1995.

- Pescio, Claudio. Rembrandt and Seventeenth-Century Holland: The Dutch Nation and Its Painters. New York: Peter Bedrick Books, 1995.
- Romei, Francesca. Leonardo da Vinci: Artist, Inventor, and Scientist of the Renaissance. Salem, Ore.: Publishing Group West, 1994.
- Salvi, Francesco. The Impressionists: The Origin of Modern Painting. Salem, Ore.: Publishing Group West, 1994.
The A Weekend with . . . series. New York: Rizzoli.

\$19.95 each. Order directly from Rizzoli, or check your local library. This series tells not only about the paintings, but about the artist's life, his tools, his techniques, and his lifestyle.

Beneduce, Ann Keay. A Weekend with Winslow Homer. 1996.
Bonafoux, Pascal. A Weekend with Rembrandt. 1995.
Braun, Barbara. A Weekend with Diego Rivera. 1994.
Knight, Johan, and Floridan Rodari. A Weekend with Matisse. 1994.
Plazy, Gilles. A Weekend with Rousseau. 1993.
Rodari, Floridan. A Weekend with Picasso. 1994.
Skira-Venturi, Rosabianca. A Weekend with Degas. 1992.
A Weekend with Renoir. 1996.
A Weekend with Van Gogh. 1994.

Music Appreciation

Basic Text

Ardley, Neil, and Poul Ruders. A Young Person's Guide to Music: A Listener's Guide. New York: Dorling Kindersley, 1995.

\$24.95. Includes a CD inside the book. Order from a local bookstore or Dorling Kindersley dealer. This book will serve as the base text for all four years.

Supplementary Resources

Brownell, David, and Nancy Conkle. Great Composers I: Bach to Berlioz Coloring Book. Santa Barbara, Calif.: Bellerophon Books, 1985.

\$4.95. Order from Greenleaf Press. Portraits to color along with biographical sketches for fifteen composers including Bach, Handel, Beethoven, and Mozart.

Brownell, David. Great Composers II: Chopin to Tchaikovsky Coloring Book. Santa Barbara, Calif.: Bellerophon Books, 1991.

\$4.95. Order from Greenleaf Press. Twenty-nine composers, including Schumann, Liszt, Wagner, Verdi, Brahms, and Grieg.

------. Great Composers III: Mahler to Stravinsky Coloring Book. Santa Barbara, Calif.: Bellerophon Books, 1993.

\$4.95. Order from Greenleaf Press. Twenty-seven composers.

The Music Masters series.

\$6.99 for CD, \$3.99 for cassette. Order from Greenleaf Press. Each contains a narration of the composer's life, with significant events illustrated by selections from the works composed at that time and 18 to 20 minutes of unbroken music at the end. Good introduction to classical music.

The Story of Vivaldi and Corelli. The Story of Bach. The Story of Handel. The Story of Hadyn. The Story of Mozart. The Story of Beethoven. The Story of Schubert. The Story of Berlioz. The Story of Mendelssohn. The Story of Schuman and Grieg. The Story of Chopin. The Story of Verdi. The Story of Wagner. The Story of Strauss. The Story of Foster and Sousa. The Story of Brahms. The Story of Tchaikovsky. The Story of Dvořák.

Tomb, Eric, and Nancy Conkle. *Early Composers Coloring Book*. Santa Barbara, Calif.: Bellerophon Books, 1988.

\$4.95. Order from Greenleaf Press. The first in the Composers Coloring Books series. A detailed coloring book of composers' portraits from Palestrina through Corelli, with a biographical note for each. Also a good guide to early composers.

Venezia, Mike. Getting to Know the World's Greatest Composers series. Danbury, Conn.: Children's Press.

\$6.95 each. Order from Greenleaf Press or from Grolier. Thirty-two-page biographies with historical images.

Aaron Copeland. 1995. Duke Ellington. 1996. George Gershwin. 1995. George Handel. 1995. Igor Stravinsky. 1997. Ludwig van Beethoven. 1996. Peter Tchaikovsky. 1995. Wolfgang Amadeus Mozart. 1996.

22

1//

MAGIC BOXES: USING Computers and videos

Computers should work. People should think.

—IBM slogan

A ll of the cautions we extended in Chapter 10 also apply to the middlegrade student. Software and videos are easier to use than books. They teach through images, not words; they encourage passive reception instead of active engagement. This is directly opposed to the goal of the logic stage. In grades 5 through 8, you're constantly teaching the student to analyze and make connections; software and (especially) videos tend to push the brain into a state of uncritical observation.

Software and videos can be used as careful supplements to a languagebased curriculum. They can also serve as constructive entertainment—but always with the recognition that if the student weren't glued to a screen, he'd be doing something more active (making a model? playing Monopoly? shooting hoops? reading a book?). Every time you use the computer or turn on the TV, ask yourself: What am I giving up? What will my child do if I don't turn on the computer or pop in this video?

Having said this, we offer the following cautious recommendations.

SOFTWARE

When choosing software programs, beware of software that reduces complex subjects (science and history) to ten-second flashes of information narrated by constantly animated figures. Educational software is most appropriate for subjects that are largely visual anyway (geography, for example, or anatomy) or for fact-based drills that are being used as an alternative to flash cards. There's not much difference between turning a card over to check the answer to a math fact or clicking an icon to achieve the same effect. (There is, however, a difference between doing a computer math drill and writing the answers to a math drill on a sheet of paper. Don't substitute software for written drills, which engage the muscles as well as the mind—kinesthetic learning.) We've recommended several software resources, popular with home schoolers, at the end of this chapter.

Every middle-grade student should learn to type and to use a wordprocessing program. You can use a typing program such as the standard *Mavis Beacon Teaches Typing*. Or check out one of these highly recommended alternatives: *TypingMaster* (you can download the first three lessons for demonstration purposes and place orders at its home page, www. TypingMaster.com), *FasType* (www.trendtech.com), or *Letter Chase Typing Tutor* (www.letterchase.com). Each is available for Windows or for Mac users.

Even if you don't have a computer at home, typing is still important. Use a standard typing book such as *Type It* (see Resources at the end of this chapter).

Once keyboard skills have been mastered, middle-grade students should learn how to use a standard word-processing program: WordPerfect or Microsoft Word are currently the most popular. The best way to learn a word-processing program is to buy it, install it, and work through the tutorial provided. Good typing skills and word-processing fluency will simplify paper preparation and open up entry-level job positions. If you don't have a computer, consider using a friend's or the computers now available at most public libraries.

We think students should do handwritten work through sixth grade. But beginning in seventh grade (the first year of junior high), papers can be prepared on the computer.

THE INTERNET

The Internet continues to be a mixed blessing. Yes, there's plenty of information online, much of it highly useful. The rest is either garbage or simply a waste of time.

Although reference works are increasingly available online, information accessed through home pages tends to be superficial, untrustworthy, and unedited. If the student can find online versions of respected works (articles from the *Encyclopaedia Britannica*, for example, or from publications such as *Time*, *Newsweek*, or the *New York Times*), that's fine. But for research papers, he should still use the library for most of his references. Respected scholarly works aren't often posted online for free; publishers pay scholars for it, publish it, and charge for the books. On the Internet, the adage "You get what you pay for" comes to life.

We've recommended several online tutorial services (see pages 438–439). These can be useful, but face-to-face tutoring is better, if you can find it. Try your local university before you try the Internet. If you live in an isolated area, however, online tutorials are your best option.

The information service HOMER (Home Education Resource Network) is a curriculum resource for home schoolers. The company that runs HOMER, IMSATT, charges an hourly fee of \$3.00, which gets expensive quickly. However, you can get a demo kit for no cost, and HOMER includes an E-mail service. HOMER offers K–12 courses, Calvert School (a well-regarded full home-school curriculum) online, test preparation, bulletin boards, and a software library. You can call IMSATT or write to the company for a brochure and/or trial kit.

Supervise Internet use. Net surfing, like TV watching, can waste hundreds of priceless hours. E-mail is great, but chat rooms tend to be the cyber equivalent of hanging out at the local fast-food joint—just as intellectually stimulating. And cyber relationships can too easily become substitutes for real friendships. We've met families whose teens spend five to six hours per day online, chatting with online buddies. This is socially (and academically) destructive. Online relationships allow teens to present themselves in carefully edited versions and to control exactly what's said; the relationships offer no chance for adolescents to learn the ins and outs of face-toface communication—tone of voice, facial expression, body language. Your child won't conduct his adult social life in cyberspace, so don't let him practice his social skills via keyboard.

Unsupervised Internet use is the électronic equivalent of allowing your twelve year old to wander alone through a bookstore that has a large Xrated section just off to one side. Keep an eye on computer use, and don't put all your trust in a filter such as CyberPatrol or NetNanny, which can block useful information and let harmful information through. (The most recent fuss was over one Net filter's blocking of all Christian Websites along with neo-Nazi and white-supremacist sites, claiming that they contain "hate language.")

Be aware that E-mail isn't safe. Online pornographers routinely spam electronic mailboxes with deceptive mail containing hyperlinks to X-rated sites. Your twelve year old can open an E-mail, click once, and enter an adult movie house.

Keep both the television and the computer in a family area. This will prevent mindless use and will make every member of the family accountable for what he or she watches or where he or she surfs. Some TV programs and Websites are appropriate for adults but not for children, but we think it is hypocritical for parents to restrict teenage viewing and then indulge in soft- (or hard-)core porn.

VIDEOS

Rule 1 for video use: never substitute videos for bookwork.

Watch videos after preparation. Once you've already studied a subject, a video becomes a vehicle for building more connections, rather than one for passive absorption of ideas. After you've read about sea life, a Jacques Cousteau or National Geographic video can not only reinforce, but make vivid the concepts that the student has learned. If you've just studied volcanoes, a video of the Mount St. Helen's eruption can cement that information in the student's mind forever.

Movies made from classic novels can be great fun—after the student has read the book. Video versions of *Ivanhoe* or *Pride and Prejudice* can fill in valuable historical details of dress and daily life. But vast areas of plot and character development are, of necessity, eliminated. The exception to this rule can be filmed versions of plays, which, after all, were written to be seen. The print versions of *Henry V* or *Murder in the Cathedral* will probably be more interesting and easier to understand once the student has seen a performance.

Videos can always be useful for language acquisition. If the child is studying Spanish, try to find Spanish-language versions of popular programs for him to watch. He'll be able to immerse himself in the language for an hour. But don't substitute this for a regular language course.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). This section lists typing programs, other software, online tutorials, and video/software resources.

Typing Programs

Beacon, Mavis. Mavis Beacon Teaches Kids to Type. St. Louis, Mo.: St. Louis City Art Museum, 1997.

\$39.95 on CD-ROM. Order from the Education Connection. This is a good typing program, designed for grades 1 through 6. It includes lots of animation along with a guide to surfing the Web.

- Duffy, Joan. *Type It.* Cambridge, Mass.: Educators Publishing Service. \$12.00. Order from EPS or from Rainbow Resource Center. A standard typing manual for all grades, popular with home schoolers. Builds spelling and vocabulary skills as well as typing skills.
- Owen, Betty. *Typing for Beginners*. Gilbert, Ariz.: Perigee Publishing, 1985. \$8.95. This is a standard typing program, not specifically designed for young students.

Online typing tutorials can be found at: *TypingMaster*. www.TypingMaster.com. *FasType*. www.trendtech.com.

Letter Chase Typing Tutor. www.letterchase.com.

Other Software

Dorling Kindersley Eyewitness Encyclopedias. New York: DK Multimedia. \$34.95 each. Order from a bookstore or from Dorling Kindersley. These are all multimedia reference works with video, animations, sound clips, and text.

Cartopedia: The Ultimate World Reference Atlas. 1997.

An atlas, almanac, and encyclopedia all in one. Overviews of every country, including population, natural resources, climate—this has it all. Highly recommended.

The Eyewitness Encyclopedia of Nature. 1995.

The Eyewitness Encyclopedia of Science. 1994.

Covers chemistry, physics, math, and life sciences.

The Eyewitness Encyclopedia of Space and the Universe. 1997.

Fly around the solar system, explore a space station, and more.

(Includes a highly speculative reconstruction of the Big Bang.)

The Eyewitness History of the World. 1995.

Twelve different time periods. Click on historical objects and artifacts for facts and stories.

Dorling Kindersley Eyewitness Virtual Reality. New York: DK Multimedia. Order from a bookstore or from Dorling Kindersley. Each CD-ROM is a virtual museum with rooms to explore, interactive exhibits, and activities.

Chronicle of the Twentieth Century. 1996.

\$34.95. Read about history; watch actual news reports; listen to Churchill, Martin Luther King, Jr., and others deliver actual speeches.

Virtual Reality Bird. 1996.

\$29.95 All types of birds, lots of live action.

Virtual Reality Dinosaur Hunter. 1996.

\$24.95. Dig up bones, and see them come to life.

Virtual Reality Earth Quest. 1997.

\$24.95. Journey underground, build volcanoes, create earthquakes, study a museum-quality rock collection.

Dorling Kindersley Multimedia. New York: DK Multimedia.

Order these titles from a bookstore with a software division or from Dorling Kindersley. These CD-ROMS are high-quality, informative, complex, and are packed with text and photos.

Biesty, Stephen. Castle. 1997.

\$24.95. Explore a fourteenth-century castle, using the identity of a page, knight, or servant.

——. Stowaway. 1995.

\$24.95. Explore an eighteenth-century warship. Based on the Stephen Biesty *Incredible Cross-Sections* book.

Macauley, David. The Way Things Work. 1994.

\$34.95. An interactive version of Macauley's fascinating book about inventions.

The Ultimate Human Body: A Multimedia Guide to the Body and How It Works. 1994.

\$34.95. This is a spectacular program that offers 3-D exploration of the entire human body. You can also interact with the body systems. *The Ultimate 3-D Skeleton.* 1997.

\$34.95. 3-D exploration of and interaction with the human skeleton.

GeoSafari Platinum Edition CD-ROMS. Carson, Calif.: Educational Insights Learning Technology.

\$29.95. Order from the Education Connection. Interactive software teaches basic facts; very game-oriented. Good reinforcement for history and science.

GeoSafari Animals. 1996. GeoSafari Geography. 1997. GeoSafari History. 1997. GeoSafari Science. 1997.

Online Tutorials

HOMER

For HOMER information, contact IMSATT, 105 West Broad Street, Falls Church, VA 22046, 703-533-7500.

Escondido Tutorial. www.gbt.org.

This classical Christian online tutorial offers Latin, logic, rhetoric, and great-books tutorials.

Online classes are available from a number of community colleges and correspondance services. Offerings and Websites change almost daily. The best way to find quality online tutorials is to call your local home-school support group or state organization (see Appendix 2) and ask which tutorials other home-school families have used and enjoyed.

Videos/Software

The most economical way to find good videos is to browse through the shelves at your local library. If you're interested in buying, you can find an immense catalog of educational videos at WSI Marketing's Website at www.wsi-marketing.com. You can also request a print catalog by sending \$1.00 to Total Marketing Services, 400 Morris Avenue, Long Branch, NJ 07740. The catalog contains listings for videos from Cousteau, Eyewitness, National Geographic, and Audobon Society; the subject matter ranges from music skills, opera and music theater, and languages to algebra, history, and more.

Milliken Publishing Company, a major educational publisher, carries hundreds of software titles for K–9. Write to them at 1100 Research Boulevard, St. Louis, MO 63132; call toll-free 800-325-4136; or visit their Website at www.millikenpub.com to view the catalog and download demos.

Softbasics Software has particularly good math and grammar drills. Call 413-229-2191; write P.O. Box 255, Mill River, MA 01244; or visit their Website at www.vgernet.net.

23

1//

MOVING TOWARD INDEPENDENCE: Logic for life

What we have to learn to do, we learn by doing. —Aristotle, *Nicomachean Ethics*

Your middle-grade student is busy learning about logic, cause and effect, valid and invalid arguments, clear thinking. All this knowledge isn't limited to bookwork. Logic applies to daily life as well.

The logic stage is a time of growing independence, both mental and practical. As the student begins to form her own opinions, she also should begin to take responsibility for parts of her daily life.

Educationally, this new independence assumes the form of increased time spent in self-study. As you move through the middle-grade years, you—the parent—should start to step back from minute-to-minute supervision of the child's study. Begin in fifth grade by giving the child a single assignment ("Read these two pages in your history book, and choose which topics you want to study further. Then see me.") If the child completes the assignment responsibly, she enjoys the rewards. ("Now you're done. Take some free time.") If she doesn't, she pays the price. ("It's time for swimming. But you've been lying on your bed reading a comic book instead of doing your history, so you'll need to stay in and finish it instead of going outside.")

This is the practical application of logic. Certain behaviors have certain consequences. And responsibility leads to freedom. If the child does her assignments regularly, you can begin to assign her a week's work at a time and check in with her on Fridays to make sure she's finished. If she doesn't complete the work, supervise more closely.

During the logic stage, the home-educated student should begin to understand the logical relationships of daily living as well the connection between responsibility and freedom—that is, between work and money, preparation and success. During the middle grades, students should begin to manage their own finances and keep their own daily schedules.

We suggest that seventh graders open a checking account at a local bank (many offer free checking without a minimum balance to students). Help the student draw up a budget so that she knows what portion of her money (earned or allowance) is available for spending, what part should be saved for a long-term goal (at least 20 percent), what part should be kept for family responsibilities (clothing, presents), and what part should be given away to charity or the religious community.

We also think that the logic stage is the perfect time for students to learn how to keep to a schedule independently. At the beginning of fifth grade, go together to an office supply store, and buy a daily planning calendar and a large wall calendar with enough space to write on for each day of the month.

In the fall, sit down together and make preliminary plans for the entire year. On the large wall calendar, write down the weeks you plan to spend in school, the weeks you'll take off, family holidays, and other commitments. (Now is a good time to explain to the student that schedules are flexible.)

At the beginning of each month, the two of you should make lists of goals. What do you want to accomplish in each subject? What days will the student "go to school"? What other appointments (library visits, music lessons, sports, doctors' visits, birthday parties, holidays, science fairs) need to be written on the calendar? Keep this calendar in a prominent place, and make it a cardinal rule that the student *must* write all new appointments (baby-sitting jobs, nights out, visits with friends) on both cal-

endars as they come up. *A good rule:* If it isn't on the calendar, it doesn't happen. (If you're schooling two or more children, this rule is necessary for your sanity.)

In her daily calendar, the student should keep a basic daily schedule ("Mondays: up by 7, math 8–9:30, science 9:30–11 . . .") and refer to it. Each week, she should list her responsibilities. What should she complete in each subject? How much time can she spend watching TV, playing on the computer, talking on the phone? She should have her own alarm clock and watch so that she can begin to keep track of her own time.

This basic training in the logic of daily life yields three rewards. First, the student gains structure to her days. We understand that different personalities cope well with different degrees of structure, but we firmly believe that everyone needs a daily schedule of some kind in order to be productive.

Second, the student begins to understand that you, the parent, are not the sole motivating force in her life. She doesn't do her assignments because you're nagging her; she does them because the assignments have to be done by Friday so that she can move on to the next week's lessons because she wants to have enough time over the summer to do no school at all. She doesn't turn off the TV because you ordered her to; she turns off the TV because she's used up her TV quota for the day.

Third, she's getting ready for college and a career. Freshmen who fail classes or get fired from jobs often do so because they've never been responsible for their own schedules. They've always gotten up because Mom called them, changed classes because the bell rang, done homework because the teacher told them to. When they reach the relative freedom of college life, they often flounder.

Your classically trained student won't flounder if she has been well trained—not only for academics, but for the responsibilities of daily life.

PARTII

SN//

EPILOGUE

The Logic Stage at a Glance

Guidelines to how much time you should spend on each subject are general; parents should feel free to adjust schedules according to the child's maturity and ability. For sample daily schedules, see Chapter 38.

Fifth Grade

Logic	3 hours per week: do logic puzzles (Mind Benders,
	Red Herrings).
Mathematics	45–60 minutes, four days per week: do fifth-grade
	math (Saxon Math 65); 60 minutes, once per
	week: do real-life math.
History	60 minutes, three days per week, or 1½ hours,
	twice per week: study ancient times (5000 B.C
	A.D. 400), using the Kingfisher Illustrated History of
	the World; outline sections (one sentence per
	paragraph); mark dates on the time line; do map
	work; prepare written summaries on two topics
	per week.
Language	15 minutes per day: do Spelling Workout books; 40
	minutes per day: do formal grammar; 30 minutes
	or more per day: do structured reading-ancient
	myths and legends, epics; 60 minutes per day: do
	free reading.

444 THE LOGIC STAGE

Writing	30-60 minutes daily: do Writing Strands three days
	per week; do dictation twice per week.
Science	1½ hours, two days per week: study biology—day
	1, do reading and prepare a report; day 2, do
	sketches and experiments.
Latin/foreign language	3 or more hours per week, depending on pace:
	study Latin and begin a foreign language.
Religion	10-15 minutes per day: learn the basics of
	personal faith; learn about world religions through
	the study of history.
Art	1-2 hours, once per week: alternate art projects
	with studying ancient art.
Music	1-2 hours, once per week: study the instruments
	of the orchestra.
	Sixth Grade
Logic	3 hours per week: do Introductory Logic.
Mathematics	45-60 minutes, four days per week: do sixth-grade
	math (Saxon Math 76); 60 minutes, once per
	week: do real-life math.
History	60 minutes, three days per week, or 1½ hours,
	twice per week: study medieval-early Renaissance
	times (400–1600), using the Kingfisher Illustrated
	History of the World, reading 6–8 pages per week;
	outline each section; mark dates on the time line;
	do map work; prepare one composition per week.
Language	15 minutes per day: do Spelling Workout books; 40
	minutes per day: do formal grammar; 40 minutes
	or more per day: do structured reading—medieval
	and early Renaissance literature; 60 minutes per
	day: do free reading.
Writing	30–60 minutes, three days per week: do Writing
	Strands; once per week: do essays in history and
	science; twice per month: write personal letters.
Science	1½ hours, two days per week: study astronomy
	and earth science—day 1, do reading and prepare
	report; day 2, do sketches and experiments.

Part II: Epilogue 445

Latin/foreign language	3 or more hours per week, depending on pace:
	study Latin and begin a foreign language.
Religion	10-15 minutes per day: learn the basics of
	personal faith; learn about world religions through
	the study of history.
Art	1–2 hours, once per week: alternate art projects
	with studying medieval and early Renaissance art.
Music	1-2 hours, once per-week: listen to medieval and
	early Renaissance music; read biographies of the
	composers.
	Seventh Grade
Logic	3 hours per week: do Intermediate Logic.
Mathematics	50-60 minutes per day: do Saxon Algebra 1/2 or
	standard pre-algebra.
History	60 minutes, three days per week, or $1\frac{1}{2}$ hours,
	twice per week: study late Renaissance-early-
	modern times (1600-1850), using the Kingfisher
	Illustrated History of the World, reading four to six
	pages per week plus the Jackdaw primary-
	reference packs; outline each section; mark dates
	on the time line; do map work; prepare one
	composition per week.
Language	45 minutes, once per week: do Spelling Workout
	books, and, when finished, go to Vocabulary from
	Classical Roots A and B (5 minutes, four days per
	week: review the material); 40 minutes or more
	per day: do formal grammar; 40 minutes or more
	per day: do structured reading—late Renaissance
	through early modern literature; 60 minutes per
	day: do free reading.
Writing	30-60 minutes, three days per week: do Writing
	Strands; twice per month: write personal letters.
Science	1½ hours, two days per week: study chemistry,
	using kits and reporting on experiments.
Latin/foreign language	3 or more hours per week, depending on pace:
	study Latin and continue with the foreign language.

. 4

Religion

Art

Music

Logic

Mathematics History

Language

Writing

Science

Latin/foreign language

Religion

10–15 minutes per day: learn the basics of personal faith; learn about world religions through the study of history.

1–2 hours, once per week: alternate art projects with studying art from the late Renaissance through the early-modern periods.

1–2 hours, once per week: listen to Renaissance, Baroque, and Classical music; read biographies of the composers.

Eighth Grade

3 hours per week: Critical Thinking, Book One and Critical Thinking, Book Two. 60 minutes per day: do Algebra I. 60 minutes, three days per week, or $1\frac{1}{2}$ hours, twice per week: study modern times (1850-present), using the Kingfisher Illustrated History of the World, reading four pages per week; outline each section; mark dates on the time line; do map work; prepare one composition per week; schedule oral-history interviews once per month. 45 minutes, once per week: do Vocabulary from Classical Roots C and D (5 minutes, four days per week: review the material): 40 minutes or more per day: do formal grammar study; 40 minutes or more per day: do structured reading-literature from 1850 to the present; 60 minutes per day: do free reading.

45–60 minutes, three days per week: do *Writing Exposition*.

1½ hours, two days per week: study physics, using kits and reporting on experiments.

 ge 3 or more hours per week, depending on pace: study Latin and continue with the foreign language.
 10–15 minutes per day: learn the basics of personal faith; learn about world religions through the study of history.

.

Art

1–2 hours, once per week: alternate art projects with studying modern art.

1–2 hours, one day per week: listen to Romantic and modern music; read biographies of the composers.

Music

2.2000 N. Shatte Apport 2.2000 N. Shatte Apport -

PART / III

. .

THE RHETORIC Stage

Ninth Grade through Twelfth Grade



24^{-1}

SPEAKING YOUR MIND: THE Rhetoric Stage

It is absurd to hold that a man should be ashamed of an inability to defend himself with his limbs, but not ashamed of an inability to defend himself with speech and reason; for the use of rational speech is more distinctive of a human being than the use of his limbs.

-Aristotle, Rhetoric

SUBJECT: Rhetoric and debate

TIME REQUIRED: 3 hours per week in grades 9 and 10, plus time spent in extracurricular debate activities

R hetoric is the art of expression. During the rhetoric stage—grades 9 through 12, the traditional high-school years—the student learns to express herself with fluency, grace, elegance, and persuasiveness.

Since self-expression is one of the greatest desires of adolescence, highschool students should have training in the skills of rhetoric so that they can say, clearly and convincingly, what's on their minds. Without these skills, the desire for self-expression is frustrated. Expression itself becomes inarticulate. External objects—clothes, jewelry, tattoos, hairstyles—assume an exaggerated value as the clearest forms of self-expression possible.¹

¹Susan has a completely unscientific theory about this—she believes that students who are skilled in rhetoric will never feel the need for a nose ring.

"To a certain extent," Aristotle writes in *Rhetoric*, the classic text on the subject, "all men attempt to discuss statements and to maintain them, to defend themselves and to attack others. Ordinary people do this either at random, or through practice and from acquired habit."² The study of rhetoric is designed to make success in speech a matter of skill and practice, not accident.

A GENERAL GUIDE TO The Rhetoric stage

Rhetoric is dependent upon the first two stages of the trivium. The grammar stage laid a foundation of knowledge; without knowledge, the rhetorician has nothing of substance to say. The logic stage taught the student to think through the validity of arguments, to weigh the value of evidence. In the rhetoric stage, the student uses knowledge and the skill of logical argument to write and speak about all the subjects in the curriculum.

The last four years of classical education stress expression and flexibility. The student expresses herself by continually writing and speaking about what she's learning. At first, rhetoric is a specific subject for study, just as logic was during the middle grades. But the skills acquired in the study of rhetoric are then exercised in history, science, and literature. In the last two years of schooling, the student will undertake two major writing projects in an area of her own choice, which will show her mastery of rhetoric as well as her skills.

Flexibility becomes paramount as the student pursues her junior and senior writing projects. These demand a great deal of time and effort. When the high schooler decides on the fields she'll study in depth, other subjects in which she has already received a good basic grounding will fade into the background. "Those who are likely never to have any great use or aptitude for mathematics," writes Dorothy Sayers in "The Lost Tools of Learning," "[should] be allowed to rest, more or less, upon their oars."³ The same can be said for languages and for highly technical aspects of the sciences. Twelve

²Aristotle, Rhetoric I.i.

³Dorothy Sayers, "The Lost Tools of Learning," in Douglas Wilson, Recovering the Lost Tools of Learning (Wheaton, Ill.: Crossway, 1991), p. 161.

years of schooling aren't sufficient for a student to complete her studies in a particular field of knowledge anyway. But even though the student may not finish twelfth grade with a comprehensive grasp of science or history, she will know how to learn—a skill that she can use for the rest of her life.

A third distinctive characteristic of the rhetoric stage is its focus on great books. History and literature meld together as the student reads the works of great minds, from ancient Greece to the present day. Great books are rhetoric in action; their persuasion has_stood time's test. As the high schooler studies the rhetoric of classic authors, she analyzes the force of their arguments. Great books provide historical perspective on the accepted truths of our own age; they can prevent the student from swallowing the rhetoric of modern-day orators undigested.

THE STUDY OF RHETORIC

During the rhetoric stage, the student will study the principles of selfexpression and exercise them in both writing and speech.

At first, this study is specific. Ninth- and tenth-grade students will learn the rules of rhetoric from classic texts such as *Rhetoric* and *Ad Herennium* as well as from modern texts that build on the classical foundations.

The study of rhetoric involves developing skill in five areas, or "canons": *inventio, dispositio, elocutio, memoria,* and *pronuntiatio*. The first three of these apply to both written and spoken rhetoric, while *memoria* and *pronuntiatio* apply specifically to debate and speechmaking.

Inventio, "invention," is the process of formulating an argument and gathering all the supporting evidence. It requires both logic and knowledge. In essay writing, *inventio* occurs when you select a thesis and research it, lining up all the proof needed to make your thesis convincing.

Dispositio is the skill of putting all that information into persuasive order. The way you present an argument depends on a slew of factors—the makeup of the audience, the setting you'll be arguing in, the emotional effect various types of information might produce, and so on. *Dispositio* teaches you to arrange all your evidence in the most convincing way. (The question of whether this is also the best and truest way is a source of tension within the study of rhetoric, which continually brings ethical issues to the fore.)

Elocutio, "elocution," teaches you how to evaluate the words you use when you give your argument. Which words will most clearly reveal the truth? (Alternately, which words will produce the desired emotions in the listener?) Which types of metaphors, parallelisms, figures of speech should you use? How can you structure your sentences for maximum effect? The third book of Aristotle's *Rhetoric* offers a powerful lesson in effective prose—from which words to avoid (invented words) to the best way to put a summary paragraph together.

For debate, you'll also need skills in *memoria* (memorizing important points or entire speeches) and *pronuntiatio* (effective methods of delivering the speech).

Rhetoric, Aristotle tells us, leads to fair-mindedness. The student of rhetoric must be able to argue persuasively on both sides of an issue, not in order to convince his audience of that which is wrong, but "in order that we may see clearly what the facts are."⁴ And this is true for every subject in which rhetoric is employed. Rhetoric, Aristotle concludes, is universal.⁵

HOW TO DO IT

During ninth and tenth grades, the student should study rhetoric during those hours previously devoted to logic. Plan on three hours per week, divided into two sessions of one and a half hours each or three sessions of one hour each. *Note:* Don't begin the study of rhetoric until the student has finished *Vocabulary from Classical Roots* and *Writing Strands*. Otherwise, the student's schedule will be impossibly crowded. See Chapter 25 for details.

For each grade, you'll need two texts. Ninth graders should begin with Anthony Weston's A Rulebook for Arguments, an introduction to rhetoric that provides a quick review of logic as applied to written essays; they should then proceed to Classical Rhetoric for the Modern Student by Edward Corbett, an introduction to classical rhetoric techniques. Tenth-grade students will use the classical texts themselves: Aristotle's Rhetoric, followed by Ad Herennium (if time permits), a manual attributed to Cicero.

These texts should be kept on hand during the eleventh- and twelfth-

⁴Aristotle, *Rhetoric* I.1. ⁵Ibid., I.2. grade years, when the study of rhetoric as a subject will give way to the exercise of rhetoric itself.

As with other advanced subjects, you can use a tutor or online tutorial for the study of rhetoric. However, good readers should be able to pursue this study independently by following this pattern:

- 1. Read a section in the text under study—A Rulebook for Arguments, Classical Rhetoric for the Modern Student, Rhetoric, or Ad Herennium.
- 2. Outline the content of the text.
- 3. Provide two examples of the text's lesson, either from someone else's rhetoric or of your own creation.

The ninth grader using *A Rulebook for Arguments* will encounter, at the end of Chapter 4, a section entitled "Personal attacks do not disqualify a source." Weston's text reads:

(17) Personal attacks do not disqualify a source. Supposed authorities may be disqualified if they are *not* informed, impartial, or largely in agreement. *Other* sorts of attacks on authorities are not legitimate. Ludwig von Mises describes a series of illegitimate attacks on the economist Ricardo:

In the eyes of the Marxians the Ricardian theory is spurious because Ricardo was a bourgeois. The German racists condemn the same theory because Ricardo was a Jew, and the German nationalists because he was an Englishman. . . . Some German professors advanced all three arguments together against the validity of Ricardo's teaching.⁶

This is the "ad hominem" fallacy: attacking the *person* of an authority rather than his or her qualifications. Ricardo's class, religion, and nationality are irrelevant to the possible truth of his theories. To disqualify him as an authority, those "German professors" have to show that his evidence was incomplete—that is, they have to show that his judgments were not fully *informed*—or that he was not impartial, or that other equally reputable economists disagree with his findings. Otherwise, personal attacks only disqualify the *attacker*!⁷

⁶L. von Mises, *Human Action* (New Haven: Yale University Press, 1963), p. 75. ⁷Anthony Weston, *A Rulebook for Arguments* (Indianapolis: Hackett, 1992), pp. 35–36. A good outline of this passage might look like this:

- I. An authority can be attacked for three reasons.
 - A. Not being informed.
 - B. Not being impartial.
 - C. Being out of agreement with most other authorities.
- II. An authority cannot be attacked for his person.
 - A. This is the "ad hominem" fallacy.
 - B. Class, religion, nationality, or other personal attacks are irrelevant.
 - C. Ad hominem attacks disqualify the attacker.

The student would follow this by finding two examples of ad hominem attacks in a political speech (a depressingly easy exercise) or by writing her own ad hominem refutation of something she's read. Either exercise will show that she understands the concept.

In Book I, Chapter 4, of Aristotle's *Rhetoric*, the tenth grader will find the following passage:

First, then, we must ascertain what are the kinds of things, good or bad, about which the political orator offers counsel. For he does not deal with all things, but only with such as may or may not take place. Concerning things which exist or will exist inevitably, or which cannot possibly exist or take place, no counsel can be given. Nor, again, can counsel be given about the whole class of things which may or may not take place; for this class includes some good things that occur naturally, and some that occur by accident; and about these it is useless to offer counsel. Clearly counsel can only be given on matters about which people deliberate; matters, namely, that ultimately depend on ourselves, and which we have it in our power to set going. For we turn a thing over in our mind until we have reached the point of seeing whether we can do it or not.

Outlined, this passage might appear:

- I. The limits of political rhetoric.
 - A. Politicians shouldn't talk about things that are impossible or that will inevitably happen.

- B. Politicians shouldn't talk about good things that may or may not occur, if these are completely natural occurrences.
- C. Politicians can only give advice on matters that people can change through their actions.

It shouldn't be difficult for the student to find a speech in which a politician holds forth about the impossible or the inevitable, or takes credit for some naturally occurring good. (Alternately, she can write her own political rhetoric illustrating these errors.)

The classic texts are obviously more challenging than those used in the ninth-grade year, but by the time the student has gone through Weston and Corbett, she should be well prepared to tackle them.

Aim to finish A Rulebook for Arguments in two to three months so that the rest of the ninth-grade year can be spent on the Corbett text. Aristotle's *Rhetoric* should take one to two semesters to complete; if the *Rhetoric* is finished before the end of the tenth-grade year, continue on to Ad Herennium. It's fine to spend the entire year on the *Rhetoric*, although many students will finish the text in less time.

For a complete explanation of the junior and senior projects, see Chapter 33.

DEBATE

Involvement in a debate club or society provides invaluable, hands-on training in rhetoric. If at all possible, find a local debate society, and enroll your ninth grader in it. Try to pursue debate throughout ninth and tenth grades. If the eleventh grader no longer wants to take part, debate can then be dropped from the curriculum—it has served its purpose.

Your local university or college is a good starting place. Call the theater department, which is generally connected with the debate club because debate is a spoken performance. Ask who coaches the debate team. Once you've found the coach, explain what you're doing, list the rhetoric texts you're using, and ask how your ninth grader can practice debating skills. The coach may invite the student to sit in on the college sessions. At the very least, he should be able to direct you to an age-appropriate debate group nearby. You can also call a parochial school, if you happen to have a good one nearby. Ask for the debate-team coach, and explain your situation. Some private schools welcome home schoolers to extracurricular clubs.

Finally, you can call your state home-education organization (see pages 687–704) and ask about debate clubs for home schoolers. More and more of these are popping up. The quality of the coaching tends to be mixed—you can end up with anyone from an overworked parent who's never studied rhetoric to a moonlighting university professor. Ask about the qualifications of the coach before you commit. But these groups are often very resource-ful, mounting regular competitions and even statewide championships for home schoolers.

SCHEDULES

Finish Vocabulary from Classical Roots and Writing Strands before beginning rhetoric.

	Sc	hedules
Ninth grade	3 hours per week	A Rulebook for Arguments (9–14 weeks); Classical Rhetoric for the Modern Student (remainder of the year).
	Extracurricular	Debate club.
Tenth grade	3 hours per week	Aristotle's Rhetoric (18-36 weeks,
		depending on ease of learning); Ad
		Herennium (remainder of the year).
	Extracurricular	Debate club.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Rhetoric

Aristotle. *The Art of Rhetoric*. Trans. John Henry Freese. Cambridge, Mass.: Harvard University Press, 1975.

\$18.50. Order from Greenleaf Press. The Loeb edition has Latin and English text on facing pages. If you'd prefer a cheaper paperback translation without the Greek, you can buy the Penguin edition, translated by Hugh Lawson-Tancred (New York: Penguin, 1992), for \$12.95 through any bookstore.

Cicero (pseudo). Ad Herennium. Trans. Harry Caplan. Cambridge, Mass.: Harvard University Press, 1981.

\$19.95. Order from Greenleaf Press. The Loeb edition has Latin and English text on facing pages.

Corbett, Edward P. J. Classical Rhetoric for the Modern Student. 4th ed. Oxford: Oxford University Press, 1998.

\$35.00. This is available only in hardback. Order it from any bookstore or online bookseller.

Weston, Anthony. A Rulebook for Arguments. 2d ed. Indianapolis, Ind.: Hackett, 1992.

\$7.00. Order from Greenleaf Press.

Debate

The Home School Legal Defense Association (HSLDA), a national homeeducation advocacy group, sponsors a national debate tournament for home schoolers every year. For information, visit their Website at www.hslda.org, write to them at P.O. Box 3000, Purcellville, VA 20134, or call them at 540-338-5600. HSLDA is Republican and Christian in orientation, which some may find unacceptable. The debate tournament, though, is judged on skill, not by a sectarian or political agenda.

If you're inspired to start your own debate club, look for these useful titles through any bookstore:

Oberg, Brent C. Forensics: The Winner's Guide to Speech Contests. Colorado Springs, Col.: Meriwether Publishing, 1995.

\$14.95. A guide to debate, specifically geared toward competition skills.

Phillips, Leslie, William S. Hicks, and Douglas R. Springer. *Basic Debate*. 4th ed. Lincolnwood, Ill.: National Textbook Company, 1996.

\$29.95. A standard hardcover textbook on the subject. Highly regarded.

Phillips, Leslie. *Basic Debate: Teacher's Resource Book*. 4th ed. Lincolnwood, Ill.: National Textbook Company, 1997. \$21.95.

SKILL WITH WORDS: GRAMMAR AND WRITING

25

MIL.

Reading maketh a full man, writing an exact man, and conference a ready man.

-Francis Bacon

SUBJECT: Grammar and writing skills TIME REQUIRED: 3 hours or more per week

In many classical programs, English as a subject drops out of the schedule by high school. Reading and writing aren't separate "subjects," after all, but skills that cut across the entire curriculum. Reading means coming in contact with the philosophical and creative minds of the past and present, something that occurs in both history and science. Writing takes place every day in every subject. So why do we need English as a subject any more?

Overall, we agree with this point of view. It does assume, though, that the ninth grader has a complete grasp of grammar, syntax, and usage. We haven't found this to be generally true.

The middle-grade language topics—spelling and word study, grammar, reading, and writing—do change in high school. In the rhetoric stage, the

461

student finally begins to put the knowledge and skills he's acquired during the first eight years of education to work. Once mastered, basic skills (such as spelling, constructing paragraphs and essays, and developing logical arguments) can be eliminated as specific subjects of study. The skills acquired during the logic stage don't disappear, but the student's focus is now on using those skills rather than acquiring them. A painter may take a special class in art school on mixing colors. He won't stay in this class for the rest of his painting career, but he will continually mix colors as he creates works of art.

HOW TO DO IT

During the rhetoric stage, we suggest that the student keep a single notebook, the language reference notebook. This notebook will serve not as an exercise book, but as a handbook of basic skills. One notebook should be used for the four years of high school.

Divide the language reference notebook into four sections: Words, Grammar, Principles of Reading, and Principles of Writing.

Spelling and Word Study

Try to finish *Vocabulary from Classical Roots E* in ninth grade. If necessary, complete books *C* and *D* first.

Ninth graders who have followed the program outlined in Chapter 17 know how to spell. They've already studied the rules of spelling and the principles of word formation. Any new words they encounter can be spelled by comparing them to words they already know. Words that consistently trip them up (and we all have a few) should be kept on a list in the Words section of the language reference notebook. No other formal spelling work is necessary.

The reading and language study done during the middle grades should have developed the student's vocabulary skills so that he can tackle classic works without trouble. Even though his vocabulary will continue to grow for the rest of his life, during the rhetoric stage vocabulary acquisition will come "on the job"—from constant reading (exposure to new words in context) and writing (searching for just the right word to use).

We strongly suggest that you do finish up the Vocabulary from Classical

Roots series. If you're on track, you finished book *D* at the end of the eighthgrade year; book *E* can be done in the fall of the ninth-grade year. *E* reviews the roots, prefixes, and suffixes already used; continue to keep a record of these on pages headed "Prefixes_and Suffixes" and "Word Roots" (see Chapter 17 for a full description). If you're not up to book *D* yet, simply continue with the series until you're finished.

Follow the pattern recommended in Chapter 17 (page 332):

Monday	30-45 minutes	Read through the word roots,
		definitions, and sample
		sentences; make 3×5 -inch flash
		cards for each Latin root and
		unfamiliar English word.
Tuesday–Thursday	5–10 minutes	Drill with flash cards.
Friday	10 minutes	Review flash cards; complete
		exercises; check.

Once you've finished *Vocabulary from Classical Roots E*, no further formal vocabulary and spelling work is required. As the student encounters unfamiliar words in his reading, though, he should copy them into the Words section of the notebook, along with pronunciation (these symbols were taught in the *Spelling Workout* books), origin, definition, and the sentence in which they are used.

When reading *Jane Eyre*, for example, the eleventh-grade student will come across this paragraph:

In her turn, Helen Burns asked me to explain; and I proceeded forthwith to pour out, in my own way, the tale of my sufferings and resentments. Bitter and truculent when excited, I spoke as I felt, without reserve or softening.

If he's not familiar with the word "truculent," he should look it up in the dictionary and make an entry in his language reference notebook:

Truculent. 'trəkyələnt. From the Latin *truculentus*, wild or fierce. "Feeling or showing savage ferocity, harsh, aggressively selfassertive." *Jane Eyre:* "Bitter and truculent when excited, I spoke as I felt, without reserve or softening." This word-study exercise will help build both Latin and English vocabulary skills.¹ The student will need some encouragement to stop and do this when he sees an unfamiliar word, rather than skimming over it and going on. As the rhetoric stage continues, though, he'll find himself stopping less often.

During the rhetoric stage, you *must* have two reference works on hand: a dictionary (unabridged, if you can afford it) and *Roget's Thesaurus*. Encourage the student to use the thesaurus continually while writing, choosing the exact word for every occasion.

Grammar

Try to follow this pattern:

Ninth grade	A Beka's Grammar and Composition III or Writer's Choice
	Grammar Workbook 9
Tenth grade	A Beka's Grammar and Composition IV or Writer's Choice
	Grammar Workbook 10
Eleventh grade	A Beka's Handbook of Grammar and Composition and
	Workbook A, or Writer's Choice Grammar Workbook 11
Twelfth grade	A Beka's Handbook of Grammar and Composition and
	Workbook B, or Writer's Choice Grammar Workbook 12

Grammar is the single language-skill area that you should study every year through senior high. Grammar, usage, and mechanics must become completely automatic for truly mature reading and writing to take place. And although the logic-stage student has been exposed to all the grammar skills he needs, the skills haven't yet had time to become part of his mental apparatus.

As in the logic stage, you can choose between an excellent grammar program put out by a Christian publisher (A Beka Book) and an adequate but not-quite-as-challenging grammar-workbook series produced by a nonsectarian education press (Glencoe's *Writer's Choice Grammar Workbook* series).

The A Beka Grammar and Composition series continues from eighth

¹A side benefit: excellent performance on the verbal section of the SAT.
grade with Grammar and Composition III (ninth grade) and Grammar and Composition IV (tenth grade). Senior-high-school students use the A Beka Handbook of Grammar and Composition, a reference work, for grades eleven and twelve, each with its accompanying workbook. (If you begin the A Beka program after ninth grade, start with Grammar and Composition III, which is foundational to the whole program.)

The A Beka program turns out good, confident writers and readers. Susan used it in high school and highly recommends it. As we've mentioned before, the program is drill-intensive; you shouldn't try to do all the exercises in every lesson unless you are weak in that area. Also, you don't need to complete the writing exercises where they overlap with what's already been taught in *Writing Strands*. However, if the *Writing Strands* skills have begun to fade, you can use the A Beka exercises as refreshers.

Don't bother with the A Beka research-paper assignments. The method is unnecessarily complicated, and the student will undertake two research projects in the junior and senior years anyway.

If you feel inadequate to supervise advanced grammar, you can enroll in either A Beka's correspondence courses or its video courses. The correspondence courses range from \$150.00 to \$185.00 for the year; you take care of adminstering the daily lessons, but A Beka will check all work and issue a grade. The video courses are more expensive (\$370.00 per course), but all the teaching (which isn't scintillating) is on video. High-school students would be better off studying on their own, developing academic independence and self-direction. But if your student struggles with grammar, this is a good option. Be aware that if you opt for either the correspondence courses or the video courses, you must complete every assignment, which will probably require you to cut back on some other area of the classical curriculum.

The Writer's Choice Grammar Workbook series provides a good basic review and drill in grammar (including diagramming), usage, and mechanics. There's little in the way of writing exercises, so don't skip anything. Each workbook consists of a handbook in the front, a "troubleshooting" section illustrating common faults, and a grammar-drill section (most of the workbook). Begin with the grammar drill, using the other two sections for reference. Each workbook contains 109 short lessons plus tests that the student can administer to himself, so you'll need to plan on completing a lesson per day of study (a reasonable requirement). Whichever program you choose, plan on spending 45 minutes per day five times per week or an hour three times per week on grammar skills. The student should follow a three-part process:

- 1. Read through the lesson and examples.
- 2. Copy all grammar and usage rules into the Grammar section of the language reference notebook.
- 3. Complete and check the exercises.

Reading

Follow this schedule:

Ninth gradeHow to Read a Book.Tenth gradeReading Strands.

The rhetoric stage is centered around the study of great books of philosophy, politics, religion, poetry, fiction, biography. Rather than studying history and literature as two separate subjects, the classically educated student recognizes that these pursuits are essentially the same.

Because of this, "reading" as such is swallowed up by the great-books study outlined in the next chapter. But the beginning student of rhetoric still has to prepare himself to read and analyze intelligently.

The ninth grader should read and outline the modern classic *How to Read a Book*, by Mortimer Adler and Charles Van Doren (yes, of *Quiz Show* fame). First published in 1940, *How to Read a Book* tells you how to read actively and attentively, pencil in hand.² Adler (an early proponent of classical education for modern times) and Van Doren teach the various levels of reading (skimming, inspection, speed reading, and more), reading techniques for different types of books (practical, imaginative, philosophical, mathematical, and so on), how to extract an author's message, proper criticism, and more.

²This method of learning has a long and honorable pedigree. Such literary luminosities as Alexander Pope and Robert Browning were almost completely self-educated. They spent their young adult years reading and taking notes on great books of every description. Great-books study (as outlined in Chapter 26) will be done for two hours per day. The ninth grader should spend this time at the beginning of the year reading *How to Read a Book* and outlining its instructions in the Principles of Reading section of the lánguage reference notebook.

This outlining process should focus on the actual instructions given in the book. Chapters 1 through 3 of *How to Read a Book* contain valuable information about the reading process and the stages of reading. But actual tips for how to read a book begin with Chapter 4. Outlining should start with this chapter.

Don't rush this process; if the student spends most of a semester absorbing the principles in this book, he'll reap the benefits for a lifetime. But most students should be able to complete this outline in four to eight weeks. When the student has finished *How to Read a Book*, he'll begin his readings in the Ancients period. He should consciously follow these instructions as he reads and responds to the great books.

The tenth-grade student should follow the same process, using *Reading Strands*. This manual is a guide to the intelligent reading and discussion of imaginative literature. *Reading Strands* reviews the categories of literature and their characteristics, introduces methods of Socratic dialogue for discussing imaginative works, and contains reading lists (you can use these to supplement the lists of great books in Chapter 26). Both parent and student should read this book so that the two of you can discuss the fiction and poetry that you have read. In tenth grade, at the beginning of the year, the student will use the two hours that have been set aside each day for great books to go over *Reading Strands* until he's finished it (again, a four- to eight-week process). He'll then go on to read the great books of the Middle Ages (see Chapter 26 for a summary).

Once *Reading Strands* has been completed, formal reading instruction is over. But throughout the rhetoric stage, the student should continually refer back to his outlines in the Principles of Reading section of the language reference notebook.

Writing

Ninth grade

Finish Writing Strands 7 and Writing Exposition; read The Elements of Style.

468 THE RHETORIC STAGE

Tenth grade	Reread	The	Elements	of Style.
Eleventh grade	Reread	The	Elements	of Style again.
Twelfth grade	Reread	The	Elements	of Style yet again.

Like reading, formal writing instruction is dropped from the curriculum during the rhetoric stage. Instead, the student writes—about history, science, art, great books, and everything else he studies.

Grammar and composition work will continually reinforce the writing skills already learned. In addition, the rhetoric texts teach skills that will improve the student's writing ability.

If you haven't finished the *Writing Strands* series, continue the middlegrade schedule into the rhetoric stage until all the books have been completed. By this time, the student will have learned the basic forms of writing (essays, argumentative essays, creative forms, research papers, book reports). Now he'll put them to use.

Once *Writing Strands* is completed, we suggest that you buy William Strunk and E. B. White's classic, *The Elements of Style*. Keep it on hand as a reference work. Require the student to go through it actively, pencil in hand, following Adler and Van Doren's method for reading practical non-fiction. Rhetoric-stage students should read *The Elements of Style* every year and refer to it constantly as they edit and revise their own writing.

SCHEDULES

Ninth grade	Finish Vocabulary from Classical Roots series (books C, D,
	and E); do A Beka's Grammar and Composition III or
	Writer's Choice Grammar Workbook 9; work through How
	to Read a Book (during great-books study); finish
	Writing Strands 7 and Writing Exposition; read The
	Elements of Style.
Tenth grade	Do A Beka's Grammar and Composition IV or Writer's
	Choice Grammar Workbook 10; work through Reading
	Strands (during great-books study); reread The Elements
	of Style.
Eleventh grade	Do A Beka's Handbook of Grammar and Composition and
	Workbook A, or Writer's Choice Grammar Workbook 11;
	reread The Elements of Style.

Twelfth grade

Do A Beka's Handbook of Grammar and Composition and Workbook B, or Writer's Choice Grammar Workbook 12; reread The Elements of Style.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. Books in a series are listed together.

Spelling/Word Study

Chapman, Robert, ed. Roget's International Thesaurus. 5th ed. New York: HarperCollins, 1993.

\$18.95. This is available at most bookstores as well as online.

Fifer, Norma, and Nancy Flowers. *Vocabulary from Classical Roots* series. Cambridge, Mass.: Educators Publishing Service, 1994.

Student books are \$6.90 each; *Teacher's Guide and Answer Key* books are \$4.00 each. Order from Educators Publishing Service.

Vocabulary from Classical Roots C. Teacher's Guide and Answer Key C. Vocabulary from Classical Roots D. Teacher's Guide and Answer Key D. Vocabulary from Classical Roots E. Teacher's Guide and Answer Key E.

Grammar

A Beka Book Grammar and Composition series. Pensacola, Fla.: A Beka Book.

Order directly from A Beka Book, Inc. For information on enrolling in the correspondence or video English courses, call A Beka Book at 800-874-3592. The materials include tests. You should administer these during high school to check your student's comprehension and to help him practice test taking.

Grammar and Composition III (ninth grade) (\$12.45).

Teacher Key (\$14.75). Student Test/Ouiz Book (\$4.90). Teacher Test/Ouiz Kev (\$8.60). Grammar and Composition IV (tenth grade) (\$12.45). Teacher Key (\$14.75). Student Test/Ouiz Book (\$4.90). Teacher Test/Quiz Key (\$8.60). Handbook of Grammar and Composition (eleventh and twelfth grades) (\$12.95).Workbook A for Handbook of Grammar and Composition (eleventh grade) (\$10.95). Teacher Kev (\$14.75). Student Test Book (\$4.90). Teacher Test Kev (\$8.60). Workbook B for Handbook of Grammar and Composition (twelfth grade) (\$10.95). Teacher Kev (\$14.75). Student Test Book (\$4.90). Teacher Test Key (\$8.60).

Writer's Choice Grammar Workbook series. Westerville, Ohio: Glencoe-McGraw Hill, 1996.

Order directly from Glencoe–McGraw Hill.
Writer's Choice Grammar Workbook 9 (\$10.99).
Teacher's Annotated Edition (\$22.47).
Writer's Choice Grammar Workbook 10 (\$10.99).
Teacher's Annotated Edition (\$22.47).
Writer's Choice Grammar Workbook 11 (\$10.99).
Teacher's Annotated Edition (\$22.47).
Writer's Choice Grammar Workbook 12 (\$10.99).
Teacher's Annotated Edition (\$22.47).

Reading

Adler, Mortimer J., and Charles Van Doren. How to Read a Book. Rev. ed. New York: Simon & Schuster, 1972.

\$12.50. Order from Canon Press.

Reading Strands. Niles, Mich.: National Writing Institute, 1995.

\$22.95. Order direct from the National Writing Institute or from Rainbow Resource Center for a small discount.

Writing

Strunk, William, and E. B. White. *The Elements of Style*. 3d ed. New York: Allyn & Bacon, 1979.

\$5.95. Buy at any bookstore or order from Rainbow Resource Center.

Writing Strands, Challenging Writing Programs for Homeschoolers series. Niles, Mich.: National Writing Institute, 1995.

The *Writing Strands* program can be purchased directly from the National Writing Institute or, at a small discount, from Rainbow Resource Center. *Writing Strands* 6 (\$19.25).

Writing Strands 7 (\$21.00).

Writing Exposition (\$21.00).

Evaluating Writing (\$17.95).

This booklet for parents/teachers reviews common problems and how to fix them. It also includes an IBM PC program to improve your editing. A good parent resource.

26

1

GREAT BOOKS: HISTORY AND Reading

Reading is to the mind what exercise is to the body. —Richard Steele, The Tatler

SUBJECT: History and reading TIME REQUIRED: 10 hours per week

I f grammar-stage learning is fact-centered and logic-stage learning is skill-centered, then rhetoric-stage learning is idea-centered. During the rhetoric stage, the student actively engages with the ideas of the past and present—not just reading about them, but evaluating them, tracing their development, and comparing them to other philosophies and opinions.

This sounds abstract, but fortunately there's a very practical way to engage in this conversation of ideas: read, talk about, and write about the great books of the world.

To some extent, the division between history and literature has always been artificial; we know about history from archaeology and anthropology, but our primary source of historical knowledge is the testimony of those who lived in the past. Without the books written by Aristotle, Homer, Plato, Virgil, and Caesar, we would know very little about the politics, religion, culture, and ideals of Greece and Rome.

By ninth grade, the student has already traveled twice through the story of mankind; she's already been exposed to the major writers and thinkers of each historical period. Although the student will record dates and read summaries of historical events, the focus of rhetoric-stage history is on ideas rather than on facts. The study of great books allows the past to speak for itself, combining history, creative writing, philosophy, politics, and ethics into a seamless whole.

The goal of the rhetoric stage is a greater understanding of our own civilization, country, and place in time, stemming from an understanding of what has come before us. "The old books," writes classical schoolmaster David Hicks, "lay a foundation for all later learning and life."¹ The student who has read Aristotle and Plato on human freedom, Thomas Jefferson on liberty, Frederick Douglass on slavery, and Martin Luther King, Jr. on civil rights will read Toni Morrison's *Beloved* with an understanding denied to the student who comes to the book without any knowledge of its roots.

Remember, again, that the goal of classical education is not an exhaustive exploration of great literature. The student with a well-trained mind continues to read, think, and analyze long after classes have ended.

We have supplied lists of great books for each year of study, the ninthgrade list being the shortest, the twelfth-grade list the longest and most complex. A few words about list making:

- 1. The lists are flexible. Depending on speed of reading and comprehension, the student might read eight books or fifteen or thirty. No one will read all the books listed.
- 2. If the student finds a work impossible to understand after she's had a good try at it, let her move on.
- 3. The lists are mostly made up of books that are from the historical period being studied; the date of composition or publication of each entry follows in parentheses. We've also included several excellent works of history covering the times under study. These have no dates following them.
- 4. Read the titles in chronological order—as they appear on the lists.

¹David Hicks, Norms and Nobility: A Treatise on Education (New York: Praeger, 1981), p. 138.

5. List making is dangerous. We've left important books off this list. We've put titles on it that you may find trivial. You will encounter many lists of important books as you home-school, created by people of different ideologies; and those lists inevitably reflect those ideologies. You can always add or drop titles from our list.

HOW TO DO IT

To organize your study of great books, you'll need three basic texts: A Short History of Western Civilization, The Timetables of History, and the Dorling Kindersley History of the World. A Short History is a high-school/college-level survey of the history of the West, from the ancients up to the early twentieth century. The Timetables of History is a big paperback reference book. From 4500 B.C. until A.D. 1990, the Timetables lists historical events, birth and death dates of important people, books, paintings, inventions, and other facts. Although the Dorling Kindersley History is designed for juniorhigh students, rhetoric-level students will also find it useful. It is a visual survey of world history that covers people and events continent by continent. Since the great-books list is heavily weighted toward Western civilization, the Dorling Kindersley History will provide a useful running commentary on what was going on in other parts of the world.

Once again, you'll be dividing your study into four years: Ancients (5000 B.C.–A.D. 400) in ninth grade; medieval–early Renaissance (400–1600) in tenth grade; late Renaissance–early modern (1600–1850) in eleventh grade; modern (1850–present) in twelfth grade.

For each grade, the student should keep a three-ringed notebook, labeled "Great Books." Each notebook should be divided into three sections: Context, Book Notes, and Compositions.

For each book on the list, the student should follow this pattern:

 Glance at the appropriate pages in *The Timetables of History* and the Dorling Kindersley History of the World. Read the corresponding section in the Short History of Western Civilization. Then, write a one-page summary, setting the book in historical perspective.² Give basic informa-

²Create a context page only for the great books themselves, not for the history books we've included on the list. The ninth grader should make a Context page for Cicero's *De republica*, written around 54 B.C., but not for William Davis's history book *A Day in Old Rome*.

tion about the author, his times, his country, and his purposes in writing; summarize great events going on in the rest of the world. File this page in the Context section of the notebook. *Note:* As you progress through the lists in chronological order, this section will begin to resemble a one-volume world history in its own right.

- 2. Read through the text, pencil in hand, using the techniques suggested in Adler and Van Doren's *How to Read a Book*. File all the notes you take on the book in the Book Notes section of the great-books notebook.
- 3. Discuss the text. Talk about its purposes, its strengths, its weaknesses. Have a conversation about the ideas and whether or not they are valid.
- 4. Write about the text. This is a flexible assignment—you can write a book report, an evaluation, an argumentative essay proving some point about the book, or an analysis of the book's ideas. All of these forms have been taught in *Writing Strands* and *Writing Exposition*, and the continuing study of rhetoric will further develop writing skills. Put the finished composition (at least two pages) in the Compositions section of the notebook.

We offer the following lists of great books as general guides for the highschool student. Although she isn't obliged to read everything on this list, what she does read should be read in chronological order, as has been organized here.

Ninth Grade

Bible: Genesis—Book of Job *Epic of Gilgamesh* (c. 2500 B.C.)
Homer, *Iliad* (c. 850 B.C.)
Homer, *Odyssey* (c. 850 B.C.)
William S. Davis, *A Day in Old Athens*Herodotus, *History of the Persian Wars* (c. 431–426 B.C.)
Thucydides, *The History of the Peloponnesian War* (fifth century B.C.) (Livingston abridged edition)
Sophocles, *Oedipus Rex* (c. 440 B.C.)
Euripides, *Medea* (c. 431 B.C.)
Aristophanes, *The Frogs* (405 B.C.)
Plato, *The Republic* (c. 387 B.C.)

476 THE RHETORIC STAGE

Plato, Symposium (c. 387 B.C.)
Aristotle, On Poetics (384–322 B.C.)
Aristotle, Ethics (384–322 B.C.)
William S. Davis, A Day in Old Rome
Bible: Book of Daniel (c. 165 B.C.)
Lucretius, On the Nature of Things (c. 60 B.C.)
Cicero, De republica (54 B.C.)
Virgil, Aeneid (c. 30 B.C.)
Ovid, Metamorphoses (c. A.D. 5)
Bible: Corinthians 1 and 2 (c. A.D. 58)
Josephus, Wars of the Jews (c. A.D. 68)
Plutarch, The Lives of the Noble Greeks and Romans (c. A.D. 100)
Tacitus, On the Incarnation (c. A.D. 300)

Tenth Grade

Augustine, Confessions (c. 411) Augustine, City of God, Book 8 (c. 411) Boethius, The Consolation of Philosophy (524) Koran (selections) (c. 650) Beowulf (c. 1000) Mabinogion (c. 1050) David Howarth, 1066: The Year of Conquest Anselm, Cur Deus Homo (c. 1090) William Stearns Davis, Life in a Medieval Barony James Daugherty, The Magna Carta Robert Goodwin, ed., Aquinas: Selected Writings (c. 1273) Dante, The Inferno (1320) Sir Gawain and the Green Knight (c. 1400) Chaucer, The Canterbury Tales (selections) (c. 1400) Malory, Le Morte d'Arthur (selections) (c. 1470) Erasmus, Education of a Christian Prince (selections) (1510) Machiavelli, The Prince (1513) Thomas More, Utopia (1516) Martin Luther, Commentary on Galatians (c. 1520) John Calvin, Institutes of the Christian Religion (selections) (1536) Albert Marrin, Empires Lost and Won: The Spanish Heritage in the Southwest

Great Books: History and Reading 477

Christopher Marlowe, Faustus (1588) Edmund Spenser, The Faerie Queene (1590) William Shakespeare, Julius Caesar (1599) William Shakespeare, Hamlet (1600) William Shakespeare, other plays (c. 1592–1611) William Stearns Davis, Life in Elizabethan Days

Eleventh Grade

Miguel de Cervantes, Don Ouixote (abridged) (1605) John Donne, Divine Meditations (c. 1635) René Descartes, Principles of Philosophy (1644) John Milton, Paradise Lost (selections) (1664) Blaise Pascal, Pensées (1670) John Bunyan, The Pilgrim's Progress (1678) John Locke, "An Essay Concerning Human Understanding" (1690) Ionathan Swift, Gulliver's Travels (1726) Edmund Burke, "On American Taxation" (1774) Albert Marrin. The War for Independence Jean-Jacques Rousseau, "The Social Contract" (1762) Benjamin Franklin, The Autobiography (1771) The Declaration of Independence (1776) Immanuel Kant, "Critique of Pure Reason" (1781) Alexander Hamilton et al., The Federalist (1787-1788) Constitution of the United States (ratified 1788) William Blake, Songs of Innocence and Experience (1789) Thomas Paine, "The Rights of Man" (1792) William Wordsworth and Samuel Taylor Coleridge, Lyrical Ballads (1798) Jane Austen, Pride and Prejudice (1813) Mary Shelley, Frankenstein (1818) John Keats, "Ode to a Nightingale" and other poems (1820s) James Fenimore Cooper, The Last of the Mohicans (1826) Alfred, Lord Tennyson, "The Lady of Shalott" and other poems (1832) Edgar Allan Poe, "The Fall of the House of Usher" and other stories (1839)Ralph Waldo Emerson, "Self-Reliance" (1844) Charlotte Brontë, Jane Eyre (1847) Herman Melville, Moby Dick (1851)

6

Twelfth Grade

Alexis de Tocqueville. Democracy in America (1835) Karl Marx and Friedrich Engels, Communist Manifesto (1848) Harriet Beecher Stowe. Uncle Tom's Cabin (1852) Henry David Thoreau, Walden (1854) Walt Whitman, Leaves of Grass (1855) Fyodor Dostoyevsky, Crime and Punishment (1856) Charles Darwin. On the Origin of Species (1859) Charles Dickens, Great Expectations (1861) Albert Marrin, Unconditional Surrender: U. S. Grant and the Civil War Albert Marrin, Virginia's General: Robert E. Lee Abraham Lincoln, Gettysburg Address (1863) Carl Sandburg, Abraham Lincoln: The War Years (Pulitzer biography, 1940) Leo Tolstoy, War and Peace (1864) Thomas Hardy, The Return of the Native (1878) Friedrich Nietzsche, Thus Spake Zarathustra (1883) Mark Twain. Huckleberry Finn (1884) W. B. Yeats, Selected Poems (1895) Sigmund Freud, The Interpretation of Dreams (1900) G. K. Chesterton, "The Innocence of Father Brown" (1911) Wilfrid Owen, Selected Poems (1918) Robert Frost, "A Poem with Notes and Grace Notes" (Pulitzer, 1924) Franz Kafka, "The Trial" (1925) T. S. Eliot, Murder in the Cathedral (1935) Zora Neale Hurston, Their Eyes Were Watching God (c. 1937) Thornton Wilder, Our Town (1938) John Steinbeck, The Grapes of Wrath (1939) Adolf Hitler, Mein Kampf (1939) George Orwell, Animal Farm (1945) Ralph Ellison, Invisible Man (1952) C. S. Lewis, Mere Christianity (1952) Arthur Miller, The Crucible (1953) Robert Bolt, A Man for All Seasons (1962) Martin Luther King, Jr., "Why We Can't Wait" (1964) Tom Stoppard, Rosencrantz and Guildenstern Are Dead (1967) Aleksandr Solezhenitsyn, The Gulag Archipelago (1974) Sylvia Plath, Collected Poems (1981, posthumous) Toni Morrison, Beloved (1988)

The ninth grader, for example, would prepare to read Aristophanes' *The Frogs* by, first of all, looking up 405 B.C. in *The Timetables of History*. The *Timetables* reveals that Aristophanes was born around 450 B.C. and died around 387 B.C.; during this period, several important law systems (the Torah and the Twelve Tables of the Roman law) were codified; Greek architecture flourished (the Acropolis was rebuilt along with several other important Greek buildings); the plague swept through Athens; Greece fought its way through a series of important battles, including the Peloponnesian War; and Ezra and Nehemiah rebuilt the wall of Jerusalem. According to the *Dorling Kindersley History of the World*, Darius of Persia rose to power as well; the Paracus culture flourished in Peru; and in Ohio, the Adena people reached the peak of their civilization. The student would then read about the years 450–387 B.C. in the *Short History of Western Civilization*.

After all this reading, the student would go on to create a Context page a one-page summary of the historical events between 450 and 387 B.C. Since *The Frogs* is a Greek work, the one-page summary should focus on events in Greece—the Peloponnesian War, the renaissance in architecture, Greece's forms of government and ethics. The student can briefly summarize events elsewhere in a final paragraph.

This summary page should not be an exhaustive study of ancient history between 450 and 387 B.C. Rather, the student should choose to focus on one series of events during this time. She'll write more than one summary about this period, after all; as she reads the *History of the Persian Wars* or *The History of the Peloponnesian War, Oedipus Rex* or *Medea*, the *Republic* or the *Symposium*, she'll come back to these years again and write yet another context page, focusing on a different series of events.

But even if she doesn't return to this period of history, don't worry. As in every part of the classical education, you're not aiming for a total mastery of history. You're aiming to teach methods of learning—how to read historical documents and put them in context. The student who masters this process will go on "doing history" for the rest of her life.

When this summary page is done, the ninth grader should file it in the Context section of the notebook and crack open her volume of Aristophanes. She'll now read through *The Frogs*, taking notes on it as Adler and Van Doren teach in *How to Read a Book*. When she's finished, she'll head these notes *"The Frogs* by Aristophanes" and put them in the Book Notes section of the great-books notebook.

Once this is done, you'll sit down with the student and talk about the play. Why was it written? What's Aristophanes' main point? Does it succeed as a drama? Which parts were interesting? which were boring? why? What is the play's structure? How might it be staged? *Reading Strands* and *How to Read a Book* will supply you with the questions to begin this dialogue. Also consider using *Cliffs Notes*, which supply not only plot summaries, but biographical notes, cultural background, discussion questions, and bibliographies for further reading.

When the conversation is over, the student is ready to write. She can do a standard "book report," summarizing the plot of *The Frogs* and giving a brief evaluation of the play. She can explain what Aristophanes is saying about the nature of man and either agree or disagree. She can write about some technical aspect of Greek drama and how it applies to a scene in the play (this will probably require some additional reading about Greek drama). Or she can choose some other topic—as long as it relates directly to *The Frogs* and Aristophanes. (Remember, these writing skills have been taught in *Writing Strands* and reinforced by the student's work in grammar and composition.) This finished composition should be filed in the Compositions section of the notebook.

How much should you do?

Rather than holding rigidly to a schedule of how much to complete per week, you should instead devote two hours per day to reading, talking about, and writing about great books.³ If the ninth grader isn't stirred by Greek drama, she'll probably finish the Aristophanes assignment in a week. If she decides to write about a technical aspect of staging Greek drama, though, she'll need to do extra reading and research, and the *Frogs* assignment could easily cover two to three weeks.

As parent, it's your responsibility to make sure that those two hours are actually spent in reading and writing, rather than in daydreaming or creating doodles on notebook paper. Especially in the early years of high school, you should supervise this process, rather than allowing the student to disappear into the family room alone with her books. Great-books study is demanding. It requires the student to work hard, to abandon simple

³In the ninth and tenth grades, the student will spend this two-hour period at the beginning of the semester working through *How to Read a Book* and *Reading Strands* before going to the reading lists. question-and-answer learning in favor of a struggle with ideas. Often, the material isn't immediately appealing. The philosophies may be unfamiliar; the opinions are complex; the vocabulary is challenging. Put the student at the kitchen table (or wherever you're planning to be) so that you can encourage her to keep working.

The study of great books requires diligence, good reading skills (taught in *How to Read a Book*), basic knowledge of Socratic dialogue (provided in *Reading Strands*), and lots of time. We think that most parents are capable of supervising this study. If you feel out of your depth, however, you can always make use of a tutor—something that's an option for every high-school subject.

If you're near a university, call the English department and ask whether any member of the faculty is interested in doing a great-books tutorial. A good prep school might also supply a tutor.

At the end of this chapter, we have provided a list of universities that offer varying types of great-books curricula. These will prove especially valuable to those who live nearby. Most of the universities will also supply you with copies of their great-books reading lists and curricula on request; some may even allow you to join in online discussion groups or E-mail lists.

Online tutorials and discussion groups not connected to universities may also help your high-school student begin her study of great books. A paid tutorial is offered by Escondida Tutorial Services (www.gbt.org), a classical tutoring service with a Reformed Protestant emphasis. You can also access their list of other great-books Websites and discussion groups at www.gbt.org/res.html.

The American Classical League Website (umich.edu/~acleague) has information about Greek and Latin texts; ACL also sponsors the National Junior Classical League for high-school students studying the classics. Western Canon University (westerncanon.com) sponsors discussions, open forums, and online lectures centered on the great books of the Western tradition. Another busy site sponsoring discussions of great books and boasting 20,000 participants from fifty nations is jollyroger.com. Kill Devil Hill (www.killdevilhill.com) also hosts great-books chats and bulletin boards. A search for "great books tutorial" on any good search engine will yield the newest sites.

Where do you get the books?

Classical education, as Douglas Wilson notes, isn't a package deal: "No one supplier or textbook publisher will provide you with everything you need in a fifty-pound box delivered by UPS."⁴ High-school students will need to do some bookstore hunting and library scouring to find these texts (think of this as a class in advanced reference skills). However, the resurgence of interest in great-books curricula has produced affordable reprints of most of these books. Where we know of a particularly good edition, we've listed it, along with ordering information, at the end of this chapter. But finding the books is part of the process of education.

The sets of Norton anthologies described in Resources at the end of the chapter are wonderful reference works. These contain many difficult-to-find texts (such as the *Epic of Gilgamesh*) and a nice sampling of poetry. We suggest that you find "real books" (stand-alone texts) when possible because anthologies are awkward to handle and the print is very small. Also, they're hard to read in bed and impossible to handle in the bathtub.

WRITING PROJECTS

The student should plan on writing a research paper in the spring of the ninth- and tenth-grade years. These research papers—six to eight pages in ninth grade, seven to ten pages in tenth grade—explore a historical topic. The ninth- and tenth-grade research papers should attempt to prove a theory about some historical event or series of events, using three to eight history resources, both primary (the works of Plato) and secondary (a critic's book *about* the works of Plato). These papers will put the techniques of rhetoric now being learned into use in writing and will prepare the student for the junior and senior projects described in Chapter 33.

Research-paper forms and procedures are covered in all of the grammar and composition texts we recommend as well as in the *Writing Strands* series. But because the very term *research paper* seems to terrify many parents (and students), we offer the following brief guide to preparing the first two research papers.

⁴Douglas Wilson, Wesley Callihan, and Douglas Jones, Classical Education and the Home School (Moscow, Idaho: Canon Press, 1995), p. 6.

Preparation

Classically educated students don't need to suffer from "paper phobia" since the ongoing study of grammar and composition from early on and the continual writing of short papers have prepared them for the writing of longer papers. Along with mechanics, style, paragraph organization, and the development of arguments—all taught in the texts we recommend—the student must know how to outline.

In a proper outline, each subpoint supports the point that comes before:

```
A.
1.
a.
```

I.

Correct outlining is taught in the Beka grammar books. If you're using a grammar text that doesn't cover outlining, you should order *Preparing the Research Paper*, a standard guide produced by Educators Publishing Service. Pages 30–38 teach outlining skills; the entire guide is useful, but it's written on a senior-high/early-college level, and most ninth graders will probably find the complexity of its procedures daunting.

Inventio

Classical rhetoric divides writing into three stages: *inventio*, *dispositio*, and *elocutio*. *Inventio*, formulating an argument, involves picking the subject, deciding on a specific topic, and writing a thesis statement. Think of *inventio* as a three-step process.

1. Prereading. The student shouldn't begin by trying to write a thesis statement. Nor should she start making note cards immediately. Rather, she should begin by spending three or four weeks reading about the general topic she's decided to write on. Begin this process sometime in January. If, for example, the ninth grader decides to write about the Greek Empire after the death of Alexander the Great, she shouldn't try to come up with an exact subject for her paper right away. If she does, she'll more than likely end up with an unworkable subject—one that's too broad or too vague. Instead, she should plan to skim through plenty of books, reading the sec-

tions that deal with the Greeks after Alexander. She shouldn't make notes yet, but should put bookmarks (strips of notebook paper are fine) on any pages she finds particularly interesting or informative. As she reads, she should brainstorm, jotting down on a pad of paper thoughts that come to mind, questions that her reading brings up, and comments on what she's finding out. These jottings don't need to be connected in any way. The student is simply exploring all the branches of her topic.

2. Settling on an exact subject. After the student has done plenty of prereading—covering ten books or more—she should gather together all her jottings and look for a particular theme that keeps popping up. If she finds, for example, that she has continually written "The Seleucids came after Alexander in Syria. Syria was important because of the trade routes. Antiochus the Great ruled Syria. Antiochus thought he was the sun god. The Seleucids took over Israel," this suggests that that she should narrow her topic to "The Rulers of Syria after Alexander the Great."

This is a narrower and more manageable topic, but the student still isn't ready to write. Now she needs to settle on a thesis statement.

3. Developing a thesis statement is tricky. Fortunately, all the curricula we recommend carefully develop this skill. As the parent/teacher, you should remember this simple definition: a thesis is a statement that requires proof. "Alexander's successors in Syria" or "Syria under Antiochus the Great" aren't thesis statements—they're simply phrases; neither needs to be proved. "Alexander's successors shared his megalomania" or "Antiochus the Great's insanity caused him to lose control of Syria" are thesis statements. Both require the student to explain, using examples from history to support these conclusions.

Bad thesis statements tend to have two problems: either they're not specific enough, or they're so obvious that they don't require support. "Antiochus the Great was a bad ruler" is a bad thesis because it isn't specific—you could say this about any number of ancient potentates ("Nero was a bad ruler," "Akhenaton was a bad ruler"). "Alexander's empire was divided among his generals" doesn't work either. This is perfectly obvious. What's left to say?

"Antiochus's religious obsessions ruined his hold on his empire" is a good thesis statement because it leaves the student something to prove. She's suggesting a specific cause for the decline of the Seleucid Empire. Now she has to defend this conclusion, using historical evidence.

Dispositio

Once the student settles on a topic, she has to arrange supporting information in proper order for a persuasive argument—*dispositio*.

The student should begin by glancing back over the notes she's taken on her reading. From this information, she should make an outline covering the main points of her argument. These are the facts her reader will have to believe in order to be convinced. The outline should be very basic, only three or four points long, each point assigned a Roman numeral. The ninth grader's outline might look like this:

- I. Antiochus suffered from religious delusions.
- II. These delusions kept him from paying attention to his borders.
- III. These delusions caused him to treat his subjects with unnecessary cruelty.

The student should then write each major point at the top of a separate sheet of paper.

Now she's ready to start making note cards. The classic way of collecting information for a research paper is to write down quotes and general information on 3×5 cards, each card marked with the title of the book used and the author's last name. The student should go back through the books she used for prereading. In each place where she put a marker, she should evaluate whether or not the information supports one of her main points. If so, she should jot down on the note card either a paraphrase of the idea in the book or an exact quote. And she should indicate on each card where the information belongs by marking it with a Roman numeral that corresponds to a numeral on the outline.

There's no reason why the student shouldn't do this on computer. Note cards have traditionally been used because the student can shuffle them around as she works on the flow of her argument. But since the cut-andpaste function on a word processor has the same effect, she can input her quotes and paraphrases instead.

Once the student has collected information (four to six sources for a ninth-grade paper, six to ten for a tenth-grade paper), she should put the cards for each Roman numeral into a pile and use this information to develop a more detailed outline:

- I. Antiochus suffered from religious delusions.
 - A. He thought he was the god Zeus.
 - 1. He retreated to his estate to practice being divine.
 - 2. He demanded that his courtiers worship him.

Each of these points is based on a fact discovered while reading and jotted onto a card.

Elocutio

When the outline is complete, the student is ready to write. *Elocutio*, the final stage of written rhetoric, involves the words, phrases, figures of speech, and writing techniques used in persuasive writing. The student should sit down with the outline and note cards, and write one well-structured paragraph about each point in the outline. The paper should always conclude with a summary paragraph, restating the student's thesis and main supporting points. Each book consulted must be placed on a bibliography page, arranged alphabetically by author. For exact information on format and the proper way to cite quotes, see any of the grammar texts used in early high school, or use *Preparing the Research Paper*.

UNIVERSITY SOURCES FOR GREAT-BOOKS CURRICULA

California

- Seaver College, Pepperdine University, Malibu, California; 310-456-4000. The Great Books Colloquium is a four-course sequence offered by the Humanities/Teacher Education Division.
- Thomas Aquinas College, Santa Paula, California; 800-634-9797. The entire curriculum is centered on great books (18 percent of the student body is home-educated).

Canada Brock University, St. Catharines, Ontario; 905-688-5550.

Carleton University, Ottawa, Ontario; 613-520-3663.

Great Books: History and Reading 487

Concordia University, Montreal, Quebec; 514-848-2668.

Malaspina University, Nanaimo, British Columbia; 250-753-3245.

The Malaspina Web page also offers an online discussion group.

Connecticut

Wesleyan University, Middletown, Connecticut; 860-685-2000.

The College of Letters is an interdisciplinary major centered on great books from ancient times to the twentieth century.

Georgia

Mercer University, Macon, Georgia; 912-752-2700 or 770-986-3000. Has a nine-course great-books curriculum.

Illinois

Shimer College, Waukegan, Illinois; 847-623-8400.

The college uses no textbooks—all original source readings.

The University of Chicago Center for Continuing Studies, Chicago, Illinois; 773-702-1234.

The Basic Program of Liberal Education for Adults is a noncredit discussion program—a four-year sequence of classics.

Indiana

University of Notre Dame, South Bend, Indiana; 219-631-5000.

The Program of Liberal Studies is a three-year sequence centered on great books.

Iowa

New St. Andrews College, Moscow, Idaho; 208-882-2034 or 882-4654. A Reformed Protestant school where the entire curriculum is focused around the study of great books.

Louisiana

Northwestern State University of Louisiana, Natchitoches, Louisiana; 318-357-6171.

The Louisiana Scholars' College offers a great-books program, from classics to moderns.

Maryland

St. John's College, Annapolis, Maryland; 410-263-2371 or 800-727-9238. A four-year program of reading, discussion, and writing.

Massachusetts

Boston University, Boston, Massachusetts; 617-353-2300.

The "Core Curriculum" centers on the discussion of great books and writing skills.

Minnesota

Saint Olaf College, Northfield, Minnesota; 507-646-2222.

A five-course sequence in the "Great Conversation."

New Hampshire

Saint Anselm College, Manchester, New Hampshire; 888-426-7356.

The Great Books Program is administered by the Philosophy Department.

New Mexico

St. John's College, Santa Fe, New Mexico; 505-984-6060 or 800-331-5232. A four-year program of reading, discussion, and writing.

New York

Columbia College, Columbia University, New York, New York; 212-854-2522.

Offers a year-long Masterpieces of Western Literature and Philosophy course.

Oregon

Gutenberg College, Eugene, Oregon; 541-683-5141.

A Christian school with a great-books program.

Pennsylvania

Temple University, Philadelphia, Pennsylvania; 215-204-1131. The Intellectual Heritage Program is a two-course great-books sequence;

the Core Curriculum focuses on great books in eight areas.

South Carolina

Rose Hill College, Aiken, South Carolina; 800-684-3769.

Tutorials and small-group discussions of classic texts.

Texas

College of Arts and Sciences, University of North Texas, Denton, Texas; 940-565-2000.

The Academic Core Programs-Great Books is a nine-hour set of courses.

Virginia

Lynchburg College, Lynchburg, Virginia; 800-544-8300 or 800-426-8100. The Lynchburg College Symposium Readings Program reaches outside the college to encourage reading, writing, and discussion focused on the classics.

Washington

Central Washington University, Ellensburg, Washington; 509-963-1111. The William O. Douglas Honors College offers a four-year great-books program.

Whitman College, Walla Walla, Washington; 509-527-5111.

The General Studies Program is a two-semester course on great books/world views.

Wisconsin

The University of Wisconsin—Milwaukee, Milwaukee, Wisconsin; 414-229-1122.

The Great Books Program.

SCHEDULES

Ninth grade	2 hrs. per day	Read, discuss, write about great books; begin by using the 2-hour period to summarize <i>How to Read a</i> <i>Book</i> ; in the spring, use the 2-hour period to work on research paper until it is finished.
Tenth grade	2 hrs. per day	Read, discuss, write about great books; begin by using 2-hour period to summarize <i>Writing Strands</i> ; in the spring, use the 2-hour period to work on research paper until it is finished.
Eleventh grade	2 hrs. per day	Read, discuss, write about great books.

Twelfth grade

2 hrs. per day

Read, discuss, write about great books.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Basic texts for the four-year rhetoric stage are listed first. A great-books section follows. The list for each year of study is in chronological order. Most of these book are available in standard editions, but where we think a specific edition is particularly good, we have recommended it.

Many of the resources recommended in Chapter 16 are still suitable for high-school students, particularly the Jackdaw portfolios of primary sources. We suggest that you call Jackdaw for a catalog and order any of the packs that look particularly interesting to your student. Check Resources at the end of Chapter 16 for details.

Basic Texts

Davies, Phillips, and Samuel Rogal. *Preparing the Research Paper*. Cambridge, Mass.: Educators Publishing Service, 1993.

Order directly from Educators Publishing Service.

Fry, Plantaganet Somerset. The Dorling Kindersley History of the World. New York: Dorling Kindersley, 1994.

The 1994 edition is the first. Check to see whether it's been updated when you are ready to buy.

Grun, Bernard, and Daniel J. Boorstin. *The Timetables of History*. 3d rev. ed. New York: Touchstone, 1991.

This is regularly updated; make sure you get the latest edition. The third edition ends in 1990.

Harrison, John, Richard Sullivan, and Dennis Sherman. A Short History of Western Civilization, vol. 1. 8th ed. New York: McGraw Hill, 1994.

\$45.00. Available from bookstores or online booksellers.

——. A Short History of Western Civilization, vol. 2. 8th ed. New York: McGraw Hill, 1996.

\$46.00.

Great Books

Any titles listed without mentioning a specific edition can be easily located in standard editions. We've supplied ordering information where possible, but texts can also be bought through bookstores or online book services. In addition, public libraries should carry almost all of these titles.

The easiest way to read great books is to buy a Norton anthology—the standard collection of classic works between two covers, all properly annotated. These are great reference works, but, like all reference works, they are unwieldy and have very small print. Your student won't read these in bed or in the car, only at a desk or table. We think you should use individual texts where possible because they're easier to read and more fun. Also, some works that you'll want to read in full are only excerpted in the anthologies. But consider investing in the Norton anthologies to fill in the gaps. You can also buy instructor's manuals with discussion questions and guides—an extremely valuable resource. These are at every bookstore and library. You can also order them from Greenleaf Press, 800-311-1508.

Abrams, M. H., gen. ed., et al. *The Norton Anthology of English Literature*. 7th ed. New York: Norton, 1999.

\$59.95 per anthology; \$24.95 per instructor's manual.

Volume I.

From Beowulf to Burns.

Volume II.

From Burns to Thomas.

Instructor's Manual, Vol. I.

Instructor's Manual, Vol. II.

Baym, Nina, gen. ed., et al. The Norton Anthology of American Literature. 5th ed. New York: Norton, 1998.

\$59.95 per anthology; \$24.95 per instructor's manual.

Volume 1.

From the explorers and settlers through Whitman; includes the American Founding Fathers.

Volume 2.

From Clemens through the modern poets.

-46

Instructor's Manual, Vol. 1.

Instructor's Manual, Vol. 2.

Lawall, Sarah, and Maynard Mack, gen. eds. et al. The Norton Anthology of World Masterpieces. 7th ed. New York: Norton, 1999.

\$59.95 per anthology; \$24.95 per instructor's manual. These are also available in an expanded edition that incorporates more non-Western literature.

Volume 1: Literature of Western Culture through the Renaissance. Excerpts from the Epic of Gilgamesh, Homer, Sophocles, Aristophanes, Aristotle, Dante, Chaucer, Machiavelli, Cervantes, Milton.

Volume 2: Literature of Western Culture since the Renaissance.

Enlightenment, Romanticism, Naturalism, Modernism, Contemporary.

Instructor's Manual, Vol. 1.

Instructor's Manual, Vol. 2.

Ancients, 5000 B.C.-A.D. 400 (Ninth Grade)

Bible: Genesis—Book of Job.

For all Bible readings, use a modern version for clarity. We suggest the New International Version (Grand Rapids, Mich.: Zondervan).

Epic of Gilgamesh (c. 2500 B.C.).

Homer. Iliad (c. 850 B.C.).

Homer. *Iliad*. Trans. Robert Fitzgerald. New York: Anchor, 1975. \$8.95. Order from American Home-School Publishing.

Homer. Odyssey (c. 850 B.C.).

Homer. *Odyssey*. Trans. Robert Fitzgerald. New York: Vintage, 1990. \$10.00. Order from American Home School Publishing.

Davis, William S. A Day in Old Athens: A Picture of Athenian Life. Cheshire, Conn.: Biblo-Moser, 1960.

\$16.50. Order from American Home School Publishing.

Herodotus. History of the Persian Wars (c. 431–426 B.C.).

Thucydides. The History of the Peloponnesian War (fifth century B.C.).

Sophocles. Oedipus Rex (c. 440 B.C.).

Euripides. Medea (c. 431 B.C.).

Aristophanes. The Frogs (405 B.C.).

Plato. The Republic (c. 387 B.C.).

Plato. Symposium (c. 387 B.C.).

Segal, Erich, ed. *The Dialogues of Plato*. New York: Bantam, 1986. \$5.95. Order from American Home School Publishing. Includes the *Symposium* and *Apology*.

Aristotle. On Poetics (384–322 B.C.).

Aristotle. Ethics (384-322 B.C.).

Davis, William S. A Day in Old Rome: A Picture of Roman Life. Cheshire, Conn.: Biblo-Moser, 1959.

\$21.95. Order from American Home School Publishing.

Bible: Book of Daniel (c. 165 B.C.).

Lucretius. On the Nature of Things (c. 60 B.C.).

Cicero. De republica (54 B.C.).

Virgil. Aeneid (c. 30 B.C.).

Ovid. Metamorphoses (c. A.D. 5).

Bible: Corinthians 1 and 2 (c. A.D. 58).

Josephus. Wars of the Jews (c. A.D. 68).

Plutarch. The Lives of the Noble Greeks and Romans (C. A.D. 100).

White, John S. *Plutarch's Lives of the Noble Greeks and Romans: Selected and Edited.* Cheshire, Conn.: Biblo-Moser, 1940. \$23.75. Order from American Home School Publishing. This adaptation is particularly suitable for ninth graders.

Tacitus. Annals (c. A.D. 117).

Athanasius. On the Incarnation (C. A.D. 300).

Medieval/Early Renaissance, 400–1600 (Tenth Grade) Augustine. Confessions (c. 411).

Augustine. Confessions. New York: Viking, 1979. \$8.95. Order from

Greenleaf Press. A number of acceptable translations of this exist, but the Viking version is affordable and easily found.

Augustine. City of God, Book 8 (c. 411).

Boethius. The Consolation of Philosophy (524).

Koran: selections (c. 650).

Beowulf (c. 1000).

Beowulf. Trans. Frederick Rebsamen. New York: Icon, 1992. \$5.00. Order from Greenleaf Press.

Mabinogion (c. 1050).

Howarth, David. 1066: The Year of Conquest. New York: Penguin, 1981. \$12.95. Order from American Home School Publishing.

Anselm. Cur Deus Homo (c. 1090).

Davis, William Stearns. Life in a Medieval Barony. Cheshire, Conn.: Biblo-Moser, 1990.

\$22.95. Order from American Home School Publishing.

Daughtery, James. *The Magna Carta*. Sandwich, Mass.: Beautiful Feet Books, 1992.

\$8.95. Order from American Home School Publishing.

Aquinas. Selections (c. 1273) Goodwin, Robert, ed. Aquinas: Selected Writings.

Dante Aligheri. The Inferno (1320).

Dante. *The Inferno*. Trans. Robert Pinsky. New York: Noonday Press, 1996. \$8.00. There are many good translations of *The Inferno*, including one by Dorothy Sayers, but Susan likes Pinsky's.

Sir Gawain and the Green Knight (c. 1400).

Sir Gawain and the Green Knight. Trans. Marie Borroff. New York: Norton, 1967. \$10.00. This is available in several versions, but the Borroff translation is interesting, readable, and a minor classic itself.

Chaucer, Geoffrey. *The Canterbury Tales*, selections (c. 1400).Chaucer, Geoffrey. *The Canterbury Tales*. Ed. A. Kent Hieatt and ConstanceB. Hieatt. New York: Bantam, 1982. Make sure you read this in modern

English unless the student has a particular interest in Middle English. A simpler, prose version is by Geraldine McCaughrean (New York: Puffin, 1997).

Malory, Thomas. Le Morte d'Arthur, selections (c. 1470).

Erasmus. Education of a Christian Prince, selections (1510).

Machiavelli. The Prince (1513).

More, Thomas. Utopia (1516).

Luther, Martin. Commentary on Galatians (c. 1520).

Calvin, John. Institutes of the Christian Religion, selections (1536).

Marrin, Albert. Empires Lost and Won: The Spanish Heritage in the Southwest. New York: Atheneum, 1997.

\$19.00. Order from American Home School Publishing.

Marlowe, Christopher. Faustus (1588).

Spenser, Edmund. The Faerie Queene (1590).

Shakespeare, William. Julius Caesar (1599).

Shakespeare, William. *Julius Caesar*. Ed. Roma Gill. Oxford School Shakespeare. Oxford: Oxford University Press, 1994. Order from American Home School Publishing.

——. Hamlet (1600).

Shakespeare, William. *Hamlet*. Ed. Roma Gill. Oxford School Shakespeare. Oxford: Oxford University Press, 1992. Order from American Home School Publishing.

——. Other plays.

Davis, William Stearns. *Life in Elizabethan Days*. Cheshire, Conn.: Biblo-Moser, 1994.

\$25.00. Order from American Home School Publishing.

Late Renaissance/Early Modern, 1600–1850 (Eleventh Grade) Cervantes, Miguel de. Don Quixote, abridged (1605).

Donne, John. Divine Meditations (c. 1635).

Descartes, René. Principles of Philosophy (1644).

Milton, John. Paradise Lost (1664).

Pascal, Blaise. Pensées (1670).

The Pensées are lengthy. If you'd prefer an edited version, try Peter Kreeft's *Christianity for Modern Pagans: Pascal's Pensées Edited, Outlined, and Explained* (Fort Collins, Col.: Ignatius Press, 1993), \$15.00. This picks out the most relevant of the *Pensées* for today's student and provides discussion.

Bunyan, John. The Pilgrim's Progress (1678).

Locke, John. "An Essay Concerning Human Understanding" (1690).

Swift, Jonathan. Gulliver's Travels (1726).

Burke, Edmund. "On American Taxation" (1774).

Marrin, Albert. *The War for Independence*. New York: Atheneum, 1988. \$9.00. Order from American Home School Publishing.

Rousseau, Jean-Jacques. "The Social Contract" (1762).

Franklin, Benjamin. The Autobiography (1771).

The Declaration of Independence (1776).

Kant, Immanuel. "Critique of Pure Reason" (1781).

Hamilton, Alexander, et al. The Federalist (1787-1788).

Constitution of the United States (ratified 1788).

Blake, William. Songs of Innocence and Experience (1789).

Paine, Thomas. "The Rights of Man" (1792).

Wordsworth, William, and Samuel Taylor Coleridge. Lyrical Ballads (1798).

Austen, Jane. Pride and Prejudice (1813).

Shelley, Mary. Frankenstein (1818).

Keats, John. "Ode to a Nightingale" and other poems (1820s).

Cooper, James Fenimore. The Last of the Mohicans (1826).

Tennyson, Alfred, Lord. "The Lady of Shalott" and other poems (1832).

Poe, Edgar Allan. "The Fall of the House of Usher" and other stories (1839).

Emerson, Ralph Waldo. "Self-Reliance" (1844).

Brontë, Charlotte. Jane Eyre (1847).

Melville, Herman. Moby Dick (1851).

Modern, 1850-Present Day (Twelfth Grade)

Tocqueville, Alexis de. Democracy in America (1835).

Tocqueville, Alexis de. *Democracy in America*. Text Henry Reeve, rev. Francis Bowern. New York: Vintage, 1990. \$26.00. Order from American Home School Publishing.

Marx, Karl, and Friederich Engels. Communist Manifesto (1848).

Stowe, Harriet Beecher. Uncle Tom's Cabin (1852).

Thoreau, Henry David. Walden (1854).

Whitman, Walt. Leaves of Grass (1855).

Dostoyevsky, Fyodor. Crime and Punishment (1856).

Darwin, Charles. On the Origin of Species (1859).

Dickens, Charles. Great Expectations (1861).

Marrin, Albert. Unconditional Surrender: U. S. Grant and the Civil War. New York: Antheneum, 1994.

\$21.00. Order from American Home School Publishing.

Virginia's General: Robert E. Lee. New York: Atheneum, 1994. \$22.00. Order from American Home School Publishing.

Lincoln, Abraham. Gettysburg Address (1863).

Sandburg, Carl. Abraham Lincoln: The War Years. 4 vols. New York: Harcourt Brace, 1939.

Pulitzer prize-winning biography, 1940.

- Tolstoy, Leo. War and Peace (1864).
- Hardy, Thomas. The Return of the Native (1878).
- Nietzsche, Friedrich. Thus Spake Zarathustra (1883).
- Twain, Mark. Huckleberry Finn (1884).
- Yeats, W. B. Selected Poems (1895).
- Freud, Sigmund. The Interpretation of Dreams (1900).
- Chesterton, G. K. "The Innocence of Father Brown" (1911).
- Owen, Wilfrid. Selected Poems (1918).
- Frost, Robert. "A Poem with Notes and Grace Notes." From a Pulitzer prize-winning collection of poetry, 1924.
- Kafka, Franz. "The Trial" (1925).
- Eliot, T. S. Murder in the Cathedral (1935).
- Hurston, Zora Neale. Their Eyes Were Watching God (c. 1937).
- Wilder, Thornton. Our Town (1938).
- Steinbeck, John. The Grapes of Wrath (1939).
- Hitler, Adolf. Mein Kampf (1939).
- Orwell, George. Animal Farm (1945).
- Ellison, Ralph. Invisible Man (1952).
- Lewis, C. S. Mere Christianity (1952).
- Miller, Arthur. The Crucible (1953).
- Bolt, Robert. A Man for All Seasons (1962).
- King, Martin Luther, Jr. "Why We Can't Wait" (1964).
- Stoppard, Tom. Rosencrantz and Guildenstern Are Dead (1967).

Solzhenitsyn, Aleksandr. The Gulag Archipelago (1974).

Plath, Sylvia. Collected Poems (1981).

Plath, Sylvia. Collected Poems New York: Harper & Row, 1986.

Morrison, Toni. Beloved (1988).

Morrison, Toni. Beloved. New York: Plume, 1998.

27

1//

COMFORT WITH NUMBERS: MATH

The cumulative and coherent study of mathematics is, in fact, a microcosm of the entire curriculum and reflects in its expanding field the workings of the scholarly mind in a manner analogous to that which we examined in the field of arts and letters.

-David Hicks, Norms and Nobility

SUBJECT: Higher mathematics TIME REQUIRED: 5 hours per week for each year of study

A classical education considers competency in higher-math skills—algebra, plane geometry, and geometrical proofs—to be part of basic literacy. The classically educated student will complete courses in geometry, first-year algebra, and second-year algebra. This coincides with the bare minimum demanded by most colleges for admission.

Most classical educators suggest that students who have no particular bent for mathematics and no plans for a career in science be allowed to "rest on their oars" after completing basic upper-level mathematics requirements. Ideally, the student would take at least one additional mathematics course after Algebra II; this will give him an edge both in college admissions and in general mathematical and scientific literacy. If this is impossible or
if the student has spent extra years struggling to reach the Algebra II level, the additional mathematics course can be eliminated. Generally, students who don't plan to use advanced mathematics in later life and who aren't trying for selective college admissions can aim for math-free junior and senior years (grades 11 and 12).

All three of the math programs we've described in Chapters 6 and 15— Math-U-See, A Beka Book, and Saxon—extend through twelfth grade. The A Beka program includes Algebra I (ninth grade), Plane Geometry (tenth grade), Algebra II (eleventh grade), and a two-semester advanced elective course that covers trigonometry in the first semester and analytic geometry in the second. As in the early grades, the presentation is clear and drillintensive.

Since the A Beka program doesn't include step-by-step teaching instructions, if you feel uncomfortable with upper-level math and don't plan on using a tutor, consider the Math-U-See program. This manipulativebased curriculum includes videos that you watch before you present each concept to the student. It's a thorough program, particularly good for visual learners, but very time-intensive for the parent/teacher. As in the A Beka program, the Math-U-See Algebra I materials are designed for ninth grade, Geometry for tenth, Algebra II for eleventh, and Trigonometry for twelfth.

Plan on doing high-school-level math for an hour a day, five days a week, until the math sequence is complete.

POSSIBLE SEQUENCES

The Ideal Sequence, Using Saxon

In Chapter 15, we outlined several possible tracks for the home-educated student. If you're using the Saxon home-education courses—the simplest, most user-friendly option for at-home students—you've probably followed this sequence:

Seventh grade	Algebra 1/2
Eighth grade	Algebra I
Ninth grade	Algebra II

The student who's been on this schedule should now continue with the Saxon Advanced Mathematics course in tenth grade. This program weaves to-

gether topics in algebra, geometry, trigonometry, discrete mathematics, and Euclidean geometry. Any student who has managed to finish *Algebra II* by ninth grade should take this course. Because Saxon integrates geometry into the algebra programs, the student will not have completed a full geometry course until he finishes *Advanced Mathematics*. A full geometry course is important to fulfill college admission requirements. Students who want to do well on the PSATs (which also serve as the National Merit Scholarship qualifying test), taken in the fall of the eleventh-grade year, should have completed *Advanced Mathematics* before taking the test; both the PSATs and SATs are heavy on geometry.

After Advanced Mathematics, the student can drop math or continue with Advanced Placement options. Saxon also offers an eleventh-grade calculus course designed to prepare home-educated students for the Advanced Placement examination.

The mathematically gifted twelfth grader can elect to take the Saxon physics course, a mathematically focused program for Advanced Placement students. Or he could take a trigonometry course. Saxon doesn't offer trigonometry, but the student can take a course at a local university or community college. Alternately, he can enroll in one of the correspondence or online courses that we discuss later in this chapter.

The sequence for high school, then, becomes

(Eighth grade)	(Algebra I)
Ninth grade	Algebra II
Tenth grade	Advanced Mathematics
Eleventh grade	Calculus (elective)
Twelfth grade	Physics (elective) or trigonometry (elective)

The Saxon advanced-math course covers the trigonometry necessary to do well on the SATs. If the student chooses to take an SAT II subject test in math, an advanced, full course in trigonometry should be taken rather than (or before) physics (use the A Beka program or a community-college class).

The Slightly Slower Sequence, Using Saxon

Some students using Saxon math take an extra year to begin algebra, as we outlined in Chapter 15. These students will follow this pattern:

Comfort with Numbers: Math 503

(Seventh grade)	(Math 87, the extra drill book for those who aren't
	quite ready to move on to pre-algebra)
(Eighth grade)	(Algebra 1/2)
Ninth grade	Algebra I
Tenth grade	Algebra II
Eleventh grade	Advanced Mathematics
Twelfth grade	Calculus (elective)

You might also find yourself on this schedule if you've pulled your highschool student out of a public or private school. Although this is a good college prep program, it has one drawback: the student doesn't finish *Advanced Mathematics* until the end of eleventh grade, which means that he will not have full knowledge of geometry when he takes the PSATs.

Should you worry about this? The PSATs have two functions: they serve as practice for the SATs taken in the senior year, and they also qualify students for the National Merit Scholarship program. If your high-school student consistently tests above the 90th percentile, a National Merit Scholarship is within the realm of possibility. In this case, you should plan on doing a catch-up course in geometry the summer before the eleventhgrade year so that he'll be fully prepared for the test.

You can use the A Beka geometry text and work through it with a tutor, or use an online tutorial or correspondence course (see pages 504–505 for details).

A Beka Book Sequence

We like Saxon math, but it often happens that a student's brain simply doesn't think along the same patterns as those of Saxon's textbook writers. If you find Saxon frustrating or if you've been using A Beka all along and are happy with it, use the A Beka upper-level math program. If you follow the suggested sequence, you will be a year behind the full-speed Saxon program. The *Basic Mathematics I* text provides a review of arithmetic topics and introduces a few advanced concepts. A strong mathematics student could skip this level and go into pre-algebra in seventh grade, which would accelerate the Beka program to match the Saxon program. You may also wish to use a tutor, since A Beka was designed for classroom use and includes little in the way of teacher guidance.

- Grade 7 Basic Mathematics I
- Grade 8 Pre-Algebra
- Grade 9 Algebra I
- Grade 10 Plane Geometry
- Grade 11 Algebra II
- Grade 12 Trigonometry with Tables, one semester/Analytic Geometry, one semester

Remember, you should plan on completing geometry by the end of the tenth-grade year in order to score well on the PSATs.

Math-U-See

The Math-U-See program is excellent for visual learners and for parents/teachers who are willing to spend a large amount of time preparing lessons. The courses include manipulatives and videos that the parent watches before presenting the material; this is a good option if you don't want to use a tutor. The student should have taken the two-year *Advanced Mathematics* course, which covers seventh and eighth grade (see Chapter 15 for a full explanation of this level).

Grades 9 and 10	Basic Algebra and Geometry
Grade 11	Algebra II
Grade 12	Trigonometry

This suggested sequence isn't for students who wish to specialize in math; it leaves no room for physics or advanced math electives, and Math-U-See has not yet developed a calculus course. However, it is excellent for students who want a good, solid knowledge of basic mathematics.

OUTSIDE HELP

Online Resources

No matter what program you use, you may find yourself needing help. Cornell University sponsors a Website with links to all the best online math resources: Ask Dr. Math (a free question-answering service staffed by Swarthmore College students and faculty), Calculus Help, Math Homework Help, Interactive Online Geometry, software tutoring packages, and more. Go to www.tc.cornell.edu/Edu/MathSciGateway to explore the options. You can also check out the University of Pennsylvania math help site at www.math.upenn.edu/MathSources.html. The GoMath Website offers tutorials, discussions, SAT preparation, and links to reference and information sites. You can access their site at www.gomath.com.

The University of Nebraska sponsors online, interactive high-school courses through CLASS (Communication, Learning, Assessment in a Student-Centered System). CLASS offers an entire high-school diploma sequence of fifty courses. This won't be complete until 2001, but they've already got a full geometry course and a general mathematics course up and running. Visit their Website at class.unl.edu.

Saxon also offers math help for students enrolled in its program. Go to www.saxonpub.com for full information.

Correspondence Options

Seton Home Study School offers both Saxon algebra and a standard Houghton Mifflin geometry course by correspondence. You pay the tuition fee; they provide explanations, lesson plans. tests, and the final grade. Seton is Catholic-oriented and academically demanding. See Resources for contact information.

The most extensive high-school correspondence program is offered by the University of Nebraska at Lincoln. Their Independent Study High School is used both by home schoolers and by small rural schools that want to broaden their range of courses. Over 130 courses are available, including a full range of mathematics classes. See Resources for contact information.

The University of Oklahoma offers by correspondence Algebra 1 and Algebra 2, using the Saxon texts. Other high-school math courses include modern geometry (using *Holt Geometry*), trigonometry, pre-calculus, and analytic geometry. These will provide the student with more feedback than the Saxon home-study kits.

A number of other colleges and universities offer correspondence courses that are open to high-school students. For a full list, see Chapter 43. For advanced mathematics, you can also enroll your high-school student in a local college or university introductory math course. This is known as "concurrent enrollment" and has the advantage of proving that the student is capable of college-level work. Consider this option for eleventh- and twelfth-grade math electives.

ADVANCED PLACEMENT

Students completing calculus and trigonometry as advanced electives may qualify for Advanced Placement credit. The standard Advanced Placement test is given every year in March. The College Board offers Advanced Placement credit in both calculus and physics. To qualify for credit, all you have to do is score well on the exam. For detailed descriptions of the exams, you can contact the College Board at 1-888-225-5427 or visit their Website at www.collegeboard.org (search the site for "AP"). According to the College Board, home schoolers are permitted to take Advanced Placement exams at their local school; call your nearest high school, and ask to speak to the person in charge of the exams.

For further discussion of standardized tests, see Chapter 40.

SCHEDULES

All college-bound students should complete two years of algebra plus a geometry course. This sequence should begin in eighth or ninth grade.

Saxon Sequence

Algebra I Algebra II Advanced Mathematics Elective: Calculus

Standard Sequence

Algebra I Geometry Algebra II Electives: Pre-calculus, Calculus, Trigonometry, Statistics

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). We suggest that you contact these publishers of math materials and examine their catalogs closely before deciding on a curriculum. Most publisher will help you place your child at the most appropriate level. We have listed basic curricula first and other resources (online tutorials and correspondence schools) second.

Math Curricula

- A Beka Book Traditional Arithmetic series. Pensacola, Fla.: A Beka Book. Order from A Beka Book. A Beka Book also offers a wide range of mathematics teaching aids. Ask for a copy of their home-school catalog. Parents don't need the curriculum/lesson-plan books for each level; these give tips for classroom teaching.
 - Basic Mathematics I (seventh grade/optional). \$15.15.
 - Basic Mathematics I Teacher Key. \$19.40.
 - Student Test and Quiz Book. \$5.95.

Teacher Test/Quiz Key. \$8.60.

- Pre-Algebra (seventh/eighth grades). \$18.50.
 - Pre-Algebra Teacher Key. \$23.50.

Student Test and Quiz Book. \$5.95.

Teacher Test/Quiz Key. \$8.60.

- Algebra I (eighth/ninth grades). \$15.65.
 - Algebra I Solution Key. \$48.60.
 - Algebra I Student Test Book. \$4.60.
 - Algebra I Teacher Test Key. \$8.60.
 - Algebra I Student Quiz Book. \$4.35.
 - Algebra I Teacher Quiz Key. \$8.60.
- Plane Geometry (ninth/tenth grades). \$16.80.
 - Plane Geometry Solution Key. \$74.95.

Plane Geometry Student Test and Quiz Book. \$6.90.

Plane Geometry Teacher Test and Quiz Key. \$9.20.

- Algebra II (tenth/eleventh grades). \$16.45.
 - Algebra II Solution Key. \$48.60.
 - Algebra II Student Test and Quiz Book. \$6.40.
 - Algebra II Teacher Test and Quiz Key. \$9.20.

508 THE RHETORIC STAGE

Trigonometry with Tables (eleventh/twelfth grades, one semester). \$14.25.

Trigonometry Answer Key. \$10.20.

Trigonometry Solution Key, Selected Problems. \$34.65.

Trigonometry Student Test and Quiz Book. \$4.60.

Trigonometry Teacher Test and Quiz Key. \$8.60.

Analytic Geometry (eleventh/twelfth grades, one semester). \$14.25.

Analytic Geometry Solution Key, Selected Problems. \$34.65.

Analytic Geometry Student Test and Quiz Book. \$4.60.

Analytic Geometry Teacher Test and Quiz Key. \$8.60.

Math-U-See. Virginia Beach, Va.: Math+Plus.

Order from Math+Plus. This program has a number of different levels and workbook/video/manipulative combinations.

Advanced Mathematics, Grades 7-8.

\$150.00 for the basic curriculum. If you've done the Math-U-See *Intermediate Mathematics*, the price is \$90.00 (you already own the manipulatives you'll need).

Basic Algebra and Geometry, Grades 9-10.

\$100.00 for the basic curriculum; \$45.00 for additional manipulatives, some of which you may not need (look at the program first). *Algebra II, Grade 11.*

\$90.00 for teacher book, student book, and video.

Trigonometry, Grade 12.

As of this writing, this program was still under development. Call for prices.

Saxon Secondary Mathematics. Norman, Okla.: Saxon Publishers.

Order from Saxon, from the Education Connection, or from Rainbow Resource Center. Each home-study kit contains a student textbook, an answer key, and examinations. The Saxon home-study catalogs include a diagnostic test. Request a catalog and test from Saxon Publishers, or send an E-mail message from their Website at www.saxonpub.com.

Algebra 1/2. 2d ed. 1997. \$51.95.

Pre-algebra for seventh grade. Used by eighth graders who did the *Math 87* book in seventh grade.

Algebra I. 2d ed. 1990. \$51.95.

For eighth grade. Used by ninth graders who did *Algebra 1/2* in eighth grade.

Algebra II. 2d ed. 1997. \$51.95.

For ninth grade. Used by tenth graders who did Algebra I in ninth grade.

Advanced Mathematics. 2d ed. 1996. \$55.95.

For tenth grade. Used by eleventh graders who did *Algebra II* in tenth grade.

Calculus. 1997. \$67.00.

For eleventh or twelfth grade. Treats the topics covered in an Advanced Placement AB-level program as well as some of the topics required for a BC-level program.

Physics. 1993. \$61.95.

For any student who has completed Algebra 2.

Online Tutorials and Correspondence Schools

Cornell University Website with links to online math resources: www.tc.cornell.edu/Edu/MathSciGateway.

GoMath Website, with tutorials, discussions, SAT preparation, and links: www.gomath.com.

Saxon Math online help: www.saxonpub.com.

Seton Home Study School, 1350 Progress Drive, P.O. Box 396, Front Royal, VA 22630. Call: 540-636-9990. E-mail: www.setonhome.org.

\$125.00 for a single course. Offers Saxon *Algebra 1* through AP Calculus.

University of Nebraska—Lincoln Independent Study High School, James E. Schiefelbein, Ed.D., Principal, Department of Distance Education, University of Nebraska—Lincoln, P.O. Box 839800, Lincoln, NE 68501-9888. Call them at 402-472-4321. Or E-mail them at www.unl.edu/conted/disted/ishs.html.

CLASS, the University of Nebraska online interactive high-school program, is found at www.class.unl.edu.

The University of Oklahoma College of Continuing Education, University of Oklahoma, Independent Study Department, 1600 S. Jenkins, Room 101, Norman, OK 73072-6507. Call them at 800-942-5702. Or E-mail them at www.occe.ou.edu.

The Independent Study Department handles the University of Oklahoma's high-school correspondence courses.

University of Pennsylvania online math-help site: www.math.upenn.edu/ MathSources.html.

Also see the full list of correspondence-course resources in Chapter 43.

PRINCIPLES AND *LAWS: SCIENCE

28

M/A

Science without conscience is the death of the soul. —François Rabelais

SUBJECT: High-school science (biology, astronomy, chemistry, physics) TIME REQUIRED: 4 hours per week

H ow does the classical approach to the study of science differ from science taught in schools across the country?

Two distinctive characteristics set rhetoric-stage science apart. First, science studies are rigorous and intellectually demanding, like all classical subjects. The student is encouraged to study science for all four years of high school, passing again through biology, astronomy,¹ chemistry, and physics. She'll study the principles and laws of each science, finishing high school with a sound grasp of foundational scientific ideas. As in all stages of classical education, she will read and write about science as well as

¹In high school, earth science gives way to a more intensive study of astronomy.

perform experiments. And she'll be encouraged to explore science resources, rather than filling in workbooks and answering comprehension questions.

But rigorous science education can be found in any number of nonclassical curricula. "Classical" science is further distinguished by its demand that the student do science *self-consciously*—not simply learn about the world, but ask what the implications of each discovery might be. What does this theory say about my existence? What does that principle imply about human beings and their place in the universe? What are the implications for the human race?

As a whole, then, rhetoric-stage science is taught in the context of the student's broader study of ideas. The student isn't merely learning abstract principles; she's seeing how they fit into the Great Conversation she's having with the great books of the classical curriculum.

AN OVERVIEW OF RHETORIC-STAGE Science

Rhetoric-stage science study falls into three parts.

- 1. *The study of principles* This is "standard science." Using texts and experiment books, the student will learn the laws of each scientific field. As she did in the logic stage, she'll do this by reading, writing, and experimentation.
- 2. *Source readings* Each year, the student will read from primary scientific sources—the reflections of contemporary scientists on the work being done in their own day. She'll start with Hippocrates and end with Michael J. Behe, writing a brief book report/analysis of each text. These readings are not meant to crowd out science or the other great books. Rather, they are meant to give historical perspective to the study of science.
- 3. Joining the Great Conversation Each year, the science student will write a paper tracing the history and development of some new technology or knowledge. This paper should be centered around the field being studied. The ninth grader, for example, could write on the

changing ideas about origins, on the problems of extinction, on the rise of new diseases or the development of antibiotic-resistant strains, on the developments in reproductive technology such as cloning or in vitro fertilization techniques that allow sixty-year-old women to become mothers, on the effects of the body on the mind and vice versa. The tenth grader could write about the changing paradigms of the universe—the earth's move from the center of the universe to its edge—and the effect this shift had on our view of ourselves. The eleventh grader can research the development of various types of fuels and how they changed the landscape of work and daily life. Highschool students could choose any twentieth-century technology, from the splitting of the atom to the development of the Internet, and write about its history and future.

HOW TO DO IT

As in the previous two stages, the student will keep her work in a science notebook. Each should have three sections: Principles, Source Readings, and Papers.

We suggest studying science two days each week for two hours per day. Six to eight weeks should be devoted to the reading of source materials; four to six weeks should be given to the writing of the science paper; the rest of the time will be spent in studying the principles of science.

The Study of Principles

For the study of science principles, we suggest following the same general procedure as in the middle grades. The student should read from her science text, write a brief composition summarizing the information, make sketches of any diagrams, and do any experiments and record the results. Compositions should be more detailed than in the logic stage—the ninth grader can write one and a half to two pages about the function of a cell, whereas the fifth grader wrote two or three paragraphs. All of this work should be filed under Principles in the science notebook.

These compositions should draw their information not only from the

primary science texts we recommend, but also from other general reference works. We suggest that you keep on hand the *Usborne Illustrated Dictionary of Science*. Other specific resources may be found in Resources, at the end of this chapter.

Generally, the student should use the first science period of every week to read and make notes, applying the techniques learned in Adler and Van Doren's *How to Read a Book*.² She should supplement these notes by looking up in other science books, kept on a nearby shelf, those subjects that interest her or that seem unclear. Make use of the library—stock up on the popular and colorful science books written for young adults. At this time, the student should also sketch any diagrams (cell structure, atomic structure, trajectories) and label them.

In the second period of every week, the student should write a composition of one and a half to two pages, referring to her notes. She should also do experiments, recording the results in the form suggested in Chapter 18. All of this material—the notes along with diagrams, the composition, and the results of experiments—should be filed in the Principles section of the science notebook.

For high-school texts, we like Wiley's *Self-Teaching Guides*, a series of clear, well-written books designed for independent college preparation:

Ninth grade	Biology: A Self-Teaching Guide by Steven D. Garber
Tenth grade	Astronomy: A Self-Teaching Guide by Dinah L. Moche
Eleventh grade	Chemistry: Concepts and Problems—a Self-Teaching Guide by
	Clifford C. Houk and Richard Post
Twelfth grade	Basic Physics: A Self-Teaching Guide, by Karl F. Kuhn
	(principles-focused), or Saxon Physics Home Study Kit, a
	more technical and math-focused physics course
	leading to Advanced Placement credit. ³

²Chapter 17 of that book applies to both science texts and the classic works of science suggested as source readings.

³If you use the Saxon physics program, you'll need to do physics five days per week, rather than following the schedule we suggest at the end of this chapter. However, if you do Saxon physics, you can drop advanced math electives. Saxon physics should be considered a math course; continue to do the source readings and composition assignments, as outlined in this chapter, two days per week.

Source Readings

The student should begin to explore the development of scientific thought by reading three or four early, original works of science each year. This study promotes critical thought; the student learns to view science not as an unerring oracle, but as a human endeavor, limited by time and culture. Even great scientists suffer from bias and ignorance. The reading of source works each year makes science human.

The following titles are suggestions; you can add to or change this list, depending on the student's interests and capabilities. *The Timetables of History* (see page 490) offers a full list of scientific publications by year, from 500 B.C. until the present.

The student should read her selected text and write a book report/evaluation, as taught in *Writing Strands*. Each source reading will take a couple of weeks to complete; during this time, source reading replaces the study of science principles (see the schedules at the end of this chapter).

Ninth Grade

Hippocrates, medical treatises Euclid, *Elements* Aristotle, *Physics*

Tenth Grade

Nicholas Copernicus, On the Revolutions of the Heavenly Spheres Johannes Kepler, Epitome of Copernican Astronomy Johannes Kepler, Harmonies of the World Galileo Galilei, Dialogues Concerning Two New Sciences

Eleventh Grade

Robert Boyle, The Sceptical Chemist Isaac Newton, Principia Antoine Lavoisier, Elements of Chemistry

Twelfth Grade

Albert Einstein, Relativity: The Special and the General Theory (trans. Robert W. Lawson)
Stephen Hawking, A Brief History of Time
Michael J. Behe, Darwin's Black Box

The Great Conversation: Writing Papers

Each year, the student should write one paper (four to six pages in ninth grade, five to eight pages in tenth, six to ten in eleventh, eight to twelve pages in twelfth), discussing some scientific discovery or technological innovation. These papers should trace the historical development of the topic, mentioning the ethical issues raised. A ninth-grade paper might begin with the plague and progress through the 1917 influenza epidemic, the discovery of antibiotics, and the development of antibiotic-resistent "superbugs." The ninth grader should then conclude by answering the following: What overall effect has the use of antibiotics had on the war against disease? What defenses against the superbugs remain? Don't expect the student to solve these dilemmas; do encourage her to consider them.

In *The End of Education*, Neil Postman suggests that any student who has truly studied science and technology will consider certain questions, including:

- 1. Any technology offers both advantages and disadvantages. What are they?
- 2. These advantages and disadvantages aren't evenly spread throughout the population; some will benefit, others will be injured. Who are they?
- 3. All technologies come complete with a philosophy about what is important about human life and what is unimportant. What parts of life does the technology exalt? What parts does it ignore?
- 4. Every technology competes with an old technology for time, money, and attention. What technology is being replaced or squeezed out?
- 5. Every technology favors a certain type of intellectual expression, a certain type of emotional expression, a certain type of political system, a certain type of sensory experience. What are these?⁴

These questions will serve as thought starters for the student as she studies science and considers paper topics. Postman further proposes the

⁴Neil Postman, *The End of Education: Redefining the Value of School* (New York: Knopf, 1995), pp. 192–193. For a full explanation that will help both you and the student think through these issues, we highly recommend reading Postman's essay on the necessity of "technological education."

following two possibilities for a hypothetical final exam. They would serve equally well as topics for the eleventh- and twelfth-grade papers:

Part I: Choose one pre-twentieth century technology—for example, the alphabet, the printing press, the telegraph, the factory—and indicate what were the main intellectual, social, political, and economic advantages of the technology, and why. Then indicate what were the main intellectual, social, political, and economic disadvantages of the technology, and why.

Part II: Indicate, first, what you believe are or will be the main advantages of computer technology, and why; second, indicate what are or will be the main disadvantages of computer technology, and why.⁵

This paper should be written in the spring of each year (see the discussion of the research paper on pages 482–486 for specific guidelines). Allow four to six weeks for this paper.

OUTSIDE HELP

Correspondence Options

The student who wants to pursue a standard high-school science course can elect to use a correspondence course instead of studying science independently. The University of Nebraska offers standard and advanced highschool science courses by correspondence in biology, chemistry, and physics; chemistry may be taken with or without lab. The University of Oklahoma offers high-school biology, chemistry, and physics, as well as a college course in astronomy. We've provided a full list of correspondenceschool resources in Chapter 43. These courses will be textbook- and question-and-answer–focused rather than centered on reading and writing, and the student may or may not be able to manage source readings and the spring science paper while using them.

However, if you'd feel more comfortable with a structured correspondence course or if the student flounders without a textbook-type approach, investigate the correspondence option. Call the schools listed in Chapter 43, and look through their catalogs for courses in biology, astronomy, chem-

⁵Postman, p. 193.

istry, and physics. Teachers are available for consultation. Levels of involvement can vary from materials only to complete grading and transcript service.

CLASS (Communication, Learning, Assessment in a Student-Centered System) is an online interactive high-school curriculum, administered by the University of Nebraska, that currently offers chemistry and oceanography, with more classes scheduled to begin every year. Visit their Website at class.unl.edu.

Online Resources

Whether you use correspondence courses or not, make use of online science resources. Cornell University sponsors a math and science Website with links to dozens of fantastic science sites, including Human Anatomy Online; Chickscope (an online MRI of a developing chick in an egg); Cornell's Lab of Ornithology; Interactive Frog Dissection (sponsored by the University of Virginia, this site allows you to dissect a virtual frog—you can reach them at curry.edschool.virginia.edu/go/frog/); DNA molecular modeling; microscopy of living cells; the latest pictures from the Mars Global Surveyor, the *Galileo* probe, and the *Pathfinder* mission; online planetariums; an online tour of the Fermilab high-energy physics laboratory; virtual chemistry textbooks and experiment sites; and more. Go to www.tc. cornell.edu/Edu/MathSciGateway.

SCHEDULES

We suggest you schedule two weeks per source reading and four to six weeks for the writing of each science paper. The remaining weeks should be devoted to the study of science principles. This means that ninth, eleventh, and twelfth graders will spend six weeks on source readings; tenth graders will spend eight weeks. Allot four to six weeks for the writing of the spring science paper. In a thirty-six-week school year, you'll be left with twenty-two to twenty-six weeks to study the science text. Don't attempt to cover the entire text. Decide with your student how many pages she can reasonable cover each week, and try to hold to this schedule.

Principles and Laws: Science 519

Ninth grade	Weeks 1–6	Biology: A Self-Teaching Guide
	Weeks 7–8	Hippocrates, medical treatises
	Weeks 9–15	Biology: A Self-Teaching Guide
	Weeks 16-17	Euclid, Elements
	Weeks 18-24	Biology: A Self-Teaching Guide
	Weeks 25–26	Aristotle, Physics
	Weeks 27-32	Biology: A Self-Teaching Guide
	Weeks 33-36	Paper on life-science topic
		е-
Tenth grade	Weeks 1–7	Astronomy: A Self-Teaching Guide
	Weeks 8–10	Copernicus, On the Revolutions of the
		Heavenly Spheres
	Weeks 11–14	Astronomy: A Self-Teaching Guide
	Weeks 15-16	Kepler, Epitome of Copernican Astronomy
		and Harmonies of the World (first
		half)
	Weeks 17-19	Astronomy: A Self-Teaching Guide
	Weeks 20–21	Kepler, Epitome (second half)
	Weeks 22-26	Astronomy: A Self-Teaching Guide
	Weeks 27-28	Galileo, Dialogues Concerning Two New
		Sciences
	Weeks 29-32	Astronomy: A Self-Teaching Guide
	Weeks 33-36	Paper on astronomy topic
Eleventh grade	Weeks 1–6	Chemistry: Concepts and Problems—a Self-
		Teaching Guide
	Weeks 7–8	Boyle, The Sceptical Chemist
	Weeks 9–15	Chemistry: Concepts and Problems—a Self-
		Teaching Guide
	Weeks 16-17	Newton, Principia
	Weeks 18-24	Chemistry: Concepts and Problems-a Self-
		Teaching Guide
	Weeks 25-26	Lavoisier, Elements of Chemistry
	Weeks 27-32	Chemistry: Concepts and Problems—a Self-
		Teaching Guide
	Weeks 33-36	Paper on technology topic

. 4

Twelfth grade	Weeks 1–6	Basic Physics: A Self-Teaching Guide
U	Weeks 7–8	Einstein, Relativity: The Special and the
		General Theory
	Weeks 9-15	Basic Physics: A Self-Teaching Guide
	Weeks 16-17	Hawking, A Brief History of Time
	Weeks 18-24	Basic Physics: A Self-Teaching Guide
	Weeks 25–26	Behe, Darwin's Black Box
	Weeks 27-32	Basic Physics: A Self-Teaching Guide
	Weeks 33-36	Paper on technology topic

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. Reference materials for the entire four years of the rhetoric stage are listed first. Resources for each year are listed next, with each list divided into basic texts and optional supplementary materials. You can still use some of the resources listed in Chapter 18, particularly the experiment kits and the CD-ROMs.

Reference Materials for All Four Years

Sockley, C., C. Oxlade, and J. Wertheim. *The Usborne Illustrated Dictionary of Science*. Tulsa, Okla.: E.D.C. Publishing, 1988.

Try a bookstore, or order from the Education Connection as three separate books (*Dictionary of Biology, Dictionary of Chemistry,* and *Dictionary of Physics*) for \$12.95 each.

Science Equipment

You can order science equipment from Science Projects, a home-school supply company with everything from sheep brains to chemistry kits. For an overwhelmingly complete (over 1,200 pages) catalog of high-quality school science supplies, call the Carolina Biological Supply Company. Although much of what Carolina sells is packaged in large quantities, it carries some materials that are unavailable elsewhere.

Biology (Ninth Grade)

Basic Texts

Aristotle. *Physics*. Ed. Robin Waterfield and David Bostock. Oxford: Oxford University Press, 1996.

\$8.95. Order through a bookstore or online bookseller, or check your library.

Euclid. Thirteen Books of Euclid's Elements. Ed. Thómas L. Heath. 2d ed. Vol. 1. New York: Dover, 1956.

\$10.95. Order through a bookstore or online bookseller, or check your library.

Garber, Steven D. *Biology: A Self-Teaching Guide*. New York: Wiley, 1989. \$17.95. Order through a bookstore or online bookseller.

Hippocrates. *Hippocrates*. Trans. Paul Potter. Loeb Classical Library, no. 482. Cambridge, Mass.: Belknap Press, 1996.

\$18.95. Order through a bookstore or online bookseller, or check your library.

Supplementary Resources

A.D.A.M.: The Inside Story, '97 Edition. Atlanta, Ga.: A.D.A.M. Software, 1997.

\$39.95. Order from A.D.A.M. Software or Rainbow Resource Center. This is an award-winning interactive CD-ROM that guides you through the human body.

Burnie, David. *Life: Eyewitness Science*. New York: Dorling Kindersley, 1994.
\$15.95. A good basic reference work for biology; covers everything from cell structure to classification.

Eyewitness Books. New York: Knopf, 1988.

\$19.00 each. Designed by Dorling Kindersley, these are museums in a book—photos, reference text, definitions, all beautifully done.

Burnie, David, and Peter Chadwick. Bird.

_____. Tree.

Parker, Steve, and Philip Dowell. Pond and River.

-------. Skeleton.

Whally, Paul, et al. Butterfly and Moth.

Kapit, Wynn, and Lawrence M. Elson. *Anatomy Coloring Book*. 2d ed. Reading, Mass.: Addison-Wesley, 1993.

\$12.95. Order from Rainbow Resource Center. Even more detailed than the *Gray's Anatomy* coloring book (see below). Covers, in 291 pages, all major body systems. Revised to include information on AIDS.

Pollock, Steve. Ecology: Eyewitness Science. New York: Dorling Kindersley, 1993.

\$15.95. This is a particularly good guide for students trying to come up with paper topics. Examines cause and effect in the natural world.

Stark, Freddy. Start Exploring Gray's Anatomy: A Fact-Filled Coloring Book. Philadelphia, Pa.: Running Press, 1991.

\$8.95. Order from Greenleaf Press. Detailed drawings to color, with descriptions from the classic anatomy text.

Walker, Richard, ed. The Eyewitness Visual Dictionary of Human Anatomy. New York: Dorling Kindersley, 1996.

\$18.95. Order from Dorling Kindersley or any bookstore. An oversized, detailed guide to anatomy.

Astronomy (Tenth Grade)

Basic Texts

Copernicus, Nicholas. On the Revolutions of the Heavenly Spheres. Trans. Charles G. Wallis. New York: Prometheus, 1995.

\$8.95. Order through a bookstore or online bookseller.

Galilei, Galileo. Dialogues Concerning Two New Sciences. Trans. Alfonso De Salvio and Henry Crew. New York: Prometheus, 1991.

\$9.95. Order through a bookstore or online bookseller.

Kepler, Johannes. Epitome of Copernican Astronomy and Harmonies of the World. Trans. Charles Glenn Wallis. New York: Prometheus, 1995.

\$8.95. Order through a bookstore or online bookseller.

Moche, Dinah L. Astronomy: A Self-Teaching Guide. New York: Wiley, 1993. \$17.95. Order through a bookstore or online bookseller.

Supplementáry Resources

Galaxy Guide.

\$11.75. Order from Rainbow Resource Center. Twelve star charts with a red LED light, so that you can use it outside while you watch. Built-in compass.

Lippincott, Kristen. Astronomy: Eyewitness Science. New York: Dorling Kindersley, 1995.

\$15.95. Order from Dorling Kindersley. Reviews the history of astronomy along with recent discoveries.

Luminous Star Finder. Skokie, Ill.: Rand McNally.

\$10.95. Order from Rainbow Resource Center. This big wheel turns to the appropriate month, day, and time. Has glow-in-the-dark stars.

Ridpath, Ian, and Annie Gallagher. *Stars and Planets: Eyewitness Science*. New York: Dorling Kindersley, 1998.

\$18.95. Order from a bookstore or Dorling Kindersley. Photos, diagrams, and lots of information.

Chemistry (Eleventh Grade)

Basic Texts

Boyle, Robert. *The Sceptical Chemist*. Kila, Mont.: Kessinger Publishing, 1992. \$36.00. Order from a bookstore or online bookseller.

Houk, Clifford C., and Richard Post. Chemistry: Concepts and Problems-a Self-Teaching Guide. New York: Wiley, 1996.

\$17.95. Order from a bookstore or online bookseller.

Lavoisier, Antoine. *Elements of Chemistry*. New York: Dover, 1984. \$15.95. Order from a bookstore or online bookseller.

Newton, Isaac. Principia. Trans. Andrew Motte. New York: Prometheus, 1995.

\$14.95. Order from a bookstore or online bookseller.

Supplementary Resources

Knapp, Brian. ChemLab series. Danbury, Conn.: Grolier Educational Corporation, 1997.

\$285.00. Order from Grolier. This is an excellent twelve-volume series covering all the major areas of chemistry with illustrations, experiments, and definitions. Highly recommended for anyone planning on college chemistry. Grolier only sells the entire set, but you should be able to find these at your local library.

Volume 1: Gases, Liquids, and Solids.
Volume 2: Elements, Compounds, and Mixtures.
Volume 3: The Periodic Table.
Volume 4: Metals.
Volume 5: Acids, Bases, and Salts.
Volume 6: Heat and Combustion.
Volume 7: Oxidation and Reduction.
Volume 8: Air and Water Chemistry.
Volume 9: Carbon Chemistry.
Volume 10: Energy and Chemical Change.
Volume 11: Preparations.
Volume 12: Tests.

Physics (Twelfth Grade)

Basic Texts

Behe, Michael. *Darwin's Black Box*. New York: Touchstone, 1998. \$13.00. Order through a bookstore or online bookseller.

Einstein, Albert. Relativity: The Special and the General Theory. Trans. Robert W. Lawson. New York: Crown, 1995.

\$7.00. Order through a bookstore or online bookseller.

Hawking, Stephen. A Brief History of Time. 10th anniversary ed. New York: Bantam, 1998.

\$14.95. Order through a bookstore or online bookseller.

Kuhn, Karl F. Basic Physics: A Self-Teaching Guide. 2d ed. New York: Wiley, 1996.

\$16.95. Order through a bookstore or online bookseller.

Supplementary Resources

Physics Project Kits. Riverside, N.Y.: Educational Designs.

\$8.50 each. Order from Rainbow Resource Center. Each kit is complete with all materials.

Crystal Radio.

A working crystal radio.

Electric Bell.

Build a bell-buzzer-telegraph.

Electric Motor.

Electro-Magnetix.

Electromagnetic motor to build.

29

1

LEARNING OTHER WORLDS: Foreign languages

We are greatly helped to develop objectivity of taste if we can appreciate the work of foreign authors, living in the same world as ourselves, and expressing their vision of it in another great language.

—T. S. Eliot

SUBJECT: Classical and modern languages TIME REQUIRED: 3 to 6 hours per week

When it comes to rhetoric-stage foreign-language study, you have two goals. One is to fulfill the standard college-prep high-school requirement—two years of a foreign language studied during the high-school years (grades 9–12).¹ Students who have followed our suggested middlegrade program will be in good shape. Two years of high-school language study should lead to at least basic fluency as well as the ability to read popular-level foreign-language literature.

This two-year requirement is a minimum. The classically educated stu-

¹Languages studied before ninth grade generally don't count in the eyes of college admissions officers; they assume that this study was on a lower level.

Learning Other Worlds: Foreign Languages 527

dent has other purposes in mind: the mastery of one foreign language (the equivalent of four years of study, resulting in the ability to read literature fluently), and the beginning study at the high-school level (two years) of another. Ideally, one of these language should be ancient Greek or Latin, while the other should be a modern spoken language.

Why this more ambitious program?

During the rhetoric stage, the student is continually dealing with words—how they should be put together, how they express emotions and ideas, how they can be arranged for greatest effect. Study of two foreign languages teaches the student how writers from other cultures, thinking in different ways, deal with words. This expands the student's grasp of language, raising questions about the relationship between language and thought.

In his 1892 essay "The Present Requirements for Admission to Harvard College," James Jay Greenough writes that reading in a foreign language forces the student to look at each thought from two points of view: that of the original language and that of the English translation he is producing. This gives the student "a clearer conception of the thought than he could possibly get by looking at it from the English side only. . . . He grows accustomed to clear thinking, and therefore expresses his own thoughts more clearly both in speech and in writing." Language study is central to the skills of expression being worked on during the rhetoric stage.

WHICH LANGUAGES?

For the four-year language requirement, we suggest that most students keep studying Latin, completing the equivalent of Latin IV during the high-school years. The student who truly loathes Latin could be permitted to drop it after completing Latin II, but he should plan on studying a modern foreign language through the fourth-year level. The Power-Glide language resources listed in Chapter 19 only take you through second-year studies. As you continue, you should choose a tutor, a community-college or a beginning university course, or a correspondence course for the third and fourth levels of study.

The student with a strong interest in the classics could substitute Greek I and Greek II for a modern foreign language, while continuing with the study of Latin through Latin IV.

Since the study of modern languages was begun in the middle grades, the rhetoric-stage student who applies himself for an additional two years of high-school study will progress much further than students who come into high school unprepared. As mentioned before, we strongly recommend the study of Spanish for the modern-foreign-language requirement; French, Italian, German, Russian, Japanese, Chinese, and Hebrew are also possibilities. T. S. Eliot, in his essay "The Man of Letters," suggests that scholars with "very exceptional linguistic ability" will benefit from studying a language that is "more remote" from our own. He mentions Hebrew and Chinese, but Japanese (and, to a lesser degree, Russian) would have the same effect.²

TEXTS AND COURSES

Ancient Languages

For Latin, we suggest that the student use the Oxford University Latin Course. This is one of the few courses that continues all the way through the fourth year, with plenty of reading practice. Latin III offers a narrative built around the life of Horace; Latin IV is a straight reader with selections from Caesar, Cicero, Catullus, Virgil, Livy, and Ovid. In our Resources list, we suggest several readers you might use to supplement this (including the modern classic *Winnie Ille Pu*). The student who only completes two years of Latin should finish Latin II. The student who has used *Wheelock's Latin* or Artes Latinae in middle school can continue with the Oxford Latin III.

If the student wishes to begin Greek, we suggest Oxford University Press's *Athenaze*. This two-year program supplies a full introduction to Greek grammar and syntax, essays on Greek history and culture, plenty of exercises, and an extensive teacher's edition. Greek is not a difficult language to learn, but you'll want to find a tutor to help with the introduction to the alphabet (it's different from the Latin alphabet) and pronunciation. Try a local church. Almost all seminaries require ministers-in-training to take two years of New Testament Greek in order to graduate. Although

²T. S. Eliot, The Classics and the Man of Letters (Brooklyn, N.Y.: Haskell House, 1974), p. 22.

New Testament (Koine) Greek is different in structure and vocabulary from classical Greek, the alphabet and pronunciation are the same. With a few weeks of introductory help, any student who has mastered the first two years of Latin can continue his Greek studies alone.

Modern Languages

If you haven't yet studied a modern foreign language, complete one of the Power-Glide courses described in Chapter 19. These courses take the student through second-year modern language. A Power-Glide course plus Latin III and IV will fulfill the classical requirements for foreign language (and impress college admissions officers). If you already finished a Power-Glide course in the middle grades, you have two options: you can learn a second modern language in high school (you need to have those two highschool years for the sake of college admissions), or you can continue to study the language you are learning for two additional years.

For the latter option, you'll need to "outsource"—find a teacher or class. Modern-foreign-language literature should be read with a teacher who's enthusiastic and knowledgeable about both the culture and the language. You may be able to locate a tutor who would be willing to do a two-year reading course with a student who's already had the language basics-try the language department of your local college, or call a good private school and ask for options. Or you can enroll your high-school student in a class at your local university or community college (see Chapter 43 for a full discussion of concurrent enrollment). We suggest that you and your child talk to the instructor, who will want to evaluate the student's readiness. In most cases, two years of high-school study is considered the equivalent of one year of college study, so a student who's finished two years of French or Spanish will probably be placed in a second-year class. After this twosemester class, you'll advance to a literature class. These two years of study (French II and French literature, Spanish II and Spanish literature, and so forth) are the equivalent of four high-school years of study (French I-IV, Spanish I-IV, and so on).

Another option is a correspondence course offered by either the University of Nebraska or one of the other schools listed in Chapter 43 (call for catalogs). The University of Oklahoma offers high-school Latin, French, German, and Spanish. The student could also enroll in one of that university's college-level courses (Russian, Spanish, German, Greek, Japanese, French, Chinese), which takes the student through literature courses.

SCHEDULES

The basic goals of grades 9 through 12 are

- two years of study in one language (which completes the learning of basic grammar and conversational vocabulary),
- four years of study in another language (grammar, vocabulary, plus two years of developing reading competency).

One of these languages should be modern, the other, ancient.

The choices you make concerning foreign-language study depend, in part, on your seventh- and eighth-grade preparation. You'll notice that most of the following schedules aim to complete the formal study of language by tenth or eleventh grade so that the senior-high-school student is free to concentrate on an area of specialization (see Chapter 33).

If you followed option 1 from Chapter 19 (page 408)—the acceleratedstudies option—the student's schedule might look like this:

Sample Schedule

Seventh grade	Latin I (Oxford University Latin Course, Part I; Artes
	Latinae; or the first half of Wheelock)
	and
	Power-Glide modern-language course
Eighth grade	Latin II (Oxford University Latin Course, Part II; Artes
	Latinae; or the second half of Wheelock)
	and
	Power-Glide modern-language course
Ninth grade	Oxford University Latin Course, Part III
	and
	Athenaze, Book I
	or
	A new Power-Glide modern-language course

Learning Other Worlds: Foreign Languages 531

	or
	Third-year modern language (reading with a tutor or
	enrollment in a second-year college course)
Tenth grade	Oxford University Latin Course, Part IV
	and
	Athenaze, Book 2
	or
	The second year of Power-Glide
	or "
	Fourth-year modern language (reading with a tutor or
	enrollment in a college literature course)
Eleventh grade	Elect any language, or drop languages to concentrate
	on computer programming or another subject
Twelfth grade	See eleventh grade

More commonly, home-educated students will follow option 2—learning two languages more slowly (pages 408–409). In this case, the highschool schedule will look like this:

Seventh grade	Latin Grammar, first half; begin second half of Power- Glide course
Eighth grade	Latin Grammar, second half; finish second half of Power-Glide course
Ninth grade	Latin I (Oxford University Latin Course, Part I; Artes Latinae; or first half of Wheelock) and Begin a new Power-Glide course
	or Third-year modern language (reading with a tutor or enrollment in a second-year college course) or
Tenth grade	Athenaze, Book 1 Latin II (Oxford University Latin Course, Part II; Artes Latinae; or first half of Wheelock) and Finish ninth-grade Power-Glide course
	or

532 THE RHETORIC STAGE

Fourth-year modern language (reading with a tutor or enrollment in a third-year college course) or Athenaze, Book 2

At this point, the student who has completed four years of one modern language and two years of high-school Latin can drop languages. If he's done only two years of each language, he'll need to continue with either Latin or the modern language until he's had four years of study in a single language:

Eleventh grade	Oxford University Latin Course, Part III
	or
	Athenaze, Book 1
	or
	A new Power-Glide modern-language course
	or
	Third-year modern language (reading with a tutor or
	enrollment in a second-year college course)
Twelfth grade	Oxford University Latin Course, Part IV
	or
	Athenaze, Book 2
	or
	The second year of Power-Glide
	or
	Fourth-year modern language (reading with a tutor or
	enrollment in a college literature course)

Students who weren't able to handle the simultaneous study of two different languages in middle school followed option 3—learning two languages, one at a time (page 409). These students have finished one Power-Glide course and the beginning Latin grammar course. They can either follow the schedule above or (less ideally) continue to alternate the study of languages, following this pattern:

Seventh gradeSecond half of Power-Glide modern-language courseEighth gradeLatin Grammar

Learning Other Worlds: Foreign Languages 533

Ninth grade	Third-year modern language (reading with a tutor or
	enrollment in a second-year college course)
Tenth grade	Latin I (Oxford University Latin Course Part I; Artes
	Latinae; or the first half of Wheelock)
Eleventh grade	Fourth-year modern language (reading with a tutor or
	enrollment in a college literature course)
Twelfth grade	Latin II (Oxford University Latin Course, Part II; Artes
	Latinae; or the second half of Wheelock)

This still fulfills the classical language requirements—two years of Latin and four years of a modern language, leading to reading proficiency.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Latin resources are given first, with Greek second and modern foreign languages following. Books in a series are listed in order. See Chapter 19 for additional foreign-language resources and more supplementary Latin readings (including Elvis in Latin).

Latin

Basic Texts

Morwood, James, and Maurice G. Balme. *Oxford University Latin Course*. New York: Oxford University Press.

Order from American Home-School Publishing.

Oxford University Latin Course, Part I. 2d ed. 1996.

Student Text. \$20.95.

Teacher Text. \$14.95.

Oxford University Latin Course, Part II. 2d ed. 1997.

Student Text. \$20.95.

Teacher Text. \$14.95.

Oxford University Latin Course, Part III. 2d ed. 1997.

Student Text. \$20.95.

Teacher Text. \$14.95.

Oxford University Latin Course, Reader. 2d ed. 1997.

Fourth year in the Oxford series.

Student Text. \$20.95. Teacher Text. \$14.95.

Sweet, Waldo E., et al. Artes Latinae. Wauconda, Ill.: Bolchazy-Carducci Publishers, 1997.

Each set contains a CD-ROM, reference book, reader, and teacher's guide. Order direct from Bolchazy-Carducci. The publisher courts home schoolers. If you call, they'll send you a brochure and a demo disk. This is a very good course. You can buy books, workbooks, teacher's texts, reference notebooks, audio cassettes, and tests separately, without the CD-ROM. Ask for a full listing of materials.

Artes Latinae I. \$267.00. Artes Latinae II. \$277.00.

Wheelock, Frederick M., and Richard A. Lafleur. *Wheelock's Latin.* 5th ed. New York: HarperCollins, 1995.

\$17.00. A classic Latin course in one book. Widely available, but one vendor you can order from is Canon Press. You will probably also want to buy the *Workbook for Wheelock's Latin* by Paul T. Comeau and Richard LaFleur, 3d ed. (New York: HarperCollins, 1997), for \$14.00. Canon Press also carries this book, which provides valuable exercises and drills.

Supplementary Resources

Hammond, Mason, and Anne R. Amory. Aeneas to Augustus: A Beginning Latin Reader for College Students. Cambridge, Mass.: Harvard University Press, 1967.

\$21.95. Order from any bookstore or online bookseller. A standard introduction to great Latin writers.

Lenard, Alexander, and A. A. Milne. Winnie Ille Pu: A Latin Version of A. A. Milne's Winnie-the-Pooh. New York: Puffin, 1991.

Order from any bookstore or online bookseller.

Russell, D. A. An Anthology of Latin Prose. Oxford: Oxford University Press, 1990.

\$24.95. Order from any bookstore or online bookseller. A standard reader that may be simpler than the Hammond/Amory reader for home use since it doesn't include poetry (which is extremely difficult).

Greek

Basic Texts

Lawall, Gilbert, and Maurice G. Bahne. Athenaze: An Introduction to Ancient Greek, rev. ed.

Order from American Home School Publishing.

Book 1, Student Edition. 1990. \$19.95.

Book 1, Teacher's Edition. 1990. \$14.95.

Book 2, Student Edition. 1991. \$19.95.

Book 2, Teacher's Edition. 1991. \$14.95.

Supplementary Resources

Betts, Gavin, and Alan Henry. *Teach Yourself Ancient Greek*. Lincolnwood, Ill.: NTC Publishing Group, 1993.

\$16.95. If *Athenaze* proves too challenging, you can use this mass-market self-teaching guide as a supplement or even a substitute. It isn't as complete, but you may find it easier to use.

Pharr, Clyde, and John Henry Wright. *Homeric Greek: A Book for Beginners*. Norman, Okla.: University of Oklahoma Press, 1986.

\$21.95. A good complement to *Athenaze*. This book, designed for students who know no Greek, plunges you into the reading of Homer almost straight away. A good motivator for the first-year Greek student.

French

Basic Texts

Celestin, Julio. *French Grammar*. Harpercollins College Outline Series. New York: HarperCollins, 1991.

\$13.00. This text could serve as the base of a third-year French course, following the Power-Glide French Course.

Power-Glide Language Courses. Provo, Utah: Power-Glide.

Order from Power-Glide, the Education Connection, or Rainbow Resource Center. The teacher's guides and test books aren't necessary to learn the languages, but they'll help you grade and evaluate.

French Course. \$89.95.

Textbook and cassettes.

French Teachers' Guide/Test Book. \$29.95.

Lesson plans, games, quizzes, and tests with keys.

Supplementary Resources

Saint-Exupéry, Antoine de. Le Petit Prince. French ed. San Diego, Calif.: Harcourt Brace, 1969.

\$7.00. Often found in translation, this is a good first excursion into French literature.

Spanish

Basic Texts

Power-Glide Language Courses. Provo, Utah: Power-Glide.

Order from Power-Glide, the Education Connection, or Rainbow Resource Center. The teacher's guides and test books aren't necessary to learn the languages, but they'll help you grade and evaluate.

Spanish Course. \$89.95.

Textbook and cassettes.

Spanish Teachers' Guide/Test Book, \$29.95.

Lesson plans, games, quizzes, and tests with keys.

Prado, Marcial. Advanced Spanish Grammar: A Self-Teaching Guide. New York: Wiley, 1997.

\$16.95. This text could serve as the base of a third-year Spanish course, following the *Power-Glide Spanish Course*.

Supplementary Resources

Parish, Peggy, et al. Amelia Bedelia (Ya Se Leer). New York: HarperCollins, 1996.

\$15.95. A children's standard for fun Spanish reading. See how the puns work out in another language.

Viorst, Judith, and Alma F. Ada. Alexander Y El Dia Terrible, Horrible, Espantoso, Horroroso. Illus. Ray Cruz. New York: Aladdin, 1989.

\$4.99. A Spanish version of a favorite children's book. Another reading just for fun.
Other Modern Languages

Power-Glide Language Courses. Provo. Utah: Power-Glide.

Order from Power-Glide, the Education Connection, or Rainbow Resource Center. The following courses are \$89.95 for each basic course (textbook and cassettes); the accompanying Teachers' Guide/Test Book is \$29.95 and has lesson plans, games, guizzes, and tests with keys. The teachers' guides and test books aren't necessary to learn the languages, but they'll help you grade and evaluate.

German Course.

German Teachers' Guide/Test Book.

Russian Course (no Russian Teachers' Guide/Test Book available).

The following one-year course costs \$55.95:

Iapanese Course.

Correspondence Courses

University of Oklahoma Independent Study Department 1600 S. Jenkins, Room 101 Norman, OK 73072-6507 800-942-5702 www.occe.ou.edu

The University of Oklahoma has particularly good language correspondence courses; they come complete with texts and cassette tapes. The catalog includes both high-school and college courses.

30

1

MASTERING THE MAGIC BOX: Computer skills

People are flooding the Internet like the lava from Vesuvius flooded Pompeii.

-Tom Lichty, American Online's Internet

SUBJECT: Basic computer programming

TIME REQUIRED: 3 to 5 hours per week for one year (eleventh or twelfth grade)

GENERALLY SPEAKING

Throughout Part III of this book, we referred the high-school student to computer resources—CD-ROMs, online tutorials, reference Websites. So we're certainly not antitechnology. Computers are marvelous tools; word processing beats typewriting; E-mail is more convenient (and cheaper) than the postal service. We live in the country. Before Internet access, we had to make the hour-long round-trip drive to the public library in order to look up information about books we wanted to recommend. Now we can sign on, search the library catalog, and be off in three minutes.

In the spirit of classical education, though, we approach this new technology with great caution. In Chapter 28, we suggested that the student use questions outlined by Neil Postman in *The End of Education* to evaluate scientific discovery and innovation better. These should be applied first and foremost to computer technology.

Postman says, in essence: Any technology offers both advantages and disadvantages. What are they?¹

The Internet floods cyberspace with information. Yet only some of this information is filtered in any way—fact-checked, read through for general accuracy, edited. Scholarly books, on the other hand, have been *mediated*—passed through a number of tests before publication. They may still be bad scholarship, but they generally won't contain libelous statements, out-and-out lies, or intentional distortions. It is relatively easy to publish on the Internet; libel, lies, and distortions abound. The student who uses the Internet for information needs to check everything carefully, applying to the task all her skills in logic and analysis.

In other words, Internet information doesn't make the book obsolete. It doesn't remove the need for the student to be trained in critical thought. It should not take the place of library trips, magazine subscriptions, or any of the mediated ways to gain information. When Internet resources become primary, the student herself becomes the mediator of knowledge and no high-school student can match the experience of an editor at a university press who's been working with scholars and their manuscripts for many years.

Now, consider this:

All technologies come complete with a philosophy about what is important about human life and what is unimportant. What parts of life does the technology exalt? What parts does it ignore?²

Constructing a philosophy of the Internet is a complex job, but one part of that philosophy is immediately obvious: the Internet exalts intellectual ex-

¹Neil Postman, The End of Education: Redefining the Value of School (New York: Knopf, 1995), p. 192.

²Postman, p. 192.

perience over sensory experience. The Internet is body-neutral. Physical sensations—touch, smell, taste, balance—are irrelevant.

What are the implications of that? At least two stand out.

First, because we're physical beings, our intellectual pursuits affect our bodies. Numerous studies have been done on how different experiences change the physical makeup of the brain. Specifically, the brain of the student who spends eight hours per day in front of the computer looks different than the brain of the student who spends an hour in front of the computer, four hours in front of books, and the other three hours doing outside activities. Any constantly repeated activity develops some neural pathways at the expense of others. In other words, balance computer use with paper-and-pencil work and active learning. Otherwise, you'll be developing certain parts of the brain while ignoring others. Don't let this form of modern technology dominate your child's spare time; think long and hard about what you're agreeing to when you allow your adolescent to roam the Net for five hours in the evening instead of building models, reading Plato, playing a musical instrument, cutting the grass, drawing, keeping a journal, eating, sleeping or staring into space and thinking about what life means.

A second implication is especially important for high-school students. Any normal adolescent—by which we mean one who is insecure, struggling to face others with both grace and confidence, self-conscious about skin and hair and weight—prefers to communicate via chat room. Electronic friends are much safer than flesh-and-blood companions. We've met teenagers who spend almost all their recreation time in chat rooms or E-mailing. Although computer friendships can be productive, any computer friendship may take the place of real, live give-and-take between people who are physically present.

For high school, we're not laying down hard-and-fast rules. We are encouraging you to realize that computers, like all technologies, put priorities on some types of experience and relegate others to the background. Know what kind of bargain you and your teen are making when dealing with computer use. As a matter of fact, simply to maintain balance, we think that every high-school student ought to read at least one neo-Luddite work on the computer age (for example, *Data Smog, Resisting the Virtual Life*, or one of the other titles listed at the end of this chapter) to balance out the techno-ravings of software executives and Internet providers.

PRACTICALLY SPEAKING

High-school students should be familiar with basic computer use (how to navigate through Windows), Internet access, and a common wordprocessing program such as WordPerfect or Microsoft Word. Knowledge of a desktop-publishing program such as QuarkXPress or PageMaker and a spreadsheet program such as Quicken will boost the student's employability. The best way to learn any of these programs is to buy, install, and use it with one eye on the computer, the other on the manual. Let the rhetoricstage student prepare her paper on a word processor, keep her checkbook on Quicken, and write the family newsletter on PageMaker. Then she can add to her résumé: "Computer skills: Microsoft Word, PageMaker, Quicken."

Our computer guru also suggests that every high-school student be introduced to basic computer programming. This is a way to take the mystery out of computers and put them in their place—as powerful tools, not as dictators of culture. The student who can program has asserted her control over the computer genie.

We suggest that during eleventh or twelfth grade, you schedule at least a year of beginning computer programming into the student's curriculum. Computer programming traditionally takes the place of an advanced mathematics elective or a language elective (anything beyond the four years of one language and two of another outlined in Chapter 29).

As of this writing, the most useful computer language for study is Visual Basic. We suggest several self-teaching computer courses in the Resources list at the end of this chapter. With the proper equipment, the student should be able to work through these independently for a good grasp of programming principles. Computer languages slide into obsolence faster than fresh produce spoils. So before you plunge into the study of Visual Basic, you might call a friend who programs (or consult the computer-science department at a local college, or talk to the technology-education teacher at a good private school) and ask whether another language has already trumped it.

As always in high school, you can also enroll your student in a programming course at a local college or find her a tutor. Adult-education classes offered by colleges and libraries often include basic computer skills and programming.

SCHEDULE

Grade 11 or 12: a one-year course in beginning computer programming for three to five hours per week

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books and tapes or CDs can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Skeptical Reflections on Technology

Brook, James, and Ian A. Boal, eds. Resisting the Virtual Life: The Culture and Politics of Information. San Francisco, Calif.: City Lights Books, 1995.

This anthology of twenty-one essays and interviews asks: Who benefits from the latest technologies, and what are the consequences?

Shenk, David. Data Smog: Surviving the Information Glut. San Francisco, Calif.: Harper San Francisco, 1997.

Shenk argues that the huge amount of unfiltered information available in society contributes to social fragmentation, lowered educational standards, religious extremism, and political bickering.

Slouka, Mark. War of the Worlds: Cyberspace and the High-Tech Assault on Reality. New York: Basic Books, 1996.

Fascinating essays on how cyberspace changes the rest of reality.

Stoll, Clifford. Silicon Snake Oil: Second Thoughts on the Information Highway. New York: Anchor, 1996.

Although it's easier to poke holes in Stoll's argument than in the arguments of the other authors we recommend, he offers some provocative ideas: that computers change the way we think, isolate us, and tie us to a cycle of constant spending and updating.

Basic Computer Knowledge

Most Common Word-Processing Programs

WordPerfect Microsoft Word

Most Common Spreadsheet Program

Quicken

Most Common Publishing Programs

QuarkXPress PageMaker Photoshop CorelDraw Illustrator

Acquiring Programming Skills

We offer this as a tentative and extremely rudimentary list. You would do well to call a local computer-science teacher or the computer-science department of the college where your child hopes to apply, and ask what titles they would recommend for beginning programming skills.

If you're a beginner (still looking for the power switch), start with one of these:

Dungworth, Richard, et al. Complete Book of Windows: With an Introduction to Windows 95. Tulsa, Okla.: Educational Development Center, 1996.

Use this if you have Windows and an IBM-compatible system. It is written for students and provides a very easy start for the intimidated. We expect an updated version with an introduction to Windows 98 to follow shortly, but as of this writing no update has been published.

Levitus, Bob, and Steve Bobker. *Mac OS 8.5 for Dummies*. Foster City, Calif.: IDG Books Worldwide, 1998.

Order directly from IDG Books. Use this if you have a Macintosh. This guide to the latest Mac operating system begins with "What you should see after turning the power on" and progresses to more advanced concepts. If you're already familiar with your computer's operating system, you're ready to move on into programming. You can start with one of the following titles:

Sydow, Dan Parks. *Mac Programming for Dummies*. 2d ed. Foster City, Calif.: IDG Books Worldwide, 1996.

Order directly from IDG Books. Simple programming for the Mac. Includes a CD-ROM.

Wright, Peter. Beginning Visual Basic 6. Chicago, Ill.: Wrox Press, 1998. Beginning programming for Windows. Moves on into fairly advanced concepts.

31.

1/1/

APOLOGIZING FOR FAITH: Religion

It is upon this that our whole Western culture has been built: The universe had a personal beginning—a personal beginning on the high order of the Trinity.

-Francis Schaeffer

One goal of rhetoric is the apologia, the articulate and well-reasoned defense of belief. During the rhetoric stage, the student should certainly learn to defend his own faith without resorting to rhetorical abuses ad hominem attacks, abusive fallacies, black-and-white fallacies, or any of the other illegitimate arguments forbidden by both logic and rhetoric. And the study of rhetoric should protect the student from abuse of his own beliefs by others.

Religion and rhetoric have an even deeper relationship, though. Classical rhetoric cannot be pursued apart from the considerations of faith. In *Rhetoric,* Aristotle writes that the man who wishes to master rhetoric must be able

(1) to reason logically, (2) to understand human character and goodness in their various forms, and (3) to understand the emotions—that is, to

name them and describe them, to know their causes and the way in which they are excited.¹

The ability to reason logically is learned during the logic stage; rhetoric itself aims to name and describe human emotions. But an understanding of human character and goodness in its various forms cannot be separated from our belief about who human beings are, where they came from, and what they are essentially like. Goodness itself cannot be defined without making serious faith decisions: either goodness resides in a Being, or it exists as a social construct.

This is the foundation of ethics.

Nor can ethics be discussed in some sort of "neutral" fashion. If you are a theist, you believe that human character comes from a Creator and reflects some of the Creator's qualities. If you are a materialist, you believe that human character is primarily the result of biological factors, some of which can be controlled, some of which can't. If you are a Christian, you believe that moral absolutes are binding upon every human being. If you are an agnostic, you believe that moral absolutes are unknowable and that making pronouncements about moral absolutes thus reaches the height of arrogance.

What sort of neutral ground can these views meet on?

None. Rhetoric involves an intensive discussion of social ethics, the nature of good and evil, individual responsibility, and the extent to which the manipulation of emotions is morally acceptable. None of these issues can be tackled without a grasp of ethics. And ethics is, itself, inseparable from our view of God, our belief about the nature of humankind, and our expectations of society.

The rhetoric exercises we recommend—evaluating the ideas and philosophies of the great books, writing about the moral and ethical implications of technology—have to be done in the context of faith. Tolerance for the faith of others doesn't mean that the student simply throws open his arms and says, "We're *all* right"; that makes nonsense of five thousand years of deeply held and contradictory beliefs. The tolerance taught by rhetoric involves the student's holding on to his own deep, well-reasoned convic-

¹Aristotle, Rhetoric I.2.

tions, while simultaneously treating others with respect. Respect doesn't mean admitting that someone else is right. It does mean refraining from resorting to abusive fallacies and the rhetoric of propaganda so that those of different faiths can seriously and peacefully argue about ideas.

We think that every rhetóric-stage student should make at least a prelimary study of ethics. Since ethics is related to belief, we can't (obviously) recommend an ethics text that will satisfy all home schoolers. The texts we recommend are those we've used ourselves—as Protestant Christians. We encourage you, as you work through the rhetoric stage with your highschool student, to formulate your own beliefs. Use logic and rhetoric to extract what you really believe from the cloudy ideas that may be swirling around you. And then base your own discussions of ethics—right and wrong—self-consciously on those beliefs.

RESOURCES

Consult your own religious or intellectual community, or make use of the following resources:

Christian Ethics

Schaeffer, Francis. How Should We Then Live? Wheaton, Ill.: Good News Books, 1983.

\$14.99. Order from Greenleaf Press. An outline of Western history and the place of Christian morality within it. Special emphasis on art and philosophy.

Wilkens, Steve. Beyond Bumper Sticker Ethics: An Introduction to Theories of Right and Wrong. Downers Grove, Ill.: InterVarsity Press, 1995.

The basics of cultural relativism, emotivism, utilitarianism, situation ethics, and deontology, with an evaluation of each.

Jewish Ethics

Alper, Janice, and Joel Lurie Grishaver. Mah La'asot—What Should I Do? A Book of Ethical Problems and Jewish Responses. Los Angeles, Calif.: Torah Aura Publications. Order directly from Torah Aura, which also offers other titles on ethics. This book is recommended by the Jewish Home Education Network.

Gittelsohn, Roland B. *How Do I Decide?* West Orange, N.J.: Behrman House, 1989.

\$9.95. Order directly from Behrman House, which also offers other titles on ethics. This text is written specifically for high-school students.

APPRECIATING THE "ARTS: ART AND MUSIC

32

MIL.

Art is the imposing of a pattern on experience, and our aesthetic enjoyment is recognition of the pattern.

-A. N. Whitehead

SUBJECT: Art and music TIME REQUIRED: 2 hours, twice per week

The rhetoric student recognizes both art and music as types of expression that are as valid as words. Just as words, spoken and written, are governed by the rules of rhetoric, so art and music are governed by conventions. The study of art and music during the final four years of classical education will center on those conventions—how they are used, how they are altered, how and when they are discarded.

Logic-stage study of art and music was tied chronologically to the study of history. The student was attempting to establish logical connections between artists and musicians and their times. Rhetoric-stage art and music study doesn't need to be connected quite so closely to the historical periods under study. Rather, the study focuses on art and music as the means by which ideas are expressed, just as the study of great books centers on writing as the expression of ideas in words. Pablo Picasso was a philosopher; Cubism embraced an ethical system; Ludwig van Beethoven and John Cage subscribed to widely different world views, and their compositions express this difference. Gothic cathedrals were built to demonstrate God's place at the center of existence; fifteen hundred years later, London artist Francis Bacon painted a screaming pope surrounded by sides of beef to show that "we are all carcasses."

Art is rhetoric.

Keep roughly to the same schedule you've been using all along—one one- to two-hour period per week for music study, another for art study. The student will keep two notebooks, one for art and the other for music. These notebooks should last for the entire four years of the rhetoric stage.

ART

The high-school student should continue to study both art skills and art appreciation. As in middle school, the student can alternate art projects one week with art appreciation the next. Or she can choose to study drawing, painting, and modeling one semester and art appreciation the following semester.

Art Skills

The high-school student can continue to divide art-project days among drawing, painting, and modeling (as in the middle grades). Or she can focus on one of these skills, developing a real mastery. For an artistically gifted student, you may want to consider "outsourcing"—hiring a tutor for her (most artists are accustomed to teaching for bread-and-butter money) or enrolling her in a college or adult-education art class. Call your local art association (check your Yellow Pages), and ask for a recommendation. Art museums and galleries often offer art classes, taught by professionals, that are appropriate for students who've already mastered basic skills.

Drawing and Painting

The high-school student can use any of the drawing and painting resources listed at the end of Chapter 21. A slightly more advanced course, good for

anyone who's finished Brookes's *Drawing with Children* and Edwards's *Drawing on the Right Side of the Brain*, is Dorling Kindersley's Art School books, which are designed to teach techniques and materials for a full range of drawing and painting skills. We suggest using the books in the following order:

An Introduction to Drawing An Introduction to Perspective Drawing Figures An Introduction to Pastels An Introduction to Watercolor Watercolor Still Life An Introduction to Acrylics An Introduction to Oil Painting Oil Painting Portraits An Introduction to Mixed Media

This is more than a full high-school art course. The student can pick and choose among the titles.

Modeling

The high-school student has been introduced to modeling through Erdmann's Hands-On Sculpting. She can either continue to use the titles we list at the end of this chapter—Sculpture: Principles and Practice, Modeling a Likeness in Clay, Modeling the Head in Clay, and Modeling the Figure in Clay—or devote that time to painting and drawing, using the Dorling Kindersley series.

Art Appreciation

The high-school student is ready for a full art-history course, one that covers techniques, the philosophies of individual artists, and the rise of the various schools.

For a base text, we like *The Annotated Mona Lisa: A Crash Course in Art History from Prehistoric to Postmodern.* This survey, written by Carol Strickland, walks the beginner through art history in a brisk, nontechnical manner. It summarizes schools, periods, artists, and technique in architecture, painting, and sculpture, from prehistoric times through postmodernism. In a thirty-six-week school year, the student will spend eighteen weeks studying art history. In each of these eighteen weeks, she should read from the *Annotated Mona Lisa* and use additional resources to study the artists and works of art discussed (we suggest keeping the Eyewitness art series and *The Story of Painting*, by Sister Wendy Beckett, on hand). She should then record something she's learned, either writing briefly about it, or using the distinctive characteristics of the artist or school under discussion to sketch something in that style. These notebook pages and sketches should be kept in the art notebook.

If the ninth grader, for example, is studying the Italian Renaissance, she'll read through the appropriate pages in the textbook and pick one of the subjects discussed (the life of Leonardo da Vinci, the composition of the Mona Lisa or The Last Supper, Michelangelo's accomplishments, Raphael as a representative of the High Renaissance, Titain's methods of painting textures, or the four R's of Renaissance architecture (Rome, rules, reason, and 'rithmetic). Whatever subject she chooses, she'll look at any relevant paintings in the Eyewitness art series and in The Story of Painting and read any relevant background material. Then she'll write briefly (three-quarters of a page to a full page is fine), summarizing the information. If suitable, she could also sketch her report; if she were studying the composition of the Mona Lisa or The Last Supper, for example, she could simply draw the layout, adding annotations that contain the information she's learned (the diagonal lines all converge on Christ's head; Mona Lisa sits in an innovative. three-quarter pose). Creativity in reflection should be encouraged during the rhetoric stage of art-historical study.

Divide The Annotated Mona Lisa as follows:

Ninth grade	"The Birth of Art" through "The Renaissance: The
	Beginning of Modern Painting" (pp. 2–45)
Tenth grade	"Baroque: The Ornate Age" through "Birth of
	Photography" (pp. 46–95)
Eleventh grade	"Impressionism: Let There Be Color and Light"
	through "Expressionism" (pp. 96–144)
Twelfth grade	"Mondrian: Harmony of Opposites" through "The New
	Breed: Post-Modern Art" (pp. 145–194)

Since these divisions contain approximately eighteen sections each, the student can plan on studying one per week. The ninth grader, for example,

will begin with "Prehistoric Art: The Beginning," progress through "Egypt: The Art of Immortality," "African Art: The First Cubists," and "Gothic Art: Height and Light," and will finally end up with "The Spanish Renaissance."

MUSIC

Music Skills

By high school, those students who are not interested in playing an instrument will have dropped lessons, while those who are interested will have developed some proficiency and will know whether they want to keep on.

Music Appreciation

Whether or not the student is taking music lessons, she should continue to spend one and a half to two hours every week doing music appreciation.

Like art appreciation, music appreciation will focus on styles, forms, and schools of composition, rather than on the time line of music. For a base text, we like *Classical Music: A New Way of Listening* by Alexander Waugh, a book that comes complete with time lines and a compact disc of examples to illustrate points in the text. The companion volume is Waugh's *Opera: A New Way of Listening*, which you should work through after *Classical Music*. If you finish both of these, you can move on to *The Listener's Guide to Classical Music: An Introduction to the Great Classical Composers and Their Works*, by Kenneth and Valerie McLeish, which contains profiles of one hundred composers and descriptions of over one thousand works, cross-listed by major instrument groups.

Rather than requiring a certain number of pages to complete per week, the student should progress through *Classical Music* in a relaxed manner, taking plenty of time to borrow CDs from the library and listen to them. It's okay to take the whole four years of the rhetoric stage to progress through *Classical Music*. Follow these guidelines:

1. Write a short biographical sketch (one to two pages long) for each composer encountered. Try to focus not just on facts (birth and death dates, training, posts held), but on the development of each com-

poser as an artist. Did he ever express his purpose for composing? What were his musical models? What did he consider to be his greatest work? Why? Did he hold to his early training or break away from it?

- 2. Whenever *Classical Music* describes a certain school of composition, write a couple of paragraphs discussing the school's characteristics and its major followers. Then make a brief list of important world events and philosophical movements going on at the same time (*The Timetables of History* will provide this information).
- 3. For each composer studied, keep a list of works that you've listened to. Before you move on to another composer, write a couple of paragraphs describing the quality of this composer's work (this is a creative assignment). What effect does the music have on you? Do you like it? dislike it? Are you excited by it? bored? Be sure to give specific reasons.

The student encountering Chopin, for example, could linger on this section of *Classical Music* until she's listened to several weeks worth of Chopin's music. When she's ready to move on, she should (1) write a biographical sketch of Chopin, (2) briefly describe the Romantic movement and list major world events and philosophical shifts (for example, the Romantic movement in literature), and (3) list the works of Chopin listened to and write a couple of paragraphs about the effects of Chopin's music on her. She should file all these papers in the music notebook.

SCHEDULES

Sample Schedules

e art projects with
about 50 pages of the
ł Mona Lisa.
Classical Music; whenever
e on to a new topic, write
ies, descriptions of
schools, and reactions to
tions.

Tenth grade	Mondays, 2 hrs.	Alternate art projects with studying about 40 pages of the Annotated Mona Lisa.
	Thursdays, 2 hrs.	Listen to <i>Classical Music</i> ; whenever you move on to a new topic, write biographies, descriptions of musical schools, and reactions to compositions.
Eleventh grade	Mondays, 2 hrs.	Alternate art projects with studying about 50 pages of the Annotated Mona Lisa.
	Thursdays, 2 hrs.	Listen to <i>Classical Music</i> ; whenever you move on to a new topic, write biographies, descriptions of musical schools, and reactions to compositions.
Twelfth grade	Mondays, 2 hrs.	Alternate art projects with studying about 50 pages of the Annotated Mona Lisa.
	Thursdays, 2 hrs.	Listen to <i>Classical Music;</i> whenever you move on to a new topic, write biographies, descriptions of musical schools, and reactions to compositions.

Appreciating the Arts: Art and Music

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books and tapes or CDs can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. These resources are divided into three lists: art skills (including art supplies), art appreciation, and music appreciation (at this stage, music skills should be studied with a professional teacher). For each list, we have given basic texts first, followed by supplementary resources (you can pick and choose among these). You can also use many of the resources listed in Chapter 21, particularly the art-skills books and materials.

Art Skills

Basic Texts

Dorling Kindersley Art School series. New York: Dorling Kindersley.

\$16.95 in hardback; \$9.95 in paperback. Check these titles out from the library, order from Dorling Kindersley (hardbacks only), or buy through a bookstore or online bookseller.

Horton, James. An Introduction to Drawing. 1998.

Lloyd, Elizabeth Jane. Watercolor Still Life. 1994.

Smith, Ray. Drawing Figures. 1994.

———. An Introduction to Acrylics. 1998.

———. An Introduction to Oil Painting. 1998.

——. An Introduction to Perspective. 1995.

_____. An Introduction to Watercolor. 1998.

———. Oil Painting Portraits. 1994.

Wright, Michael. An Introduction to Mixed Media. 1995.

------. An Introduction to Pastels. 1998.

Grubbs, Daisy. *Modeling a Likeness in Clay*. New York: Watson-Guptill, 1982. Order from a bookstore or online bookseller. How to make a clay portrait. A year's course in realistic sculpting.

Lucchesi, Bruno, and Margit Malmstrom. *Modeling the Figure in Clay*. New York: Watson-Guptill, 1996.

Order from a bookstore or online bookseller.

. *Modeling the Head in Clay*. New York: Watson-Guptill, 1994. Order from a bookstore or online bookseller.

Slobodkin, Louis. Sculpture: Principles and Practice. New York: Dover, 1983.\$11.95. An introduction to the theory of sculpture, along with projects.

Art Supplies

Sculpey. Elk Grove Village, Ill.: Polyform Products.

\$7.95 for a 2-pound pack, \$29.50 for an 8-pound pack. Order from Rainbow Resource Center. Sculpey is an easy-to-work clay that fires in a regular oven in twenty minutes without shrinking. Rainbow also sells Sculpey Glaze, in either matte finish or glossy finish, for \$2.35 per bottle. Visit an art supply store, or call for art supply catalogs to browse through available materials:

Cheap Joe's, 800-227-2788, www.cheapjoes.com. Jerry's Artarama, 800-827-8478, www.jerryscatalog.com. Rainbow Resource Center, 800-841-3456.

Supplementary Resources

Basic Techniques series. Cincinnati, Ohio: North Light Books.

These books will provide additional projects for those who want to do extra work.

Wolf, Rachel, ed. Basic Portrait Techniques. 1994.

———. Basic Still Life Techniques. 1994.

Wolf, Rachel, and Greg Albert, eds. Basic Oil Painting Techniques. 1993.

Art Appreciation

Basic Texts

Strickland, Carol. The Annotated Mona Lisa: A Crash Course in Art History from Prehistoric to Postmodern. Kansas City, Mo.: Andrews McMeel, 1992. \$18.00. Order from Rainbow Resource Center.

Supplementary Resources

Beckett, Sister Wendy. The Story of Painting: The Essential Guide to the History of Western Art. New York: Dorling Kindersley, 1994.

\$39.95. Order through a bookstore or online bookseller, or try your library. Contains more than 450 full-color paintings spanning 800 years.

Eyewitness Art series. New York: Dorling Kindersley.

\$16.95 each. Order from Dorling Kindersley. Although some of these are still available through bookstores or online booksellers, Dorling Kindersley now sells most of them exclusively. Check your local library for short-term use.

Cole, Alison. Color. 1993.

------: Perspective. 1993.

——. The Renaissance. 1994.

Opie, Mary-Jane. Sculpture. 1994..

Welton, Jude. Impressionism. 1993.

———. Looking at Paintings. 1994. Wiggins, Colin. Post-Impressionism. 1993.

Music Appreciation

Basic Texts

Waugh, Alexander. Classical Music: A New Way of Listening. New York: Macmillan, 1995.

\$24.95. Includes the book and CD.

———. Opera: A New Way of Listening. New York: Stewart, Tabori & Chang, 1996.

\$24.95.

Supplementary Resources

McLeish, Kenneth, and Valerie McLeish. The Listener's Guide to Classical Music: An Introduction to the Great Classical Composers and Their Works. New York: G. K. Hall, 1992.

\$15.95.

THE SPECIALIST

MIL

33

Any child who already shows a disposition to specialize should be given his head: for, when the use of the tools has been well and truly learned, it is available for any study whatever. It would be well, I think, that each pupil should learn to do one, or two, subjects really well, while taking a few classes in subsidiary subjects so as to keep his mind open to the inter-relations of all knowledge.

-Dorothy Sayers, "The Lost Tools of Learning"

SUBJECT: Junior and senior project

TIME REQUIRED: 2 to 3 hours or more per week in grades 11 and 12

In the preceding chapters, you will have noticed that the number of subjects studied are reduced in the junior and senior years of high school. For example, math and language study can be completed in tenth or eleventh grade; the formal study of writing ends. By the junior year in high school, the typical student of rhetoric is spending two hours per day study-ing great books, an additional hour and half two days per week studying science, and a couple of hours twice a week dealing with art and music. He's also pursuing an elective—computer programming, advanced language, or Advanced Placement math. This schedule leaves time for the junior and senior writing projects. Eleventh and twelfth graders should choose a major research project in a field that interests them and carry this project out. This is the equivalent of a high-school "honors" program.

During the high-school years, most students begin to develop a "speciality," a skill or branch of learning in which they have a particular talent and interest. Computer programming, Victorian novels, ancient Britain, Renaissance art, French poetry, piano performance, gymnastics, baseball, writing fiction—whatever the student chooses to spend his time doing can become a speciality.

The junior and senior projects give the student an opportunity to exercise all his hard-learned skills in writing and reasoning on a subject that excites him. The opportunity to do in-depth reading and writing on these subjects may steer him toward (or away from) a college major.

GENERAL GUIDELINES

The junior and senior projects are wider in scope than the ninth- and tenthgrade research papers. Research papers focus on a topic that can be summarized in a thesis statement; they tend to deal with a single time and place (that is, they are *synchronic*—they examine a particular point in time). The junior and senior projects should be more complex—they should be *diachronic* (moving through history, examining the origins and historical development of the topic under study).

Any subject, Neil Postman observes, can be given scholarly value if the student traces its historical development, reflects on its origins, and theorizes about its future.¹ Every topic treated in this way sheds insight on human endeavor—the way we live. Baseball, for example, becomes a fascinating and fruitful study if the student follows it back to its beginnings and traces it from there. Bat-and-ball games were played as far back as the Aztecs; baseball became a popular child's game in the nineteenth century; the mutation of baseball into a professional sport parallels the general shift in American culture from rural-centered to urban-centered; baseball clubs, first formed in the 1870s, were plagued by corruption; in the twentieth century, baseball heroes were carefully shielded by the media, which felt they had a duty to protect the hero status of baseball players by not reporting on their misdeeds; baseball players evolved into "celebrities"; and

¹Neil Postman, The End of Education: Redefining the Value of School (New York: Knopf, 1995), p. 112.

so forth. This study pinpoints a number of cultural shifts in American life amateur to professional, rural to urban, hero to celebrity. Any student who completes this project will have a better understanding not only of baseball, but of his own culture and history.

The student should keep these questions in mind while developing his topic of study:

- When did this begin? What was its original form? What cultural purpose did it serve?
- Who performed this activity? What cultural place did they occupy? How were they regarded by others?
- What prior historical events did this event/activity resemble? Is this coincidental? Did this event/activity model itself on something that came before? What philosophy does this reveal? (The Olympics, for example, obviously owe a great deal to the ancient Greeks and their ideas about what makes an ideal human being.)
- What ideal picture of human beings does this activity/event hold up?
- How did this activity develop from its beginnings to the present day?
- What effects did this event have on its surroundings? On the generation directly after? Five hundred years later? The present day?
- How did this activity/event change the way people viewed nature? How did it change the way they thought about God?
- What current cultural trends are reflected in this activity? What cultural trends resulted from this event?

Not all of these questions will be applicable to every topic. But if the student can answer some form of these queries, his paper will begin to take shape.

For example, suppose the high-school junior loves the novels of Jane Austen. If he decides to do a project on Austen's novels, he needs to think widely about the origins of the novel, its development, Austen's use of it, and the effects of Austen's work on present-day readers. His questions, then, might take the following form:

• When were the first novels written? What were the first novels? (*Don Quixote* is widely regarded as the first novel.) What cultural shifts around the time of Cervantes led him to create this new form?

- Who originally wrote novels? (Men.) What cultural place did they occupy? (They were thinkers and philosophers.) How were they regarded by others?
- What is the relationship between the historical forms that came before the novel (the epic poem, the fable) and the novel itself? How do novels differ from epic poems and fables? How are they the same? What can a novel do that a poem or fable can't?
- How did novel reading develop from Cervantes to Austen? (This is an immensely fruitful area—novels were viewed with suspicion by the Church; novel reading became a silly, "female" activity and thus was considered trivial and a waste of time; the "lady novelist" was a figure of fun).
- How did novel reading develop from Austen to the present? (Novels slowly regained their position as serious reflections on the human condition, paralleling in some ways the rise in status of women in society.)
- What effects did Austen's novels have on novel writing in general? (The "novel of manners"—a new genre—was created.) What is the twentieth-century equivalent of the novel of manners?
- What is the relationship of "women's fiction" in the twentieth century to Austen's novels? Have certain types of novel become (once more) the province of "lady novelists"?
- What does the current popularity of Austen's novels say about our own culture? (Quite a bit has been written about the postmodern longing for a return to proper etiquette and manners.)

As in preparation for writing the research papers for ninth and tenth grades, the student should plan on doing a great deal of prereading (the entire fall semester can be spent prereading). Extensive reading in criticism, history, and theory can clarify which of the questions can be answered and which don't apply.

After prereading, the student can follow the general guidelines for preparing the research paper, given in Chapter 26. We suggest that you buy and use *Preparing the Research Paper*, published by Educator's Publishing Service. We criticized this text as being too complex for the ninth- and tenth-grade years, but its complexity suits the wider range of the junior and senior project. Part XIII has a highly useful list of suggested topics for papers in agriculture, architecture, art, aviation, business, civil rights, ecology, economics, education, engineering, entertainment, government, history (both American and world), labor, law, literature, medicine, music, politics, religion, science, sports, and the women's movement. These ideas should move the topicless student in some direction.

The junior paper should be fifteen to twenty pages long; the senior paper, twenty or more pages long.

FLEXIBILITY

Allow some room for creativity. At least one of the projects (ideally, the junior project) should be in standard research-paper form. But permit the second to vary. A student with an interest in creative writing could research the novel in the junior year and write part of a novel for the senior project. The junior with an interest in physics can write a historical study of some development in physics during the junior year; in the senior year, he could perform a complex experiment and document it. The musical student could write a music-history paper in the junior year and give a recital (or compose a piece) for the senior project. The gymnast can write a history of gymnastics in the junior year and prepare for a serious competition to take place the year after.

Just keep the following guideline in mind: whatever creative project is undertaken for the senior year must be documented—it must involve *writing*. The high-school scientist can perform experiments, but he must then write an article about his findings—just as practicing scientists do. The gymnast must write an account of his preparation and competition. The musician must write an essay explaining his choice of recital pieces or analyzing the form of his composition. If the senior writing project is combined with some other activity, it can be shorter (ten pages is a good rule of thumb), but it can't disappear entirely. These writing projects force the student to evaluate what he's doing. They also serve as documentation of the senior project for school boards and college admissions officers.

SPECIFIC GUIDELINES

During the rhetoric stage, as Dorothy Sayers writes in "The Lost Tools of Learning," all subjects tend to run together; knowledge is interrelated.² The student writing a history paper will find himself discussing scientific developments; the physicist will have to deal with the religious implications of discoveries in physics (something that occupied Einstein); the musician will find himself studying philosophy. However, projects in each area of knowledge should follow specific guidelines.

History

The student who chooses to research a historical event or era should be careful not to get "stuck in the past." He should deal with the event's relationship to similar prior events, its effect on the surrounding cultures, and any effects that stretch to the present day. The student working on a historical topic should always conclude his paper by answering the question: What does this tell me about my own day and culture?

Research on the lost continent of Atlantis, for example, should deal with early stories of lost civilizations, early volcanic eruptions and other natural disasters that wiped out entire groups of people, the specific events surrounding the loss of Atlantis, the stories of the lost continent told by different cultures (each one varies slightly, depending on the culture that tells it), and the theme of a lost country in twentieth-century American science fiction, fantasy, and folklore. You might answer the question "What does Atlantis tell me about my own day and culture?" by saying: "We have a constant longing to find an 'unspoiled' country, free from the problems we see around us."

For a shining example of this sort of history, read Thomas Cahill's *How the Irish Saved Civilization*, in which the author relates the copying activities of a group of Irish monks to both ancient culture and the preservation of Western civilization in our own day. (He also points out eerie parallels be-

²Dorothy Sayers, "The Lost Tools of Learning," in Douglas Wilson, Recovering the Lost Tools of Learning (Wheaton, Ill.: Crossway Books, 1991), p. 161.

tween the descent of darkness in the Middle Ages and the "new barbarism" of our own times.)

Literature

The student working on literature should always treat the development of the genre under study, from its roots to the present day. This will yield a number of insights, as is illustrated by the Jane Austen example, above. Why was novel reading considered a female activity? Why has the epic poem fallen out of favor? Why was philosophy first written in verse and then in prose? These sorts of questions will widen the study of literature.

Mathematics

Mathematics projects can take two forms: the historical development of a type of mathematics (from Pythagoras and Euclid to the present) and the application of mathematics to specific scientific problems. Generally, the junior mathematics project should trace historical development. The senior project can involve the solving of problems, as long as the student writes up his findings as though for publication.

Science

Scientific projects should follow the same guidelines as those given in "Mathematics," above. A historical survey in the junior year can be followed by experimentation or projects in the senior year, providing everything is properly documented.

Foreign Languages

The language student can write a paper on the literature of another country, following the "Literature" guidelines, above. For a more challenging project, he can write a literature, history, or creative paper *in* the foreign language of his choice. Like the science student, the language student can do a project for the senior year (teaching a language class to other home schoolers; going abroad to the country where that language is spoken). This project should be summarized in a ten-page essay.

Computer Programming

Any student planning to specialize in computers *must* write a junior or senior paper following Neil Postman's guidelines:

Indicate, first, what you believe are or will be the main advantages of computer technology, and why; second, indicate what are or will be the main disadvantages of computer technology, and why.³

This will help prevent "Computer Programmer's Disease"—the belief that computers are the center of existence.

The second project can be a programming one, which must be properly documented. A manual to accompany the project could fulfill this requirement.

Religion

A paper on religion will resemble a history paper in that it will trace the development of a certain aspect of faith and practice and will reflect on present-day effects and applications. Ethics papers should follow the same general guidelines. Any paper treating the ethical aspect of some behavior (assisted suicide or cloning, for example) must examine the history of the issue as well as proposing present guidelines.

The Arts: Painting, Sculpture, Theater, Music

As in science and math, the junior project should be a historical survey (of a painting or sculptural style or school, the development of a particular theatrical convention, the performance history of one of Shakespeare's plays, the development over time of a particular musical form or style, the development of an instrument). The senior project can be a recital, an art exhibit, or a theatrical performance. A ten-page essay should document and explain this project.

³Postman, p. 93.

Sports

As demonstrated in the discussion of baseball, sports can provide great cultural insight if studied historically. Sports are a type of performance, and, as with the performing arts, the student should write one historical study. The senior year can be devoted to a sports performance, properly documented with a ten-page essay.

EVALUATION *

We strongly suggest that you find someone to evaluate the junior and senior projects. Enlist local college faculty members or experts in the student's field. You can also write to authors, musicians, and scholars, asking them to evaluate the junior and senior papers and projects. If you can afford it, you should offer to pay for these evaluations. (If you can't, the student has the chance to write a persuasive essay, explaining why he's worthy of the scholar's time and energy.)

If the expert will agree, the student should follow this pattern:

- 1. Preread.
- Make an appointment to discuss the topic with the expert, either in writing or by phone, on the Internet or in person. The expert will have additional suggestions, clarifying questions, and resources for the student to investigate.
- 3. Write or perform the project.
- 4. Submit the project for evaluation. Ask the expert to comment on and evaluate it.
- 5. Rewrite the project according to suggestions made by the expert.
- 6. Resubmit the completed, revised project.

Since this will take a fair amount of time and effort on the part of the expert, you should offer him or her a one-hundred-dollar honorarium, a small but acceptable token of good faith (it shows that you're not just wasting the his or her time).

This evaluation has two purposes. (1) The student is submitting his work to an expert, who can help him to sharpen and improve his knowledge

in the specific area. (2) The expert is now in a position to write letters of reference for the student when the student applies to colleges.

SCHEDULE

Eleventh grade	Allow 2–3 hours or more per week in the fall for
	prereading, 2–3 hours or more per week in the spring
	for writing.
Twelfth grade	Allow 2–3 hours or more per week in the fall for
	prereading or preparation, 2-3 hours or more per week
	for writing or performance.

RESOURCE

Davies, Phillips G., and Samuel L. Rogal. *Preparing the Research Paper*. Cambridge, Mass.: Educators Publishing Service, 1993.

Order direct from EPS.

SOME PEOPLE HATE HOMER

34

Tomorrow's economy will be volatile and dependent on flexible workers with a high level of intellectual skills. Thus, the best vocational education will be . . . in the use of one's mind.

-Theodore R. Sizer, Horace's Compromise

Classical education's fine for the college-bound. Homer and Plato might be fun for intellectuals. But what about the student who isn't interested in college? What about the student who doesn't really care about scholarship? What about the student who wants to finish high school, get out, and work?

A classical education is valuable even for people who hate Homer.

At a recent conference on education in Richmond, Virginia, a top executive from a car manufacturer let fly in frustration: Why are you asking me how to prepare students for the job market? Most of the high-school graduates who apply for jobs with us can't write, don't read well, can't think through a problem. We spend an unbelievable amount of money retraining these graduates in basic academic skills *before* we can teach them how to do their jobs. Don't bring more vocational training into the high-school curriculum. Teach them how to read, to write, to do math, and to think. *We'll* train them in the specific job skills they need. A well-trained mind is a necessity for any job—from car repair person to university teacher. The mechanic with a classical education will be more successful than her untrained counterparts; she'll know how to plan her business, how to relate to her customers, how to organize her responsibilities, how to *think*. A classical education is the best possible preparation for the job market.

Throughout this book, we've maintained that the classical education is not intended to teach all subjects comprehensively—history, science, math, language. The classical education *is* designed to teach the student how to learn. In its constant demand that the student read and then analyze and write about what she's read, the classical education trains the mind to gather, organize, and use information. And the student who knows how to learn—and has had practice in independent learning—can successfully do any job.

In their book *Teaching the New Basic Skills: Principles for Educating Children* to *Thrive in a Changing Economy*, authors Richard J. Murnane and Frank Levy analyze the hiring practices of several large companies. They conclude that while employers look for certain basic skills—the ability to do math, to read well, to communicate effectively in writing and in speech, to use computers for simple tasks—the primary quality that makes students employable is the abilities to "raise performance continually" by learning on the job.¹ Such ability follows the Platonic definition of *knowledge*—an activity, a continual process of learning, not some sort of static body of information.

Gene Edward Veith points out that the Greeks would have viewed with suspicion education that trains the student for a highly specific job. Such training creates "a slave mentality, making the learner an obedient worker utterly dependent upon his masters."² In an economy where the average worker has held five different jobs over the space of a career, only the flex-ible can survive (and be free).

A classical education is useful.

But to a certain extent, to ask "What's the use?" is itself antithetical to

¹Richard J. Murnane and Frank Levy, Teaching the New Basic Skills: Principles for Educating Children to Thrive in a Changing Economy (New York: Free Press, 1996), p. 32.

²Gene Edward Veith, "Renaissance, Not Reform," an essay posted at the Philanthropy, Culture and Society Website, August 1996; www.capitalresearch.org/pcs/pcs-0896.html. See also Gene Edward Veith, Jr. and Andrew Kern, *Classical Education: Towards the Revival* of American Schooling (Washington, D.C.: Capital Research Center, 1997), p. 78. the goals of the classical education. "The practical life," writes David Hicks, in a paraphrase of Plato, "falls short of completeness. The wealth one acquires in business is a useful thing, but as such, it exists for the sake of something else."³ The classically educated student aims for more than a life of comfort; she aims for a "life that knows and reveres, speculates and acts upon the Good, that loves and re-produces the Beautiful, and that pursues excellence and moderation in all things."

The classical education, with its emphasis on the life of the mind, on reading and writing about ideas, is aimed at producing a student who pursues excellence and moderation in all things. This is Plato's "virtuous man" (who, parenthetically, is generally highly employable—a side effect).

There's yet another reason for classical education, which has to do with the nature of a democracy. From ancient times through recent centuries, only a small, elite segment of the population received the kind of education we've outlined in these chapters. Because only a fraction of society was equipped to think through ideas and their consequences, only that fraction was qualified to govern—an act that demands that the governing members of society look past the immediate, the popular, and the simplistic in order to evaluate long-range consequences and complex cause and effect.

But in a democracy, all citizens have a part in government. They should be able to look past immediate gratification, rhetorical flourishes, and simplistic solutions in order to understand which course of action is the right one to take. In a healthy democracy, the casting of a vote is the act of a welltrained mind.

Every citizen in a democracy takes on the responsibilities that were once reserved for the well-educated aristocratic segment of society. And so every citizen, college-bound or not, should receive the type of education that will develop the life of the mind.

What happens if this is neglected?

"The average citizen," David Hicks writes, "will begin to doubt the soundness of his own judgments. He will surrender his fundamental democratic right to ideas and to decision making to a few experts. . . . [He will] grow lazy in his demand for a high quality of public thought and information. He will doubt his ability to decide the issues shaping his life, and

³David Hicks, Norms and Nobility: A Treatise on Education (New York: Praeger, 1981), p. 20.

he will take another step beyond representative government in relinquishing the privilege of self-government by putting himself at the mercy of a few experts. At last, abandoning his Western classical heritage, he will resign himself and his children to . . . a democracy in name only."⁴

It's a chilling scenario, but already these tendencies are visible in America at the end of the twentieth century. The classical education—for all students, not just for some college-bound "elite"—is the best preventive.

And you don't have to wait for your local school to come to this conclusion. You can train your child's mind yourself.
PART.III

EPILOGUE*

The Rhetoric Stage at a Glance

Guidelines to how much time you should spend on each subject are general; parents should feel free to adjust schedules according to the child's maturity and ability. For sample daily schedules, see Chapter 38.

Ninth Grade

(Vocabulary)	(2 hours per week: finish the Vocabulary from
	Classical Roots series.)
(Writing)	(60 minutes, three days per week: finish up
	Writing Exposition.) ¹
Rhetoric	3 hours per week: study and summarize A
	Rulebook for Arguments, followed by Classical
	Rhetoric for the Modern Student.
Language	45 minutes per day: work on a formal grammar
	workbook; read The Elements of Style.
Great books	2 hours per day: work through How to Read a
	Book; read, discuss, and write about great
	books; work on the research paper in the
	spring.
Mathematics	60 minutes, five days per week: Algebra I,
	Geometry, or Algebra II.

¹This is catch-up work from the logic stage. Do *not* begin the study of rhetoric until this work is completed, or the student will be overwhelmed.

573

574 THE RHETORIC STAGE

Science	4 hours per week: study biology.
Latin/foreign language	3-6 hours per week (depending on pace): Latin
	I or III; modern language or Greek.
Religion	Discuss ethics as appropriate when reading
	great books; work on apologia for your faith
	during "family time."
Art	2 hours per week: alternate art projects with
	studying the Annotated Mona Lisa.
Music	2 hours per week: work through music-
	appreciation texts, and listen to music.
Extracurricular activity	Debate club.

CLASS TIME SPENT: 36–40 hours per week (typical high-school week: 35 hours in class, plus homework and transportation time)

	Tenth Grade
Rhetoric	3 hours per week: study and summarize
	Aristotle's Rhetoric, then Ad Herennium.
Language	45 minutes per day: work on a formal grammar
	workbook; read The Elements of Style.
Great books	2 hours per day: work through Writing Strands
	until finished; read, discuss, and write about
	great books; work on the research paper in the
	spring.
Mathematics	60 minutes, five days per week: Geometry,
	Algebra II, or Advanced Mathematics.
Science	4 hours per week: study astronomy.
Latin/foreign language	3-6 hours per week (depending on pace): Latin
	II or IV; modern language or Greek.
Religion	Discuss ethics as appropriate when reading
	great books; work on apologia for your faith
	during "family time."
Art	2 hours per week: alternate art projects with
	studying the Annotated Mona Lisa.
Music	2 hours per week: work through music-
	appreciation texts, and listen to music.
Extracurricular activity	Debate club.
PSAT/SAT prep	1 hour per day, five days per week.

Part III: Epilogue: 575

CLASS TIME SPENT: 36–40 hours per week (typical high-school week: 35 hours in class, plus homework and transportation time)

	Eleventh Grade
Language	45–60 minutes per day: do formal grammar;
	read The Elements of Style.
Great books	2 hours per day: read, discuss, and write about
	great books. •
Mathematics	60 minutes, five days per week: Algebra II,
	Advanced Mathematics, or an Advanced
	Placement elective.
Science	4 hours per week: study chemistry.
Latin/foreign language	3-6 hours per week (depending on pace): Latin
	III or Greek; modern language or Greek.
(Computer programming)	(3-5 hours per week for one year: this is a
	substitute for advanced math or language study.)
Religion	Discuss ethics as appropriate when reading
	great books; work on apologia for your faith
	during "family time."
Art	2 hours per week: alternate art projects with
	studying the Annotated Mona Lisa.
Music	2 hours per week: work through music-
	appreciation texts, and listen to music.
Junior project	2–3 hours or more per week.

CLASS TIME SPENT: 36–40 hours per week (typical high-school week: 35 hours in class, plus homework and transportation time)

	Twelfth Grade
Language	45–60 minutes per day: do formal grammar;
	read The Elements of Style.
Great books	2 hours per day: read, discuss, and write about
	great books.
Mathematics	60 minutes, five days per week: Advanced
	Mathematics or an optional advanced elective.
Science	4 hours per week: study physics (5-6 hours per
	week, if Saxon course is used as an advanced
	elective).

Latin/foreign language	3–6 hours per week (depending on pace): Latin IV or Greek; modern language.
(Computer programming)	(3–5 hours per week for one year: this is a substitute for advanced math or language study.)
Religion	Discuss ethics as appropriate when reading great books; work on apologia for your faith during "family time."
Art	2 hours per week: alternate art projects with studying the <i>Annotated Mona Lisa</i> .
Music	2 hours per week: work through music- appreciation texts, and listen to music.
Senior project	2–3 hours or more per week.

CLASS TIME SPENT: 36–40 hours per week (typical high-school week: 35 hours in class, plus homework and transportation time)

PART IV

W/ .

COMING HOME

How to Educate Your Child at Home

THE KITCHEN-TABLE SCHOOL: Why home-educate?

35

SN/1

Over the next decade, up to 2 million children, or 5% of the total student population, could be home schooled.

-Denise G. Masters

The perfect school is a myth. Rather than trying to do the impossible by attempting to duplicate the perfect (and imaginary) school experience, be realistic and diligent about what you can do well. Offer personal, individual tutoring; use your time efficiently; control the child's social and moral environment until she's mature enough to make wise decisions. Your aim is education, not the duplication of an institution.

Remember, you aren't alone. Home schooling is now legal in all fifty states for one reason—parent activism. The beginning of the modern homeschool movement can be traced to the alternative schools founded in the 1960s and 1970s by parents who defended their right to choose from among educational alternatives.

These alternative schools tended to be politically liberal and activist.¹

¹Shawn Callaway, "Home Education, College Admission, and Financial Aid," *Journal of College Admission* (Spring 1997): 8.

Parents without access to these schools or who saw themselves as more conservative followed the trend of parent involvement by choosing instead to home-school their children quietly. By the 1980s, increasing numbers of Christian Protestants were taking their children out of the public school systems, which they saw as culturally and spiritually alien to their values. Catholic families had done this years before, as had orthodox Jewish families; now there are Jewish, Muslim, Mormon, and secularist home-school support organizations as more and more parents decide to exercise their option to choose an alternative to the public school system.

The reasons for making this choice are varied: unhappiness with academic standards, a wish to avoid negative social pressures, frustration with oversized classes, disagreement with the philosophy of education held by local schools. What all these parents have in common is a single belief: the right of all parents to choose how to educate their children. And all of them are actively, not passively, involved in helping their children learn.

WHY SHOULD YOU HOME-SCHOOL?

Over the years, we've heard a number of reasons why parents choose to take their children out of school. They include

- Boredom.
- Fatigue caused by long bus rides or unreasonable schedules.
- Frustration and academic failure.
- Lack of academic challenge.
- Constant travel.
- Health problems that prevent the child from taking part in a regular school-day program.
- School pressure for conformity, rather than flexible programs that enable children to develop their own strengths and solve their own problems.
- The need for one-on-one instruction, individual attention, time, and encouragement to develop special talents or strengths.
- Negative peer pressure. The child starts to adopt the standards of her peer group and reject those of her family.
- The need for quiet. The child doesn't mentally operate well where there is confusion and noise.

The Kitchen-Table School: Why Home-Educate? 581

- Learning problems that aren't being solved. The child isn't being challenged to overcome weaknesses.
- Peer or faculty intimidation. The child is being intimidated, teased, or abused verbally or physically by classmates or teachers.
- The need for more or less time per subject. The rate of instruction (too fast, too,slow) doesn't match the child's rate of learning.
- Too much emphasis on nonacademic activities. Extracurricular activities usurp necessary time from academic excellence.
- The waste of a gifted student's time. The gifted child is used by the teacher to tutor slower students, rather than being challenged to press forward.
- An emphasis on popularity rather than on academic achievement. The child becomes popular, but not productive and literate.
- The "pariah" status of the gifted student. The quick student feels discriminated against because of giftedness—often jealousy and resentment from classmates, sometimes even from teachers.
- The ostracization of the student who is different. The child with a mild problem or difference (lisp, shyness, or even slowness in doing work because she's unusually careful) often gets placed in a special-education class and is then negatively labeled by both classmates and teachers for the rest of her school career.²
- Conflicting family schedules. The parent may have a work situation that doesn't allow him to spend time with the child except during school hours.
- Loss of academic self-esteem. The child is losing confidence in her ability to learn. (Jessie once worked with a sixteen-year-old girl who was unresponsive and discouraged. Jessie kept on with one-on-one instruction, basic phonics, remedial math and writing, and lots of encouragement. Eventually the girl returned to regular school, graduated, and completed nursing school. She came back for a visit after she had worked as a nurse for several years. "Thank you," she said, "for making me believe that I *could* learn.")

²Students with mild speech impediments are often placed in special-education classes. According to an article in the *New York Times*, financial incentives encourage schools to keep these children in special education, a situation that often yields "isolation and failure." These children often never return to mainstream classes, and many do not graduate with a regular diploma. ("Fresh Thinking on Special Education," *New York Times*, 26 November 1996, sec. A, p. 20.)

-

The parent is shut out of the educational system and wants back in. A December 8, 1996, article in the New York Times tells of a peer intervention program in the New York City public schools. Instead of being dismissed, incompetent teachers are allowed to enroll in a remedial program for poor teachers "in which a teaching coach works one-on-one in the classroom for as long as a year. . . . Parents who ask," the article continues, "are generally given the impression that the extra adult in class is a teacher's assistant."³ In other words, these parents aren't told the truth. The article goes on to describe a first-grade teacher who yells at the children and humiliates them. The teaching coach corrects him privately, but the parents are never told what's going on in the classroom.

These are reasons to home educate.

ENCOURAGEMENT FOR PARENTS

Don't be intimidated because you can't reproduce a classroom environment or school activity. Remember, programs, multiple aids, and group activities are designed for groups. Tutoring is probably the most efficient method of education since the teaching is tailored to the individual child's needs and rate of learning. You can supply this.

And as teaching progresses, parents can teach not only academic subjects, but life experiences as well. Home schooling allows time and space for the teaching of practical skills; older students especially have the flexibility to learn painting, papering, carpentry, woodworking, electrical and plumbing repair, food preparation, car repair, gardening, yard care, and so on.

Parents also serve as models and guides for acceptable, productive behavior. When you teach your child at home, you're training her to work hard and to be disciplined. Help her set goals with a plan for reaching those goals—this gives a reason for the hard work. Teach her how to manage time and schedule tasks. Work on gradual improvement, keeping records of progress and planning rewards for increments of achievement. Don't spend

³Pam Belluck, "Poor Teachers Get Coaching, Not Dismissal," New York Times, 8 December 1996, sec. A, pp. 1 and 46. time only on the tasks you like, but form a plan to improve weaknesses. Take rest and recreation breaks when you become nonproductive. All of these are principles for success in any endeavor, not just in home education.

In classical education, the teacher isn't a never-ceasing fount of information from which students continually drink up answers. Instead, the model of the classical teacher and students is that of leader and "disciples," meaning that the teacher and students are united together in the same task, learning an inherited body of knowledge together. "The teacher's true competence," writes classical headmaster David Hicks, "is not in his mastery of a subject, but in his ability to provoke the right questions and . . . [in his] peculiar eagerness to explore new subjects and new ideas with his students."⁴

Given the time and the resources we suggest, any dedicated parent can do this.

Plan ahead, of course, but don't panic, when your child is in first grade, that you won't be able to do eighth-grade algebra. Take one year at a time. You'll study and grow and learn with your child. Jessie says that she learned more when she was home-educating her children than she did in college.

The home-school environment prepares children for the "real world" better than identification with age-segregated peer groups. After all, the typical workplace contains a number of different ages and abilities, not a single peer group. The home, with its mixed-aged, mixed-ability environment, is much more like this workplace than the single-grade classroom.

A special encouragement to the parents of high-school students: you don't have to teach everything. If your child were enrolled in a large, wellequipped high school that offered many courses, time would still allow only so many selections. Jessie has observed that in larger schools with more courses, students often end up with less-than-desirable schedules courses fill up, guidance counselors are overworked, students are given too much freedom to take easy courses. We know of one student at a big, prosperous high school who was allowed to sign up for four art courses—not because he was interested, but because he thought they would be easy. By the time his mother saw his schedule, he wasn't able to sign up for a betterbalanced year because the other classes were full.

⁴David Hicks, Norms and Nobility: A Treatise on Education (New York: Praeger, 1981), p. 129.

FIRST STEPS

If you have decided to home-school, start by contacting your state homeschooling organization. It can give you information about the laws in your state. (Different states require different types of notification: some want you to submit a general plan of study; others are happy with a photocopied college diploma.) We've provided a list at the end of this chapter. They'll also give you advice on the best way to remove your child from public or private school, if she's already enrolled there.

Look at all the material out there. Write for catalogs. Gather together what you'll need to start the year.

Plan schedules for your family. (See Chapter 38 for suggestions.)

Consider joining the Home School Legal Defense Association, if you are not in a "friendly" school district or if there is any possibility that you might be challenged. If you have a special-needs child, for example, the school can assert its right to keep the child in special-education classes. If you think you might have trouble, join HSLDA *before* you start the homeschooling process; HSLDA attorneys won't take cases that have already been contested by school authorities. *Note:* HSLDA may get on some people's nerves. Their literature is both Christian and heavily Republican in tone, and they sometimes send out mailings in favor of political candidates. Nevertheless, they are supportive of *any* family's right to homeschool for any reason and can provide you with experienced and affordable legal help, if you need it.

Visit a home-school support group. Your state organization will give you a list of local groups.

Two cautions. Jessie has found that for ongoing support and a social outlet for yourself and your children, you may not choose to join the group closest to you. Local support groups, of necessity, take on the personality and philosophy of the leadership. Some are inclusive; some are exclusive and make those who don't agree uncomfortable. You have to find the one that best suits you.

Also, you may find that your local home-school group is populated mostly by "unschoolers." Classical education is diametrically opposed to "unschooling," which is immensely popular among many home schoolers. "Unschooling" is child-centered. It assumes that the child will learn all that she needs to know by following her natural impulses and that any learning that is "imposed" on the child by an authority figure will prove unproductive.

Classical education is knowledge-focused, not child-focused. It attempts to teach knowledge in a way that awakens the child's interest, but the child's interest is not the sole determining factor in whether or not a subject should be followed. How does a child know whether something will interest and excite her unless she works at unfamiliar (and perhaps intimidating) material to find out what it's all about?

Unschoolers also tend to denigrate "book" learning in favor of "real" learning. Many unschoolers claim that the day-to-day realities of family life provide plenty of opportunities for learning. For these unschoolers, taking care of the house, grocery shopping, cooking, car repair, working in the family business, writing thank-you notes, and so on provide enough opportunity for children to learn real-life skills without "doing school" in a formal way.

While this may be true, a child's education shouldn't be limited to "reallife skills." Classically educated children should be able to cook, write thank-you notes, and tie their shoes. They also know where their country came from, how to construct a logical argument, and what *puella* means.

Unschoolers claim that students who aren't forced to learn the mathematics tables in third grade can pick them up in a day once they hit sixth or seventh grade and get interested on their own. In our experience, the student who doesn't learn the math tables in third grade will never be comfortable enough with math to get interested in sixth or seventh grade.

If you end up in a local group of unschoolers and you want to follow the curriculum we've outlined in this book, you'll probably need to switch groups.

TAKING YOUR CHILD OUT OF SCHOOL

If your child has been in a bad situation—destructive peer relationships, discouraging classroom experiences—and you've brought her home to rescue her, expect a period of adjustment. Be understanding but firm in your decision. Fully explain what you are doing and why. Your confidence in the

decision that what you are doing is best for her will be communicated. So will indecision, which will make her resist the change even more.

Any radical change can cause "culture shock." Children generally prefer a known situation, no matter how flawed, to an unknown one—structure and routine are always comforting. Expect a period of adjustment. But use common sense. If you see depression and anger that doesn't adjust in six weeks or so, take your child to a trusted counselor so that you can both talk out the problems.

THE REALITIES OF HOME SCHOOLING

While we think home education is wonderful—we've seen children and parents thrive at home, we've heard hundreds of success stories—you must go into it with your eyes open.

- Home schooling is time-consuming, hard work.
- Housework suffers. Books and science experiments and papers are all over the house.
- Everyone wants to quit at some point during the school year.
- The kids aren't always perfect, and you can't blame it on school or on their friends.
- Academic schedules are frequently interrupted by sickness, family needs, and life in general.
- Children often "just don't get it"—that is, they may experience plateaus or have difficulty with a new concept.
- Grandparents may think you're ruining your children.
- The neighbors will probably tell you that you're crazy.

A PERSONAL WORD FROM JESSIE

I was often tired and sometimes felt overwhelmed by what I had undertaken—that is, home-educating my children. And if I'd had a perfect school available, I would have enrolled my children in it. But I looked at the academic and social options, and concluded that, in spite of my failures, my children were doing better under my tutoring than they would have done in a group situation.

Personally, I decided to put on hold some of my goals. But I held on to the wise council given me when my children were toddlers: "Live your life in chapters. You don't have to do everything you want to do in life during this chapter of rearing children." This advice provided the cornerstone of my plans for personal goals.

I wanted to write. I wanted to make a hand-braided early American-style rug. When my three children were toddlers, I had a whole stash of wool, all stripped in preparation for braiding. Since toddlerhood wasn't the right time to start such a large project, I stored it in boxes "until the children are in school." Instead of sending them off each morning while I quietly braided the rug, I was even more busy with home schooling than I had been with three preschoolers.

I have time to write now. My rug-in-waiting is still in boxes, although I can almost see the time approaching to start it—thirty years later! But my children are the most creative project I have been involved in. I can't compare the relationship I have with them to a relationship with a rug, no matter how beautifully hand-crafted. And my crafting of their education has been life-enriching to all of us.

There were times when I longed for a magazine-beautiful house instead of a house with "projects" all over it. Housework wasn't always done on time. Every October and March, I wanted to quit. (I learned to take a week off when that feeling came over me. Rest and change of pace renewed my focus.) When my children needed correction, I had to take the responsibility and not blame it on bad friends. Academic schedules were sometimes interrupted by life. My father had a brain tumor. My son had allergies. But looking back, I can see that even when we took off from school for the necessities of family life, we had a long-range goal in mind. We were able to get back on track and continue with our plan, taking up where we left off.

The most discouraging thing I encountered was the lack of support from family and neighbors. When I started home schooling, I worried a lot. I worried I wouldn't be able to keep up with my children's grade levels. I worried that their social development would suffer. The neighbors said, "They'll never get into college." The grandparents cried.

But as I look back, none of the worries materialized. My children did get

into college. They have careers and relationships. And even the grandparents, seeing the academic progress and the better-than-normal social development, eventually admitted that they had been mistaken.

RESOURCES

For a list of home-education organizations, see Appendix 2.

Magazines and Newspapers

The Link is a national home-schooling newspaper designed to be nonsectarian—accessible to home educators of every persuasion. Good articles, reviews, and ads for dozens of home-school resources in every issue. It's a free publication. Write them at 587 N. Ventu Park Road, Suite F-911, Newbury Park, CA 91320, visit the Website at www.conejovalley.com/ thelink, or E-mail them at homepaper@gte.net.

The Teaching Home has a Christian orientation. Good information, updates on each state, reviews, and articles. Write Box 20219, Portland, OR 97294, call at 503-253-0633, or visit their Website at http://www.teleport.com/~tth.

Practical Home Schooling has extensive reviews of books, software, curricula, and everything else new that comes out. Publisher Mary Pride is outspokenly Christian, anti-feminist, and anti-birth control. Even if you disagree with her views, the product information will be useful to you. Write Home Life, Inc., P.O. Box 1250, Fenton, MO 63026-1850, or visit the Home World Website at http://www.home-school.com.

36

11/1

THE CONFIDENT "CHILD: Socialization

The Smithsonian Institution's recipe for genius and leadership: (1) children should spend a great deal of time with loving, educationally minded parents; (2) children should be allowed a lot of free exploration; and (3) children should have little to no association with peers outside of family and relatives.

-H. McCurdy, "The Childhood Pattern of Genius"

" B ut what about socialization?" If you haven't asked this question already, a neighbor or grandparent certainly will.

The most convincing proof that home-educated children develop normally is a conversation with a home-educated child who's bright, engaged, polite, interesting, and outgoing. Home-school graduates get into college and do fine; they get jobs and excel.

But it's important to understand what socialization means. According to the dictionary, *socialization* is "the process by which a human being, beginning in infancy, acquires the habits, beliefs, and accumulated knowledge of his society." In other words, you're being socialized when you learn habits, acquire beliefs, learn about the society around you, develop character traits, and become competent in the skills you need to function properly in society.

Who teaches all of this? Agents of socialization include the family (both

589

immediate and extended), the religious community, neighborhoods, tutors and mentors, the media (TV, radio, films, books, magazines all tell the child what's expected of him, for better or worse), clubs (social or academic), the arts (both in observation and participation), travel, jobs, civic participation. And formal schooling in an institution.

Taking the child out of school doesn't mean that you're going to remove him from the other "agents of socialization" that surround him. Furthermore, think about the type of socialization that takes place in school. The child learns how to function in a specific environment, one where he's surrounded by thirty children his own age. This is a very specific type of socialization, one that may not prove particularly useful. When, during the course of his life, will he find himself in this kind of context? Not in work or in family life or in his hobbies. The classroom places the child in a peerdominated situation that he'll probably not experience again.

And this type of socialization may be damaging. Thirty years ago, Cornell Professor of Child Development Urie Bronfenbrenner warned that the "socially-isolated, age-graded peer group" created a damaging dependency in which middle-school students relied on their classmates for approval, direction, and affection. He warned that if parents, other adults, and older children continued to be absent from the active daily life of younger children, we could expect "alienation, indifference, antagonism, and violence on the part of the younger generation."¹

Peer dependence is dangerous. When a child is desperate to fit in—to receive acceptance from those who surround him all day, every day—he may defy your rules, go against his own conscience, or even break the law.

We live in an age in which people think a great deal about peers, talk about them constantly, and act as if a child's existence will be meaningless if he isn't accepted by his peer group. But the socialization that best prepares a child for the real world can't take place when a child is closed up in a classroom or always with his peer group. It happens when the child is living with people who vary widely in age, personality, background, and circumstance.

The antidote for peer-centered socialization is to make the family the basic unit for socialization—the center of the child's experience. The fam-

¹Urie Bronfenbrenner, *Two Worlds of Childhood* (London; George Allen' & Unwin, 1971), p. 105.

ily should be the place where real things happen, where there is a true interest in each other, acceptance, patience, and peace, as far as is possible.

Socialization in the family starts when very young children learn that they can trust adults to give them answers, to read books to them, to talk to them, to listen to music with them. Socialization continues as the child learns to fit into the lives of his parents and siblings, to be considerate and thoughtful of other people, to be unselfish instead of self-centered. A two year old can learn to play alone for a few minutes while the parent teaches a ten year old; an eight year old can learn not to practice the piano during the baby's nap time. It's the *real* world when a child learns to play quietly because Daddy is working on his income taxes. (We still talk about "the year we couldn't go into the living room" because Dad was being audited and his tax papers were spread throughout the living room for weeks.)

In our society, children, taught by their peer groups, learn to survive, not to live with kindness and grace. Exclusive peer groups—cliques—start forming around age five. Even in kindergarten, children are accepted or rejected on the basis of what they wear, what toys they own, what TV programs they watch. Even when adults are supervising, these cliques survive —and strengthen—as children grow. And only the strongest flourish.

The trend in our culture is to devalue—even bypass—the family as a basic unit of socialization. But it's within the family that children learn to love by seeing love demonstrated; learn unselfishness both through teaching and through example (choosing to teach a child at home is unselfishness at work); learn conflict resolution by figuring out how to get along with parents and with each other.

The family unit—this basic agent of socialization—is itself a place to communicate with people of different ages. But socialization doesn't stop there. As a family, you should make a wide range of friends of various ages. Home-school parent and lawyer Christopher Klicka points out that home-educated children are continually socialized through church youth groups, community activities, Little League, Scouts, band, music lessons, art classes, field trips, and the numerous events sponsored by local home-school support groups.²

By means of these activities, parents teach children how to live in soci-

²Christopher Klicka, *The Case for Home Schooling*, 4th rev. ed. (Gresham, Ore.: Noble, 1995), p. 13.

6

ety and how to relate to others. In contrast, peer groups teach a child either to take direction from the most popular kid in school or to transform himself into the most popular kid at school, often sacrificing intelligence and character in the process.

What about high school?

High-school students demonstrate what sociologist Charles Horton Cooley describes as "the looking-glass self"—they evaluate their worth by looking at themselves in the mirror held up by their peers.³ Unfortunately, the qualities that lead to high-school success—such as peer popularity and athletic prowess—are precisely those that may be of least use during later life. In contrast, the home-style classical education develops and rewards skills (perseverance, dedication, patience) that will be useful in later life. Is it more important that the high-school years be ones of dizzying social success followed by a lifetime of nostalgia or a time of preparation for a successful life?

Of course, high school isn't a "dizzying social success" for most people.

At a reception for students at Cornell University, a ring of young women closes around Jane [Goodall], who is describing how adolescent chimp females often leave their community to join another. Kimberly Phillips, a graduate student in genetics, asks what kind of welcome a female can expect from the new community.

"Well, the males are delighted," Jane says. "But the females beat her up. They don't want the competition. One strategy the newcomer can use, however, is to attach herself to a high-ranking female, even if she is treated badly by that female. The others will eventually accept her."

"God, it sounds just like high school," Kimberly says.4

By the time the student reaches high school, he's looking at a future that will probably be spent in family life, work, and community involvement. Doesn't it make sense to spend your training time with these emerging young adults preparing them for the real life they're getting ready to enter? There is life after high school. (There is even life after college and graduate school.)

In this day of endemic family breakup, teaching your high schooler to live

³Charles Horton Cooley, Human Nature and the Social Order (New York: Scribner's, 1902), pp. 184–185.

⁴Peter Miller, "Jane Goodall," National Geographic, December 1995, 121.

peacefully in a family is probably the most important feat of socialization you can accomplish. Teach skills of resolving conflict, habits of doing for others instead of self, truthfulness, loyalty, sensitivity.

What about dating?

We'll brave the collective wrath of American high-school students by suggesting that exclusive dating in high school is a waste of time. After all, what are you going to do if you fall deeply in love at seventeen? Get married? Break up? Have sex? We believe that sex without commitment is damaging at any age (we're pro-marriage). But it's even worse for teens, who are uncertain, vulnerable, and unsure of their own attraction. Sex can be a powerful, manipulative tool even for supposedly mature adults. It's even more devasting when wielded by the unready. We have yet to find an adult who remembers high-school dating as rewarding and life-enriching.

Not that you should ignore the opposite sex (a practical impossibility). Lots of family-oriented socializing—parties that include not just teens, but people of all ages—give teens plenty of practice in relating to the opposite sex in an atmosphere that isn't fraught with sexual tension, the pain of uncertainty, and the possibility of rejection. Look at the general state of peace, joy, and sexual fulfillment at the average high school and ask: Is this what I want my teen to be socialized to?

Positive socialization is all about living in your world responsibly, fulfilling your potential, taking advantage of opportunity, making the lives of others around you better. You don't need the institutional school to teach these values to your child.

Practically speaking, you provide positive socialization through familybased and interest-based activities. The Red Cross offers CPR and babysitting instruction. Museums offer special classes. Church and community teams offer sports participation. Clubs for every hobby from photography to stamp collecting meet regularly. Science fairs, debate clubs, swimming lessons—all of these provide opportunities for social interaction.

Nor should you be afraid of being alone. A measure of solitude can develop creativity, self-reliance, and the habit of reflective thought. Socialize, but don't crowd your schedule so full that the child has no time to think, to sit and stare at the walls, to lie in the backyard and watch ants crawl by.

37

1//

THE CHARACTER ISSUE: Parents as teachers

Becoming a responsible human being is a path filled with potholes and visited constantly by temptations. Children need guidance and moral road maps, and they benefit immensely with the examples of adults who speak truthfully and act from moral strength.

-Vigen Guroian, Tending the Heart of Virtue

S chools have tried to implement "character training," an enterprise that's bound to fail because it's been taught in a theological and philosophical vacuum. Moral issues are discussed, but no one moral standard can be settled on since someone might disagree and the beliefs of all must be respected. Right and wrong can't be asserted with too much vigour because "we want our children to be tolerant, and we sometimes seem to think that a too sure sense of right and wrong only produces fanatics."¹

Character training isn't some sort of subject, like algebra or spelling, that can be packaged into a curriculum and taught to everyone, regardless of belief. The definition of character is tied to standards of right and wrong, which in turn are tied to religious belief; the training of character is done through example and teaching—not in a classroom, but in daily life.

¹Vigen Guroian, Tending the Heart of Virtue: How Classic Stories Awaken a Child's Moral Imagination (New York: Oxford University Press, 1998), p. 3. What is character? Character is the possession of moral qualities that have become habits of life. As a partial list, we offer:

Boldness	Honesty
Compassión	Humility
Creativity	Initiative
Dependability	Patience
Determination	Perseverance
Diligence	Responsibility
Endurance	Self-control
Enthusiasm	Sincerity
Fairness	Thoroughness
Forgiveness	Tolerance
Gratefulness	Truthfulness

While we can't imagine anyone arguing about the components of this list, we also can't figure out how to teach them in the abstract without some sort of philosophical, theological underpinning (taboo in public schools).

Be diligent, the teacher of the character curriculum says.

The student yawns: I'm bored with the subject. I don't see what good it's doing me. So why be diligent?

As parents, we answer: Because we believe that this subject *will* do you good down the road, and that's what we're aiming you toward. (Schools don't really have the right—or the authority—to make career plans for students. Parents do.) And even if you don't see this, we have the responsibility of planning for your future and the authority to tell you how to prepare for it.

This is our approach—yours might be different. The point is that the parent and child share a context—a worldview—within which certain qualities of character can be explained in a way that makes sense. Without this shared context, character training becomes a matter of following pointless rules. And this sort of character building lasts only until the student reaches the age of independence.

When it comes to the more demanding virtues—tolerance, forgiveness, humility—that shared context is even more vital. The Christian believes in a forgiveness that is modeled after God's—it doesn't expire after a number of offenses. A secular, Muslim, Buddhist, or Scientologist definition of forgiveness might be expressed differently. The unfortunate teacher, honorbound not to step on anyone's toes, has to allow the class to evolve a lowest-common-denominator definition of *forgiveness* from the students' shared consciousness. By the time this is done, the moral quality under discussion—supposedly a yardstick for the students to measure themselves against—has become a loosely worded definition of what everyone is prepared to accept.

To define *character* properly may be nearly impossible for schools, but to build character is even further out of the realm of possibility. These moral qualities have to become habits, and habits are often achieved by going against the immediate short-term desire of the child. This is a parent's job, not a teacher's.

If these moral qualities are to become habits of life, they must be reinforced by both observation and practice. As you supervise your child's education, you can encourage him to read books and watch movies that demonstrate admirable character. Be careful of the character content of teen or young-adult books. Some are excellent, some aren't. Jessie remembers her sixth-grade son picking up a book full of sexual obsession with no encouragement of positive morality. The author of that book has said in interviews that any experience children have is a valid theme for literature. But the whole enterprise of teaching character assumes that some experiences are worth dwelling on and striving for, while others aren't.

You must also be a model of these qualities every day. When you forgo your own wants to tutor your child through fifth-grade math, you're demonstrating self-control. When you patiently go through a lesson several times until the child figures it out, you're showing perseverance. When you introduce a history lesson, complete with coloring books, paper models, and interesting books that you've collected, you're showing enthusiasm. When you turn off the TV because a program you want to watch wouldn't be good for the child, you're showing self-discipline. These qualities have to be internalized by the child, and this will only happen if she continually sees them being practiced by you.

As you work with her every day, you're helping her to put good character into practice. To develop character, a child has to learn obedience. Obviously, strict obedience changes as the child grows older and shows herself to be responsible. But it is impossible to teach a child over whom you have no control (ask any public-school teacher). Currently, obedience is a virtue that isn't popular since it's at odds with the autonomy now touted as being essential to proper development. But autonomy—what *I* want supersedes any consideration for family, community, or government— can ultimately turn into disregard for laws or restrictions.

It's an expression of intelligent, loving care to teach a child that disregarding certain rules brings unpleasant consequences. You can't live in the real world without structure and authority: every day, we stop at stop signs, drive on the right side of the road, refrain from stealing food at the grocery store. The child with character has learned to thrive within structure.

Requiring a child to work and study hard in the early years develops the moral qualities of industry and perseverance. This doesn't mean that the child has a cheerless education. Many of the subjects studied *are* enjoyable, fascinating, immediately engrossing. But others won't be instantly fun. Some will require hard work so that the student can acquire skills she'll need in the future. The reality of life is that disciplined people usually accomplish more and can achieve their goals.

Powerful models of character are found in stories. Read them together. Talk about them. The joy of home education is that all of this learning takes place in the context of the family. You're not just teaching hard principles. You're also living them out. Thus, education becomes entwined with the living of life—together.

RESOURCES

Guroian, Vigen. Tending the Heart of Virtue: How Classic Stories Awaken a Child's Moral Imagination. New York: Oxford University Press, 1998.

A fantastic book about good, evil, friendship, redemption, faith, and courage. Read it together, and read the books Guroian discusses. At bookstores.

Kilpatrick, William, Gregory Wolfe, and Suzanne M. Wolfe. Books That Build Character: A Guide to Teaching Your Child Moral Values through Stories. New York: Touchstone, 1994.

An introduction to morality, along with descriptions of dozens of stories for families to read together. At bookstores.

38

W//

AND JUST WHEN DO I DO All This? Schedules for Home Schoolers

To choose time is to save time. —Francis Bacon

H ome education is a family commitment. We've noticed that in many families the entire responsibility for teaching the kids is shifted to one overworked parent. If one parent works full-time while the other teaches, that's a fine arrangement. But the job of planning lessons, investigating curricula, taking trips, reviewing progress, going to conventions, and generally talking about what goes on in home school needs to be shared by both parents.

Life is made up of hard but rewarding choices. It isn't possible for both parents to pursue demanding full-time careers while home-educating. Flextime, part-time, or semester-oriented jobs (like teaching) can be worked around home schooling. A full-time criminal lawyer and a practicing obstetrician, married to each other, won't be able to manage.

We know of families that home-educate almost entirely in the evenings because of job schedules; we know of families that do school in the summer because the parents teach during the school year; we know families with home businesses and telecommuting jobs who set up school right in the home office and do it, on and off, throughout the day; we know single parents who home-school when they're not working. Although it takes organization, energy, and determination, combining home school with work can be done. And if you're able to do this, the child will be involved in a great part of your life—and you in his.

Susan and her husband, Peter, both work at home. Susan also teaches part-time at the university during the school year. In the mornings, Peter works while Susan does math, grammar, writing and spelling, and history or science with the boys. At 2:00 P.M., they swap shifts, Susan goes to work, and Peter does reading with the boys and takes them to appointments (swimming, doctor's visits, grocery store). Art and music are fit into the evenings and weekends. Saturdays and Sundays are family days for housework, museums, zoo visits, worship, and doing nothing.

An important, sanity-preserving part of every home-school day ought to be the "afternoon nap." Jessie scheduled an afternoon nap for all three of her children up until the time they finished high school. For two hours, everyone went to his or her room and pursued a quiet activity alone, while Jessie put her feet up. Bedtime was also strictly enforced—no one went wandering through the house after the lights were off.

Susan, following the same principles, had her preschoolers go from taking naps to a two-hour rest period, even though they stopped sleeping. The boys had toys, coloring books, other books, and tape recorders with good books on tape to listen to. If they got out of bed (except to go to the bathroom, of course), they lost a privilege (like the tape recorder). They've never gotten accustomed to skipping the nap; it's a regular part of every day. Susan keeps certain books, tapes, and craft supplies just for naptime use. This middle-of-the-day break period is necessary for everyone. The children need it after studying hard all morning; the baby needs it; and parents certainly need the chance to sit down, rest, have a cup of coffee, and catch up on business. The boys also go to bed early—between 8:00 and 8:30—and are allowed to have lights on for an hour for quiet reading and play before going to sleep.

Home-educating parents like their children's company. They don't want to send the kids off for most of every day. But they need a break in the middle of the day, someone to share the job of teaching, and quiet evenings. And in terms of parental sanity, the younger the children, the more important these rest times and early bedtimes.

HOW MUCH TIME DOES IT TAKE?

After having taught in a classroom, Jessie found that she could accomplish as much instructing—and a great deal more one-on-one interacting—in less time at home. The children didn't spend time on a bus or in lines. And with immediate detection of errors and on-the-spot correction, instruction time is more efficient and progress is faster.

For kindergarten, intensive instruction in reading, writing, and math can be done in about an hour, gradually increasing to five to six hours per day in high school. If the foundations are properly laid in basic reading, writing, spelling, and math, the student becomes more independent and less in need of direct instruction.

Jessie found that by high school, her role became one of "chief of accountability" and encourager. She helped her high-school children keep in mind their long-range goals (college) as well as their daily and weekly goals. Education took place continually, not just in a "sit at the desk" format. Discussion occurred around the table, during snacks and meals. We listened to tapes and had conversations in the car, going to the library or to music lessons or on field trips. We played classical music while cleaning. Books were everywhere in the house (we took the TV out). The children read all the time—while waiting, in the car, at bedtime, during rest periods. And while she polished shoes, Susan even read the newspaper that was under them.

As the children got older, Jessie taught them how to prepare meals. In the beginning, this was time-consuming; but when Susan was thirteen, she asked, and was permitted, to prepare a full-course dinner for an extended family birthday celebration (Jessie has pictures of a very tired but accomplished cook). In his teens, Susan's brother, Bob, hand-kneaded and made all the family bread. Her sister, Deborah, became the expert pie baker and did much of the general cooking. These are not only time-savers for the parent-teacher, but life skills that have been mastered by the children.

Jessie still remembers her surprise when a group of Susan's college friends came home for the weekend. One girl didn't even know how to break lettuce and make a salad. She was a good student, with a traditional institutional education, but had never been allowed in the kitchen.

Read through time-management books for hints, both corporate (how to handle paperwork) and domestic (freedom from unnecessary housework). We've listed Jessie's favorites on pages 614–615.

Douglas Wilson, founder of a national classical-school organization, writes that education "is the process of selling someone on books."¹ The home-schooling parent must make time for reading. Read at night, at lunch, in the bathroom, while waiting, and whenever else you can squeeze in the time. Turn off the TV, and reclaim those hours.

YEARLY PLANNING

There's no particular reason why you should home-school every day for nine months and then take the summer off. The children burn out during the year and get bored (and forget all their math) over the long summer break. We advise going year round, taking vacations throughout the year.

Here are plans that are time-equivalent to the traditional nine-month school year. You can adjust your time off for family vacations, company, illness, a new baby, or whatever else you have planned.

Option 1

School	September, October, November
Break	December
School	January, February, March
Break	April
School	May, June, July
Break	August

Option 2

School for three weeks and break for one week, year round.

For each year, set goals ("Finish the whole math book," "Read through the Renaissance in history," "Teach my five year old to read"). Then, as you

¹Douglas Wilson, in Douglas Wilson, Wesley Callihan, and Douglas Jones, Classical Education and the Home School (Moscow, Idaho: Canon Press, 1995), p. 19.

divide your year into monthly, weekly, and daily segments, ask: What am I doing to achieve this goal? Be specific. The math book is divided into daily lessons; you need to do 140 days of math to finish the book. Your school year is nine months long, and you have 200 history pages to cover; that's around 22 pages per month or 6 pages per week. In ten minutes per day of phonics, the five year old can learn to read.

Set goals for each subject, and chart out the pace you would like to keep. If you're using a textbook, you can divide the number of pages by the number of days or weeks you plan to study. Write down the master plan. You can accelerate or slow down as you progress, but you have this general guide to keep you on target. You may want to have a master-plan notebook to record goals for each subject; checking periodically will give you a feeling for the progress you've made. Also, there are courses, like Saxon Math, that have daily plans for you. Try to follow whatever plan you choose, but be flexible. If the child needs to work more slowly or wants to work faster, accommodate him.

With the older child who is studying more independently, check on his progress weekly. When Susan was in eighth grade, she was generally responsible and studied hard, so Jessie didn't check on her progress in accounting for several months. By the time Jessie did check, Susan was far behind; since she was doing the course by correspondence, she had a huge amount of work to do to catch up.

In spring—preferably by June—read through the next year's suggested work, write and call for information, and try to place orders. The earlier you order books, the quicker they'll arrive. Remember that since by midsummer everyone's buying books, you can expect a six- to eight-week delay in the processing of your order.

In his book *How to Get Control of Your Time and Your Life*, Alan Lakein suggests setting A, B, and C priorities. Do the A's first, the B's next, and let the C's fall off your schedule, if you don't have time for them.²

WEEKLY PLANNING

Many home schoolers are able to accomplish in four days what would normally take five days in a classroom setting. The fifth day can be used for li-

²Alan Lakein, How to Get Control of Your Time and Your Life (New York: Signet, 1974), pp. 28–29.

brary trips, tutoring, lessons, field trips, or other "off-campus" learning. Jessie did four-day school weeks and was still able to take off three months every year; she also took a week off in October and February, when everyone was feeling stressed.

We sometimes found it less crowded and more convenient to take "Saturday trips" during the week, when most other children are in school, and to use Saturday as a school day.

Start the year with a disciplined approach, following a preplanned, written schedule. If the plan is too strenuous, you can adjust and ease up, which is much easier than starting out with a relaxed approach and then finding that you are not accomplishing your goals or that your child is becoming lazy.

Don't panic about illness or doctors' appointments. The child would miss those days from school anyway. And Jessie found that a bored, mildly sick or recovering child welcomed "something to do." If there was no TV allowed, he continued to do schoolwork.

Don't be upset over unavoidable interruptions. Remember, schools have interruptions, too: the teacher is sick and the substitute doesn't follow her lesson plan; weather or mechanical problems close down the school; violence or lack of discipline sometimes disrupts teaching; strikes or political demonstrations interfere with instruction. In the midst of interruptions, teach children to be flexible. And don't worry about your child lagging behind the rest of the class. Simply take up where you left off.

Jessie's Weekly Schedule

4 days	"In-house"	teaching	
--------	------------	----------	--

1 day "Off-campus" learning-library, tutoring, lessons, short trips

1 day Major projects (household, yard, shopping) or family trips

1 day Rest, worship, relaxation

DAILY PLANNING

Plan a schedule for daily life, and stick to it. If you can, go to bed early and get up early—mind and body are fresher in the morning. Get up at the same time every day.

Plan how much time you'll spend on each lesson. Always leave some "wiggle room" by scheduling in a little more time than you think you'll need. Schedules reduce indecision and arguing because everyone knows what to do and is able to get on with the job at hand. (See the sample daily schedules at the end of this chapter.)

Have a specific time each day for each class, and try to keep to this. Math, spelling, and writing are skills that need daily practice and feedback in a predictable routine.

Be flexible. Schedules will change as children grow. And a new baby or suddenly mobile toddler can wreck the most carefully put-together schedule. You have the freedom to change activities around. If a small child becomes interested in earthworms, you'd still do basic skills—phonics, reading, writing, math—every day, but you might not do history for a week while he learns about earthworms. A high-school student might suddenly develop an interest in some research project. You should keep up with the daily lesson in math because it's an incremental skill. But he can spend a week on just history or just science and catch up on his other work later. The key is the *intentional* use of flexibility for an educational goal, rather than allowing students to do what they "feel like" doing.

Write down all family activities on a chart. Once a week, we filled out a wall chart that had a column for each member of the family. On it were the unchangeables: outside work, schedules, appointments, deadlines for lessons or hobbies, meetings. If Mom and Dad were taking a child to a recital, that went on all three columns (Mom's, Dad's, and the child's). Then we scheduled school lessons, meals, naps, practices, chores, housework, and free time. This way, Jessie could assign subjects with an eye to her availability: Susan didn't need help practicing the piano, but Bob needed help with grammar, so Mom put Bob's grammar lesson on her schedule at the same time Susan practiced.

JESSIE'S METHOD OF ORGANIZING: A Personal account

I started with a 3×5 -inch notebook to carry in my purse, but soon I needed more space. I went to the 5×8 -inch size, which is the size of many daily business organizers available at office-supply stores. Calendars, paper, and plastic zip cases are easy to find for this size.

And Just When Do I Do All This? Schedules for Home Schoolers 605

I put a plastic zip case containing a $2\frac{1}{2} \times 4$ -inch pocket calculator in the front of this notebook (handy for figuring shopping bargains).

I kept a Month At-A-Glance, tabbed, yearly planning calender just behind the plastic zip case. All appointments, meetings, birthdays, deadlines, holiday celebrations, and so forth were kept in here, colored with highlighters.

I bought a set of blank 5×8 -inch notebook dividers and made the following personal divisions in the notebook:

Daily Plan Here I put in blank sheet's of paper, each one dated at the top, and outlined the family activities for that day. I kept a week ahead and threw sheets away as I transferred unfinished items to the next page. I kept one page separate and wrote a list of large projects to plan for.

Shop In this division, I kept current shopping lists (except the grocery list, which I kept on the refrigerator until grocery day). Clothes, hardware, office supplies—all this was available whenever we shopped or had the chance to run into a store.

Household Information Here I kept all the notes useful for running the household: printer and typewriter model numbers, sizes of household items (like the dining-room table's dimensions for tablecloth shopping), paint shades, appliance model numbers.

Clothes I kept current sizes of all family members here and their current needs in case I saw a sale.

Business Here I kept Social Security numbers of family members, contents of the safety deposit boxes, frequently used phone numbers, account numbers, and so forth.

Books I kept a running list of books, videos, tapes, and music to look for at libraries, stores, and sales.

Directions Because we live out in the country, I kept a typed-up set of directions to the house so that service companies could find us. (You might not want to do this for security reasons.)

Gifts Here I jotted down ideas for gifts for all family members.

Miscellaneous Notes Just what it sounds like—recipes I read in magazines at the doctor's office, notes about people I met, addresses, things to think about.

Make your own personal dividers according to the information you need at your fingertips. I was never able to buy a preprinted plan book that could satisfy my needs.

GOOD USE OF TIME

Read in the evenings, instead of watching TV.

For once-a-week family entertainment, go to the public library together instead of to the mall or movies. Read books together; go to evening story time with younger children; check out CDs and books. Get all the books for the next week's study.

Take control of the telephone. Take it off the hook, turn off the ringer, get an answering machine—but don't answer it when you're home schooling. And tell family and frequent callers not to call when you're teaching. Jessie's father had a long and serious illness at one point when the children were still studying; she put in a second line and gave that number only to family.

Limit outside commitments. You don't have to meet all personal goals while you are home educating your children. As a family, discuss, decide, and keep in mind your long-term goals. Balance other responsibilities with these goals.

Simplify life. Jessie's lifestyle while home educating didn't require formal entertainment. So she put away silver that needed polishing, chose not to buy clothes that required special care, put time-consuming hobbies on hold. Instead of entertaining, the family shared meals with friends.

Try to set aside a place for learning, not playing. If you don't have a separate room, the kitchen table is fine. When you get ready to do school, clear off the table. Don't allow toys or other distracting objects to co-exist with the books and papers.

Remember that everything costs either money, time, or energy, all of which are in limited supply. If you have more money than time or energy, buy your teaching aids. If you have more time and energy, make them.

HOME SCHOOLING WITH BABIES AND TODDLERS

Try these ideas to keep babies and toddlers occupied:

 Do something with the youngest children first. Then give them independent activities or toys that are only brought out at "schooltime."

- Make a "job" chart for toddlers, with pictures of activities.
- Don't ask, "What do you want to do?" or "Do you want to color?" Children always choose to do something else. State what the toddler can do, leaving no options. (Unless, of course, he's ill or fatigued and needs special attention.)
- Let a baby or toddler sit on your lap during some of the instruction. Children can be taught to sit still in a lap if it is made a habit. (Jessie's two year olds learned to sit through hour-long religious services because the small church didn't have a nursery. They slept, listened, or looked at picture books.)
- Hire an older sibling (or use a grandparent) to babysit. Be careful not to use older children as unpaid labor; however, a seven year old can earn extra pocket money by babysitting (and can get in some good job practice).
- Start actual instruction with toddlers—simple repetition, with no pressure. (Susan's eighteen month old learned to say his letters when Daddy held up the wooden blocks, and he drew frantically with a pencil when the two older boys were doing writing. Jessie's oldest, Bob, learned his alphabet by playing with refrigerator magnets. *B* was on the refrigerator until he learned it; then Jessie added other letters over the period of a year or so.)
- Don't let the baby's morning nap disappear. (A home-schooling friend of Susan's told her to keep on putting the baby in his crib with plenty of toys, even when he gave up sleeping. She did. Now he "takes a crib break" for half an hour every midmorning. Susan uses this time to do intensive, one-on-one instruction in math.)
- Don't worry if toys and books get spread all over the house. Schedule
 a daily fifteen-minute pickup before lunch and dinner, and put everything back in its place.
- Susan has put the toddler at the sink and allowed him to play with water, even though some got on the floor; has hidden Cheerios around the house for the baby to find; has made suds in the tub with Ivory soap; has turned the living room into a set of connected forts made with blanket; and has generally allowed him to make a mess so that she can tutor the older two.

-

SAMPLE SCHEDULES FOR Home schoolers

At the beginning of every school year, we make out a schedule like the ones that follow. We adhere slavishly to it for about two weeks—and then we loosen up.

You must have a schedule to start with. You need some idea of how much time each subject should take, how often to take breaks, when to start, when to stop. But once you've worked with your child for several weeks, you'll know how to adjust the schedule to suit yourself. You'll find that math may take less time and grammar more time than scheduled (or vice versa). You'll discover that your child can do certain tasks on his own, allowing you to rearrange the schedule so that these tasks coincide with putting the baby to bed or making phone calls. Or, if you're a working parent, you'll change the schedule so that the child is schooled when you're there.

Make sure that evenings are free to do some schoolwork and reading since the student doesn't have "homework" in addition to his regular study.

Consider the following schedules as possibilities. Give them a try, and then make up your own.

Note: We've provided only one schedule for high school—the tenth-grade year. By high school, student schedules and programs vary so much that a single schedule is impossible to propose. Use the tenth-grade schedule as an example of one way to organize the high-school day.

Sample Daily Schedules

First Grade

7:30-8:00	Get up, dress, make bed, wash
8:00-9:00	Breakfast, help with cleanup, collect school materials
9:00-10:00	Math
10:00-10:30	Break
10:30-11:00	Spelling and writing (copying short sentence)
11:00-11:15	Snack
11:15-11:45	Grammar (English for the Thoughtful Child)
609

11:45-12:15	Reading and notebook-page creation
12:15-1:00	Break
1:00-1:30	Lunch
1:30-2:30	History (Monday, Wednesday, Friday)
	Science (Tuesday, Thursday)
2:30-3:30	Free reading on sofa
3:30-4:00	Break
	Wednesday, school day is finished at 3:30
4:00-5:00	Art project or picture study (Monday)

Listening to music and coloring (Friday)

Second Grade

7:30-8:00	Get up, dress, make bed, wash
8:00–9:00	Breakfast, help with cleanup, collect school materials
9:00-10:00	Math
10:00-10:30	Break
10:30-11:00	Spelling and writing (dictation)
11:00-11:15	Snack
11:15-11:45	Grammar
11:45-12:15	Reading and notebook-page creation
12:15-1:00	Break
1:00-1:30	Lunch
1:30-2:30	History (Monday, Wednesday, Friday)
	Science (Tuesday, Thursday)
2:30-3:30	Free reading on sofa
3:30-4:00	Break (Wednesday, school day is finished at 3:30)
4:00-5:00	Art project or picture study (Monday)
	Listening to music and coloring (Friday)
	Third Grade
7:30-8:00	Get up, dress, make bed, wash

8:00-9:00	Breakfast, help with cleanup, collect school materials
0.00 10.00	3.6 -1

- 9:00–10:00 Math
- 10:00–10:30 Break
- 10:30–11:00 Spelling and writing (dictation) (Monday, Wednesday, Friday)
- 11:00-11:15 Snack (Monday, Wednesday, Friday)

6

610 COMING HOME

11:15-11:45	Grammar (Monday, Wednesday, Friday)
11:45-12:15	Reading and notebook-page creation (Monday,
	Wednesday, Friday)
12:15-1:00	Break (Monday, Wednesday, Friday)

Or, from 10:30 to 1:00

10:30-10:45	Spelling (Tuesday, Thursday)
10:45-11:00	Snack (Tuesday, Thursday)
11:00–11:30	Writing Strands (Tuesday, Thursday)
11:30-12:00	Grammar (Tuesday, Thursday)
12:00-12:30	Break (Tuesday, Thursday)
12:30-1:00	Reading and notebook-page creation (Tuesday, Thursday)
1:00–1:30	Lunch
1:30–2:30	History (Monday, Wednesday, Friday)
	Science (Tuesday, Thursday)
2:30-3:30	Free reading on sofa
3:30-4:00	Latin vocabulary
4.00-5.00	Art project or picture study (Monday)

I J I I I I I I I I I I I I I I I I I I
Wednesday, school day is finished at 4:00
Listening to music and coloring (Friday)

Fourth Grade

7:30-8:00	Get up, dress, make bed, wash
8:00–9:00	Breakfast, help with cleanup, collect school materials
9:00-10:00	Math
10:00-10:30	Break
10:30-11:15	Spelling and Writing Strands (Monday, Wednesday, Friday)
11:15–11:30	Snack (Monday, Wednesday, Friday)
11:30-12:00	Grammar (Monday, Wednesday, Friday)
12:00-12:30	Reading and notebook-page creation (Monday,
	Wednesday, Friday)
12:30-1:00	Break (Monday, Wednesday, Friday)

Or, from 10:30 to 1:00

10:30-10:45	Spelling (Tuesday, Thursday)
10:45-11:00	Snack (Tuesday, Thursday)

And Just When Do I Do All This? Schedules for Home Schoolers 611

11:00-11:30	Write from dictation (Tuesday, Thursday)
11:30-12:00	Grammar (Tuesday, Thursday)
12:00-12:30	Break (Tuesday, Thursday)
12:30-1:00	Reading and notebook-page creation (Tuesday, Thursday)

1:00-1:30 Lunch and cleanup
1:30-2:30 History (Monday, Wednesday, Friday) Science (Tuesday, Thursday)
2:30-3:30 Free reading on sofa
3:30-4:00 Latin vocabulary
4:00-5:00 Art project or picture study (Monday) Wednesday, school day is finished at 4:00

Listening to music and coloring (Friday)

Fifth Grade

7:00–7:30	Get up, wash, dress, make bed
7:30-8:30	Breakfast, help with cleanup, collect school materials
8:30-9:30	Math
9:30-10:00	Break and snack
10:00-10:15	Spelling Workout
10:15-10:45	Grammar
10:45-11:15	Structured reading
11:15-11:45	Writing Strands (Monday, Wednesday, Friday)
	Dictation (Tuesday, Thursday)
11:45-12:15	Logic puzzles
12:15-12:45	Lunch and cleanup
12:45-1:45	Rest, free reading
1:45-2:45	History (Monday, Wednesday, Friday)
(2:45-3:15)	(Modern foreign language, optional—Monday,
	Wednesday, Friday)

Or, from 1:45 to 3:15

Science (Tuesday, Thursday)

.

- 3:15–7:00 Pick up schoolwork; exercise, practice music, play, do chores, help prepare and eat evening meal
- 7:00-9:00 Art (Monday)

612 COMING HOME

Music (Wednesday) Free evening (Friday) Latin (Tuesday, Thursday)

Sixth Grade

6:30-7:00	Get up, wash, dress, make bed
7:00–8:00	Breakfast, help with cleanup, collect school materials
8:00-8:15	Spelling Workout
8:15-8:45	Grammar
8:45-9:25	Structured reading

- 9:25–10:10 Writing Strands
- 10:10–10:40 Break and snack
- 10:40-11:40 Math
- 11:40–12:40 Latin (Monday, Wednesday, Friday)
 - Latin or modern language (Tuesday, Thursday)
- 12:40–1:30 Lunch and cleanup
- 1:30–2:30 Rest, free reading
- 2:30-3:30 History (Monday, Wednesday, Friday)
- Science (Tuesday, Thursday)
- (3:30–4:30) (Piano practice, optional)
- 4:30–7:00 Pick up schoolwork; exercise, practice music, play, do chores, help prepare and eat evening meal
- 7:00–8:30 Listen to music and read about composers (Monday) Science (Tuesday)

Study pictures and read about artists (Wednesday) Evening off (Thursday, Friday)

Seventh Grade

6:00-7:00	Get up, wash, dress, make bed, do morning chores
7:00–7:30	Breakfast
7:30-9:00	Science (Monday, Tuesday)
	History (Wednesday, Thursday)
	Art project (Friday)

- 9:00–9:30 Break and snack
- 9:30-10:30 Math
- 10:30-11:00 Logic
- 11:00-11:15 Spelling

11:15-11:45	Grammar
11:45-12:25	Structured reading
12:25-1:00	Lunch and cleanup
1:00-2:00	Rest, free reading
2:00-3:00	Writing Strands (Monday, Tuesday, Wednesday)
	Art appreciation (Thursday)
	Music appreciation (Friday)
3:00-4:00	Latin

Or, from 3:00 to 4:00

Latin (Monday, Wednesday, Friday) Modern language (Tuesday, Thursday)

....

4:00–7:00 Pick up schoolwork; exercise, practice music, play, do chores, help prepare and eat evening meal

Eighth Grade

6:00-7:00	Get up, wash, dress, make bed, do morning chores
7:00-7:30	Breakfast
7:30-8:30	Latin
8:30-9:30	Modern language
9:30-10:00	Break and snack
10:00-11:00	Math
11:00-12:30	History (Monday, Tuesday)
	Science (Wednesday, Thursday)
	Music (Friday)
12:30-1:15	Lunch and cleanup
1:15-2:15	Rest, free reading
2:15-3:00	Vocabulary from Classical Roots (Monday)
	Vocabulary review and then Writing Strands or Writing
	Exposition (Tuesday, Wednesday, Thursday)
	Art appreciation (Friday)
3:00-3:30	Grammar
3:30-7:00	Pick up schoolwork; exercise, practice music, play, do
	chores, help prepare and eat evening meal
7:00-8:00	Structured reading

.

High-School Schedule: Tenth Grade

	· · · · · · · · · · · · · · · · · · ·
6:00-7:00	Get up, wash, dress, make bed, do morning chores
7:00–7:30	Breakfast
7:30-8:30	Math
8:30-10:30	Great books
10:30-11:00	Break and snack or short walk
11:00-11:45	Grammar
11:45-12:45	Rhetoric (Monday, Tuesday, Wednesday)
	Art history (Thursday)
	Art project (Friday)
12:45-1:15	Lunch and cleanup
1:15-2:15	Rest, free reading, hobbies
2:15-3:00	Latin
3:00-3:45	Another language or music practice
3:45-7:00	Exercise, recreation, help prepare and eat supper
7:00-8:00	PSAT/SAT study and practice
8:00-9:00	Science (Monday, Tuesday, Wednesday, Thursday)
	Music appreciation until 9:30 (Friday)
	(If you wish to be free at this time on Friday, do music
	appreciation between 3:45 and 7:00)

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Lakein, Alan. How to Get Control of Your Time and Your Life. New York: Signet, 1974.

A guide to setting priorities for work and home jobs.

McCullough, Bonnie. Bonnie's Household Organizer: The Essential Guide for Getting Control of Your Home. 2d rev. ed. New York: St. Martins, 1983.

Strategies for spending a minimum amount of time on household jobs.

-------. 401 Ways to Get Your Kids to Work at Home. New York: St. Martins, 1982.

Tips for training children to work.

Steward, Jennifer. Choreganizers: The Visual Way to Organize Household Chores. Gresham, Ore.: Noble, 1995.

\$13.75. Order from Rainbow Resource Center. An innovative timemanagement system for the whole family, developed by home schoolers. Comes with cards outlining various jobs, a chart where the cards fit in once the jobs are done, "Mom and Dad Dollars" for rewards, and a Chore Store where kids can shop with their dollars.

Wilson, Mimi, and Mary Beth Langerborg. *Once-a-Month Cooking.* 2d ed. Colorado Springs, Col.: Focus on the Family Publishing, 1992.

For the ambitious, this is a guide to preparing and freezing a month's worth of meals in a single day. A good source for time-saving recipes, even if you don't want to freeze all the food.

39

11/1

PAPER PROOF: GRADES AND Record Keeping

The purpose . . . is to communicate his nontraditional education in the traditional terms outsiders will understand.

—Debra Bell

I ronically, a classical education is now considered "nontraditional" because it doesn't fit into the neat credits-per-subject pattern of the average high school. Home education is nontraditional as well. Your task is to record what your student is doing in a way that makes sense to school administrators and college admissions officers.

Fortunately, many people have walked this road before you. Your state home-school organization can send you a packet of information covering state requirements for home schoolers, the awarding of grades and diplomas, and the keeping of an appropriate transcript. As a home-educating parent, you'll be doing paperwork in three areas: notification, portfolio keeping for elementary-school and middle-school students, and transcript preparation for high-school students.

NOTIFICATION

When you begin home schooling, you'll need to notify your local school system. Contact your state organization for the exact way to do this. In some states, if you have a college diploma, you simply fill out an "Intent to Home School" form and send a copy of your diploma. If you don't have a diploma, the state may require you to submit an outline of study, which is simply a list of the books you plan to cover each year in each subject. Only basic texts need be listed.

ELEMENTARY SCHOOL AND MIDDLE School: Portfolios

In elementary school and middle school, you must keep track of each subject taught each year. Since no one but you and the local school district will ever see the grades for school years K–8, you should check with your school administrators. Most schools will happily accept portfolios of work as proof that you're doing what you're supposed to do; the notebooks you create for each subject fulfill this requirement. Keep these notebooks filed where you can get to them, and offer them when you need to document your child's work at home.

The only reason for you to issue the child a letter or number grade for K–8 is (1) if the school district demands it (very rare) or (2) if you think the child might want to transfer into a school that requires transcripts. In most cases, schools are content with portfolios—which, in any case, offer a much better picture of the child's achievements. If you do want to issue a grade, you can keep a K–8 transcript like the one we've suggested you use for high school (see below). But in most situations, this is unnecessary.

A word about testing. We don't think there's much point in administering tests in grades 1 through 4. During those years, you should be evaluating rather than testing. Watch the child's work to see what errors she makes again and again. Then reteach those concepts. In middle grades, you should start giving tests in the "skills" areas math, grammar, spelling—just to accustom the student to the testing process. You can do this with the tests supplied in the teacher's editions and test booklets that accompany your texts. But in history, science, and reading—the "content" areas—the child is continually reading, writing, and talking about what she's learning. There's no need to create some kind of test for this material.

HIGH SCHOOL: TRANSCRIPTS

For grades 9 through 12, issuing grades and filling out a transcript form is necessary. The transcript records subjects studied, years of study, units of credit, and final grades. Transcripts ought to be kept on permanent file. Although some colleges are happy to accept portfolios for home-school applications (see Chapter 44), others insist on a regular transcript. Employers and educational institutions will often request a high-school transcript. (Occasionally, a potential employer will still call Jessie and ask for the highschool transcript of a student she tutored ten years ago.) That piece of paper is important!

At a minimum, you should record each subject studied, the traditional end-of-semester grades—A, B, C, and so forth—and achievement test scores. Having taught in traditional schools, Jessie knows that many factors influence a final course grade, among them attendance, participation, application, attitude, projects and activities. We also know of some class-rooms where an A equals 95 to 100, and other classrooms where an A equals 90 to 100. Failing scores are always determined by the teacher and can range from 60 to 75. The home-school teacher is allowed to exercise the same flexibility of judgment as the traditional school teacher. Taking all of the above factors into account, Jessie awarded an A for excellent work and application, a B for above-average work that could have been a little better, a C for meeting-the-grade work, and a D for performance that was much less than the child was capable of doing.

Because, in a home situation, Jessie continually evaluated and tested for mastery before testing to award a grade, the grades were usually high. She also tried to match the grades to achievement scores (see Chapter 40 for more on testing). A transcript with all A's and low standardized test scores won't appear credible (although a standardized test doesn't necessarily test the material taught and shouldn't be used to determine a course grade).

Even if your school system allows a portfolio assessment instead of traditional grades, you must keep this official transcript for high school. You might be asked for it at the most unexpected times.

The student needs to fulfill a minimum number of credits in order to graduate from high school. Traditionally, 1 credit in high school equals 120 hours of class work, or 160 45-minute periods. Labs and projects, field trips, and independent reading can all count as class work.

Check with your support group, state home-school organization, or local school-board office on graduation requirements. Remember, they do change from time to time and from state to state. Typically, 20 credits are required for graduation:

Language arts	4
Mathematics	2
Science	2
American history	1
American government	1
Physical education	2
Electives	8

A college-preparation course is more extensive, ordinarily requiring the following 21 to 29 credits:

4
3–4
2–4
1
1
1
3–4
2
4–8

The student who follows the classical curriculum outlined in Part III and holds to a basic 36-week school year will spend, on average, the following hours in study every year (this is adjusted to allow for illness, field trips, and other skipped days of school):

	Ninth Grade
Grammar	120 hours
Rhetoric	90 hours
Great books	320 hours
Math	120 hours
Science	108 hours
Foreign language	108-216 hours
Art and music appreciation	108 hours

	Tenth Grade
Grammar	120 hours
Rhetoric	90 hours
Great books	320 hours
Math	120 hours
Science	108 hours
Foreign language	108-216 hours
Art and music appreciation	108 hours

	Eleventh Grade
Grammar	120 hours
Great books	320 hours
Math	120 hours
Science	108 hours
Foreign language	108-216 hours
Art and music appreciation	108 hours
Junior thesis	100-150 hours
(Computer programming)	(150 hours)

Grammar Great books Math Science Twelfth Grade 120 hours 320 hours 120 hours 108 hours (more like 180 hours, if Saxon physics is elected)

Foreign language	108-216 hours
Art and music appreciation.	108 hours
Senior thesis	100-150 hours
(Computer programming)	(150 hours)

How does this fit into a transcript? If you keep to this schedule, you award 1 English credit per year for the study of grammar (that's the language-arts requirement). You also award 1 math credit each year that a math course is completed. After the ninth- and tenth-grade years, math courses can be counted toward the 8 required electives.

Science courses are slightly below the normal class hours, but don't forget that home study tends to be more concentrated than classroom work. Also, the 108 hours of science is supplemented by the works on science read in the great-books course and by extra time spent on science-fair projects and outside reading. If the junior and senior projects are scienceoriented, the number of hours climbs even more. So it's perfectly legitimate for you to award 1 science credit for each year of study. And if, by the end of the year, you don't feel that the child has done the equivalent of a year's study, simply continue into the summer until that extra 12 hours are completed (it's only 4 extra weeks—less if you do more than 3 hours per week). Use common sense and look at what the student has completed when deciding to award the credit.

We suggest you award 1 fine-arts elective credit for every year's work in art and music appreciation combined. Award 1 foreign-language credit for each one-year course in foreign language completed. For physical education, award the student 1 credit for a full year's involvement in organized physical activity—aerobics classes, tennis lessons, karate lessons, community softball or basketball leagues. Alternately, the student can just keep a yearlong log of the time spent in regular physical activities such as walking, jogging, and bike riding. When she reaches 120 hours, award her 1 physical-education credit (everyone who does the exercise gets A's in physical education). This will encourage the child to exercise regularly, which will help her overall health.

The great-books study is the equivalent of considerably more than 2 high-school courses. Add the study of rhetoric in ninth and tenth grades, and the junior and senior theses in eleventh and twelfth grades, and you've got more credits than needed for graduation. The study of great books en-

-

compasses world history, world literature (although the study of grammar provides the necessary language-arts credit, you can give elective credit in world literature for every year of great-books study), American history, and American government (it includes source readings from all the texts required in a government course plus the background readings in ancient political theory that most high-school courses simply can't cover). If you do debate, count rhetoric and debate club together as 1 speech elective. Computer programming is another elective. Furthermore, in the junior and senior years, the senior-thesis requirement can be counted as an honors elective course in independent research.

The transcript is not the place to explain that you've done rhetoric and great books instead of traditional textbook courses. The transcript will show that you've met and exceeded the minimum state requirements; the portfolio, that you've met those requirements in a challenging, creative way—it accompanies your transcript when you apply to college (see Chapter 44).

The transcript values, then, look like this:

Curriculum		What you put on transcript	
Course	Hours	Course	Units
	Ν	Jinth grade	
Grammar	120	English 1	1 language arts
Rhetoric	90	Speech 1	1 elective
Great books	320	World lit. 1	1 elective
		World hist. 1	1 history
Math	120	Algebra	1 math
Science	108	Biology	1 science
Foreign lang.	108-216	Latin/modern	1-2 foreign lang.
Art and music	108	Fine arts 1	1 elective
	7	Fenth grade	
Grammar	120	English 2	1 language arts
Rhetoric	90	Speech 2	1 elective
Great books	320	World lit. 2	1 elective
		World hist. 2	1 history

High-School Credits

Paper Proof: Grades and Record Keeping 623

Math	120	Algebra	1 math
Science	108	Earth science	1 science
Foreign lang.	108–216	Latin/modern	1-2 foreign lang.
Art and music	108	· Fine arts 2	1 elective

Eleventh grade

Grammar	120 hours	English 3	1 language arts
Great books	320 hours	Victorian lit.	1 elective
		American hist.	1 history
Math	120 hours	Advanced math	1 math
Science	108 hours	Chemistry	1 science
Foreign lang.	108-216 hours	Latin/modern	1-2 foreign lang.
Art and music	108 hours	Fine arts 3	1 elective
Junior thesis	100-150 hours	Junior honors	1 elective
(Computer prog.)	(150 hours)	(Computer prog.)	(1 elective)

Twelfth grade

Grammar	120 hours	English 4	1 language arts
Great books	320 hours	Modern lit.	1 elective
		American gov.	1 government
(Math, elective)	(120 hours)	(Elective)	(1 math)
Science	108 hours	Physics	1 science
Foreign lang.	108-216 hours	Latin/modern	1–2 foreign lang.
Art and music	108 hours	Fine arts 4	1 elective
Senior thesis	100-150 hours	Senior honors	1 elective
(Computer prog.)	(150 hours)	(Computer prog.)	(1 elective)

The student who follows this curriculum ends up with these credits:

Mathematics3-4Foreign language4-8World history2American history1American government1Science4	
Foreign language4-8World history2American history1American government1Science4	ŀ
World history2American history1American government1Science4	}
American history1American government1Science4	
American government 1	
Science 4	
Juliu	
Electives 10-	-1-

.

Add 2 credits in physical education, and this goes far beyond the average college prep high-school track.

As can be seen, it's acceptable (especially for the student who isn't college-bound) to simplify the high-school curriculum. The fine-arts electives aren't necessary either for graduation or for the college track. One to two years of science could be eliminated as well as several years of foreign language and at least one year of mathematics.

But a rigorous high-school program prepares the student for the unexpected—a future change in employment, a sudden desire to go to college or graduate school, a growing home business that requires a high level of intellectual competency. We recommend as vigorous a curriculum as the child's mental ability allows. Jessie also feels that every student, even those who don't plan on college, ought to take the PSAT and SAT (see Chapter 40). If, two or three years later, the high-school graduate decides to go to college, the standardized scores already exist; she doesn't have to take tests on material that's been partially forgotten.

Any courses taken through correspondence, a community college, or a concurrent program at a local university should be listed on the high-school transcript along with the grade earned. These courses also count toward high-school graduation credits.

The high-school transcript also includes space for extracurricular activities. Record all the student's nonacademic activities (teams, hobbies that she puts significant time into, athletic pursuits, music lessons, competitions, volunteer work, jobs, all memberships in any kind of organization, any leadership positions at church or in community groups, all participation in regular community activities). You'll probably have to list these on a separate sheet of paper or fit them into a margin on the transcript since most transcripts have a preset list of extracurricular activities ("Offices Held" or "Band"). Just make sure these activities appear with the transcript wherever it is submitted.

DIPLOMA

If your state home-school association has a graduation ceremony that awards high-school diplomas (as Virginia does), take advantage of it. And if your state allows your home school to operate as a private school, you can design and present your own diploma with the name you have selected for your institution.

The Home School Legal Defense Association sells professionally printed diplomas for home schoolers to fill in and award. You can award your own diploma, if you have no other option—the transcript form proves that your student has completed the necessary work for graduation.

Many home-schooling organizations suggest that students take the GED. We're not sure this is a good idea, especially for classically educated students. The GED really only requires a mastery of tenth-grade material, and taking it tends to lump highly accomplished, academically oriented students together with those who couldn't or wouldn't finish eleventh grade.

We suggest calling the admissions offices of colleges you might be interested in and asking them how they view a home-schooled transcript and whether they require a diploma. Many colleges are now formulating specific policies for home schoolers.

If the student is thinking about joining the military, talk to a local recruiter about the high-school graduation requirement and how you can best document graduation.

Your transcript (and portfolio) plus achievement scores are much more valuable than a diploma. Schools all across the United States vary so widely in the skills required to gain a diploma that the piece of paper itself has lost much of its meaning. Again, the most important thing you can do is *call* any of the institutions requiring a diploma and ask what they prefer for home schoolers.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Daily Planner. New York: Scholastic.

\$4.95. Order from the Home School. This basic record book supplies space to keep track of dates, assignments, field trips, and grades in K–12.

Diploma.

\$20.00 Order from Home School Legal Defense Fund. This high-school diploma has a psalm on it. If you want a plain diploma, you can often find blank diplomas at art stores or large office supply stores.

High-school transcript form.

\$1.00. Order from Home School Resource Center. This standard highschool transcript form is published by the National Association of Secondary School Principals. Get several in case you make a mistake.

The Homeschooler's High School Journal, 7-12.

\$8.75. Order from Rainbow Resource Center. Highly recommended, this spiral-bound journal gives the student sections for recording test scores, daily logs for recording time spent on each subject and time spent on field trips or research, library list forms to keep track of what you've read, a chart to keep track of weekly hours spent on each subject, and a grade record.

40

11/1

THE YARDSTICK: Standardized testing

In some ways, parents who educate at home are in better shape because of the sanctity of modern testing. It's not that hard to teach a child to do well on a standardized test, and since the tests are sacred, good results command respect.

-Mary Pride, The New Big Book of Home Learning

Standardized tests are necessary evils. On the negative side, they don't necessarily measure the child's knowledge or skill; they may not coincide with what you've been working on; and they require specific test-taking skills that your child will have to practice when he could be doing something else. On the positive side, standardized tests are a great equalizer. Because grading standards vary so much from school to school, standardized tests scores have become the ultimate proof that you're doing a good job educating your child. High Scholastic Aptitude Test (SAT) scores will open dozens of doors for high-school seniors. Advanced Placement (AP) tests give college credit to the well prepared. Students with a good grounding in the foundational skills of reading, writing, and mathematics generally test well; students who read widely almost always score highly.

YEARLY TESTING

If you're home educating, you need to have your child tested every year. Although this is a pain in the neck, look on the bright side: children who are accustomed to taking timed standardized tests inevitably score well on college admissions exams. Jessie, paranoid about academic achievement back when no one else she knew was home schooling, had her children tested every year. As a result, when they took their PSATs and SATs, they were relaxed and confident, and came out with high scores.

There are a slew of standardized skills tests for grades K–12. The only way to negotiate the maze is to follow these steps:

1. Call your state home-school organization, and ask what your state regulations are. When does the child need to be tested? What tests are acceptable? (In Virginia, home-schooled students are allowed to use any nationally standardized achievement test, not only the test that happens to be used by the local school district—the content hardly varies at all.)

2. Decide how you want the test to be administered. You have several options:

- a. If you want to, and if you have a well-ordered, friendly private school nearby, call and ask whether your children can take the standardized test on test day.¹ You will have to register ahead of time and pay a nominal fee, show up with the children on test day for the test, and take them home. This is especially good for older children (seventh grade and up) since it exposes them to the conditions that will surround SAT testing. Younger home schoolers are better off taking the test in a familiar setting, preferably from an administrator they know. At the very least, go to the test site before the test date, and wander around.
- b. Administer the test yourself. A number of the standardized basic

¹Jessie doesn't recommend that elementary-age home schoolers take tests with publicschool students unless the state requires this. The confusion and unfamiliar chaos of a big class sometimes prevents the child from concentrating on the test. We have also heard of an occasional case where hostility to home schoolers has made a child uncomfortable. tests—including the California Achievement Test and the Comprehensive Test of Basic Skills—can be given by the parent and sent back for grading. Information about each test can be found at the end of this chapter. This is the best option for K–4 students. Jessie thinks that at this stage the parent should give the test and then teach the child what he needs to know about taking tests.

c. Take your children to a professional testing site for private test administration. Your state organization can tell you where to find a local test site. The education department of a local college or university should also have this information.

3. Prepare for the test. A good basic guide to standardized test taking is found in *Dr. Gruber's Essential Guide to Test Taking for Kids*. The guide is published in two volumes, *Grades 3, 4, 5* and *Grades 6, 7, 8, 9*. These contain basic content, guides to the specific types of tests offered, practice in specific test-taking skills, and anxiety-reduction strategy. Jessie spent time prior to standardized test time teaching each child how to take the tests. They practiced taking sample tests so that the techniques of test taking became familiar and they could focus on content.

The best way to reduce anxiety, though, is for you to accept the status of the test as "no big deal." If you're agitated because you feel that your success as a parent and teacher is resting on this standardized test, your child will pick up on your urgency.

4. Take sample tests. SRA/McGraw-Hill publishes sample tests for most of the basic series. You can also order sample tests from some of the test-ing centers listed at the end of this chapter.

Make sure you tell the child, before he takes the test, that it will contain material beyond his grade level. For example, a test for grades 1 through 3 typically contains material from the fourth, fifth, and sixth grade in order to identify highly gifted or advanced third graders. But if the student doesn't know that some of the material is purposely designed to be too hard, he might panic and stop thinking clearly.

What if the child doesn't do well? Perhaps the child was sick or was upset about an unrelated matter or was suffering from text anxiety. Or perhaps you didn't cover the material emphasized on the test.

In most cases, you're given a second year to show substantial progress something you'll need for a child who's doing remedial work. Spend extra time before the next test working on test skills.

.

A great advantage to administering the test yourself or having it done privately is that you can schedule the test three to four months before the deadline your state requires. Then, if the child doesn't score well, you can prepare again and retest.

You can also appeal for a different form of testing: an individual, portfolio-based assessment of the student's progress. Your state organization can help you with the appeal and steer you toward a professional assessment service. Portfolios are made up of samples of the child's work, arranged chronologically to demonstrate achievement in different areas. They include information that can't be tested—art talent, engineering projects, community-service award. These are valuable for showing reasonable progress for a child who's testing below grade level. Contact your portfolio evaluator (recommended by your home-school state organization) at the beginning of each year to see what materials you should include.

Even if you use portfolios to satisfy the school system, you should keep on taking standardized tests. Tests are a reality of educational and professional life (you even have to take a test to get a driver's license), and constant practice will eventually dull test anxiety. You can give these tests privately, without forwarding the results to school officials.

Use the test results to target weak areas that need more study, as well as to praise the child when scores show that he has made progress. If the child consistently tests poorly in a particular skill, you might want to consult a professional evaluator to see whether the child has a learning problem or simply needs more time in that area. At its best, standardized testing is a tool for evaluating instruction. It should be used to plan the next step in the educational process. *Never make an important educational decision on the basis of one test*.

Note that a fairly new development on the scene are tests such as Performance Assessment in Mathematics (PAM) and Performance Assessment in Language (PAL). These require the student to explain in writing why he chose the answer he did. Because these answers are open to wide interpretation by the test scorer, Jessie recommends avoiding this type of testing unless it is required by law. If you do have to take these tests, call Continental Press (800-233-0759) and ask for a testing catalog. Then talk to a customer-service representative at Continental and ask for advice on the product that will best prepare the student for your state's specific test. These tests will require more preparation time than standard multiplechoice tests. So start getting ready at the beginning of the year, and practice periodically until the child is comfortable with the format.

AP AND CLEP EXAMS

High-school students who take advanced electives can earn college credit through the Advanced Placement and College Level Examination Program exams administered by the College Board. High scores on these exams don't mean that you'll actually get credit on a college transcript. (This depends on the college you apply to—some will give you credit, others simply allow you to skip low-level classes and go into more advanced work.) But high scores from home schoolers demonstrate that you have, indeed, mastered the material on your transcript. AP and CLEP scores, according to the College Board, improve the admission appeal of home schoolers "by showing that they have initiative and a real willingness to learn."²

The College Board offers thirty-four CLEP exams as well as AP exams in twenty areas of study. For online information on both types of exams, visit the College Board Website at www.collegeboard.com. (You can also call them at 212-713-8165.) The Website offers online test reviews and an evaluation service as well as information about all the exams. Ideally, you should get this information in ninth grade to help you plan your highschool electives.

AP exams are given at local high schools. As long as they have studied the subject in depth, home-school students can take AP exams without enrolling the school-offered AP course. You can obtain practice AP exams from the College Board. To get specific AP information, call 888-CALL-4-AP or 609-771-7300.

CLEP exams determine placement in a number of subjects—most notably foreign languages—and show achievement. Call CLEP at 609-951-1026 for up-to-date information.

If you plan to take an AP or CLEP exam, get a review book from Barron's,

²"College Credit before College," *The College Board: The Path from Home School to College* (1998), College Board Online, www.collegeboard.com./features/home/html/collcredit.html.

6

the College Board, or Princeton Review. During the semester before the exam, spend several hours per week preparing for the test.

PSAT, SAT, AND ACT

The PSAT, the SAT, and the ACT (American College Test) are all standardized high-school achievement/skill-evaluation tests used by colleges to sort through and rank applicants. If you're planning to attend college, take these tests seriously. Finish as much math as possible before the junior year. The Latin and vocabulary programs as well as Adler and Van Doren's *How to Read a Book* will thoroughly prepare you for the vocabulary and readingcomprehension sections of the test. Logic will help with the analytical sections.

However, you should also study directly for the tests. Beginning in tenth grade, spend at least an hour a day working through one of the review guides published by Barron's, the College Board, and the Princeton Review. All tests have their peculiarities, and the types of problems found on these tests (verbal analogies, analytical problems) may not be familiar if you don't prepare. Study regularly, and take at least three practice tests under test conditions—timed, sitting in one place without getting up for water or cookies. Susan scored above the 90th percentile in all college admissions tests by studying Latin, finishing Algebra II and geometry, and working through review books every day for over a year before taking the tests. The effort paid off in scholarship money and admission to every program she applied to.

Find out what format the test will be in. Currently, standardized tests are in the middle of a shift from paper-and-pencil administration to computerized administration, but as of this writing the SATs are still taken with paper and pencil. If you'll be taking a traditional exam, use a book to prepare for it instead of the review software sold by the College Board or Princeton Review. There's enough of a difference in the way the problems are presented via computer to throw you off when you sit down with the test booklet.

The PSAT/NMSQT (Preliminary SAT/National Merit Scholarship Qualifying Test) is administered by the College Board. It not only offers practice for the SATs, but serves as a qualifying exam for scholarships offered by the National Merit Scholarship Corporation. The PSAT is generally taken during the sophomore or junior year of high school. Students who take it in the fall of the junior year generally score higher and have a better chance of qualifying for National Merit scholarships. Questions about National Merit scholarship's should be directed to the National Merit Scholarship Corporation at 847-866-5100.

Home-school students register for the PSAT/NMSQT through the local high school. Note that, unlike the SAT, the PSAT is given *only* in October and if you miss it, it's gone. Call your local public high school in the spring of the freshman or sophomore year, and arrange to take the test the following October. Ask to speak to the PSAT administrator. Find out the day and time the test is being given. Ask about the fee (if you can't afford it, ask how you can apply for a fee waiver) and how to register. Home-school students use a College Board home-school code when filling out the registration forms. Call PSAT General Information (609-771-7070) for the appropriate code.

The College Board suggests that, if the school seems resistant, you contact another public high school or try a private school. PSAT scores for home schoolers are sent directly to your home.

The SAT, the standard college admissions test, has two parts. SAT I is the test everyone takes; it lasts three hours and has seven sections divided among verbal, mathematical, and analytical problems. SAT II, or subject, tests are optional, but home schoolers should strongly consider taking as many of them as they feel prepared for. The tests are one-hour multiple-choice exams that measure knowledge in specific areas. Good scores on the SAT II tests will validate your high-school transcript.

You should plan to take the SAT no later than January of the senior year (if you think you might want to take it more than once, take it in the spring of the junior year or the fall of the senior year). To register for the SAT, call 609-771-7600 and ask for a Registration Bulletin, or pick one up from a local high-school guidance office. Fill out the registration form, and send it back by mail. Home-schooled students use the universal home-school code listed in the Registration Bulletin. You can also register online (www. collegeboard.com). The College Board recommends that you ask for their free publications *Taking the SAT I: Reasoning Test* and *Taking the SAT II: Subject Test;* these have test-taking tips and practice test questions. As in the PSAT, you can request a fee waiver if the SAT test fees are too much for your budget.

When you fill out the form, you'll choose three test centers close to you. When your registration is confirmed, you'll be informed about where and when to take the test. Specific questions about the SAT should be directed to Educational Testing Services at 609-771-7600.

The ACT is widely, although not universally, accepted for college admissions—check with the college you want to attend. However, if you have to choose between the SAT and the ACT, pick the SAT.

The four ACT tests cover English, mathematics, reading, and science reasoning. The test is three and a half hours long, is given five times—in October, December, February, April, and June—and costs \$20.00. For information about the ACT, visit their online site at www.act.org. You should take the ACT in the spring of your junior year. For registration and location information, call 800-525-6926.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it. Resources for yearly standardized testing and test preparation are listed first, followed by PSAT, SAT, ACT, AP, and CLEP resources.

Test Ordering Information

Check with your state home-education organization to find out which of these is accepted by your state. The following tests can be administered by parents under certain conditions:

California Achievement Test.

Order through the Independent Test Service of Christian Liberty Academy. This national test can be given by the parent. The test has to be mailed back to CLA, where it will be scored and returned.

Comprehensive Test of Basic Skills.

Order from Seton School, and mail back to Seton for scoring and evaluation. Adds science, social science, and reference skills to the material tested by the other exams. Stanford Achievement Test.

Order from McGuffey Academy. This is a common standardized test used by many private schools. You must order the "Directions for Administering" before giving it.

Chow, Stanley, and Joan McRobbie. Using Portfolios to Assess Student Performance: Knowledge Brief 9.

\$4.00. Order from Far West Laboratory. If you would prefer to use portfolios rather than standardized testing to evaluate skills, this will guide you in assembling a student portfolio.

Test Preparation

Gruber, Gary R. Dr. Gruber's Essential Guide to Test Taking for Kids. Fairfield, N.J.: Morrow, 1986.

Available in two volumes, *Grades 3, 4, 5* and *Grades 6, 7, 8, 9*. Order through any bookstore or online bookseller. Includes reviews and practice questions for all widely used achievement tests.

Keys to Excellence series. Austin, Tex.: Steck-Vaughn, 1997.

Order directly from Steck-Vaughn. The series reviews skills for the following tests:

Comprehensive Tests of Basic Skills (CTB). Performance Assessment in Language Arts (PAL). Performance Assessment in Mathematics (PAM).

On Target for Tests series. Rev. Elizabeth, Pa.: Continental Press, 1999.\$4.25 each. Order directly from Continental Press. This series provides an overall guide to test-taking content and skills for young children.

Book A (grades 2–3). Book B (grades 4–6). Book C (grades 7–9).

Scoring High series. New York: McGraw-Hill.

\$5.75 each. Order from SRA/McGraw-Hill. These booklets cover the skills needed for the major achievement tests. Call for the most recent titles; each series has a number of levels, so when you call, tell the customer-service representative which test you're preparing for and what grade child you're working with. Scoring High on the California Achievement Tests. 4th ed. 1990. Scoring High on the Iowa Test of Basic Skills. Rev. 1996. Scoring High on the Metropolitan Achievement Test. 1997. Scoring High on the Stanford Achievement Test. Rev. 1997.

Test Best series. Austin, Tex.: Steck-Vaughn.

Order directly from Steck-Vaughn. The series reviews material for the following tests:

California Achievement Test. 1993. Iowa Test of Basic Skills. 1994. Metropolitan Achievement Test. 1995. New Jersey High School Proficiency Test. 1993. Stanford Achievement Test. 1998.

PSAT Preparation

For PSAT information, call the PSAT General Information number at the College Board: 609-771-7070. For National Merit Scholarship information, contact the National Merit Scholarship Corporation at 1560 Sherman Avenue, Suite 200 Evanston, IL 60201-4897, or call 847-866-5100.

Brownstein, Samuel C., et al. *Barron's Passkey to the PSAT NMSQT*. 4th ed. Hauppauge, N.Y.: Barron's Educational Series, 1997.

SAT Preparation

For the SAT Registration Bulletin or questions, call ETS at 888-225-5427 (general number) or 609-771-7600 (bulletin request), or visit the College Board Website at www.collegeboard.com.

Green, Sharon Weiner, et al. *How to Prepare for the SAT I.* 20th rev. ed. Hauppauge, N.Y.: Barron's Educational Series, 1998.

The Barron's SAT series is Susan's favorite. It's complete, affordable, and scores on the practice tests are generally close reflections of the real thing. Barron's also offers an SAT II preparation series with one title for almost every high-school subject. These are valuable for students who are planning to take an SAT subject exam.

Princeton Review. *Inside the SAT*. Book and CD ed. Princeton, N.J.: Princeton Review, 1996.

\$34.95. This is a good review book if you plan to take the SAT on computer.

Robinson, Adam, and John Katzman. *Cracking the SAT and PSAT*. Princeton, N.J.: Princeton Review, 1998.

This guide has a long history of success. Princeton Review also publishes a Cracking the SAT II series, which covers most high-school subjects.

ACT Preparation '

For ACT information, contact ACT at www.act.org, call them at 800-525-6926, or write ACT Test Administration, P.O. Box 168, Iowa City, IA 52243-0168.

Ehrenhaft, George, ed. *Barron's Pass Key to the ACT*. 3d ed. Hauppauge, N.Y.: Barron's Educational Series, 1998.

———. How to Prepare for the ACT. 11th ed. Hauppauge, N.Y.: Barron's Educational Series, 1998.

AP Preparation

For College Board resources and information about Advanced Placement exams, visit their Website at www.collegeboard.com. You can also get AP information by calling 888-CALL-4-AP or 609-771-7300.

Advanced Placement series. Piscataway, N.J.: Research and Education Association.

This series offers titles in almost every AP subject area.

Best Test Preparation AP series. Piscataway, N.J.: Research and Education Association.

This series offers titles in almost every AP subject area.

How to Prepare for the AP series. Hauppauge, N.Y.: Barron's Educational Series.

This series, covering all the subjects in which AP exams are offered, include reviews, test tips, lots of practice, and sample tests.

CLEP Preparation

For College Board resources and information about CLEP exams, visit their Website at www.collegeboard.com or call the College Board.

Best Test Preparation CLEP series. Piscataway, N.J.: Research and Education Association.

The titles in this series offer general practice for taking the CLEP exams as well as information about the specific subject exams available (one for almost every high-school subject).

WHERE'S THE TEAM?

41

ATHLETICS AT HOME

Serious sport has nothing to do with fair play. It is bound up with hatred, jealousy, boastfulness, disregard of all rules . . . it is war minus the shooting.

—George Orwell, The Sporting Spirit

Can home schoolers play team sports? It depends on what you mean. If your teenager has a good chance of becoming a professional basketball or football player, home schooling probably isn't a good option. There's simply no foolproof way to plug a home-schooled student into the pro-sports assembly line that starts in high school. If the student wants to participate in college sports, though, the Home School Legal Defense Association provides a packet that helps home schoolers validate the initial eligibility requirements for the National Collegiate Athletic Association (NCAA). (Call 540-338-5600 for details.)

But players who are serious contenders for a professional team sports career make up a very small segment of the total high-school population. For the average, academically inclined teenager, we think the question of organized team sports has gotten too much.emphasis. How many students will find that team sports make up an important part of life after high school?

639

And even in a regular school, very few players are actually able to play regularly on official teams.

However, home schoolers can make arrangements to take part in team sports. Church and community leagues often welcome home schoolers call your local Parks and Recreation office for information on community leagues. Check the bulletin boards at local sports stores to find out about special-interest sports groups and small clubs; many of these are familyoriented and welcome all ages. Youth groups such as Little League, 4-H, Scouts, Camp Fire, and Civil Air Patrol sponsor sports teams.

Home-school support groups, particularly in areas where home schooling is popular, sponsor teams especially for home schoolers. Call several local support groups (your state organization can give you names and numbers), and find out whether any of them has put a basketball or baseball team together. (If no one has, you can always start your own.) Your state organization may also know of home-school teams; some states have organized statewide home-school leagues.

Private schools, especially smaller ones, are often willing to allow home schoolers to play on school teams. If no one's ever asked to do this before, suggest that your child try it for a few weeks on a trial basis.

As in other high-school subjects, use your community-college resources for older students. A teenaged home schooler can enroll for physicaleducation (or kinesiology) classes. This can lead to team participation once the student becomes familiar with the coaches and sports staff.

Some states make specific provisions for home-schooled students to participate in public-school sports. Call your state organization, and ask what the existing policy is. In many states, there's no official policy—you'll simply need to approach your school district and ask whether your child can participate. However, if you've taken your child out of school to avoid a destructive social environment, this obviously is not a good choice.

A more relaxed approach to physical education is simply making sure that your children exercise every day, from kindergarten through twelfth grade. In elementary and middle school, play games together at least twice a week (we've suggested two good books on children's games in the Resources at the end of this chapter). Jessie concentrated on general physical fitness and on sports skills that could be honed either individually or without a large team of people: running (Susan ran a half marathon at thirteen), cycling (her brother trained alone or with Mom "drafting" him in the station wagon), horseback riding, tennis, golf, handball, swimming. All are suitable for individual recreation as well as for competition, if the student enjoys the challenge.

Walking is free (except for good shoes) and can be done alone or with a friend or sibling. Aerobics can be done in a regular class or with a home video. Pickup games of basketball, softball, and soccer with family and friends teach basic games-playing skills. Activities such as hiking, karate, skating, skiing, swimming, dancing (folk, ethnic, ballroom, classical, modern), and weight training can be learned privately. Investigate classes at your local community recreation center; generally, these are offered for a wide range of ages and levels. Clubs and gyms offer instruction in martial arts, gymnastics, fencing, and other sports or skills.

As described in Chapter 39, the high-school student should, for at least two years, keep a log of hours spent doing physical activity, including in the log brief descriptions of the activity itself and the skills practiced and mastered. These logs can serve as the basis of credits awarded for physical education. The student must devote 120 hours per year to doing physical activity in order to earn 1 unit of credit; 2 units are required for high-school graduation.

Another kind of physical activity that is often overlooked is physical work, which builds muscles as well as character. Jessie's home schoolers cut grass, gardened, took care of animals (carrying feed and water in freezing weather as well as cleaning their living quarters), and hired themselves out to trusted friends and neighbors for housework and yardwork.

You can contact the President's Council of Physical Fitness and Sport at 202-690-9000 for basic physical-fitness guidelines, ages K–12.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Henderson, Roxanne. The Picture Rulebook of Kids' Games. Illus. Michael Brown. Lincolnwood, Ill.: NTC Publishing, 1996.

-61

\$14.95. Order from a bookstore or online bookseller. Clear explanations with cartoon illustrations. Games that develop motor skills included; both classic and newer games.

Maguire, Jack. Hopscotch, Hangman, Hot Potato, and Ha, Ha, Ha: A Rulebook of Children's Games. New York: Simon & Schuster, 1992.

\$15.00. Order from any bookstore or online bookseller. A classic with rules for all the active kid's games your child would play in elementary and middle-school PE.

Marini, Alexander D. We Win: A Complete Non-Competitive Physical Education Program for the Entire Family. Gresham, Ore.: Noble, 1994.

\$19.95. Order from Noble Publishing. This is a good guide to physical fitness and family games put out by a Christian publisher. It has an introduction aimed at Christian home schoolers, but the rest of the book is simply about fitness.

The President's Council on Physical Fitness and Sport 200 Independence Avenue SW Humphrey Building, Room 73814 Washington, DC 20210 202-690-9000

42

11/1

THE LOCAL SCHOOLE: DEALING WITH YOUR SCHOOL SYSTEM

Out of sight, out of mind.

-Proverb

Most home schoolers find that the easiest way to deal with their local school system is simply to stay out of sight once the legal formalities have been completed. Many local schools are cooperative and friendly to home schoolers. But we've also heard of instances where local school systems, in cooperation with social-services personnel, have interfered in family life, taken away parental authority, and sometimes even removed children from homes even though no abuse has occurred—only differences in philosophy or opinion over how a child should be educated.

For this reason, many home-schooling parents are wary of using publicschool facilities and programs. When a home-schooled child becomes part of a public-school class or activity, he's placed under the jurisdiction of public-school authorities, who may take the opportunity to investigate the home-based part of the child's education.

Be careful, but don't assume the worst about your local schools. Assume

. .

what is most frequently the truth—that your local school officials want to make sure that you're providing a quality education at home. The best way to avoid any trouble is to comply fully with all state laws about notification, testing, and record keeping. Although some states offer a "religious exemption" clause for home schoolers—this excuses you from any accountability to the state on the ground that such accountability will violate your conscience—we do not encourage you to take this option unless you join the Home School Legal Defense Association (HSLDA) for legal advice. It is possible that you may have to prove in court that your definition of "religious exemption" is the same as that of your school authorities. (The HSLDA is listed in Resources, at the end of this chapter.) Comply with the laws as far as your convictions allow.

Don't draw attention to yourself or encourage retaliation by openly attacking and criticizing your local schools. If you want to change your school, you need to keep your child enrolled and bring about change from the inside. But if you've decided to invest your own time in educating your child, make the transition from public school to home school as quietly as possible. Be polite and respectful. Realize that public schools provide a valuable service to the community and to those who can't home-school. Your energies should now go toward creating an excellent education at home and not toward establishing an adversarial relationship with your school system.

School systems in areas where home schooling is common will be well acquainted with the law. In other places, schools may simply be unaware of the legal right to home-school. If your officials protest that you can't homeschool, or if they tell you that public-school authority extends to all children of school age whether they're enrolled or not, they may be operating from a position of ignorance. Get a copy of your state law from your state homeschool organization, and bring it to all meetings.

School officials need to see that you're using a good curriculum, that you're having your child properly tested, that the child is involved in outside activities, and that you're keeping decent academic records. You'll save yourself trouble if you create a "founding document" for your home school—a brief paper with the following sections:

1. Your educational background and any teaching experience or professional capabilities that support your ability to tutor your child at home.
The Local School: Dealing with Your School System 645

- 2. Your philosophy of education—in other words, an explanation of why you're teaching at home. If you're convinced that your child needs a religious education that the school can't provide, say so. If you're working toward academic excellence in a one-on-one, tutorial-based environment, put that down, too. You can use our explanation of the three stages of the trivium in Chapter 2 as part of your educational-philosophy statement.
- 3. The legal requirements of the state—notification, record keeping, testing—and how you plan to meet them.

Every year, write up a summary of your educational plans, complete with titles of texts. (You may not need this, but if you're questioned, having it on hand will add to your credibility.) You can use the "At a Glance" sections we've provided on pages 224–228, 443–447, 573–576, which summarize the program of study and the time spent on each subject. Add specific basic text titles, and you have a summary that should satisfy any school system. Be faithful about keeping the notebooks we describe. These prove that your child is doing good, continual work in every subject.

If you are in a system that isn't home-school friendly, or if you have a special-needs child or a child who's functioning below grade level, or if there is another unusual situation, you should join the Home School Legal Defense Association (HSLDA) before withdrawing your child from school. Proper legal advice followed at the outset might save you from confrontation later. Some school systems have within them social workers who apply child-abuse and child-neglect laws to home schoolers as if these children were truants. This situation isn't the rule. But don't place yourself in a position where you're vulnerable to such accusations.

Some school systems happily allow parents to home school, even encouraging home schoolers to take part in the system's programs, labs, and sports. If you want to participate in selected school activities, approach the local school. If no home schooler has ever made such a request, the school might not have a policy in place. Suggest participation on a trial basis. If the arrangement works out, the school will probably create a policy favorable to home schoolers. Be aware, though, that using your public-school system for anything invariably opens the rest of your home program to closer scrutiny.

It's an unfortunate truth that some school systems attempt to exclude

parents from the educational process because they view education as the sole responsibility of the state. Other schools may be afflicted by a single zealous social worker out to prove that home-schooled kids are socially deprived. If you're in a hostile situation, get legal advice from HSLDA, *not* from a local lawyer who may be unfamiliar with home-education issues. Join your state home-school organization for support and good advice. Parents experienced in home schooling unanimously agree that you should not allow social workers or school officials to tour your home even if they show up at the door. Sometimes, one phone call from a neighbor who notices your kids in the backyard will trigger a social-services visit. Even in states where legal restrictions on home schoolers are relaxed, a home visit from a social worker can land you in a morass of legal problems. You're not legally required to let anyone into your home who doesn't have a search warrant. Furthermore, denying access won't prejudice any legal system against you.

But these situations are rare. In most cases, diplomacy and good record keeping will resolve any difficulties. Collect any favorable newspaper and magazine reports about home schooling, and use them for PR when you talk to your local officials. If you can, get to know your school-board members. And always ask for access as though you're requesting a privilege, not demanding a right.

RESOURCE

Home School Legal Defense Association P.O. Box 3000 Purcellville, VA 20134 540-338-5600 www.hslda.org

YELLING FOR HELP: TUTORS, ONLINE RESOURCES, Correspondence Schools, Cooperative classes, and Colleges and Universities

43.

MIL.

Two heads are better than one.

-Proverb

In the early grades, parents serve as the child's primary teacher. Any literate parent can master the basics of an academic subject well enough to teach it to an elementary or middle-school child.

Parents are accustomed to using private teachers for music, gymnastics, or any other subject that requires a high degree of accomplishment. Upperlevel academic subjects are no different. When your home-schooled student develops proficiency in a field of study, you may want to enlist help for further work.

"Outsourcing" is one of the secrets of success for high school at home. Tutors, online services, and correspondence courses all preserve the strengths of home schooling—flexibility, one-on-one attention, expertise above and beyond that permitted by a normal high-school curriculum while eliminating its one weakness—parental ignorance of the subject at hand. Cooperative and college classes give the student a chance to get used

647

to the classroom environment, while still following a home-based program. And the student also gets a needed break from working with Mom and Dad.

TUTORS

Throughout Parts I through III, we've mentioned the use of a private tutor for certain subjects. You can employ a tutor for one-on-one work in a subject you're not comfortable teaching or simply to give yourself (and the student) a change of pace. Jessie used tutors for high-school math, foreign language, art, and music. She suggests the following for finding tutors and for supervising the work:

- Local colleges are a good source of help. Don't advertise for a tutor. Instead, call the department of the subject you want tutored, and ask for student recommendations. Make sure that the person you speak to (the chairman of the department or the departmental secretary) knows the age of the student you want tutored. Accomplished scholars aren't always good teachers, and you want someone who's patient and comfortable with your child's skill level. Also, ask what the going rate for private tutoring is. Expect to pay an hourly rate of \$10.00 for a student to \$20.00 or more for a professor. Schedule sessions for once a week, and make sure the tutor gives the child assignments to complete before the next session.
- If you use a college student, make sure your tutor is the same sex as the child. This eliminates the embarrassment factor between child and tutor (especially as the child moves into adolescence).
- Supervise tutorials. Any time a child is in an intimate, one-on-one setting with an older person who has a measure of authority, the potential for abuse exists. Jessie always made sure that tutorials took place in a public setting (the university student center), and she stayed in sight (sitting on the side of the room and catching up on paperwork or reading while the tutorial took place). Don't leave a child at the tutor's house; wait in an adjoining room instead. This provides protection for the student as well as the tutor.
- Private schools are another good source for tutors. Private-school

teachers are often happy to supplement their income by tutoring home schoolers. Expect to pay a little more than you would for a college student.

- Junior- and senior-high-school students (recommended by their teachers) are quite capable of tutoring elementary and middle-grade students.
- If you're in an active home-school community, older home schoolers may also be willing to work with younger students. Our advice about supervision still applies.
- Continue to keep an eye on the child's work. You're still responsible for issuing a grade (for high-school students) or for proving to your local school superintendent that reasonable progress has been made in the subject being studied.

ONLINE RESOURCES

In recent years, the availability of online resources has exploded. Online tutorials should never take up the majority of the child's time—limit them to one or two subjects per semester, if possible. But online tutors can be invaluable for Latin, logic, rhetoric, or other subjects that you may have difficulty finding a local tutor for.

Currently, most online classical tutorials for secondary students are Christian-oriented (Christian home schoolers have been on the cutting edge of the classical-education movement). Escondido Tutorial Service (ETS), at www.gbt.org, is currently the most popular classical tutorial on the Web. Tutor Fritz Hinrichs offers demanding courses (100 pages of reading per week with E-mailed papers for one great-books tutorial). The tutorial meets for two hours weekly and includes online discussions with other enrolled students.

Schola Tutorials, at schola-tutorials.com, and Stadium Discere Tutorials, at www.palouse.net/proise, also offer tutorials in great books, rhetoric, Latin, and logic. Visit the sites for classes, schedules, tutor qualifications, and costs.

The Institute for Study of the Liberal Arts and Sciences (ISLAS) is located at www.islas.org/islasnew.htm. ISLAS is a cooperative project of Scholars' Online Academy (SOLA) and the Catholic school Regina Coeli Academy (RCA). It offers college-prep classes on a number of levels: Scholars' Online Academy and Regina Coeli Online Academy are taught on a high-school/adult level, while the Agnus Dei Junior Program and the Regina Coeli Junior Program are geared for ages ten through thirteen.

Explore the Web on your own, and you'll find any number of resources. Try these starting places:

- The Schola page has a link farm—www.schola-tutorials.com/ resource.htm. This will steer you toward all sorts of Internet resources for classical education, including many nonsectarian sites.
- Another useful resource page is www.ccsnet.org/links.htm, a list of education resources for classical students.
- A good general-reference classical site is the Perseus Project, designed by the Tufts University classics department: www.perseus.tufts.edu.
- The major Websites for home schoolers include the Homeschool World site, from the publishers of Practical Homeschooling, at www.home-school.com. This includes links to magazines, other homeschool Websites, publishers, and dozens of home-school vendors.
- Teaching Home Magazine maintains a Website at www.teleport.com/~tth.
 Visit this site for Christian-oriented home-school information.
- The most extensive home-school Website, which includes home schoolers of all persuasions, is Jon's Homeschool Resource Page at www.midnightbeach.com/hs. This has become *the* home-school resource page. If you want to join mailing lists, check out other Websites, and generally inform yourself, visit this page. (A large unschooling community is linked to this page. See Chapter 35 for our take on unschooling philosophy.)
- The parents of high-school students might enjoy Cafi Cohen's Homeschooling Teens page at www.concentric.net/~Ctcohen. Cohen's two home schoolers went on to college. Her site includes essays, reviews, and a home-school forum where you can chat with other parents who are home-schooling their teenagers.
- The Homeschool Web Ring is a connected map of home-school sites. Start at www.vv.cta.com/~snowling/hero/hero.htm, and click on the Web Ring logo to move from page to page. A Web Ring directory, pointing you toward sites on topics from education, literature, com-

puting, games, religion, and more, can be found at www.webring.org.

The best way to find online resources is to surf, using a good browser. If you're new to the Internet, we highly recommend *The Homeschool Guide to the Online World* by-Mark and Wendy Dinsmore, a good introduction to getting online, with over 150 sites listed. Like much homeschool material, this is Christian in orientation, but the information is useful for all home schoolers. If you're already online, visit www.metacrawler.com, a search engine that allows you to use all the major search engines at the same time.

We strongly feel that the computer should be a family tool. It's easy to access graphic pornography—even by accident—and online predators often target young users. Put the computer in a family area so that Web surfing is open to general view.

CORRESPONDENCE SCHOOLS

A number of universities and private schools offer correspondence courses in dozens of subjects. The advantage of correspondence is that your student gets a detailed outline, course information, step-by-step instruction, and an official grade. The disadvantage is that correspondence courses lock you into inflexible schedules and particular texts. The best way to decide whether you want to use correspondence courses is to call for a number of catalogs and examine each school's philosophy and offerings. A detailed listing is found in the Resources list at the end of this chapter.

COOPERATIVE CLASSES

In many areas, home-school groups have set up cooperative classes taught by parents with particular knowledge or skills. Parents of home schoolers include doctors, lawyers, aerospace engineers, diplomats, and university teachers, and these parents often organize cooperative classes in their areas of expertise. In larger cities, home schoolers have even set up "academies," where students can enroll for one, two, or three courses in exchange for a time donation from student and parent. Contact your local and state homeschool organizations, and ask what resources are already in place.

Even if you don't find a formal group, don't overlook the possibility of swapping with another home-school parent. If you were a math major in college but hated grammar, you can probably find a parent with a degree in English but few math skills and teach each other's children in your respective areas of expertise. This works best when the children are of similar age and ability. And if you can make this arrangement with another home-school family you trust, you can reduce the workload for both sets of parents since each of you will be faced with preparing one class rather than two.

COMMUNITY COLLEGES AND LOCAL Universities

Community colleges and university classes are usually open to home schoolers. Community colleges are the easiest to deal with. Just call the Office of the Registrar, and ask about enrolling your high-school student in one or two classes. Universities often offer a "concurrent" program, which allows high-school students to take a class or two per semester for highschool credit. The Registrar will be able to steer you toward the proper contact.

Do remember, though, that high-school students on a college campus are vulnerable—they're younger than the other students and more uncertain. Supervise attendance. You don't have to sit in on the class, but it's probably not a good idea to leave a high-school student on campus for hours alone. Also, try to make an appointment with the professor before classes start so that the student can meet the instructor face to face. This will reduce nervousness and give the instructor a chance to evaluate your student's readiness for college work.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711-723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Guide to the Internet

Dinsmore, Mark, and Wendy Dinsmore. *The Homeschool Guide to the Online World*. Elkton, Md.: Homeschool Press, 1996.

\$12.99. Order through any bookstore or online bookseller.

Correspondence Schools

For a listing of accredited correspondence schools, write the Distance Education and Training Council, 1601 Eighteenth Street, NW, Washington, DC 20009-2529, call 202-234-5100, or visit the council's home page at www.detc.org. We suggest you investigate the following schools; call or write for catalogs. All of them offer courses by correspondence in the K–12 area. Some also offer college-level work.

A Beka Video Home School P.O. Box 18000 Pensacola, FL 32523-9160 800-874-3592 Conservative Christian, K-12.

Brigham Young University Department of Independent Study 206 Harman Continuing Education Building Provo, UT 84602-1514 801-378-2868 coned.byu.edu/is

The Calvert School 105 Tuscany Road Baltimore, MD 21210 410-243-6030 www.calvertschool.org Traditional K-8 correspondence program.

Home Study International 12501 Old Columbia Pike Silver Spring, MD 20904-6600 800-782-4767

654 COMING HOME

301-680-6570 www.hsi.com Christian orientation.

Indiana University Division of Extended Studies Owen Hall 001 Bloomington, IN 47405-5201 800-334-1011 www.extend.indiana.edu Ask for their *Homeschooling* brochure.

Laurel Springs School P.O. Box 1440 Ojai, CA 93024 805-646-2473 www.laurelsprings.com

A well-respected private school, academically rigorous, with a full range of correspondence courses for K–12.

Seton Home School 1350 Progress Drive P.O. Box 396 Front Royal, VA 22630 540-636-9990 www.setonhome.org K-12 Catholic correspondence school.

University of Arkansas Division of Continuing Education Department of Independent Study #2 East Center Fayetteville, AK 72701 800-638-1217 501-757-3647 www.uacted.uark.edu

James E. Schiefelbein, Ed.D. Principal, Independent Study High School Department of Distance Education University of Nebraska—Lincoln P.O. Box 839800 Lincoln, NE 68501-9888 402-472-4321 www.unl.edu/conted/disted/ishs.html

University of Oklahoma Independent Study Department 1600 S. Jenkins, Room 101 Norman, OK 73072-6507 800-942-5702 www.occe.ou.edu

44

1//

GOING TO COLLEGE: Applications for home Schoolers

We favor well-prepared students wherever they attend school. —Stanford Admissions Office

The education we describe in Parts I through III is college-preparatory. College isn't for everyone, but a student who plans on a white-collar or intellectual job should go to college. The possession of a college degree has risen in importance over the last decades as the value of a high-school diploma has dropped.

According to the National Center for Home Education, 93 percent of colleges polled in a recent study were willing to accept course descriptions or portfolios instead of a high-school diploma.¹ Some universities will always look at nontraditional work with suspicion: a home-schooled friend who just got into Harvard tells us that Princeton remains uncooperative; and state universities will occasionally take an inflexible stand. But as the home-

¹Christopher J. Klicka, *Home Students Excel in College*, rev. ed. (Washington, D.C.: National Center for Home Education, 1998), p. 1.

schooling wave continues to swell, more and more colleges are growing accustomed to home-school applications.

Generally, we favor small private schools over large public universities. Although this isn't always financially feasible, we've noticed that home schoolers do better in a more intimate environment in their first two years away from home. Small schools are also more likely than large schools to extend a welcome to home schoolers, with their nontraditional preparation and nonstandardized transcripts. But more and more universities are admitting home schoolers—Stanford and Swarthmore, among many others, now have an admissions procedure geared specifically for home-educated students.

PLANNING FOR COLLEGE

Many parents and students don't think about a high-school program until eighth grade. But if college is a goal for your child, you should begin preparation for a college-track program in middle school (grades 5 and 6). Critical-thinking courses, research projects, elementary Latin, and modern foreign language—all of these are college-readiness courses. Ideally, the college-bound student will begin Algebra I no later than eighth grade in preparation for the SAT and ACT. The minimum math requirement for a college-prep program is Algebra I, completed in ninth grade, and a course in geometry, completed before the PSATs given in the fall of the eleventhgrade year (see Chapter 27 for a full explanation). Latin increases vocabulary scores and general reading and grammar skills. Since students who do well on the SATs have read widely for the previous ten years, the middlegrade student should develop the habit of reading, rather than constantly watching TV or playing computer games.

Although the program outlined in Part III should be more than adequate for any set of college admission requirements, you should still get a catalog from prospective colleges before ninth grade in order to find out their requirements and to make sure that your high-school program includes these courses.

Jessie suggests the following timetable for parents and students thinking of college:

Grades 5–6 Plan a math sequence that will finish up Algebra II and geometry by PSAT time. Also plan to complete the

658 COMING HOME

Vocabulary from Classical Roots series, the courses in logic, and at least two years of Latin before taking the PSAT. Start writing for college catalogs to find out what high-Grades 7-8 school requirements you must fulfill in grades 9-12. (See "Choosing a College," page 659.) Ask prospective colleges what form they prefer home-Grade 9 school admissions to take-a transcript, a portfolio, and so forth. That way, you can start to keep your high-school records in an orderly manner. If you're not sure, just keep good records so that you can be flexible when application time comes. Keep a transcript, even if your colleges don't require it. You never know when you might need one. Find out from a local public- or private-school guidance Grade 10 counselor when the PSAT will be given (in the fall of the eleventh-grade year) and how to preregister. You can take the PSAT any time from eighth grade on and as many times as you wish. But if you're interested in a National Merit scholarship, take it only once-in the eleventh-grade year. Start working daily through an SAT preparation

Grade 11 Register for the SAT, which will be taken in the fall of the twelfth-grade year. Continue working daily through the SAT preparation guide. Visit colleges, and zero in on choices. Call admissions offices; find out when they start taking applications for early decision and regular admissions, and how to apply for financial aid. Early applications produce better aid than last-minute submissions. Investigate taking classes for college credit. Some colleges allow students who take college courses during their senior year to apply these credits to the freshman year. Also, these classes prove that you're capable of doing college work.

guide as though you were taking an extra course.

Grade 12 Take the SATs. Complete the application forms for the colleges of your choice. Submit these forms and the financial-aid forms as soon as possible. If the college conducts interviews, practice role-play interviews. Use a guide to job interviews to check on basic skills (dress nicely, make eye contact, shake hands).

CHOOSING A COLLEGE

After sending her own children to college—and after years of counseling other home schoolers—Jessie strongly advises parents to exercise their judgment (and economic leverage) to steer high-school students away from making college decisions that might sabotage their mental, physical, social, or spiritual health. Your shy eleventh grader may think that he wants to live in a freshman dorm at a 20,000-student state university. But if you believe he should spend two years at a smaller school and then transfer, don't be afraid to state your opinion. One of the saddest statements we ever heard was from a mother who told Jessie, "I spent forty thousand dollars to ruin my daughter's life." She had let her daughter make all the choices about college, despite serious misgivings.

Over the last fifteen years, Jessie has observed that home-schooled students who flourish both academically and personally keep close ties with family, make dear and valuable friends, and adjust well to the demands of college. These students invariably attend small colleges that have a moral and religious climate similar to that found at home. Many large universities have big, unrestricted dormitories, where bedlam reigns and there is no check on adolescent behavior. Your student may be both mature and responsible. But if he's forced to live on a floor filled with noisy, immature students who stay up until 2:00 A.M. dropping firecrackers down the toilets or having all-night concerts in the hall (as in the freshman dorm that Susan's brother lived in), he probably won't flourish.

Don't let financial need scare you off. Private universities often have better financial-aid packages than large state universities. Small religious schools can dig up funds for worthy students from unexpected places. And the student who cannot complete a desired major at a small school can always transfer after the sophomore year. If you think this might be the way to go, call the college that the student is thinking of transferring to, and find out which courses will transfer.

Start the college search by talking to friends, relatives, and other home schoolers about college experiences, both positive and negative. Consult the most recent guides to colleges (see Resources at the end of the chapter) to narrow your search to the colleges with the academic specialties, geographic location, and campus climate that you're looking for.

Write to the National Center for Home Education, P.O. Box 3000, Purcellville, VA 20134, and ask for the following: the list of colleges that have accepted home schoolers (there were 698 on the most recent list, including Ivy League schools) and the brochure *Home Students Excel in College* by Christopher J. Klicka, which details various admissions procedures and lists colleges that actively recruit home schoolers.

For a full list of colleges that have accepted home-schooled students, along with links to college home pages, visit Karl Bunday's School Is Dead, Learn in Freedom site at www.novaproj.org/resources/Vanguard/Colleges. html. Since Bunday is generally anti-institutional, his site appears to encourage its audience not to go to college at all. But the list and links are invaluable.

THE APPLICATION PROCESS

Some college admissions officers aren't familiar with home schooling. Others actively recruit home-educated students because of their excellent past performance. So contact the admissions office of each prospective school. Some want transcripts; others ask for a listing of courses, projects, and books read; still others will examine a complete portfolio. Find out whether financial aid requires a diploma or GED (financial-aid forms and admissions applications generally go to two different offices). It's always good to take at least two subject tests in addition to the SAT, especially if the student tests well.

According to the College Board, a transcript isn't necessary for college admissions. Nevertheless, many of the college admissions officers we spoke to were overworked and didn't want to plow through portfolios. "Send us a standard transcript form," one admissions office told us. So take that transcript seriously. A good transcript plus standardized scores will serve as the foundation of your college application.

An application will give you room to describe your areas of interest, extracurricular activities, and any special research projects you've done. Maximize your application by using the lines set aside for interests, activities, and clubs to emphasize your language accomplishments and greatbooks studies. Make sure you describe the junior and senior thesis projects, which will set you apart from most high-school students. List all community-service projects—anything you've volunteered for that benefits others.

Many colleges have an "early decision" process where you agree to enroll in that college if you're accepted. You would then go ahead and finish your senior year of high school with an assured fall acceptance. If you're interested in early decision, make sure you ask about the deadline (it differs from the regular deadline).

If you're interested in college sports, call the Home School Legal Defense Association, and ask for the packet that assists home schoolers in validating their completion of all initial eligibility requirements for the National Collegiate Athletic Association.

THE PORTFOLIO

If the college agrees to look at a portfolio (and many do), this will be your most persuasive tool.

What should you include in your portfolio?

- 1. A narrative description of your high-school studies. This is the place to explain your great-books program.
- 2. A list of all significant books read (from about seventh grade on).
- 3. At least one writing sample.
- 4. A description of any academic contests and honors.
- 5. Descriptions of any apprenticeships, interesting work experiences, and internships.
- 6. A brief description of any special area of expertise.

6

ONE SUCCESSFUL APPLICATION

Home schooler Peggy Ahern's daughter was just admitted to an Ivy League college. As well as the standard application, admissions essay, and SAT scores (including four SAT II subject-area tests), Peggy and her daughter submitted a thirty-two-page portfolio with the following eight sections:

- 1. *School Philosophy* A one-page statement written by Peggy about why she taught her daughter at home, including her summary of their use of the trivium.
- 2. *Character Profile* A brief assessment written by Peggy, using comments from teachers, friends, relatives, and siblings.
- 3. Student Assessment of Home Schooling A one-page critique written by Peggy's daughter of her home-school experience, including both positives and negatives.
- 4. *Curriculum Description* A narrative description of each course done in high school, written by Peggy. According to Peggy, this turned out to be thirteen pages long—much longer than necessary for most home schoolers.
- 5. *Teacher Evaluations* Copies of evaluations given to Peggy by some of her daughter's other tutors.
- 6. *Sample Papers* Three papers written by Peggy's daughter. One is sufficient for most portfolios.
- 7. *Reading List* All the books read by Peggy's daughter since eighth grade.
- 8. *Music Achievement* Details of competitions, master classes, recitals, and a tape. You could use this section for any major achievement.

Although Peggy and her daughter were successful in their Ivy League applications, Peggy isn't sure that a portfolio of this length will continue to be read by admissions officers—particularly if home-school applications continue to rise. We suggest that you follow Peggy's pattern, but make each section as brief as possible. And always call first to make sure that a portfolio submission is acceptable and what length is preferred.

Peggy adds these words on college preparation:

I realized that outside substantiation of her work was going to be particularly helpful when it came time to put together that transcript, and that good teacher recommendations would be invaluable. So for all four years, I actively sought out teachers for at least one or two subjects each year. I never found any locally, but did find some through correspondence and then later on through the internet, all of whom developed enough of a relationship with her that they could have written recommendations. I think it is very wise for homeschoolers to actively seek out and cultivate relationships with a few teachers. Further, if possible, I would recommend seeking out college-level teachers and courses for the student, even if it is not-for-credit, for several reasons:

1) A teacher who can vouch for the student's ability to handle college level work and to contribute in a meaningful way to class discussion will go a long way toward allaying certain admissions concerns.

2) A teacher who has been a part of the collegiate community will hopefully have a good idea of what sort of issues are typically addressed in these recommendations, how they're written and so forth, and therefore will do an effective job of it.

By the end of her four years, my daughter had a number of choices as to from whom she would seek her two recommendations. She and I really strategized at this point. We knew that any of these teachers would highly recommend her. But several of them had stand-out writing skills as well as long-term experience in higher education, and we knew that their high recommendations would likely be far more effective than those of her other options. I think it is a fair conclusion that these two recommendations played a very major role in her acceptance.

A WORD ABOUT EARLY ADMISSIONS

Many home schoolers finish their high-school studies early. It's been our experience that students are better off spending the extra time before college by studying and reading while working at an internship, apprenticeship, or other meaningful job. Maturity can't be forced—students who go to college early are more likely to flounder socially, academically, or spiritually. There's no rush. So stay at home. Read, work, write, study, enjoy life. And go to college with everyone else your age. You'll be that much better prepared.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library;

where we know of a mail-order option, we have provided it. College guides are listed first, followed by guides to the application procedure itself.

College Guides

Barron's Profiles of American Colleges. 23d ed. Hauppauge, N.Y.: Barron's Educational Series, 1998.

Book and CD. Colleges organized by geography (Northeast, Southeast, and so forth).

The College Handbook. 36th ed. New York: College Board, 1999.

Includes admission policies, requirements, and deadlines; ACT and SAT test dates; enrollment figures and majors; campus life, including sports and student services; and much more. Updated annually.

Peterson's Competitive Colleges. 17th ed. Princeton, N.J.: Peterson's, 1998. This guide lists colleges that admit high achievers, based largely on SAT scores and grades.

Peterson's Guide to Four-Year Colleges. 29th ed. Princeton, N.J.: Peterson's, 1998.

Good, standard annual guide to colleges. Comes with CD-ROM so you can also search electronically.

Sorlorzano, Lucia. *Barron's Best Buys in College Education*. 5th ed. Hauppauge, N.Y.: Barron's Educational Series, 1998.

Guides to Application Procedures

Bennett, William J. Choosing the Right College: The Whole Truth about America's One Hundred Top Schools. Grand Rapids, Mich.: Eerdman's, 1998.

An "intellectual road map" to thinking through the college decision.

Cohen, Cafi. And What about College?: How Homeschooling Leads to Admissions to the Best Colleges and Universities. Cambridge, Mass.: Holt, 1997.

Downe, Robert P. The Better Book for Getting Hired: How to Write a Great Resume, Sell Yourself in the Interview, and Get That Job. Vancouver, B.C.: Self Counsel Press, 1993.

Power, Helen W., and Robert Diantonio. The Admissions Essay—How to Stop Worrying and Start Writing: Clear and Effective Guidelines on How to Write That Most Important College Entrance Essay. Secaucus, N.J.: Lyle Stuart, 1992.

45

1//

WORKING: APPRENTICESHIPS AND OTHER JOBS

Employment is nature's physician, and is essential to human happiness. —Galen

Because of their flexibility of schedule, home-educated students have more opportunity to work at meaningful jobs. They're not limited to the typical after-school and summer routine of fast-food and retail service.

We encourage you to think of high-school employment not as jobs, but as apprenticeships—preparation for a career. If financial pressures allow, it's always better for a student to take a low-paying or nonpaying apprenticeship or internship that gives her training and experience in important job skills than for her to make more money waiting tables. The classical approach to education emphasizes long-range goals over short-term satisfactions. The student who is so busy making money that she can't prepare for worthwhile work as an adult is substituting quick pleasure for long-term gain.

Of course, many students need to make money for college. But if you can involve your child in training and apprenticeship work early, you can improve the money-making skills she'll need for college summers. The student who takes an unpaid position at a computer firm, learning consulting, will make much more money in the summer after her freshman year than the student who works a paying refail job in high school.

Be creative when looking for job opportunities. Network with friends and relatives. Do you know a computer consultant, a newspaper editor, or an electrician? Ask whether your teen can do a six-week internship to learn about the business. When the internship is over, if the student has an interest, ask whether she can stay for three more months. If she becomes substantially more skilled and begins to contribute to the business, that's the time to broach the subject of pay.

Even before beginning this process, encourage your young teen to ask questions about the jobs that relatives and neighbors have. What do you like about your work? What do you dislike? What's the most important skill you have? What skills do you wish you had? How did you get this job? What preparation would I need to get it? What's your daily schedule like? These questions will help the thirteen or fourteen year old begin to think of her own interests and skills in terms of employment.

Also assign the fourteen or fifteen year old regular reading in the career and employment books written for young people. Ask your local librarian to guide you toward career books for the appropriate age. Reading through these books now, before work has become a pressing issue for the student, makes career planning a fun exercise in thinking through possibilities.

For older teens, look for series such as Careers in Focus and Career Opportunities. Most teens don't have any idea of the variety of jobs that are available. The classic job-hunter's manual *What Color Is Your Parachute? A Practical Manual for Job Hunters and Career Changers,* by Richard Bolles, has sections on developing interests, looking for specific jobs, interviews, and more. Your library will also have the most recent guides to internships for junior- and senior-high-school students.

Every high-school student should also spend some time reading through newspaper and magazine want ads. These provide a valuable look at the sorts of job that are available and the qualifications needed to land them.

A crucial part of skill development is learning to do home chores responsibly. Prepare your student for successful internships and apprenticeships by assigning regular work at home and allowing her to work for neighbors and friends as soon as you feel that she's mature enough to do a good job. Volunteer work is also important. It develops skills and experience, and often opens the door to paid jobs later on.

If your high-school senior has no particular interest in a field of study and no burning career plans, don't push her straight into college. Let her take a year or two off to work. College will still be there when she's ready to go. And she may discover, through an apprenticeship or internship, a career that doesn't require a college degree.

RESOURCES

For publisher and catalog addresses, telephone numbers, and other information, see Sources (pages 711–723). Most books can be obtained from any bookstore or library; where we know of a mail-order option, we have provided it.

Bolles, Richard. What Color Is Your Parachute? A Practical Manual for Job Hunters and Career Changers. Rev. ed. Berkeley, Calif.: 1998.

Directed at adults and older teens.

Career Opportunities series. New York: Facts on File. Each book describes a number of career paths open to students who have particular skills.

Careers in Focus series. Chicago, Ill.: Ferguson Publishing, 1998. A whole range of books, each describing the aspects of a single career.

Field, Shelly. One Hundred Best Careers for the Twenty-first Century. New York: Arco, 1996.

Jobs in growth industries.

Oakes, Elizabeth H., ed. Career Exploration on the Internet: A Student's Guide to More Than Three Hundred Web Sites! Chicago, Ill.: Ferguson, 1998.

Wood, Heather. One Hundred One Marvelous Money-Making Ideas for Kids. New York: Tor, 1995.

How to create a business, advertise, manage, invest, and more, all written on a young-adult level. Start your middle schooler on this book.

MORE STUFF: THE ANNOTATED Catalog list

46

Of the making of many books, there is no end. —Ecclesiastes

When you start to home-educate, you'll order a book or two. You'll get a catalog, and then another, and then another. Soon you'll have a stack of resource catalogs for home schoolers as high as your table. Go to a state home-education conference, and you'll find yourself surrounded by books, materials, aids, curricula, learning guides, posters, software, supplies, and so forth.

In this chapter, we've listed some of our favorite catalogs and resources. If you're thinking about home schooling, start by calling and asking for all these catalogs. You'll be surprised to find how wide your options are.

Enjoy exploring these catalogs. Use them as guides to books you might want to check out of your local library (yes, we know that's not what they're meant for, but who can afford all those books?). Order what will suit your family and your budget, and make the learning-at-home experience as rich as possible.

GENERAL

American Home-School Publishing, 5310 Affinity Court, Centreville, VA 20120; 800-684-2121.

A wonderful catalog with great history, Latin, Greek, and reading resources.

Aristoplay, 450 South Wagner Road, Ann Arbor, MI 48103; call 888-GR-8-GAME; fax 734-995-4611; E-mail info@ aristoplay.com; or visit the online store at www.aristoplay.com.

Fascinating games in history, science, math, and literature for all ages.

Dorling Kindersley Family Learning, DK Publishing, Inc., 95 Madison Avenue, New York, NY 10016; call 212-213-4800; fax 212-213-5240—mark faxes "General Inquiries."

Visit the online store at www.dkonline.com. You can also call their head office and ask for the name of a local representative, who will then send you a catalog.

The Education Connection, Jason and Lori Schall, P.O. Box 1417, Tehachapi, CA 93581, 805-823-8022.

A selective catalog of very useful resources in all areas, grades K-8.

Rainbow Resource Center, 8227 Ulah Road, Cambridge, IL 61283; 309-937-3385 or 888-841-3456.

A home business that hit the big time. The catalog has everything you need—books, resources, games, and more—with a huge art section. All the selections are described in detail by home schoolers, and all books are discounted. A must-have.

ELEMENTARY GRADES

Gryphon House, Inc., P.O. Box 207, Beltsville, MD 20704-0207; 800-638-0928; www.ghbooks.com.

A small catalog full of hands-on, exploration-based science, art, and more. For parents and young children.

HISTORY

Greenleaf Press Catalog, Rob and Cyndy Shearer, 3761 Highway 109N, Unit D, Lebanon, TN 37087; 615-449-1617 or 800-311-1508; www.greenleafpress.com.

A must-have for the classical educator; the best history resources around. Some Christian books, many standards and nonsectarian works, and fantastic history-project stuff—models, coloring books, and more.

CLASSICS, LATIN, LOGIC

Canon Press and Book Service, P.O. Box 8741, Moscow, ID 83843; 800-488-2034 or 208-883-8932; www.canonpress.org.

A small press that publishes Latin and logic texts along with reflections on classical education, church history, social commentary, and Reformed theology.

Critical Thinking Books and Software, P.O. Box 448, Pacific Grove, CA 93950-0448; 800-458-4849; www.criticalthinking.com.

Not only logic puzzles, but critical-thinking workbooks for every area of the curriculum. We particularly like the history-based workbooks (the science and math ones are okay, but not all that important).

SHAKESPEARE

The Writing Company, Shakespeare catalog, 10200 Jefferson Boulevard, Room K4, P.O. Box 802, Culver City, VA 90232-0802; 800-421-4246 or 310-839-2249; http://www.writingco.com/shakespeare.

Contains movies, the Oxford series we recommend for student use,

Advanced Placement course materials, background information, everything you'll need. A necessity for middle and upper grades.

LANGUAGE: READING, WRITING, Grammar, and so forth

A Beka Book Home School Catalog, P.O. Box 19100, Pensacola, FL 32523-9100; 800-874-2352.

A Christian textbook supplier with the best grammar program around. Also offers home schoolers a video-program string ensemble, designed to be followed by a group of players.

Blackstone Audio Books Catalog, P.O. Box 969, Ashland, OR 97520; 800-729-2665.

Has every unabridged book-on-tape you'll ever need plus a rental program. An invaluable language development tool. Everything from Homer to *Primary Colors*.

Educators Publishing Service, 31 Smith Place, Cambridge, MA 02138-1089; 800-225-5750; www.epsbooks.com.

Emphasizes reading, spelling, college-entrance skills, typing, and specialeducation skills. Ask for the K–12 catalog.

Greathall Productions, P.O. Box 813, Benicia, CA 94510; 800-477-6234. Sells story tapes from Jim Weiss, the award-winning storyteller of classic tales.

Modern Curriculum Press, Customer Service, 4350 Equity Drive, Columbus, OH 43228; 800-321-3106.

Now a division of Simon & Schuster, MCP publishes good systematic programs for phonics, spelling, and other language skills. Ask for their phonics catalog, which includes the *Spelling Workout* series.

Perfection Learning Corporation Books Catalog, Covercraft & Paperback, PreK–8; 1000 North Second Avenue, P.O. Box 500, Logan, IA 51546-1099; 800-831-4190.

Hundreds of affordable literature titles for kids. A must-have for building a home library. Zaner-Bloser PreK-8 Catalog, 220 West Fifth Avenue, P.O. Box 16764, Columbus, OH 43216-6764; 800-421-3018.

Essential for handwriting and penmanship. Also a middle-grade grammar program.

SCIEŃCE

Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215; 800-227-1150 or 800-334-5551; www.carolina.com.

An overwhelming 1,200-page catalog of supplies for biology, physics, chemistry, mathematics, earth science, and space science for K–12. You can get every possible dissection specimen, already dead and pickled in formaldehyde. Some chemicals and resources are sold only in class-sized lots; buy those from Science Supplies (see below). The catalog is \$17.00 but comes with a \$17.00 coupon for your first order. A smaller K–6 catalog is free and contains 134 pages of activities, materials, kits, models, projects, and equipment for all branches of elementary science.

Cuisenaire: Materials for Learning Math and Science, P.O. Box 5026, White Plains, NY 10602-5026; 800-237-0338; www.cuisenaire.com.

Hands-on resources for grades K–9. Science kits and manipulatives from a well-respected company; good for earth science, physics, and life science.

Delta Education Hands-On Science, P.O. Box 3000, Nashau, NH 03061-3000; 800-442-5444.

Good physics and astronomy projects, labs, and experiment kits for elementary and middle school. Classroom-oriented so some of the equipment is expensive.

The Let's Get Growing! Company Catalog, 1900 Commercial Way, Santa Cruz, CA 95065; 800-408-1868; www.letsgetgrowing.com.

Hands-on stuff for studying bugs, worms, ponds, frogs, gardens, the earth, and more; labs, books, kits, and overall fun resources. You could do biology and earth science straight from this catalog.

Nature's Workshop Plus, P.O. Box 220, Pittsboro, IN 46167-0220; 888-393-5663.

Nature, weather, and earth books, projects, gardening stuff, beginning readers, and experiment equipment.

Pitsco and Lego Dacta catalog, Box 1707, Pittsburg, KS 66762; 800-362-4308.

A necessary catalog full of physics and engineering materials, K–12. We really like the Lego machine sets.

Science Supplies for Science Projects, 267 Hickerson Street, Cedar Hill, TX 75104; 972-291-3345; fax 800-742-7805; www.scienceprojects.net.

This is where you get the chemicals, biology specimens, slides, and lab equipment you need.

Tobin's Lab, P.O. Box 6503, Glendale, AZ 85312-6503; 800-522-4776; www.tobinlab.com.

The best astronomy and rocket-construction resource around. Also good biology projects, lots of books, posters, and kits.

MATHEMATICS

Activity Resources Catalog, P.O. Box 4875, Hayward, CA 94541; 510-782-1300; www.activityresources.com.

All manipulatives, math aids, and games for K–8; heavier on visual aids than hands-on.

Delta Education Hands-On Math, P.O. Box 3000, Nashau, NH 03061-3000; 800-442-5444.

The best math manipulatives around, including the ones you'll want for primary Saxon math.

Saxon Publishers Home Study Catalog, 2450 John Saxon Boulevard, Norman, OK 73071; 800-284-7019; www.saxonpub.com.

Complete math courses for K–12; the best for home schoolers.

USED-CURRICULA AND -BOOK Vendors

The Back Pack, P.O. Box 125, Ernul, NC 28527; 919-244-0728; www.coastal net.com/thebackpack.

Ask for the Trivium Edition of their catalog, which has many of the resources we suggest, discounted because they're used books. A good way to save money and still build your home library.

Home Education Helper, Box 53, Aetna, AB TOK 1YO, Canada; 403-653-3363 or 888-322-3363; www.homeedu.com.

An unusual service. Karen and Geórge Torbiak sell used curricula and books; if you can't find a resource, they'll track it down.

-

47

1//

THE FINAL WORD: STARTING IN THE MIDDLE

Finally, what if you're starting to home-educate a third grader or fifth grader or tenth grader? Generally speaking, it's better to go quickly through foundational materials (such as basic grammar, pre-algebra, or beginning logic) than to start using material that will frustrate a student. The following are some general guidelines to help you find your child's place in the classical curriculum. Check the Resources section of the appropriate chapters for information on the teaching/learning apparatuses mentioned here.

Reading

If a student is having difficulty reading, *start at the beginning*. Use the *Phonics Pathways* or another beginning primer to review basic phonetic reading. When it comes to reading, many children stumble because they've never been taught the principles of phonics. As a matter of

fact, phonics is often used remedially even by those school systems that take a whole-language approach in the classroom. Jessie has done beginning phonics with eighth graders; the earlier pages are easy and build confidence, while the later pages improve both reading and spelling skills. After finishing phonics, the student should continue with Spelling Workout B or C. Any student who begins spelling in fourth grade or sooner should start with Spelling Workout B. Fifth or sixth graders can begin with Spelling Workout C. Seventh graders and older can go straight into Spelling Workout D and continue from there.

Most grammar programs can be begun on grade level; the texts we recommend all start with a detailed review of material that should have been learned in previous years. If, however, you are beginning A Beka grammar with an older student, always begin with Grammar and Composition III, which is the most comprehensive of all the books. An eleventh grader who begins with III and then does IV in the twelfth-grade year will have covered all necessary grammar; the two final years of the program are largely review and reinforcement. An older student who begins the Writing Strands program should start with book 4. This will be easy, but he can progress quickly to the more difficult material. Book 4 teaches basic paragraph construction skills, which the program then builds upon. Always start with the first of the Vocabulary from Classical

Roots series, no matter how old the student is.

If you know your child's grade level, the chapters on mathematics should give you the information you need to select a text. If you're not sure what level your child is working on, Saxon offers a diagnostic test. It's bound into the middle of Saxon's home-study catalog (see the Resources lists for ordering information).

Always begin the Canon Press logic program with the first book. With an older student (grade 10 or above),

-

Spelling

Grammar

Writing

Vocabulary

Math

Logic

you can skip Critical Thinking Press's warm-up books and go straight to Wilson's *Introductory Logic* (Canon Press).

- Languages Unless a student has a particular interest in a modern language, we always recommend doing at least a year of Latin as the first foreign language. It greatly simplifies the learning of other languages.
- History Always begin history at the beginning—with the Ancients—no matter what grade your student is in. Use whichever resources are age-appropriate, and continue through the four-year cycle.
- Science Although the science sequence we suggest (biology, earth science/astronomy, chemistry, physics) meshes nicely with the four-year history cycle, it isn't vital that you follow this order. You can choose whichever science fits into your curriculum.
- Great booksAs with history, the great-books curriculum should
always be followed from the Ancients up to the present.If you're beginning the program after ninth grade,
simply trim the reading lists so that you read fewer
books, but keep them in chronological order.
- Research paper Do not begin a research paper with a student who isn't ready. Before doing the research paper, the student should complete at least a year of systematic grammar and short writing assignments; he should also be comfortable with the outlining process. It's fine to wait until eleventh (or even twelfth) grade for the research paper, if you have catch-up work to do.

What if you're home-schooling two children or more? We suggest that you keep each child doing individual, grade-level work in mathematics, grammar, writing, spelling, and vocabulary. The content areas—history, science, reading—can be done simultaneously with children of different ages. If you have a fifth grader and an eighth grader, don't drive yourself insane by doing ancient history, ancient readings, modern history, modern readings, biology, and physics. Synchronize their schedules so that both students are doing ancient history, ancient readings, and biology. You'll still have to get two sets of books, each differing in complexity and reading level, but at least you'll be covering the same basic material with each child. The same is true of a first grader and a third grader, or a seventh grader and a ninth grader. Require more writing, a higher level of difficulty in reading and experimentation, and more complex outlines from the older student. If one student goes through the four-year history cycle two and a quarter times, while the other goes through it three times, it will affect neither their academic achievement nor the quality of their lives.

HEL AN HOURS OF

a price a contrarial from the sector controls. 1.46 sectors out of the interface grants and (1.56 sectors of the collimation into back the r 1.56 sectors and the collimation of the control of the 1.50 sector them the collimation of the control of the collimation of the colli

W. P. W. W. S. Marth

Vernolli Hor Ma Cjori

TRACT ALL DESCRIPTION

and and share an end of the subscription of the subscription of the state of the subscription of the subsc

F. Sec. Sec.
APPENDICES

. . .



APPENDIX 1

11/1

TAKING AN ORAL HISTORY

This is a simplified version of the "Oral History Interview Outline" developed by Judith Ledbetter for the Charles City County Historical Society. Thanks to them for their help.

- 1. Record the name of the interviewer, the date, the time, and the place of the interview.
- 2. Record the name, and the general description of the interview subject.
- 3. When and where were you born?
 - a. Names of parents, parents' occupations.
 - b. Siblings?
 - c. Birth assisted by doctor or midwife?
- 4. What are your earliest memories about food and meals?
- 5. What do you remember about school?

- a. Transportation to school.
- b. School buildings.
- c. Subjects taught.
- d. Teachers.
- e. Discipline, sports, extracurricular activities.
- 6. How did you spend time outside of school? What kinds of games did you play? What chores did you do?
- 7. Were you sick in childhood? What illnesses did you have? Who was your doctor, and what was he like?
- 8. How did you travel (foot, horse, wagon, auto, bus, train, airplane)?
- 9. Tell me about holidays when you were small—birthdays, Christmas, Thanksgiving. Did your family have any special days?
- 10. What religion did your family observe? How did you observe it?
- 11. Do you remember going fishing/hunting, farming, gardening, or getting food in other ways?
- 12. What stores were near you? What were post offices like? How about banks? Where did people go for entertainment?
- 13. What stories do you remember your parents, grandparents, or other elderly persons telling?
 - a. Slavery, Civil War, Reconstruction.
 - b. Bootleggers, stills, illegal activities, Prohibition.
 - c. Woman's suffrage.
 - d. World War I.
 - e. The flu epidemic of 1917–1918.
 - f. Ghosts.
 - g. Sensational crimes (lynchings, murders, fires, etc.).
 - h. Racial relations-white/black, white/Indian, black/Indian, etc.
- 14. What do you remember about the Great Depression?
- 15. What do you remember about segregation in schools and other public places? How about other kinds of discrimination?
- 16. Do you remember when electricity/telephone service first came to your house?
- 17. What do you remember about World War II?
 - a. Service in the armed forces.
 - b. Friends or relatives who lost lives.
 - c. Rationing.
 - d. Precautions.

- e. News stories about the war.
- f. Letters to and from home.
- 18. When did you get married? What was your courtship like? How was it different from modern traditions?
- 19. When were your children born? Where? Were they born in a hospital or at home?
- 20. What do you remember about the Korean conflict? Were you affected by it?
- 21. What do you remember about the Civil Rights movement?
 - a. Brown v. Board of Education.
 - b. Passage of the Voting Rights Act.
 - c. Passage of the Fair Housing Act.

6

- d. The death of Martin Luther King, Jr.
- 22. What do you remember about the assassination of President Kennedy?
- 23. What do you remember about the Vietnam War? Did it have an effect on your hometown?
- 24. Could you describe the jobs you've held during your lifetime—your responsibilities, skills, the working conditions, the pay and benefits?
- 25. How has life changed the most since you were a child?

e inter son " Franklik an engened a de la de le le de le constant de la de le le constant de la de le le constant de le const

All and a second second

APPENDIX 2

HOME-EDUCATION ORGANIZATIONS

UNITED STATES: STATE ORGANIZATIONS

Many of these are Christian in orientation. Where possible we have also listed nonsectarian state organizations, but not every state has one. (They also tend to be much smaller.) Although we have tried to keep this list up to date, phone numbers change and groups disband. For a continually updated list, visit the Home Education Magazine Website at www.home-edmagazine.com. (See page 704 for Puerto Rico.)

Alabama

Alabama Home Education Network _ 256-534-6401

Christian Home Education Fellowship of Alabama 334-645-5003

Alaska

Alaska Private and Home Educators Association Box 141764 Anchorage, AK 99514

Homeschoolers Unlimited 7390 #B J Street Elmendorf AFB, AK 99506

Arizona

Arizona Families for Home Education Box 4661 Scottsdale, AZ 85261 602-443-0612

Phoenix Learning Alternative Network 602-234-5722

Arkansas

Arkansas Christian Home Education Association Box 4025 North Little Rock, AR 72190

Coalition of Arkansas Parents (CAP) P.O. Box 192455 Little Rock, AR 72219

California

California Homeschool Network P.O. Box 44 Vineburg, CA 95487 800-327-5339 www.comenius.org/chnpage.htm

Home-Education Organizations 689

Christian Home Educators Association of California Box 2009 Norwalk, CA 90651 800-564-2432

Colorado

Christian Home Educators of Colorado 3739 East Fourth Avenue Denver, CO 80206 303-388-1888

Colorado Home Educators' Association (CHEA) c/o MacLeod, 33042 South Laredo Circle Aurora, CO 80013 303-441-9938

Colorado Home Schooling Network (CHSN) 1247 Harrison Street Denver, CO 80206 303-369-9541

Connecticut

Connecticut's Citizens to Uphold the Right to Educate (CURE) 203-355-4724 or 354-3590

The Education Association of Christian Homeschoolers 25 Field Stone Run Farmington, CT 06032 800-205-7844; out of state: 860-231-2930 E-mail: teach.info@pobox.com

Delaware

Delaware Home Education Association Suite 172, 1712 Marsh Road Wilmington, DE 19810 302-475-0574

690 Home-Education Organizations

Tri-State Homeschool Network 302-234-0516

Florida

Florida at Home 4644 Adanson Orlando, FL 32804

Georgia

Georgia Home Education Association 245 Buckeye Lane Fayetteville, GA 30214 770-461-3657

Hawaii

Christian Homeschoolers of Hawaii 91-824 Oama Street Ewa Beach, HI 96706 808-689-6398

Hawaii Homeschool Association P.O. Box 3476 Mililani, HI 76789

Idaho

Pocatello Regional Christian Home Educators 13191 North Smith Road Chubbuck, ID 83202 208-238-0850

Illinois

Illinois Christian Home Educators Box 261 Zion, IL 60099 847-670-7150

Indiana

Indiana Association of Home Educators 850 North Madison Avenue Greenwood, IN 46142 317-859-1202

Iowa

Network of Iowa Christian Home Educators Box 158 Dexter, IA 50070 800-723-0438; out of state: 515-830-1614

Kansas

Christian Home Educators Confederation of Kansas Box 3564 Shawnee Mission, KS 66203 316-945-0810

Kentucky

Christian Home Educators of Kentucky 691 Howardstown Road Hodgenville, KY 42748 502-358-9270

Kentucky Home Education Association P.O. Box 81 Winchester, KY 40392

Louisiana

Christian Home Educators Fellowship of Louisiana Box 74292 Baton Rouge, LA 70874

Maine

Homeschoolers of Maine HC 62, Box 24 Hope, ME 04847 207-763-4251

Maryland

Maryland Association of Christian Home Educators Box 247 Point of Rocks, MD 21777 301-607-4284

Maryland Home Education Association 410-730-0073

Massachusetts

Massachusetts Homeschool Organization of Parent Educators 5 Atwood Road Cherry Valley, MA 01611

Michigan

Information Network for Christian Homes 4934 Cannonsburg Road Belmont, MI 49306 616-874-5656

Minnesota

Minnesota Association of Christian Home Educators Box 32308 Fridley, MN 55432 612-717-9070

Mississippi

Home Educators of Central Mississippi 535 Luling Street Pearl, MS 39208 Mississippi Home Educators Association Box 945 Brookhaven, MS 39601 601-833-9110

Missouri

LEARN, Kansas City 913-383-7888

Missouri Association of Teaching Christian Homes 307 East Ash Street, #146 Columbia, MO 65201 573-443-8217

Montana

Montana Coalition of Home Educators Box 43 Gallatin Gateway, MT 59730 406-587-6163

Nebraska

LEARN, Lincoln 402-488-7741

Nebraska Christian Home Educators Association Box 57041 Lincoln, NE 68505 402-423-4297

Nevada

Home Schools United, Vegas Valley 702-870-9566

Northern Nevada Home Schools Box 21323 Reno, NV 89515 702-852-6647

New Hampshire

Christian Home Educators of New Hampshire Box 961 Manchester, NH 03105 603-569-2343

New Hampshire Homeschool Coalition 603-539-7233

New Jersey

Education Network of Christian Home Schoolers of New Jersey Box 308 Atlantic Highlands, NJ 07716-0308 732-291-7800

New Mexico

Christian Association of Parent Educators of New Mexico Box 25046 Albuquerque, NM 87125 505-898-8548

New York

New York City Home Educators Alliance 212-505-9884

New York State Loving Education at Home Box 88 Cato, NY 13033 716-346-0939

North Carolina

North Carolinians for Home Education 419 North Boylan Avenue Raleigh, NC 27603 919-834-6243

North Dakota

North Dakota Home School Association Box 7400 Bismarck, ND 58507 701-223-4080

Ohio

Christian Home Educators of Ohio 430 North Court Street Circleville, OH 43113 740-474-3177

Ohio Home Educators' Network www.speedynet.net/~haas/ohen

Oklahoma

Christian Home Educators Fellowship of Oklahoma Box 471363 Tulsa, OK 74147 918-583-7323

Home Educators Resource Organization of Oklahoma 918-396-0108

Oregon

Jewish Home Education Network 503-362-1203

Oregon Christian Home Education Association Network 2515 NE 37th Portland, OR 97212 503-288-1285 oceanet@teleport.com

696 Home-Education Organizations

Pennsylvania

Christian Home School Association of Pennsylvania Box 3603 York, PA 17402 717-661-2428

Rhode Island

Rhode Island Guild of Home Teachers Box 11 Hope, RI 02831 401-821-7700

South Carolina

South Carolina Association of Independent Home Schools Box 2104 Irmo, SC 29063 803-551-1003

The South Carolina Home School Alliance 1679 Memorial Park Road, STE 179 Lancaster, SC 29720

South Dakota

Western Dakota Christian Home Schools Box 528 Black Hawk, SD 57718 605-923-1893

Tennessee

Tennessee Home Education Association 3677 Richbriar Court Nashville, TN 37211 615-834-3529

Texas

Home-Oriented Private Education for Texas Box 59876 Dallas, TX 75229 214-358-2221

Utah

Utah Christian Home Schoolers Box 3942 Salt Lake City, UT 84110 801-296-7198

Utah Home Education Association P.O. Box 570218 Sigurd, UT 84657

Vermont

Christian Home Educators of Vermont 214 North Prospect #105 Burlington, VT 05401 802-658-4561

Vermont Homeschoolers Association 802-453-5460

Virginia

Home Educators Association of Virginia Box 6745 Richmond, VA 23230 804-288-1608

The Virginia Home Education Association P.O. Box 5131 Charlottesville, VA 22905 540-832-3578 poe.acc.virginia.edu/ 25pm6f/vhea.html

Washington

Washington Association of Teaching Christian Homes North 2904 Dora Road Spokane, WA 99212 509-922-4811

West Virginia

Christian Home Educators of West Virginia Box 8770 South Charleston, WV 25303 304-776-4664

West Virginia Home Educators Association 800-736-9843

Wisconsin

Wisconsin Christian Home Educators Association 2307 Carmel Avenue Racine, WI 53405 414-637-5127

Wisconsin Parents Association P.O. Box 2502 Madison, WI 53701

Wyoming

Homeschoolers of Wyoming Box 907 Evansville, WY 82636 307-237-4383

UNITED STATES: NATIONAL ORGANIZATIONS

American Homeschool Association P.O. Box 3142 Palmer, AK 99645 800-236-3278 www.home-ed-press.com/AHA/aha.html

Home Educators Computer 'Users Group 26824 Howard Chapel Drive Damascus, MD 20872-1247 301-253-5467

Home School Legal Defense Association P.O. Box 3000 Purcellville, VA 20134 540-338-5600 www.hslda.org

NATHHAN National Handicapped Homeschoolers Association 5383 Alpine Road SE Olalla, WA 98359 206-857-4257

National Home Education Research Institute Attn.: Brian D. Ray, Ph.D., President P.O. Box 13939 Salem, OR 97309 503-364-1490; fax: 503-364-2827 or Mr. William A. Lloyd National Home Education Research Institute 12221 Van Brady Road Upper Marlboro, MD 20772-7924 301-372-2889

National Homeschool Association P.O. Box 290 Hartland, MI 48353-0290 513-772-9580 www.n-h-a.org

700 Home-Education Organizations

Native American Homeschool Association Saving Our Culture for Our Children through Our Children Misty Dawn Thomas, Chairwoman The Ani-Stohini/Unami Nation P.O. Box 979 Fries, VA 24330 expage.com/page/nahomeschool2

Network of Black Homeschoolers 9709 Virginia Centerway Place #103 Glen Allen, VA 23060 804-515-1980 E-mail: gwnbhl@aol.com

Simon of Cyrene Association (African-American Homeschoolers of Christian Faith) P.O. Box 26357 Rochester, NY 14626

CANADA: PROVINCIAL ORGANIZATIONS

Alberta

Alberta Home Education Association Box 3451 Leduc, AB T9E 6M2 403-320-0924

British Columbia

Christian Home Educators of Kamloops 391 Puett Ranch Road Kamloops, BC V2C 1M9 250-578-7707

Victoria Home Learning Network #106-290 Regina Avenue Victoria, BC V8Z 6S6

Manitoba

Manitoba Association of Christian Home Schools Box 283 Saint Vital Postal Station, MB R2M 5C8 204-376-5423

New Brunswick

Home Educators of New Brunswick 9 Garrison Drive Renforth, NB E2H 2V1 506-847-4663

Ontario

Ontario Christian Home Educators Connection 35 Kings Street Branchton, ON N0B 1L0 519-653-1684

Toronto Christian Homeschool Association 1403-2550 Kingston Road Scarborough, ON M1M 1L7 www.netcom.ca/ vcolling/torch.html

Saskatchewan

Saskatchewan Home-Based Educators 311 Bentham Crescent Saskatoon, SK S7N 3V5 306-249-1338

CANADA: NATIONAL ORGANIZATIONS

Homeschoolers of Colour Connection 2850 Lakeshore Boulevard #80068, Etobicoke, ON M8V 4A1 www.sympatico.ca/cher 702 Home-Education Organizations

Home School Legal Defense Association of Canada #203-1601 Dunmore Road S.E. Medicine Hat, AB T1A-1Z8 403-528-2704

INTERNATIONAL ORGANIZATIONS

Australia Homeschoolers Australia P.O. Box 346 Seven Hills, NSW 2147 02-629-3727; fax: 02-629-3278

England Education Otherwise P.O. Box 7420 London N9 9SG www.education-otherwise.org

Home Education Advisory Service P.O. Box 98 Welwyn Garden City, Herts. AL8 6AN ourworld.compuserve.com/homepages/home_ed_advisory_srv

Home Service 48 Heaton Moor Road Heaton Moor Stockport, SK4 4NX 011-44-161-4323782

Learning in a Family Environment PSC 37 Box 1215 APO AE 09459, England 01638-533516

Germany

HEART (Home Educators Are Real Teachers) for Germany Stuttgart Area Homeschoolers HQ USEUCOM Unit 30400, Box 1584 APO AE 09128 A European community of American home educators.

Japan

Kanto Plain Home Schoolers PSC 473 Box 184 FPO AP 96349-5555

Korea

Cornerstone Home Educators P.O. Box 24, Sachon City Kyungnam Province, 660-360 Republic of Korea 82-591-758-5201

Mexico

Vida Nueva Ministries Manuel Gomez De Castro 109 Burócratas Del Estado 64380 Monterrey N.L. México 83-71-5591

New Zealand

Christian Home Schoolers of New Zealand 4 Tawa Street Palmerston North 5301 011-64-6-357-4399 Learning as Families 35A Primrose Street Hamilton, New Zealand 07-847-8248

Puerto Rico

Christian Home Educators of the Caribbean Box 7888 Suite 87 Guaynabo 00970 787-740-6227

APPENDIX 3

. .

(

NATIONAL ŠCIENCE Competitions

FOR ELEMENTARY STUDENTS

Invent America! Contest United States Patent Model Foundation 1505 Powhatan Street Alexandria, VA 22314 703-684-1836 Open to grades K–8 Contest: April 1 Submit any creative inventions.

Science Olympiad 5955 Little Pine Lane

4

706 National Science Competitions

Rochester, MI 48306 810-651-4013 First division open to grades 3–6 Competition: May Solve problems in biology, earth science, chemistry, physics, computers, and technology; in teams or individually.

United States Model Rocket Championships National Association of Rocketry 182 Madison Drive Elizabeth, PA 15037 Division for ages up to 14 Competition: August Build, show, and launch model rockets in competition.

Young America Horticulture Contests National Junior Horticultural Association 411 Pine Street Freemond, MI 49412-1737 Divisions for ages 8 and under; also 9–11 Competition: October 15 Contests in gardening, environmental beautification, plant propagation, and experimental horticulture.

FOR MIDDLE-GRADE STUDENTS

Invent America! Contest United States Patent Model Foundation 1505 Powhatan Street Alexandria, VA 22314 703-684-1836 Open to grades K–8 Contest: April 1 Submit any creative inventions. National Student Zinc Essay Contest American Zinc Association Conni Kunzler 1112 Sixteenth Street, N.W. Suite 240 Washington, DC 20036 202-835-0164 Open to grades 7–12 Deadline: March 31 National essay contest on the importance of zinc in society and daily life.

Science Olympiad
5955 Little Pine Lane
Rochester, MI 48306
810-651-4013
First division open to grades 3–6; second division open to grades 6–9
Competition: May
Solve problems in biology, earth science, chemistry, physics, computers, and technology; in teams or individually.

United States Model Rocket Championships National Association of Rocketry 182 Madison Drive Elizabeth, PA 15037 Division for ages up to 14 Competition: August Build, show, and launch model rockets in competition.

Young America Horticulture Contests National Junior Horticultural Association 411 Pine Street Freemond, MI 49412-1737 Divisions for ages 9–11 and 12–14 Competition: October 15 Contests in gardening, environmental beautification, plant propagation, and experimental horticulture.

FOR HIGH-SCHOOL STUDENTS

International Science and Engineering Fair Science Service 1719 N Street, N.W. Washington, DC 20036 Open to grades 9–12 National competition: May Complete Research Plan and Approval Form; submit a 250-word abstract; display a project notebook.

National Science Bowl United States Department of Energy University and Science Education Room 6E-050 1000 Independence Avenue, S.W. Washington, DC 20585 202-586-4953 Open to high-school students and coaches Regionals: February; nationals: May Double-elimination competition, question-and-answer format. Mathematics, physics, biology, chemistry, computer science, astronomy, current discoveries.

National Student Zinc Essay Contents American Zinc Association Conni Kunzler 1112 Sixteenth Street, N.W. Suite 240 Washington, DC 20036 202-835-0164 Open to grades 7–12 Deadline: March 31 National essay contest on the importance of zinc in society and daily life.

Science Olympiad 5955 Little Pine Lane Rochester, MI 48306 810-651-4013 Third division open to grades 9–12 Competition: May Solve problems in biology, earth science, chemistry, physics, computers, and technology; in teams or individually.

United States Model Rocket Championships National Association of Rocketry 182 Madison Drive Elizabeth, PA 15037 Division for ages 15–17 and 18 and over Competition: August Build, show, and launch model rockets in competition.

Westinghouse Science Talent Search Science Service 1719 N Street, N.W. Washington, DC 20036 Open to high-school seniors Submission deadline: December

Complete an independent research project in the physical sciences, behavioral and social sciences, engineering, mathematics, or biological sciences.

under Standingen in der Standingen in der Standingen im Stan Im Standingen im Standin

186. 186.

APPENDIX 4

SOURCES -

W/

A Beka Book, Inc. P.O. Box 19100 Pensacola, FL 32523-9100 800-874-2352 for orders Fax: 1-800-874-3590 Publishes the *Little Owl* and *Little Book* readers as well as grammar texts and math books for grades 3 through 12.

A.D.A.M. Software Inc.
1600 River Edge Parkway, Suite 800
Atlanta, GA 30328
800-755-2326, ext. 3018
Web: www.adam.com
Sells *The Inside Story* and other anatomy-exploration software.

712 Sources

Aristoplay, Inc. 450 South Wagner Road Ann Arbor, MI 48103 888-GR8-GAME Web: www.aristoplay.com Sells educational games in math, science, and history.

Audio-Memory 501 Cliff Drive Newport Beach, CA 92663 800-365-7464 Web: www.audiomemory.com Sells math-fact memory tapes.

Behrman House 235 Watchung Avenue West Orange, NJ 07052 800-221-2755 Web: www.behrmanhouse.com Publishes titles on Jewish ethics and history.

Blackstone Audio Books 31 Mistletoe Road Ashland, OR 97520 800-729-2665 Sells and rents books on tape.

Bolchazy-Carducci Publishers, Inc. 1000 Brown Street Waucaunda, IL 60084 800-392-6453 Fax: 847-526-2867 Web: www.bolchazy.com Sells the *Artes Latinae* program.

Books in Motion 9922 East Montgomery, Suite 31 Spokane, WA 99206 800-752-3199 Sells books on tape.

Canon Press and Book Service P.O. Box 8741 Moscow, ID 83843 800-488-2034 Web: www.canonpress.org Sells Latin and logic texts.

Carolina Biological Supply Company 2700 York Road Burlington, NC 27215 800-227-1150, 800-334-5551 Web: www.carolina.com

Christian Liberty Academy Independent Test Service 502 West Euclid Avenue Arlington Heights, IL 60004 847-259-4444 Supplies the California Achievement Test.

Cobblestone Publishing 30 Grove Street Peterborough, NH 03458 800-821-0115 Fax: 603-924-7380 Web: www.cobblestonepub.com Publishes books on various historical and scientific subjects.

College Board Publications Educational Testing Service Rosedale Road Princeton, NJ 08541 609-921-9000 Web: www.collegeboard.com

College Board publications can most easily be ordered through a bookstore or from the online store at the College Board Website. If you persist through the many menu options, you can also order by phone.

Continental Press 520 East Bainbridge Street Elizabeth, PA 17022 800-233-0759 Sells the On Target for Tests series.

Critical Thinking Books and Software Critical Thinking Press P.O. Box 448 Pacific Grove, CA 93950-0448 800-458-4849 Fax: 408-393-3277 E-mail: ct@criticalthinking.com Web: www.criticalthinking.com Sells logic and critical-thinking books across the curriculum.

Delta Education P.O. Box 3000 Nashua, NH 03061-3000 800-442-5444 Fax: 800-282-9560 Web: www.delta.ed.com Publishes Science in a Nutshell kits and sells other science materials, including *Eyewitness* titles.

Dorbooks P.O. Box 2588 Livermore, CA 94551 800-852-4890 for orders 510-449-6983 for information Publishes Phonics Pathways: A Complete Reading Program for Beginning and Remedial Readers and Pyramid Reading Exercises. Dorling Kindersley Family Learning, Inc. 95 Madison Avenue New York, NY 10016 212-213-4800 for inquiries Fax: 212-213-5240 Web: www.dkonline.com

Dorling Kindersley sells books through local representatives and through the DK online store. Some are also sold in bookstores. If your local bookstore can't order a DK book, visit their Website (which maintains a list of local representatives), or call the head office and ask where the nearest DK representative lives.

The Education Connection Box 1417 Tehachapi, CA 93581 800-863-3828

Educators Publishing Service 31 Smith Place Cambridge, MA 02139-1000 800-225-5750 Publishes the Vocabulary from Classical Roots series and the Stewart English Program.

Eternal Hearts Dept. K P.O. Box 107 Colville, WA 99114 509-732-4141 E-mail: Eternheart@aol.com Publishes the Rummy Roots card games.

Far West Laboratory 730 Harrison Street San Francisco, CA 94107 415-565-3000 Sells the Using Portfolios to Assess Student Performance booklet. Walter Foster Publishing, Inc. 23062 La Cadena Drive Laguna Hills, CA 92653 800-426-0099 Fax: 714-380-7575 Sells art kits and materials.

Glencoe-McGraw Hill P.O. Box 508 Columbus, OH 43216 800-334-7344 Web: www.glencoe.com Publishes the Writer's Choice grammar series.

Greenleaf Press 3761 Highway 109N, Unit D Lebanon, TN 37087 800-311-1508 for orders 615-449-1617 for information Fax: 615-449-4018 E-mail: Greenleafp@aol.com Web: www.greenleafpress.com Greenleaf Press sells all the history books, crafts, and resources you'll ever need. The publisher is Christian in orientation, but it carries many general-market titles that are hard to find.

Greathall Productions P.O. Box 813 Benicia, CA 94510 800-477-62340 Sells storytelling tapes by Jim Weiss.

Grolier Publishing Sherman Turnpike Danbury, CT 06813 800-955-9877 Fax: 203-797-3197
Gryphon House, Inc. P.O. Box 207 Beltsville, MD 20704-0207 800-638-0928 Fax: 301-595-0051 E-mail: info@ghbooks.com Web: www.ghbooks.com

J. L. Hammett Co. National Division P.O. Box 9057 Braintree, MA 02184-9057 800-333-4600 Fax: 800-873-5700 E-mail: info@hammett.com Web: www.hammett.com Sells Kraft paper for time lines as well as other art supplies.

Holt, Rinehart and Winston 1120 South Capital of Texas Highway Austin, TX 78746-6487 800-225-5425 Fax: 800-269-5232 Publishes the Holt grammar series.

The Home School 104 South West Avenue Arlington, WA 98223 800-788-1221

Home School Legal Defense Association P.O. Box 3000 Purcellville, VA 20134 540-338-7600 Fax: 540-338-9333 Sells high-school diploma forms. Home School Resource Center 1425 East Chocolate Avenue Hershey, PA 17033 800-937-6311 Sells standard high-school transcripts.

IDG Books Worldwide, Inc.
919 East Hillsdale Boulevard, Suite 400
Foster City, CA 94404-2112
800-762-2974
Web: www.idgbooks.com
Sells the For Dummies series.

International Linguistics Corporation, Inc. 3505 East Red Bridge Road Kansas City, MO 64132 800-237-1830 Fax: 816-765-2855 Web: www.learnables.com Sells the *Learnables* foreign-language program.

Jackdaw Publications P.O. Box 503 Amawalk, NY 10501 800-789-0022 Fax: 800-962-9101 Web: www.jackdaw.com Sells facsimiles of historical documents for primary-source historical study.

Lawrence Hall of Science Museum Store University of California, Berkeley #5200 Berkeley, CA 94720-5200 510-642-1929 Web:www.lhs.berkeley.edu/store Sells the *Family Math* books and other math and science resources. Let's Get Growing! 1900 Commercial Way Santa Cruz, CA 95065 800-408-1868 Web: www.letsgetgrowing.com Hands-on biology materials.

McGraw-Hill/SRA A Division of the McGraw-Hill Companies 220 East Danieldade Road DeSoto, TX 75115-2490 888-772-4543, 800-843-8855 Web: www.sra.4kids.com Sells the Scoring High series.

McGuffey Academy P.O. Box 155 Lakemont, GA 30552 706-782-7709 Fax: 706-782-1235 Distributes the Stanford Achievement Test.

Mathematics Programs Associates, Inc. P.O. Box 2188 Halesite, NY 11743 888-672-6284 for orders 516-643-9300 for information Fax: 516-643-9301 Distributes the Developmental Mathematics Program.

Math+Plus 512 Princess Anne Road Virginia Beach, VA 23457-1312 757-721-7629, 888-490-9323 Distributes the *Math-U-See* curriculum.

Modern Curriculum Press Customer Service 4350 Equity Drive
Columbus, OH 43228
800-321-3106 for orders
Fax: 800-393-3156
Publishes the Modern Curriculum Press phonics series and the Spelling Workout series.

National Writing Institute 7946 Wright Road Niles, MI 49120 800-688-5375 Publishes the *Writing Strands* program.

Noble Publishing Associates P.O. Box 2250 Gresham, OR 97030 503-667-3942

Power-Glide, Inc. 988 Cedar Avenue Provo, UT 84604 801-373-3973 E-mail: info@power-glide.com Web: www.power-glide.com

Rainbow Resource Center Route 1, Box 159A 50 North 500 East Road Toulon, IL 61483 888-841-3456 for orders 309-695-3200 for information Fax: 800-705-8809 E-mail: RAINBOWRES@aol.com Sells many of the books we recommend at a significant discount.

Recorded Books Productions, Inc. 270 Skipjack Road Prince Frederick, MD 20678 800-638-1304 Fax: 410-535-5499 Web: www.recordedbooks.com Sells and rents unabridged books on tape.

Rizzoli International Publications, Inc. Catalog Department San Francisco, CA 800-522-6657

Saxon Publishers, Inc. 2450 John Saxon Boulevard Norman, OK 73071 800-284-7019 Web: www.saxonpub.com

Schola Publications 1698 Market Street, Suite 162 Redding, CA 96001 530-275-2064 Sells the Latin Road to English Grammar program.

Scholastic, Inc. 555 Broadway New York, NY 10012 800-733-5572 for orders Sells the Bob Books.

Science Projects 972-291-3345 Fax: 800-742-7805 Web: www.scienceprojects.net.

Seton School 1350 Progress Drive Front Royal, VA 22630 540-636-9990 Supplies the Comprehensive Test of Basic Skills and correspondence courses. Sonlight Curriculum, Ltd. 8121 South Grant Way Littleton, CO 80122-2701 303-730-6292 Fax: 303-795-8668 E-mail: sonlight@crsys.com Web: www.crsys.com/sonlight

Steck-Vaughn P.O. Box 26014 Austin, TX 78755 800-531-5015 Sells the Test Best series for standardized test preparation.

Tobin's Lab P.O. Box 6503 Glendale, AZ 85312-6503 800-522-4776 Web: www.tobinlab.com Science supplies.

Torah Aura Publications 4423 Fruitland Avenue Los Angeles, CA 90058 800-BE-TORAH Publishes titles on Jewish ethics.

Troll Communications 100 Corporate Drive Mahway, NJ 800-929-8765 Sells the Troll Illustrated Classics series (abridgments of classic literature).

Usborne Books Educational Development Corporation 10302 East Fifty-fifth Place Tulsa, OK 74146-6515 800-475-4522 Fax: 800-747-4509

The Wild Goose Company P.O. Box 35171 Greensboro, NC 27425 888-621-1040 Fax: 800-535-2669 E-mail: wgoose9150@aol.com Web: www.wildgoosescience.com Publishes science materials, including Goose Eggs.

The Writing Company 10200 Jefferson Boulevard, Room K5 P.O. Box 802 Culver City, CA 90232-0802 800-421-4245 Fax: 800-944-5432 E-mail: access@WritingCo.com Web: www.writingco.com/shakespeare Publishes the Shakespeare catalog.

Zaner-Bloser 2200 West Fifth Avenue P.O. Box 16764 Columbus, OH 43216-6764 800-421-3018 for orders Fax: 614-487-2699 Web: www.zaner-bloser.com han Marian (1996) 1997 - Marian Maria, 1998 1998 - Jacob Maria, 1998 2008 - Jacob Maria, 1998 - 1999 1998

Provent and the

hander in herrin Beizen in her Beize benegen Nichter bezeichte

han y the second of the continent of the second strend to the second control the colors of the second strend to the second strend to the second strend stren

 State Constraints and State States and States Constraints States and States States States and States States States States States States States States And States State

tani pingnai kara genera tani angkina Malifa kala atila ndagana

SELECTED^{*} BIBLIOGRAPHY

M//

Beechick, Ruth. A Strong Start in Language. Pollock Pines, Calif.: Arrow Press, 1993.
Eliot, T. S. Classics and the Man of Letters. New York: Haskell House Publishers, 1974.
Flesch, Rudolph. Why Johnny Can't Read and What You Can Do about It. 1955. New York: Perennial Library. 1986.

Guroian, Vigen. Tending the Heart of Virtue: How Classic Stories Awaken a Child's Moral Imagination. Oxford: Oxford University Press, 1998.

Healy, Jane, Ph.D. Endangered Minds: Why Our Children Don't Think and What We Can Do about It. New York: Touchstone, 1990.

Hicks, David. Norms and Nobility: A Treatise on Education. New York: Praeger, 1981.

Kilpatrick, William, and Gregory and Suzanne M. Wolfe. Books That Build Character: A Guide to Teaching Your Child Moral Values through Stories. New York: Touchstone, 1994.

Murnane, Richard J., and Frank Levy. Teaching the New Basic Skills: Principles for Educating Children to Thrive in a Changing Economy. New York: Free Press, 1996.

725

- Postman, Neil. The End of Education: Redefining the Value of School. New York: Knopf, 1995.
- Sayers, Dorothy. "The Lost Tools of Learning." Paper delivered Oxford University, 1947. Reprinted in Douglas Wilson. *Recovering the Lost Tools of Learning*. Wheaton, Ill.: Crossway Books, 1991.
- Veith, Gene Edward, Jr., and Andrew Kern. *Classical Education: Towards the Revival of American Schooling*. Washington, D.C.: Capital Research Center, 1997.
- Wilson, Douglas. Recovering the Lost Tools of Learning. Wheaton, Ill: Crossway Books, 1991.
- Wilson, Douglas, Wesley Callihan, and Douglas Jones. Classical Education and the Home School. Moscow, Idaho: Canon Press, 1995.

INDEX *

A Beka Book: language-skills texts of, 83, 84, 97, 98-99, 333, 334, 357-58, 464-65, 468, 469-70, 483, 677 math programs of, 116, 119, 263, 265, 268, 501, 503-4, 507-8 A Beka Book Home School Catalog, 672 Abrams, M. H., 491 abstract thinking, mathematical development of, 109-12, 113 accelerated studies program, foreignlanguage schedule in, 530-31 ACT (American College Test), 632, 634, 637 Activity Resources Catalog, 674 Ada, Alma, 536 Adams, Abigail, 151 Adams, John, 151 Ad Herennium (Cicero), 453, 454, 455, 457, 458, 459, 574

Adler, Mortimer J., 47, 466, 468, 470, 475, 479, 514, 632 Advanced Placement (AP), 506, 575, 627, 631-32, 637 Adventures in Science kits, 388, 399 Adventures of Tom Sawyer, The (Twain), 104, 347, 368 Adventures with Atoms and Molecules (Mebane and Rybolt), 182-84, 194-95 Aesop's fables, 83, 85, 100, 341, 361 African culture, 100, 306, 341, 360 afternoon naps, 599 Ahern, Peggy, 661-63 Aiken, Joan, 372 Aird, Hazel B., 162 Alcott, Louisa May, 161, 350, 370 Alden, Peter, 390 Aldred, Cyril, 304 Alexander, Lloyd, 372

Alexander III (the Great), King of Macedon, 132, 142, 302, 304, 341, 483-84 algebra, 115 curriculum options in, 500-509, 574, 575.657 preparation for, 265-67 symbolic thinking required in, 260-61, Alice's Adventures in Wonderland (Carroll), 74, 103, 347, 368 Alper, Janice, 547 alphabet exercises, 58, 62, 607 alternative schools, 579-80 Ambrus, Victor G., 99, 101, 103, 346 American Classical League Website, 481 American College Test (ACT), 632, 634, 637 American history, 124, 136, 137-38, 299, 321, 323-27, 368-69, 622, 623 basic texts in, 140-41, 301 critical-thinking resources for, 294-95, 298 memorization work in, 136, 137-38, 159, 160, 295, 299, 324, 325, 326 primary sources in, 294, 297, 322-23 see also Civil War, U.S. American Home-School Publishing, 140, 670 America the Beautiful series, 137, 159, 325 Amery, Heather, 304 Ammondt, Jukka, 411 Amory, Anne, 534 analytic geometry, 501, 504, 508 Ancient Aztecs Treasure Chest, 145 Ancient China Treasure Chest, 142-43 Ancient Egypt Treasure Chest, 143 ancient era: grammar-stage reading materials on, 85-86, 99-100 logic-stage reading materials on, 336, 340-42, 359-63, 421 in ninth-grade great-books study, 467, 473, 475-76, 479-80, 492-93 science studies in, 167 ancient history, 127 fifth-grade study of, 279-86, 302-9, 443-44 first-grade study of, 125, 128-34, 142-44, 225 in great-books studies, 475-76, 492-93 primary sources for, 283-84, 303-4

time line begun in, 274, 275-76, 281 world religions in, 213 Anderson, John K., 146, 304, 318 animals, in life science curriculum, 169-76, 179, 187-89, 383, 390-91 Annotated Mona Lisa, The (Strickland), 551-53, 554-55, 557, 574, 575, 576 Anselm, Saint, 494 Anthony, Susan B., 161 AP (Advanced Placement), 506, 575, 627, 631-32, 637 A+ Projects in Chemistry (VanCleave), 386, 391. 399 apologia, religious, 545, 574, 575, 576 appointment schedules, 441-42 apprenticeships, high-school employment viewed as, 666-68 Arbel, Lil, 190 archaeology, 130 Archambault, Alan, 157, 323 architecture, 421, 428, 552 Ardley, Neil, 429 argumentum ad nauseam, 243 argumentum ad populum, 243 Aristophanes, 475, 479-80, 493 Aristoplay, 670 Aristotle, 47, 85, 100, 142, 302, 341, 440, 493, 515, 519, 521 on rhetoric, 451, 452, 454, 456-57, 458, 545-46, 574 arithmetic, 243, 244, 260 see also mathematics Arnott, Kathleen, 360 art: appreciation of, 215-16, 217-20, 418, 421, 427-29, 551-53, 557-58 conceptual focus in, 550, 551-53 in curriculum priorities, 55, 214–15 elementary skills in, 215, 219-20, 418, 419-20, 425-27, 550-51, 556-57 in grammar stage, 55, 78n, 214-16, 217-20, 225, 226, 227, 228 in historical context, 244, 418, 421, 549, 551-52, 566 logic-stage studies of, 418-21, 424-29, 444, 445, 446, 447, 549 picture study method in, 215-16 resource lists for, 217-20, 425-29, 556-58 in rhetoric stage, 549-53, 554-58, 566, 574, 575, 576 special upper-grade projects in, 566

transcript credits and, 620, 621, 622, 623 in weekly schedule, 419, 424-25, 550, 554, 555, 574, 575, 576, 599 Art, Suzanne Strauss, 304 Artes Latinae (Sweet), 405, 408, 410, 528, 530, 531, 533, 534 Arthurian legends, 88, 102, 106, 343, 364, 366 Art of Rhetoric, The (Aristotle), 451, 452, 453, 454, 455, 458, 459, 545-46, 574 art supplies: for art studies, 420, 556-57 for history time line, 274 for subject notebooks, 78 Asbjrnsen, Peter Christen, 104, 348, 368 Ashman, Iain, 304, 311 Asimov, Isaac, 351 astronomy: second-grade study of, 179-82, 191, 193-94, 226 sixth-grade study of, 375, 376, 384-85, 393, 395-96, 445 tenth-grade study of, 511n, 515, 519, 522-23, 574 Astronomy (Moche), 514, 519, 523 Aten, Jerry, 322 Athanasius, 493 Athenaze (Lawall and Balme), 528, 530, 531, 532, 535 athletics, 593, 639-42, 661 Atlantis, 564 atlases, 279-80 Attucks, Crispus, 151 Audio Memory Songs, 121 Audubon, John J., 187 Augustine, Saint, 100, 145, 248, 309, 345, 366, 493-94 Austen, Jane, 103, 347, 348, 349, 368, 496, 561-62 autonomy, obedience vs., 596-97 Ayo, Yvonne, 306 Aztec culture, 145, 311, 313 babies, home-school accommodation for care of, 606-7 Bach, Johann Sebastian, 151, 221 Back Pack, 674-75 Bacon, Francis (artist), 550 Bacon, Francis (philosopher), 461, 598 Bains, Rae, 154, 161, 163, 164, 166 Baker, Charles, 305

Baker, Rosalie, 305 Ballard, Robert D., 326 Balme, Maurice G., 410, 533, 535 bank accounts, 441, 541 Banks, Lynn Reid, 90 Baquedano, Elizabeth, 313 Barrett, Marvin, 153 Barrie, J. M., 62, 74, 105 Barron's Passkey to the PSAT NMSOT (Brownstein), 636 Barton, Clara, 161 baseball, development of special project on, 560-61 Basic Debate (Phillips, Hicks, and Springer), 460 Basic Physics (Kuhn), 514, 520, 524 Bastien Piano Basics series, 217, 222 Battle, 69 Bauer, Christopher, 58, 209 Bauer, Peter, 85-86, 599 Bauer, Susan Wise, 41-47 on curriculum choices, 46, 92, 344, 465, 494 on educational deficiencies of college students, 42-43 educational experiences of, 35, 36-37, 41-42, 47, 54, 58, 61n, 66, 200, 465, 600, 602, 604, 632, 640-41 as home schooling parent, 62, 64, 69, 76, 85-86, 115, 209, 213, 599, 607 on literature choices, 92 on religious teaching, 213 on SAT preparation, 636 on value of rhetoric study, 451n Baym, Nina, 491 Beacon, Mavis, 436 Beattie, Owen, 326-27 Beckett, Wendy, 552, 557 bedtime, 599 Beechick, Ruth, 52, 98, 114-15, 119 Beethoven, Ludwig van, 152, 221, 550 Behe, Michael J., 512, 515, 519, 524 Bell, Debra, 616 Belluck, Pam, 582n Beloved (Morrison), 473, 499 Benchley, Nathaniel, 149 Beneduce, Ann Keay, 101 Bennet, Richard, 100 Bennett, William J., 417, 664 Beowulf, 100, 342, 345, 363, 494 Berenstain, Jan, 73 Berenstain, Stan, 73 Bernath, Stefan, 187, 190

Bernhard, Annika, 158 Bernstein, Leonard, 422 Betts, Gavin, 535 Bible, 85, 99, 306, 340, 492, 493 Biesty, Stephen, 437, 438 Biggs, Bradley, 323 biographies, 131-32, 148, 151-56, 161-66, 283 of composers, 553-54 discussion of, 338 of religious figures, 415 biology: classification employed in. 174-75 evolution theory vs. creation in, 212, 380n fifth-grade study of, 375, 376, 379-84, 390-93, 444 first-grade life science as preparation for, 170 ninth-grade study of, 514, 519, 521-22, 574 religious aspects of, 211, 212 see also life science Biology (Garber), 514, 519, 521 Biology for Every Kid (VanCleave), 390 Birch, Beverly, 101 Birch, Cvril, 359 Birmingham, Duncan, 311 Bishop, Clair, 100 Black Hawk, 152 Blackstone Audio Books Catalog, 672 Blackwell, Elizabeth, 161 Blake, William, 88, 103, 348, 496 Bliven, Bruce, 149, 318 Blos, Joan W., 318 Boal, Ian A., 542 Bob Books series, 63, 67, 71-72 Bobker, Steve, 543 Boethius, 494 Bolles, Richard, 667, 668 Bolt, Robert, 350, 371, 498 Bonnet, Bob, 392, 400 Bonnie's Household Organizer (McCullough), 614 Book of Virtues, The (Bennett), 416 book reports, 89 Books Children Love (E. Wilson), 107, 339 books on tape, 57, 62, 74-75, 86 Books That Build Character (Kilpatrick, Wolfe, and Wolfe), 416, 417, 597 Boone, Daniel, 152 Boorstin, Daniel J., 490 Borgia family, 287–88, 289

Borroff, Marie, 494 Bostock, David, 521 Boston University, 488 botany, 177-79 Bowern, Francis, 497 Bown, Deni, 301 Boyle, Robert, 168, 515, 519, 523 Brady, Esther Wood, 368 Brahe, Tycho, 145, 168, 309 brain development: physical activity levels and, 540 print culture vs. image-based technology in. 208 Bramwell, Martyn, 191-92, 393 Branagh, Kenneth, 344 Brandt, Keith, 152, 154, 155, 164, 165 Brief History of Time, A (Hawking), 515, 52.4 Bright and Early Books for Beginning Beginners series, 73 Brightling, Geoff, 313 Brink, Carol R., 368, 372 Britannica Junior, 376 Brock University, 486 Bronfenbrenner, Urie, 590 Brontë, Charlotte, 497 Brook, James, 542 Brookes, Mona, 215, 219, 420, 551 Brown, Michael, 641 Brown, Sam, 76 Brownell, David, 220-21, 318, 429 Browning, Elizabeth Barrett, 103, 348 Browning, Robert, 103, 347, 348, 367, 466n Brownstein, Samuel C., 636 Bruner, Elaine, 70 Bubbles, Rainbows and Worms (Brown), 70, 76 Buck, Pearl S., 351 Bulla, Clyde Robert, 372 Bunday, Karl, 660 Bunyan, John, 103, 346, 348, 367, 496 Burdett, Lois, 101 Burke, Edmund, 211, 496 Burnett, Frances Hodgson, 62, 105, 351, 371, 372 Burnie, David A., 24, 379-80, 390, 521 Burns, Ken, 123 Burns, T. D., 192 Byam, Michelle, 313 Cage, John, 550

Cahill, Thomas, 564-65

calculators, 114, 261, 264-65 calculus, 264, 266, 502, 503, 505, 506, 509 calendars, 441-42, 605 California Achievement Test, 629, 634 Callaway, Shawn, 579n Callihan, Wesley, 203n, 482n, 601n Calvert School online, 434 Calvin, John, 102, 145, 309, 345, 495 Canon Press and Book Service, 248, 249. 257, 671, 677, 678 Canterbury Tales, The (Chaucer), 101, 342, 343, 345, 363, 365, 494-95 Caplan, Harry, 459 card games, 69 Career Opportunity series, 668 Careers in Focus series, 668 Carleton University, 486 Carlson, Laurie, 190 Carlyle, Thomas, 123 Carolina Biological Supply Company, 673 Caron, Jill, 323 Carpenter, Eric, 152 Carroll, Lewis, 74, 103, 347, 349, 352, 368, 372 cartoons, television, 89-90 Case for Home Schooling, The (Klicka), 591n Case of Red Herrings, A, mystery series, 248, 249, 257, 443 Cassidy, Janet, 140 Cassidy, John, 197, 401, 420, 426 castles, medieval, 311, 313, 314, 316 catalogs, list of, 669-75 cathedrals, Gothic, 311, 313, 314, 315, 550 Cather, Willa, 351 Catholic Church, 416 Cat in the Hat, The (Seuss), 232 CD-ROM, self-teaching Latin program on, 405, 410 Celestin, Julio, 535 censorship, parental, 90, 339, 435 Central Washington University, 489 Cerasini, Marc, 103 Cervantes, Miguel de, 346, 561 Chadwick, Peter, 521 Challoner, Jack, 401 Chapman, Philip, 197 Chapman, Robert, 469 character development, 594-97 Charlemagne, 290, 309 Charles City County Historical Society, 683

Charlotte's Web (E. B. White), 62, 74, 92 chat rooms, 540 Chattington, Jenny, 305 Chaucer, Geoffrey, 88, 101, 145, 309, 342, 345, 352, 363, 364-65, 494-95 checking accounts, 441, 541 Chelepi, Chris, 143 chemistry: of acids and bases, 195, 196, 387 colloids, 195, 387 eleventh-grade study of, 515, 519, . 523-24. 575 seventh-grade study of, 376, 385-87, 396-99, 446 thermal reactions, 195, 387 third-grade study of, 168, 182-85, 194-96, 226, 230 Chemistry (Houk and Post), 514, 519, 523 Chemistry for Every Kid (VanCleave), 386, 397 Chemlab series, 524 Chertok, Bobbi, 427 Chesterton, G. K., 350, 370, 498 Chicago, University of, 487 "Childhood Pattern of Genius, The" (McCurdy), 589 child-led education, 66n, 585 child-neglect laws, 645 China: history of, 142-43, 144, 302, 306, 321 literature of, 85, 100, 340, 359 Chinese language, 404, 406, 413, 528, 530 Chisholm, Jane, 143, 146 Choreganizers (Steward), 615 Chorzempa, Rosemary, 311 Chow, Stanley, 635 Christianity: ethics of, 546, 547, 595-96 in home-school movement, 459, 580, 649, 650, 651 as influence in textbooks, 83-84, 116, 248, 263, 335, 671, 672 Christian Websites, 204, 435, 438, 459 Christie, Agatha, 350, 351, 370 Christmas Carol, A (Dickens), 62, 88, 106, 347, 368 Chronicles of Narnia, The (Lewis), 62, 74, 92 Chute, Marchette Gaylord, 365 Ciardi, John, 106 Cicero, 100, 142, 303, 341, 454, 459, 474n, 493

Civardi, Anne. 312 Civil War. U.S., 136, 137, 138, 157, 158, 159, 160, 253-54, 277, 297, 321, 322-24.371 Civil War Literature Pack, 137, 138, 140-41 Clare, John, 146, 149, 312, 323 CLASS (Communication, Learning, Assessment in a Student-Centered System), 505, 518 Classical and Christian Education link form page, 204 classical education: Christian home-schooler support of, 649 fine arts included in, 418-19 foreign languages in, 526-27 interrelatedness of knowledge in, 45, 564 as job-market preparation, 569-70 language focus of, 44-45, 349 multicultural influence in, 125 nonvisual intelligence fostered by, 208 - 9philosophical implications of science and, 512 primary sources stressed in. 125-26 in self-government systems, 571-72 systemic organization of, 47, 273 teacher-student partnership model of, 583 trivium pattern of, 37, 43-44, 45, 51, 53, 125-26, 452-53 ultimate goals of, 181-82, 273, 569-72 unschooling approach vs., 584-85 vocational training vs., 569-70 whole-language philosophy vs., 234-35 Classical Education (Veith and Kern), 570n Classical Education and the Home School (Wilson, Callihan, and Jones), 203n, 482n, 601n Classical Kids series, 216, 221 Classical Music (Waugh), 553-55, 558 classical myths, 52, 85, 99-100, 106, 341, 359, 360-61 Classical Rhetoric for the Modern Student (Corbett), 454, 455, 458, 459, 574 classification, biological, 174-75 clay modeling, 419, 420, 426, 551, 556-57 Cleary, Beverly, 372 CLEP (College Level Examination Program), 631-32, 637-38 Clifflands, Bill, 319

Cliffs Notes, 337-38, 480 Cody, William (Buffalo Bill), 152 Coghill, Neville, 342 Cohen, Cafi, 650, 664 Cohen, Judith Love, 193 Coiley, John, 324 Cole, Alison, 557 Cole, Joanna, 177, 189 Coleridge, Samuel Taylor, 347, 367, 496 college: application procedures for, 660-63, 664 - 65choice of, 659-60, 664 daily-life responsibilities during, 442 early admission to, 663 early-decision process of, 661 employment experiences before, 668 examination procedures in, 263 financial aid in, 267 foreign-language requirements of, 526n high-school concurrent enrollment in, 506, 529, 624, 647-48, 652, 658 home-school preparation for, 41-42. 263, 619, 625, 656-58 math requirements for, 264, 500, 502 portfolio and transcript documentation for, 616, 618-24, 625, 626, 658, 660 private vs. public, 657, 659 qualifying exams for, 632-34 remedial English needs in, 42-43 resource list for, 663-65 scholarships to, 632-33 sports in, 639, 661 testing for credit in, 628, 631-32 College Board: admissions policies and, 660 Advanced Placement tests, 506, 575, 627, 631-32 PSATs, 266, 267, 502, 503, 575, 624, 628, 632-33, 636, 657, 658 SATs, 266, 267, 464n, 502, 503, 575, 628, 632, 633, 634, 636-37, 658, College Level Examination Program (CLEP), 631-32, 637-38 College of William and Mary, 42–43 Collier, James Lincoln, 368 Collodi, Carlo, 105 Color the Classics, 216 Colum, Padraic, 360, 361 Columbia University, 488 Columbus, Christopher, 145, 146, 148, 289, 290, 309, 311, 312, 365

comic books, 90 Communication, Learning, Assessment in a Student-Centered System (CLASS), 505, 518 Complete Book of Dragons, The (Nesbit), 74, Complete Book of Windows (Dungworth), 543 compositions: great-books research papers, 482-86, 574, 575, 576 on historical subjects, 277, 289, 482-86 length of, 329 in logic stage, 277, 289, 329 outline techniques used in, 277, 467 science reports, 378, 381-82, 384, 386, 388, 513-14 upper-grade writing projects, 452, 559-68, 575, 576, 620, 621, 622, 623, 660 word-processing programs used for, 433 see also writing Comprehensive Test of Basic Skills, 629, 634 computers: access to, 433 cultural and philosophical implications of. 539-40 dominance of image over language on, 432 fourth-grade study of, 168 in grammar stage, 168, 207-10 in high-school years, 538, 540-42, 575, 576 at logic stage, 432-39 programming skills for, 541-42, 543-44, 566, 620, 621, 622, 623 resource lists for, 436-39, 542-44 upper-grade special projects for, 566 word processing and, 433, 538, 541 see also online services Conaway, Judith, 105 Concordia University, 487 concurrent enrollment, 506, 529, 624, 647-48, 652 Confucius, 100, 142, 302, 340 Conkle, Nancy, 222, 320, 429, 430 Connolly, Peter, 305-6 Constitution, U.S., 89, 137, 158, 296, 299, 322, 496 cooking skills, 600-601, 615 Cooley, Charles Horton, 592

Coolidge, Olivia, 360, 361, 362 Cooper, Christopher, 397 Cooper, Donna, 319 Cooper, James Fenimore, 104, 349, 496 Cooper, Michael, 324 Cooper, Susan, 372 cooperative classes, 647-48, 651-52 Copeland, Peter F., 146, 150, 158, 319, 324 Copernicus, Nicholas, 145, 168, 309, 515, 519, 522 Corbett, Edward, 454, 457, 459 Corbishley, Mike, 306, 312 Cornell University, 504-5, 509, 518, 592 correspondence courses, 651 in English grammar, 465 in foreign languages, 529-30, 537 high-school transcripts and, 624 in math, 505, 509-10 resource list for. 653–55 in science, 517-18 Cotterell, Arthur, 306 counting exercises, 59, 69, 224 Couper, Heather, 393, 396 Courlander, Harold, 100 Cousteau, Jacques, 435 Coville, Bruce, 102 Cox, Clinton, 140, 143 Cox, Phil Roxbee, 146 Cracking the SAT and PSAT (Robinson and Katzman), 637 Crash and Burn Chemistry, 195, 387, 398 creation, evolution theory vs., 212, 380n creativity: copying exercises and, 91 in grammar stage, 93 knowledge accumulation vs., 52 in upper-grade special research papers, 563 Creepy Crawlies and the Scientific Method (Kneidel), 383 Crew, Henry, 522 Cribb, Joe, 324 critical thinking, 240-41 Critical Thinking (Harnadek), 247, 249, 258, 446 Critical Thinking Books and Software, 671 Critical Thinking in United States History series, 294-95, 298, 301 Critical Thinking logic series, 248-49, 678 Crockett, Davey, 152 Črusades, 290, 311, 315, 365

Cuban, Larry, 207 Cubism, 550 Cuisenaire, 673 Cumbaa, Stephen, 391 Cummings, E. E., 350, 371 cursive writing, 68, 69, 75, 79, 91, 93, 96, 225 Curtis, Neil, 191, 394, 395 CyberPatrol, 435 Czech language, 406, 413 D'Achille, Gino, 104 daily life, basic training in logic of, 441-42 Daily Planner, 625 daily schedules, 603-4, 605 see also schedules; specific subjects Dalgliesh, Alice, 369 Dalton, John, 168 Dante Alighieri, 102, 145, 309, 342, 345, 352, 364, 494 Darwin, Charles, 497 Darwin's Black Box (Behe), 515, 524 Data Smog (Shenk), 540, 542 dating, 593 Daughtery, James, 494 d'Aulaire, Ingri, 148 David, Rosalie, 144 Davies, Phillips, 490, 568 Davis, Courtney, 312 Davis, William, 474n, 492, 493, 494, 495 Day in Old Rome, A (Davis), 474n Day series, 320-21 de Angeli, Marguerite, 365, 372 debate: in extracurricular societies, 457-58, 459, 574, 575, 593 rhetoric studies and, 453, 454 in weekly schedule, 451, 458 Declaration of Independence, 89, 136, 277, 295, 296, 496 Defoe, Daniel, 102, 346, 348, 367 DeKay, James T., 148 de la Mare, Walter, 89, 106, 350, 371 Delta Education Hands-On Math, 674 Delta Education Hands-On Science, 673 democracy, well-educated citizenry needed in, 571-72 De republica (Cicero), 474n De Salvio, Alfonso, 522 Descartes, René, 102, 309, 345, 496 desktop-publishing programs, 541, 543 de Trevino, Elizabeth Borten, 365

Developmental Mathematics, 117, 119-20 diagramming exercises, 333-34, 336 Dialogues Concerning Two New Sciences (Galileo), 515, 522 Diantonio, Robert, 665 Dickens, Charles, 62, 85, 88, 103, 347, 348, 368, 497 dictation exercises, 90-97, 225, 226, 227, 230, 329, 352, 354 dictionary, 464 Dinsmore, Mark, 651, 653 Dinsmore, Wendy, 651, 653 diplomas, 624-25 dispositio, 453, 483, 485-86 Doherty, Paul, 197, 401 Doing Art Together (Silberstein-Storfer and Jones), 215, 220 Dominoes Addition (Long), 122 Donne, John, 495 Don Quixote (Cervantes), 346, 367, 495, 561 Doris, Ellen, 391 Dorling Kindersley Art School series, 551, 556 Dorling Kindersley Family Learning, 670 Dorling Kindersley History of the World, The (Fry), 474, 479, 490 Dorling Kindersley software, 436–38 Dostoyevsky, Fyodor, 497 Douglass, Frederick, 56, 61, 162, 348, 349, 368 Dowell, Philip, 391, 521 Downe, Robert P., 664 Downing, Charles, 363 Doxey, Denise, 306 Doyle, Sir Arthur Conan, 105, 350, 370 Drake, Sir Francis, 148 Drawing on the Right Side of the Brain (Edwards), 420, 425, 551 drawing skills, 215, 219-20, 418, 419-20, 426-27, 550-51 Drawing with Children (Brookes), 215, 219, 225, 420, 551 Draw Today kits, 426–27 Dr. Gruber's Essential Guide to Test Taking for Kids (Gruber), 629, 635 drills, 51 in grammar studies, 84, 439, 465 in math, 116, 121-22, 263, 433, 439 whole-language rejection of, 235 Duffy, Joan, 436 Dumas, Alexandre, 103, 351

Duncan, Deborah, 312 Dungworth, Richard, 543 Dunning, Michael, 324, 393 dyslexia, 79 Dyson, John, 312 Earhart, Amelia, 162 Early Times series, 304 Earth and Space (Mayes and Tahta). 180-81.191 earth science: in second-grade curriculum, 179-82, 191-93, 226, 230 sixth-grade study of, 375, 376, 384-85, 393-95.445 tenth-grade astronomy vs., 511n Eastman, P. D., 73 East of the Sun and West of the Moon (Asbjrnsen), 104, 348, 368 Easy Start in Arithmetic, An (Beechick), 114-15, 119 Easy-to-Read books, 74 Ecclesiastes, Book of, 669 Edison, Thomas, 162 Edom, Helen, 195 education: entertainment vs., 209-10, 432 knowledge-focused approach vs. childcentered unschooling in, 584-85 passive reception vs. active engagement in, 432 see also classical education; home education Education Connection, 670 Education Week, 241 Educators Publishing Service, 332, 672 Edwards, Betty, 420, 425, 551 Egypt: in history studies, 130-31, 132-33, 143, 144, 283, 284, 302, 304, 306, 307, 308, 309, 362 mythology of, 100, 340, 359 Ehrenhaft, George, 637 eighth grade: art and music study in, 425, 447 college preparations in, 658 curriculum summary for, 446-47 foreign language studies in, 407, 408, 409, 447, 530, 531, 532 formal logic studies in, 446 grammar work in, 333, 335, 336, 355-56, 446 language skills notebook in, 329-30

math in, 266, 267, 268, 446, 501, 502, 503, 504, 506, 507, 508 memorization work in. 352, 356 modern-era reading curriculum for. 336, 349-51, 370-73, 446-47 modern history studied in, 296-300, 321-27, 446 outline skills developed by, 277, 292, 296-97 physics studies in. 375, 376, 387-89, 399-401.447 religion in, 447 sample daily schedule suggested for. 613 vocabulary study in, 330, 332, 333, 355. 446 writing studies in, 352, 353, 356, 378, 447 see also logic stage Einstein, Albert, 162, 515, 520, 524, 564 Eisenhower, Dwight D., 162 electronic teaching aids: in grammar stage, 207-10 see also computers; television; videos elementary school: home-school portfolios of work in, 616.617 see also grammar stage; logic stage; specific elementary grade levels Elements (Euclid), 515 Elements of Chemistry, The (Lavoisier), 515, 523 Elements of Style, The (Strunk and White), 467, 468, 469, 471, 574, 575, 576 Elements series, 386, 397-98 eleventh grade: art and music in, 552, 555, 575 college preparations in, 658 composition instruction in, 468, 575 computer-programming elective in, 538, 541-42, 575 curriculum summary for, 575-76 debate activities in, 457 foreign languages in, 531, 532, 533, 575 grammar studies in, 464, 465, 575, 677 great-books studies in, 477, 489, 495-97, 575 major writing project in, 452, 465, 482, 559-68, 575, 660 math in, 266, 267, 501, 502, 503, 504, 506, 507, 508, 509, 575 PSAT and SAT testing in, 267, 502, 503, 633, 658

eleventh grade (continued) religion in, 575 science education in, 513, 515, 516, 517, 518, 523-24, 575 transcript credits and, 620, 621, 622, 623 see also rhetoric stage Eliot, T. S., 89, 106, 351, 498, 526, 528 Elizabeth I. Oueen of England, 147, 148, 289, 311, 315 Ellison, Ralph, 498 elocutio, 453, 454, 483, 486 Elson, Lawrence, 522 E-mail, 434, 435, 538 Emerson, Ralph Waldo, 497 employment, classical education as asset in. 569-70 Encyclopaedia Britannica, 279 encyclopedias, 279, 376, 385, 436-37 Endangered Minds (Healy), 208 End of Education, The (Postman), 201, 208, 245n, 516, 539, 560n Engelmann, Siegfrid, 70 Engels, Friedrich, 497 England: memorizing monarchs of, 134-35, 290 prime ministers of, 295, 298 English for the Thoughtful Child (Hyde and Shearer), 82-83, 84, 91, 93, 94, 96, 224-25, 226, 229, 608 English from the Roots Up (Lundquist), 412 English grammar, see grammar, English English skills: Latin studies as boost to, 200 transcript values on, 621 see also grammar, English; language skills; reading; writing Enright, Elizabeth, 372 entertainment, education vs., 209-10, 432 Epitome of Copernican Astronomy (Kepler), 515, 522 Erasmus, 102, 309, 345, 369, 495 Erdmann, Dottie, 420, 425, 551 Ericsson, Leif, 145, 148, 290, 309 Escondido Tutorial Service, 204, 438, 481, 649 Estes, Eleanor, 372 ethics, 414, 415, 416 in character development, 594-97 classic rhetorical training used in, 545-47 in great-books discussions, 472-73,

in history, 244 in Judeo-Christian resources, 547-48 of scientific issues, 516 special projects on, 566 Euclid, 515, 519, 521 Euripides, 492 Evans, Charlotte, 141, 280n, 301 Everybody Has a Body (Rockwell), 173, 176, 177, 179, 187 evolution theory, creation vs., 212, 380n Evslin, Bernard, 360 examinations, see testing experiments, scientific: in astronomy, 180, 384 in chemistry, 182-83, 184, 185, 195, 385. 386-87 in earth science, 180 in life science, 173-74 notebook records of, 179-80, 183, 184, 186, 377, 378, 382-83 in physics, 185-86, 197, 198, 388 in preschool years, 76 supply sources for, 673-74 Explore series, 398 extracurricular activities: athletics, 593, 639-42 debate clubs, 457-58, 459, 574, 575 in high-school transcripts, 624 socialization opportunities in, 591, 593 Extraordinary Plants (Taylor), 177, 178, 179, 187 Eyewitness Art series, 552, 557-58 Eyewitness Atlas of the World, The (Bown), 278, 301 Eyewitness Books series, 306, 312-13, 319, 324, 391, 521-22, 552 Eyewitness Science texts, 376, 385-86, 387-88, 395, 396, 399 Eyewitness science videos, 210 fact collecting, 51 Faerie Queene, The (Spenser), 101, 342, 345, 364, 495 fairy tales, 85, 100, 102, 103, 105, 346, 362, 363, 367 fallacies, logical, 250, 252, 255, 415–16 family, children's social development within, 589-93 Famous Artists series, 421, 428 Farndon, John, 393 Farrand, John, 188

546, 574, 575, 576

Federalist, The (Hamilton), 126, 496

FasType, 433

Feinberg, Barbara Silberdick, 158 Felder, Deborah, 103 Field, Rachel, 369 Field, Shelly, 668 Fifer, Norma, 356, 469 fifth grade: ancient-era reading curriculum for, 336, 340-42, 359-63, 444 ancient history studies in, 279-86, 302-9, 443-44 art and music studies in. 421. 422. 423, 424, 444 biology studies in, 375, 376, 379-84, 390-93, 444, 513 college planning considered in, 657-58 curriculum summary for, 443-44 daily schedule suggested for, 611-12 foreign language study in, 404, 407, 408, 409, 444 grammar work in, 247, 333, 335, 354, 444 independent-study procedures implemented in, 440-41 language-skills notebooks in, 329 logic-study preparations in, 247-48, 443 math in, 261, 262-64, 267, 443, 657 memorization work in, 352, 354 outline skills developed in, 276-77, 280-81 religion in, 444 schedule planning begun in, 441-42 spelling and word study in, 330-31, 353-54, 444, 677 tests administered in, 357 variation of skill levels in, 381 writing work in, 352, 354, 378, 381-82, 444, 513 see also logic stage financial responsibility, cultivation of, 441 first grade: ancient history studies in, 125, 128-34, 142-44, 225 art in. 225 curriculum summary for, 224-25 daily schedule suggested for, 608-9 language-skills level at start of, 79 language-skills schedules in, 95-96, 225 - 26life-science studies in, 167, 169-79, 225, 375 math schedule in, 118

music in. 225 reading materials in, 85, 86, 99-100 religion in: 225 writing work in, 90–91 see also grammar stage Fischer, Martin H., 167 Fisher, Dorothy Canfield, 372 Fisher, Leonard Everett, 99 Fitzgerald, F. Scott, 351 Fitzgerald, Robert, 492 Fleischer, Jane, 155, 156 Fleischman, Paul, 140 Flesch, Rudolph, 234n flexibility, 452, 563 of schedules, 604 Flowers, Nancy, 356, 469 folktales, 100, 104, 340, 341, 359, 360, 362.363 Forbes, Esther, 369 Ford, Henry (illustrator), 105 Ford, Henry (industrialist), 162-63 foreign languages: ancient, 527, 528-29; see also Greek language studies; Latin studies brain development related to aptitude for. 208 choice of, 404, 527-28 classical education goals in, 526-27 college-prep requirement of, 526 computer programming study vs., 541 correspondence courses in, 529-30, 537 educational value of, 402-3, 527 logic-stage study of, 402-13, 444, 445, 446, 447, 526, 528 modern, 403, 404, 405-9, 412-13, 528, 529-30, 535-37; see also specific modern languages resource lists for, 410-13, 533-37 rhetoric-stage studies of, 526-37, 574, 575, 576, 620-24 sample yearly schedules for study of, 406-9, 530-33 self-teaching courses in, 403, 405-6 in specialization decisions, 452, 530 special upper-grade projects in, 565-66 teaching options in, 403, 407, 527, 529-30 transcript credits and, 620, 621, 622, 623, 624 value in study of, 200-201, 402-3, 526-27

foreign languages (continued) video study aids in, 436 weekly schedule on, 526 see also specific foreign languages Forensics (Oberg), 459-60 forgiveness, cultural attitudes toward, 595-96 Foster, Walter, 426 founding document, 644-45 401 Ways to Get Your Kids to Work at Home (McCullough), 614 fourth grade: curriculum summary for, 227-28 grammar studies in, 83, 84, 97, 227 language-skills daily schedule in, 97, Latin studies begun in, 199, 203, 227, 404 math schedule in, 118, 227, 263 modern history studied in, 137-39, 156-66, 227 physics work in, 168, 185-86, 196-98, 227, 231, 375 reading materials in, 85, 89, 104-6 sample daily schedule suggested for, 610-11 spelling work in, 81, 227, 677 writing study in, 91, 94-95, 97, 227 see also logic stage Fradin, Dennis Brindell, 158 Frampton, David, 140 France, history of, 295, 299 Francis of Assisi, Saint, 274 Frank, Anne, 322 Franklin, Benjamin, 61, 91, 153, 347, 367.496 Franks, Gene, 426 Freedman, Russell, 141, 324 Freese, John Henry, 459 French, Allen, 365 French language studies, 404, 406, 407, 412, 413, 528, 529, 530, 535-36 Freud, Sigmund, 498 Friedman, Jane, 190 friendship, online relationships as, 434-35 Frisbee, Lucy Post, 163 Fritz, Jean, 365 Frog and Toad books, 74 Frogs, The (Aristophanes), 475, 479-80 From Sea to Shining Sea series, 137, 158, 159 Frontier Fort on the Oregon Trail, A (Steedman), 150

Frost, Robert, 86, 350, 371, 498 Fry, Plantaganet Somerset, 490 Galen, 666 Galileo Galilei, 145, 309, 416, 515, 519, 522 Gallagher, Annie, 523 games: in foreign language studies, 205-6 math skills developed with, 69, 76, 122, 270, 271 in science education, 190, 397 Gandhi, M. K. (Mahatma), 163 Ganeri, Anita, 307 Garber, Steven D., 514, 521 Gardner, Martin, 197, 401 Garfield, Leon, 343, 344, 364 GED, 625, 660 Gee, Robyn, 146, 197 Geehan, Wayne, 122 Geisel, Theodore (Dr. Seuss), 73, 232 Genghis Khan, 274, 309 geography: computer learning aids on, 433, 438 grammar-stage study of, 127, 128, 130, 137, 141-42 history readings linked with, 128, 137, 278-79, 282 resources for, 141-42, 301-2 geology, see earth science geometric figures, recognition of, 69 geometry, 264, 266, 267, 500-508, 574, 632, 657 George, Jean, 372 GeoSafari Platinum Edition CD-ROMs, 438 Geringer, Laura, 99 German history, 298-99, 321, 323 German language studies, 404, 406, 407, 412, 413, 528, 530, 537 Gerrard, Ray, 148 Getting to Know the World's Greatest Composers series, 430–31 Gettysburg Address, 299, 497 Ghez, Andrea Mia, 193 Giancinto, Gaudenz, 427 gifted students, home education of, 581 Gill, Roma, 364 Gipson, Fred, 371 Gittelsohn, Roland B., 548 globes, 301 Glover, David M., 197

Glow-in-the-Dark Night Sky Book, The (Hatchett), 180, 182, 191, 385, 395 God's Gift of Language, 83, 84, 93, 97, 98, 333, 334, 354, 357 Go Fish, 69 GoMath Website, 509 Goodall, Jane, 592 Goodman, Ken, 235 Goodwin, Robert, 494 Goosebumps books, 89, 90 Goose Eggs, 195, 398 Gorev, Edward, 106 Gothic cathedrals, 311, 313, 314, 315, 550 government: high-school course requirements in, 622.623 well-educated citizens as participants in, 571-72 grade divisions, 79 grading procedures, 618-19 Grahame, Kenneth, 105 grammar, English: correspondence courses in, 465 daily schedules for, 81, 96, 97, 226, 227, 354, 355-56, 461, 466 defined, 78 drills in, 84, 439, 465 goals in study of, 81-82, 83, 464 grammar-stage study of, 81-84, 226, 229 Latin studies and, 404-5 logic-stage study of, 333-36, 354, 355, 357-58, 444, 446 notebooks for, 81, 82, 84, 329, 330, 336 rhetoric-stage study of, 464-66, 574, 575, 576, 620 rules of, 82, 336, 464 sentence diagrams in, 330, 333-34 for students with prior schooling, 677 testing procedures in, 357, 618 texts for, 82-84, 98-99, 334-36, 357-58, 464-65, 469-70 transcript credits and, 620, 621, 622, 623 writing program as supplement to, 93, 94.334 grammar, Latin, 201-2 grammar stage, 49-236 aptitude for fact collection in, 53-54 art studies in, 55, 78n, 214-16, 217-20, 225, 226, 227, 228

content emphasized in. 51-54, 452 creative impulses in, 93 curriculum priorities in, 55, 129, 168, 214-15 electronic learning aids discouraged in. 207 - 10grade divisions within, 79 grammar studies in, 81-84, 226, 229 history curriculum in, 55, 89, 123-66, 225-27, 230 language skills acquired in, 77-78 Latin studies in, 199-206, 227, 404 as learning stage, 43-44 math studies in, 55, 78n, 109-22, 224, 225, 226, 227 music study in, 55, 78n, 214-15, 216-19, 220-23, 225, 226, 227, 228 reading development in, 84-90 religion in, 211-13, 225, 226, 227-28 science studies in, 55, 70, 167-98, 225, 226, 227, 230-31, 374-75 subject notebooks kept in, 78, 80-81 summary of, 224-36 teaching techniques in, 54 testing procedures in, 132, 617 as trivium foundation, 452 verbal and brain development in, 208 see also specific grade levels of grammar stage Grant, Neil, 306, 313 Gravett, Christopher, 313 Gray, Elizabeth, 365 Gray, J.E.B., 359 great books, 472-99 of ancient cultures, 475-76, 492-93 basic texts used with, 474, 490 chronological order in study of, 473, 678 daily schedule for, 467, 472, 489-90, 574, 575, 576 educational goal in study of, 473 ethical issues confronted in, 472-73, 546, 574, 575, 576 flexible curriculum for, 473, 474, 480 grade-specific reading lists for, 473-74, 475 - 78historical focus melded with literary appreciation in, 453, 466, 472-73 ideas as central in study of, 472, 550 of late Renaissance-early modern era, 477.495-97 of medieval-early Renaissance, 467, 476-77, 493-95

great books (continued) of modern era, 478, 497-99 outline process for, 467 research papers on topics from, 482-86, 574 resource list for, 490-99 sources of, 481-82, 491-99 for students with other school experience, 678 study procedures for, 474-75, 479-81, 489-90 teaching techniques for, 480-82 transcript credits and, 620, 621-22, 623 university resources for, 481, 486-89 Great Buildings series, 428 Great Conversation: classical education as preparation for, 235 scientific developments addressed in, 512-13, 516-17 Great Expectations (Dickens), 88, 103, 497 Greathall Productions, 106, 672 Greek civilization, 143, 144, 283, 304, 305, 306, 307, 308, 479-80 Greek language studies, 205, 404, 527, 528-29, 530, 535, 574, 575, 576 Greek myths, 85, 99-100, 106, 341, 359, 360-61 Green, John, 144, 146, 187, 188, 193, 306, 313, 395 Green, Norman, 102 Green, Roger Lancelyn, 359, 360, 361, 365 Green, Sharon Weiner, 636 Greene, Carol, 148, 151, 152, 153, 154, 155, 156 Greenleaf Press, 140, 671 Greenough, James Jay, 527 Gribbin, John R., 399 Gribbin, Mary, 399 Griffin-Beale, Christopher, 197 Griffiths, David, 313 Grimm brothers, 103, 250, 347, 367 Grishaver, Joel Lurie, 547 Grolier, 386, 397 Gross, Gwen, 102 Groton, Anne H., 411 Grubbs, Daisy, 556 Gruber, Gary R., 635 Grun, Bernard, 490 Gryphon House, Inc., 670-71

Gulliver's Travels (Swift), 102, 103, 106, 346, 367, 496 G.U.M. series, 84, 93, 96, 97, 98, 333, 335, 336, 354, 358 Gundy, Samuel C., 188 Guroian, Vigen, 594, 597 Gutenberg College, 488 Guthridge, Sue, 162 Haddox, Phyllis, 70 Hake, Stephen, 269 Hakim, Joy, 319-20, 325 Hale, Edward E., 350, 370 Hall, Jerry, 313 Hamilton, Alexander, 496 Hammond, Mason, 534 Hammond, Susan, 221 Hammontree, Marie, 162 Hands-On Sculpting (Erdmann), 420, 425, 551 handwriting, 67-69, 75-76, 79, 107, 108 typing vs., 433 Hardy, Thomas, 351, 498 Harmonies of the World (Kepler), 515 Harnadek, Anita, 247, 258, 270 Harness, Cheryl, 150 Harris, E., 191, 395 Harrison, Michael, 346, 367 Harrison, Patricia, 307 Harrison, Steve, 307 Hart, George, 306 Hastings, Selina, 101 Hatchett, Clint, 180, 191, 395 Hawking, Stephen, 515, 520, 524 Hawthorne, Philip, 223 Haydn, Franz Joseph, 153 Hayman, Leroy, 325 Headlam, Catherine, 194, 196, 389 Health, David, 159 Healy, Jane, 208 Heath, Thomas L., 521 Hebrew language, 406, 413, 528 Heddle, Rebecca, 195 Heilbroner, Joan, 156 Heinrichs, Ann, 159, 325 Hemingway, Ernest, 351 Henbest, Nigel, 191, 393, 395, 396 Henderson, Roxanne, 641 Henry, Alan, 535 Henry, Marguerite, 372 Henry, O., 350, 370 Henry, Patrick, 89, 153 Henry and Mudge books, 74

Henry VIII, King of England, 277, 313, 345 Herodotus, 126, 492 Hewish, Mark, 197 Hicks, David, 47, 273, 473, 500, 571-72, 583 Hicks, William S., 460 Hieatt, A. Kent, 494 Hieatt, Constance, 494 high school: diplomas and, 624-25 employment experiences in, 666-68 grading and transcripts in, 618-24, 626, 658, 660 peer-centered socialization experienced in, 592-93 see also rhetoric stage Hindley, J., 313 Hinrichs, Fritz, 649 Hippocrates, 302, 512, 515, 519, 521 Hiskes, Dolores G., 70 history: American, see American history ancient, see ancient history art and music studies coordinated with, 244, 284, 418, 421, 423-24, 549, 551-52, 566 basic texts in, 301 biographical focus in, 131-32, 148, 151-56, 161-66, 225, 226, 227, 283, 415 catalog resources for, 671 chronological study of, 124, 678 computer educational programs for, 433, 437-38 in daily schedule, 129, 133-34, 135, 136, 138-39, 225, 226, 227, 272, 284-86, 290-91, 296, 299-30 foundational skills vs., 128-29 geography linked to, 128, 137, 278-79, 282 grade-specific divisions of, 85, 89, 125, 126-27, 135; see also specific grades grammar-stage studies in, 55, 89, 123-66, 225-27, 230 in great-books curriculum, 453, 466, 472-73; see also great books of home state, 137, 139, 298 of late Renaissance-early modern period, see late Renaissance-early modern history library use in, 130-31, 134, 136, 137, 282

8

logic of. 44 logic-stage studies in, 126, 244, 272-327, 443-44, 445, 446 of medieval-early Renaissance period, see medieval-early Renaissance history memorization work in, 126, 132-33, 134-35, 136, 137-38, 159, 160, 279, 284, 290, 295-96, 298-99, 324, 325, 326 of modern era, see modern history •moral considerations in, 244 narration_technique in, 128, 129-30, 134, 135, 137, 276 need for study of, 123-24 notebooks for, 127-28, 129-30, 131, 132, 136, 225, 226, 227, 230, 278-79, 283-84, 289-90, 295, 298 in oral form, 297-98, 446, 683-85 organization of material in, 272-74 as organizing outline of diverse disciplines, 45, 124, 273, 276 outlines of topics in, 276-77, 280-81, 286-89, 291-94, 296-97 parts-to-whole approach in, 235-36 primary source readings in, 125-26, 277-78; see also great books reading curricula tied to, 85, 86, 89, 336, 337 religious issues in, 212, 213, 227, 278, 415, 416 resource lists for, 139-66, 300-327 in rhetoric stage, 453 rhetoric-stage research papers on, 482-86, 564-65 science education linked to, 167-68, 374, 377-78, 381, 384, 386, 388, 512-13, 516-17, 564, 678 special projects in, 131, 564-65, 566-67 of sports, 560-61, 567 as story, 124 for students with other school experience, 678 supplementary readings in, 282-84, 304-9, 311-16, 318-21, 323-27 synthesis vs. analysis in study of, 278 testing in, 618 three curriculum repetitions of fouryear division of, 45, 275, 678 time line and, 274-76, 281, 284, 291, 296 transcript credits and, 622, 623

History of US. A. series, 319-20, 325 Hitchner, Earle, 104 Hitler, Adolf, 498 Hobbit, The (Tolkien), 53 Hodges, Margaret, 101, 342, 364 Hodgkin, Dorothy, 386 Holey Cards, 121 Holling, Holling Clancy, 159, 372 Holocaust, 298, 321 Holt Middle-Grade Language Program, 333. 336, 355, 356, 358 Holy Roman Emperors, 135 home education: advocacy group for, 459, 644, 645 afternoon naps and, 599 athletics in, 639-42, 661 auxiliary teaching resources for, 647-55 baby and toddler care accommodated in. 606-7 catalogs as resources for, 669-75 of children with prior schooling, 676-78 child's adjustment to, 585-86 college preparation in, 41-42, 263, 619, 625, 656-65 continual learning in. 600 cooperative classes in, 647-48, 651-52 daily planning of, 603-4, 605 development of, 39, 579-80 difficulties in, 586-88 expenses of, 606 extracurricular school activities in, 457-58, 459, 639-42 as family commitment, 598-600, 604, 606 flexibility in, 604 founding document for, 644-45 goals established for, 582-83, 601-2 initial decision in, 33, 35-36, 39-40, 585-86 legal requirements in, 36, 579, 584, 616-17, 619, 624-25, 628, 643-46 motivations for parental choice of, 580 - 81off-campus learning experiences in, 603 online resources for, 649-51; see also online services organizations in support of, 584, 687-704 outside job demands vs., 598-99 parental capability in, 33-34, 39, 582-83, 601, 647

periodicals on, 588 physical atmosphere of, 33 in practical skills, 582, 585, 600-601 public school relations with, 643-46 realistic expectations in, 579 record-keeping procedures in, 616-26, 644-45 religious justification for. 580 schedules developed for, 598-615 self-education ability developed in, 40, 245-46, 268, 440-42, 480-81, 600, 602 social development concerns in, 36, 40, 587, 588, 589-93, 646 suggestions for organizational procedures in, 604-6 teaching techniques in, 582-83; see also teaching techniques testing in, 78, 628-31 time commitment in, 286, 586, 587, 598-603 for two or more children. 678-79 unschooling approach to, 584-85 weekly planning of, 602-3 yearly planning of, 601-2 Home Education Helper. 675 Home Education Resource Network (HOMER), 434, 438 Homer, 46, 85, 99, 142, 283, 302, 340, 361, 492, 569 Homeschooler's High School Journal, The, 626 Homeschool Guide to the Online World, The (Dinsmore and Dinsmore), 651, 653 Home School Legal Defense Association (HSLDA), 459, 584, 625, 639, 644, 645, 646, 661 Home Students Excel in College (Klicka), 656n, 660 Hopkins, Gerard Manley, 351 Hopkinson, Christina, 141 Horace's Compromise (Sizer), 569 Horemis, Spyros, 401 Horton, James, 556 Houdini, Harry, 163 Houk, Clifford C., 514, 523 household tasks, home-school training in, 585, 600-601, 614-15, 667 Howarth, David, 494 How Nature Works (Burnie), 24, 376, 379-81, 383, 390 How the Earth Works (Farndon and

Dunning), 376, 384, 393

How the Irish Saved Civilization (Cahill). 564-65 How the Universe Works (Couper and Henbest), 376, 384, 393 How to Get Control of Your Time and Your-Life (Lakein), 602, 614 How to Prepare for the SAT I (Green), 636 How to Read a Book (Adler and Van Doren), 466-67, 468, 470, 475, 479, 480, 481, 514, 574, 632 HSLDA (Home School Legal Defense Association), 459, 584, 625, 639, 644, 645, 646, 661 Hudson, Wilma J., 162, 165 Hughes, Langston, 163, 350, 371 Hugo, Victor, 103 Human Action (Mises), 455n human body, in life-science curriculum, 169, 176-77, 179, 189-90, 383-84, 391-92 Human Body, The (Perols and Jeunesse), 176-77, 179, 187 Humble, Richard, 314 Hunchback of Notre Dame, The (Hugo), Hunt, Irene, 141, 371 Hurd, Thacher, 420, 426 Hurston, Zora Neale, 350, 370 Hutton, Warwick, 99, 100 Hyman, Trina Schart, 101 IBM, 432 I Can Read It All by Myself Beginner Books series, 73 I Can Read series, 74 Iliad (Homer), 45, 46, 85, 86, 337, 341, 361, 492 image learning, language-focused education vs., 44-45, 207-10, 432 IMSATT, 434, 438 incidental phonics, 233-34 independence, logic-stage cultivation of, 440 - 42India: folktales of, 100, 341, 359 religious practices in, 213 inductive fallacies, 252 Inferno (Dante), 102, 342, 343, 345, 364, 494 Inside Story series, 314 Inside the SAT, 636-37 Institute for the Study of Liberal Arts and Sciences (ISLAS), 649-50

Intermediate Logic (Nance), 247, 248, 249, 258.445 Internet, 403, 434-35, 538-40 see also online services internships, 667 Introductory Logic (D. Wilson), 247, 248, 249, 258, 444, 678 inventio, 453, 483-84 Irving, Washington, 347, 367, 372 ISLAS (Institute for the Study of the Liberal Arts and Sciences), 649-50 Italian language studies, 404, 407, 528 Italy, medieval, 287-89 Iackdaw Portfolios, 283-84, 285, 289, 294, 297, 303, 310-11, 317, 322, 445 Jackson, Andrew, 153 Jacobi, Derek, 344 James, Keith, 312 James, P. D., 415 James, Simon, 306 Jane Eyre (Brontë), 463, 497 Japanese language studies, 404, 406, 413, 528, 530, 537 Japanese literature, 85, 100, 340, 359 Jefferson, Thomas, 123, 153 Jeunesse, Gallimard, 187 Jewish ethics, 547-48 jobs: classical education valued in, 569-70 high-school employment in, 666-68 John, King of England, 274 Jones, Christie, 313 Jones, Douglas, 203n, 482n, 601n Jones, Gwyn, 363 Jones, John Paul, 154 Jones, Mablen, 220 Jon's Homeschool Resource Page, 650 Josephus, 493 Journey through History (Verges), 144, 147, 150-51, 160-61 Journey to the Center of the Earth, A (Verne), 104 Juárez, Benito, 163 Jungle Book, The (Kipling), 62, 74, 105, 106, 350, 370 Juster, Norton, 372 Just So Stories (Kipling), 62, 74, 105

Kafka, Franz, 498 Kant, Immanuel, 496 Kapit, Wynn, 301–2, 522 Katsaras, Peter, 190 Katzman, John, 637 Keats, John, 496 Keelv, Jack, 426 Keen, Dan, 392, 400 Keith, Harold, 371 Keller, Helen, 163 Kelly, Eric P., 365-66 Kendall, Russ, 320 Kennedy, John F., 163, 297 Kennedy, Paul E., 187 Kepler, Johannes, 515, 519, 522 Kern, Andrew, 570n Kerrod, Robin, 193 kevboard skills, 433 Keys to Excellence series, 635 Kidnapped (Stevenson), 104, 350, 370 Kill Devil Hill, 481 Kilpatrick, William, 417, 597 kindergarten years, 60-70 formal school programs in, 60 home-school schedule in, 600 math studies in, 69, 76, 224 reading skills acquired before, 34, 35 reading studies in, 61-67, 70-75, 224 science studies in, 70, 76 socialization in, 591 teaching resource lists for, 70-76 writing studies in, 67-69, 75-76, 224 kinesthetic learning, 433 King, David C., 150, 159 King, Martin Luther, Jr., 164, 299, 498 Kingfisher Illustrated History of the World (Evans), 21-22, 126, 127, 133, 135, 136, 137, 141, 277, 278, 279-80, 282, 284, 285, 287-94, 295-97, 299, 300, 301, 326, 423, 444, 445, 446 Kingfisher Science Encyclopedia (Headlam), 182, 183, 184, 185, 194, 196, 376, 377, 381, 385, 388, 389 Kipling, Rudyard, 62, 74, 105, 350, 370, 373 Kjelgaard, Jim, 373 Klicka, Christopher J., 591, 656n, 660 Knapp, Brian, 524 Kneidel, Sally Stenhouse, 383, 390 Knights Treasure Chest, 146 Knill, Harry, 307, 320 knowledge: classical focus on, 585 continual acquisition of, 570 disciplinary interrelationship of, 45. 564

early-stage accumulation of, 51-53, 452 Platonic definition of, 570 Knox, John, 102, 345 Koran, 494 Kreeft, Peter, 496 Kuhn, Karl F., 514, 524 Kulling, Monica, 103, 104 Lafayette, Marquis de, 154 Lafferty, Peter, 399 Lafleur, Richard A., 411, 534 Lakein, Alan, 602, 614 Lamb, Charles, 102 Lamb, Mary, 102 Lampkin, Greg. 222 Lang, Andrew, 105 Langerborg, Mary Beth, 615 Langley, Andrew, 307 language learning, image learning vs., 44-45, 207-10, 432 languages, see foreign languages; specific foreign languages language skills: catalog resources for, 672-73 early-stage priority of, 55 four notebooks for, 78 grammar-stage goals in, 77-78, 224-27, 328 left-hemisphere brain development and, 208 logic-stage developments in, 243, 328-30, 444-47 notebook for, 329-30 in rhetoric stage, 461-62, 574, 575, 576 transcript credits and, 621, 623 see also grammar, English; reading; spelling; vocabulary study; writing Language 3, 83, 84, 96, 98-99 Lanier, Sidney, 343, 364 Last Days of Socrates, The (Plato), 303-4, 361 late Renaissance-early modern era: chemistry advances during, 168 grammar-stage reading material on, 102 - 4great-books studies in, 477, 495-97 logic-stage readings on, 336, 346-49, 358-59, 366-69 late Renaissance-early modern history, 127 primary sources on, 294 seventh-grade study of, 291-96, 316-21, 445

third-grade study of, 135-36, 148-56, 226 time line and, 291 Latin America, revolt in, 292-94 Latin Grammar (D. Wilson), 404, 405, 407, 408, 409, 411, 531, 532 Latin Primer (M. Wilson), 201, 203, 205, 404, 405, 407, 408, 409, 411 Latin Road to English Grammar. The, 404-5. 408, 409, 410 Latin studies: college admissions tests aided by, 658 in grammar stage, 199-206, 227, 404 grammar structure in, 201-2 at high-school level, 527, 528, 529, 533-34, 574, 575, 576 logic-stage work in, 402-13, 444, 445, 446.447 online tutorials in, 204, 403, 405 parts-to-whole approach to, 204-5 pronunciation standards for, 202-3 resource lists for, 205-6, 410-12, 533-34, 671 schedules of, 205, 406-9 texts for, 201, 203, 205, 404-5, 410-11, 533-34 tutors and, 203-4, 403, 405 value of, 200-201, 632, 678 Lavoisier, Antoine, 168, 515, 519, 523 Lawall, Gilbert, 535 Lawall, Sarah, 492 Lawrence, John, 105 Lawson, Robert, 74, 373 Lawson, Robert W., 515, 524 Lawson-Tancred, Hugh, 459 Lear, Edward, 103, 349 Learnables, 406, 407, 412-13 Learning about Ancient Civilizations through Art (Chertok), 421, 427 Le Cain, Erroll, 106 Ledbetter, Judith, 683 Lee, Robert E., 164, 497 Lenard, Alexander, 534 L'Engle, Madeline, 373 Leonardo da Vinci, 145, 309 Let's Get Growing! Company Catalog, 673 Letter Chase Typing Tutor, 433, 436 letters, composition of, 92-93, 95, 225, 226 Levine, Art, 235n Levitus, Bob, 543 Levy, Frank, 570

Lewis, C. S., 74, 90, 92, 95n, 373, 498 Lewis, Sinclair, 351 libraries: book selection process in, 36, 89, 339 computer access and, 433 development of skills in. 282n history studies and, 130-31, 134, 136, 137.282 online catalog searches and, 538-39 life science, 169-79, 187-90, 230 animal kingdom, 170-76, 179, 187-89, 390-91 human body, 169, 176-77, 179, 189-90. 391-92 later biology studies and, 170 plants, 169, 177-79, 190, 392-93 see also biology Light, Duane, 426 Lincoln, Abraham, 61, 141, 164, 324, 325, 497 Lincoln, Mary Todd, 164 Lindow, John, 147, 314 Link. 588 Lion, the Witch, and the Wardrobe, The (Lewis), 53, 95n, 209 Lippincott, Kirsten, 395, 523 Listener's Guide to Classical Music, The (McLeish and McLeish), 553, 558 literature: ancient, 99-100, 336, 340-42, 359-63, 421, 467, 473, 475-76, 479-80, 492 - 93ethical values in, 596 four-year historical organization of, 45 - 46of late Renaissance-early modern period, 102-4, 336, 346-49, 358-59, 366-69, 477, 495-97 of medieval-early Renaissance period, 100-102, 336, 342-46, 363-66, 476-77, 493-95 of modern period, 104-6, 336, 349-51, 358-59, 370-73, 478, 497-99 in rhetoric-stage great-books curriculum, 453, 466, 472-73; see also great books upper-grade special research papers on, 561-62, 565 video versions of, 435-36 see also reading Little, Jean, 373 Little Bear series, 74 Little Books, 71

Little Owl Books, 71 Little Princess, A (Burnett), 62, 339, 371 Little Venture tutorial service, 204 Living History series, 312, 323-24 Llovd, Elizabeth I., 556 Lobel, Arnold, 74 Locke, John, 496 logic, formal, 247-59 basic principles of, 250-57 college admissions tests and, 658 critical thinking and, 242-43 grade-specific goals in, 247-48, 249 resource lists for, 257-59, 671 schedule for, 247, 249 for students with other school experience, 677-78 texts on, 247, 248-49, 677-78 three-part structure of, 250 logic stage, 237-447 art studies in, 418-21, 424-29, 444, 445, 446, 447, 549 critical thinking developed in. 239-41 curriculum summary for. 443-47 emergence of subject preferences in, 246 formal logic studied in, 247-59, 443, 444, 445, 446 grammar-stage preparations for, 241-42 grammar studies in, 333-36, 354, 355, 357-58, 444, 446 history studies in, 126, 244, 272-327, 443-44, 445, 446 independence cultivated in, 440-42 language-skills development in, 77-78, 224-27, 243, 328-30 math in, 243-44, 260-71, 443, 444, 445, 446 music studies in, 418-19, 422-25, 429-31, 444, 445, 446, 447, 549 one-on-one teaching time reduced in, 286 practical daily activities undertaken in, 441-42 reading curricula of, 336-52 relational concerns explored in, 244, 272-73, 328 religious issues addressed in, 212, 414 - 17science education in, 374-401, 444, 445, 446, 447 as second stage in classical education, 44, 452

self-direction monitored in, 245-46, 440-41 spelling and word study in, 329, 330-33 teaching techniques in, 244-46 testing procedures instituted in, 263, 357.618 in trivium development, 44, 452 whole-to-parts instruction in, 242 writing studies in, 289, 329, 330. 352-53, 354, 355, 356, 373, 378, 381-82, 444, 445, 446, 447 see also specific grade levels of logic stage London, Jack, 91, 350, 370 Long, Lynette, 122 Longfellow, Henry Wadsworth, 350, 370 look-say reading, 232-33 "Lost Tools of Learning, The" (Sayers), 27, 51, 239, 452, 559, 564 Loverance, Rowena, 314 Lowell, Amy, 351 Lowell, Robert, 351 Lowry, Lois, 371-72 Lucchesi, Bruno, 556 Lucretius, 493 Ludwig, Charles, 369 Lundquist, Joegil, 412 Luther, Martin, 102, 145, 277, 289, 309, 311, 345, 369, 495 Lynchburg College, 489 McAlpine, Helen, 359 McAlpine, William, 359 Macauley, David, 308, 314-15, 325, 438 McCaughrean, Geraldine, 99, 100, 101, 342, 343, 363, 364, 495 McCord, A., 308 McCullough, Bonnie, 614 McCurdy, H., 589 Macdonald, Fiona, 314 McDonald, George, 74 McEwan, Joseph, 427 McGovern, Ann, 361 McGraw, Eloise Jarvis, 359 Machiavelli, Niccolo, 495 Macintosh operating system, 543, 544 Mack, Maynard, 492 McLeish, Kenneth, 553, 558 McLeish, Valerie, 553, 558 McRobbie, Joan, 635 Magic Fishbone, The (Dickens), 103 Magic School Bus, The (Colé), 177, 189 Magna Carta, 135, 277, 289, 290, 311, 494 Maguire, Jack, 642 Malaspina University, 487 Malmstrom, Margit, 556 Malory, Thomas, 102, 342, 343, 345, 363, 495 Mandelbaum, Allen, 342, 363 manipulatives, 69, 110-11, 113 maps, 130, 137, 160, 278-79, 282, 302, 326 Maps, 130, 141-42, 302 Marchesi, Stephen, 180, 191 Marcus Aurelius, 272, 303 Marini, Alexander D., 642 Marlowe, Christopher, 495 Marrin, Albert, 495, 497 Marshall, Ken, 326 Martin, Mary, 218, 427 Marx, Karl, 497 Maslen, Bobby Lyn, 71 Maslen, John R., 71 Mason, Charlotte, 215 Mason, Miriam E., 166 Masters, Denise G., 579n Masters of Art series, 421, 427, 428 Masters of Classical Music series, 222 mathematics: abstract thinking developed through. 109-12, 113 Advanced Placement credits in, 506 algebra, 115, 260-61, 265-67, 500-509, 574, 575, 657 calculators used in, 114, 261, 264-65 calculus, 264, 266, 502, 503, 505, 506, 509 in college planning, 657 computer programming vs., 541 in context of everyday family life, 69, 261-62, 271 correspondence courses in, 505, 509-10 daily schedules of, 109, 115, 117-18, 260, 261, 264, 267-68, 500, 501, 506, 604 drills in, 116, 121-22, 263, 433, 439 games in, 69, 76, 122, 270, 271 geometry, 264, 266, 267, 500-508, 574, 632, 657 in grammar stage, 55, 78n, 109-22, 224, 225, 226, 227 in kindergarten years, 69, 76, 224 logic stage in, 243-44, 260-71, 443, 444, 445, 446 manipulatives as teaching aids in, 69, 110-11, 113

mental-image mode vs. symbolic mode in. 260-61 prepared programs in. 262-68, 269-70. 501-4 in preschool years, 59, 69, 76 rates of progress in, 266-67 resource lists for, 76, 118-22, 268-71, 507-10, 674 in rhetoric stage, 500-510, 574, 575, 576. 620-24 in specialization decisions, 452, 500-501 special projects in, 565 for students with other school experience, 677 tables memorized in, 112-14, 585 teaching techniques in, 110-12, 115, 116, 501 testing in, 263, 618, 632 transcript credits and, 620, 621, 622, 623, 624 trigonometry, 501, 502, 504, 506, 508 tutors in, 55, 262, 503 upper-grade special research papers on, 565 workbooks in, 78n, 115-17 Mathematics Program Associates, 117 Math-U-See programs, 116, 120, 262, 263, 265, 266, 269, 501, 504, 508 Math Wipe-off Books, 121-22 Matt. Margaret, 189, 392 Maugham, W. Somerset, 351 Mavis Beacon Teaches Typing (Beacon), 433, 436 Maybury, Richard, 325 Mayes, Susan, 180, 188, 191 Maynard, Christopher, 396 meal preparation, 600-601, 615 Mebane, Robert C., 182, 194 Medici family, 287, 288, 289 medieval-early Renaissance era: grammar-stage reading materials for, 100-102 logic-stage readings for, 336, 342-46, 363-66 scientific activities in, 167-68 tenth-grade great-books studies for, 476-77, 493-95 medieval-early Renaissance history, 127 second-grade study of, 134-35, 145-48, 225-26 sixth-grade study of, 286-91, 309-16, 444 time line and, 286, 444

Meditations (Marcus Aurelius), 272 Megalabs, 195, 398-99 Melville, Herman, 104, 349, 497 memoria, 453, 454 memorization, 36, 38, 44 critical thinking vs., 240-41, 244 in foreign language studies, 199, 203 of grammar rules, 82 of historical facts, 126, 132-33, 134-35, 136, 137-38, 159, 160, 279, 284, 290, 295-96, 298-99, 324, 325, 326 of math tables, 112-14, 585 of poetry, 87, 89 of primary sources, 135, 136, 137 for recitation, 87-88, 89, 230, 351-52, 354, 355, 356 in science education, 352-53, 355, 378, 383-84, 385, 387, 388-89 tapes as aid to, 133n, 160 Mendel, Gregor, 381 Menuhin, Yehudi, 418 Mercer University, 487 Meredith, Susan, 189 Metropolitan Museum of Art, 215, 218 Microcrystal Chemistry, 195, 399 microscopes, 389, 390 Microsoft Word, 433, 541 Middle English, 365, 495 middle school: home-school portfolios of work in, 617 see also logic stage; specific middle-school grade levels Miles, Lisa, 326 military, high-school graduation required by, 625 Millender, Dharathula, 164 Miller, Arthur, 350, 371, 498 Miller, Peter, 592n Milne, A. A., 351, 534 Milton, John, 77, 102, 348, 496 Minarik, Elsie, 74 Mind Benders books, 248, 249, 258-59, 443 Misérables, Les (Hugo), 103 Mises, Ludwig von, 455 Mister Rogers' Neighborhood, 57 Mitchell, Margaret, 350, 371 Moby Dick (Melville), 104, 497 Moche, Dinah L., 514, 523 modeling clay, 419, 420, 426, 551, 556-57

Modern Curriculum Press: catalog of, 672 phonics programs of, 63, 65-66, 71, 72-73.672 spelling workbooks of, 80-81, 91, 95, 96, 97-98, 224-27, 229, 330-32, 333, 353-54, 355, 357, 672 modern era: grammar-stage reading material for, 104 - 6great-books studies in, 478, 497-99 logic-stage reading curricula for, 336, 349-51. 358-59. 370-73 physics studies linked with, 168 modern history, 127 eighth-grade study of, 296-300, 321-27, 446 fourth-grade studies in, 137-39, 156-66.227 time line on. 296 see also late Renaissance-early modern history modern languages, 403, 404, 405-9, 412-13, 528, 529-30, 535-37 see also foreign languages; specific modern languages Monroe, James, 154 Monsell, Helen Albee, 161, 164 Monsters of Mythology series, 360-61 Montgomery, Lucy Maud, 350, 370 Montrew, Durham, 163 Moore, Bobbie, 150, 159 Moore, Kay, 159 Moral Compass, The (Bennett), 416, 417 morality, see ethics More, Sir Thomas, 102, 310, 345, 495 Morecock, Amelia (Meme), 38 Morecock, Luther, 38 More Mudpies to Magnets (Sherwood), 173, 178, 179, 180, 182, 187, 191 Morley, Jacqueline, 314, 315 Morrison, Toni, 351, 499 Morte d'Arthur, Le (Malory), 102, 343, 344, 345, 364, 495 Morwood, James, 410, 533 Motte, Andrew, 523 Mozart, Wolfgang Amadeus, 154, 221 Muhlberger, Richard, 218 Muirden, James, 191 multiculturalism, 125 multiplication tables, 113-14 Mulvey, Deborah, 322 Murdoch, David, 324

Murnane, Richard J., 570 Murphy, Jim, 141, 322 music: appreciation of, 216-17, 220-22, 422-24, 429-31, 553-55, 558, 574, 575, 576 as curriculum priority, 214-15 from diverse cultures, 423 in grammar stage, 55, 78n, 214-15, 216-17, 220-23, 225, 226, 227, 228 in historical context, 244, 423-24, 549, 566 in home atmosphere, 216-17, 600 instrument lessons in, 217, 222-23, 422.553 in logic stage, 418-19, 422-25, 429-31, 444, 445, 446, 447, 549 resource lists for, 220-23, 429-41 in rhetoric stage, 549-50, 553-55, 558, 566, 574, 575, 576 special upper-grade projects in, 563, 566 transcript credits and, 620, 621, 622, 623 in weekly schedule, 419, 424-25, 550, 574, 575, 576, 599 Music Masters series, 430 My First Math Book, 76 myths, classical, 52, 85, 99-100, 106, 341, 359, 360-61 Myths and Legends series, 359-60, 362-63, 366 Nahum, Andrew, 324 Nance, James B., 247, 248, 258 naps, afternoon, 599 narration exercises, 83, 86, 87, 93, 215 in grammar-stage history study, 128, 129-30, 134, 135, 136, 137, 276 in logic-stage reading activities, 337, 341 outline summary vs., 276 in science studies, 172 Narrative of the Life of Frederick Douglass (Douglass), 56, 348, 368 National Audubon Society Pocket Guides, 188, 190 National Center for Home Education, 656, 660 National Collegiate Athletic Association (NCAA), 639, 661 National Council of Teachers of Mathematics, 261, 265

National Geographic, 142, 592n National Geographic television programs, 210, 435 National Junior Classical League, 481 National Merit scholarships, 267, 502, 503, 632-33, 636, 658 National Writing Institute, 93, 94, 107 nature study, 177-78 Nature's Workshop Plus, 673-74 NCAA (National Collegiate Athletic Association), 639, 661 Nebraska, University of: correspondence courses of, 505, 517, 529 online services of, 505, 509, 518 Nesbit, Edith, 62, 74, 373 NetNanny, 435 Neuschwander, Cindy, 122 New Big Book of Home Learning, The (Pride), 627 Newmark, Ann, 396 New St. Andrews College, 487 Newton, Sir Isaac, 515, 519, 523 New York Times, 581n, 582 Nicole, David, 315 Nicomachean Ethics (Aristotle), 440 Niering, William, 190 Nietzsche, Friedrich, 498 ninth grade: art and music studies in, 552-53, 554, 574 college planning in, 658 curriculum summary for, 573-74 foreign languages in, 530, 531, 533, 574 grammar studies in, 464, 465, 574 great-books study in, 467, 473, 475-76, 489, 492-93, 574 language skills in, 461, 462, 463, 464, 466, 467, 468, 574 Latin studies in, 407, 409, 574 math in, 266, 501, 502, 503, 504, 506, 507, 508, 509, 574 modern languages in, 407, 574 religion in, 574 research paper written in, 482, 485, 489, 560, 562-63, 574 rhetoric and debate in, 451, 453, 454, 455-56, 457, 458, 574 science education in, 513, 514, 515, 516, 518, 519, 521-22, 574 transcript credits and, 620, 621, 622 writing instruction in, 573 see also rhetoric stage

Norms and Nobility (D. Hicks), 47n, 273n, 473n, 500, 571n, 583n North Texas, University of, 488 Northwestern State University, 487 Norton, Mary, 373 Norton anthologies, 482, 491-92 Norwegian literature, 104, 348 notebooks: art supplies for, 78 choice of. 78 in grammar stage, 78, 80-81, 229-31 for grammar work, 81, 82, 84, 329, 330. 336 for great-books studies, 474-75, 480 for history studies, 127-28, 129-30, 131, 132, 136, 225, 226, 227, 230, 278-79, 283-84, 289-90, 295, 298 for logic-stage language skills, 329-30 for reading, 85, 86, 87-88, 89, 225, 226, 227, 229-30, 329, 330 for science, 78, 169, 170, 172, 176, 178, 179, 182-83, 184, 185, 186, 230-31, 377-79, 381-89, 513-14 for spelling, 80-81, 94, 229, 329-30, 332 for writing, 90, 92, 94, 95, 230, 329, 330 Notre Dame, University of, 487 Number Play, 76 Nye, Robert, 342, 363 Oakes, Elizabeth H., 668 obedience, 596-97 Oberg, Brent C., 459 Oberlander, June R., 59, 70 O'Brian, Robert C., 373 O'Dell, Scott, 372, 373 Odyssey (Homer), 85, 86, 99, 283, 337, 341, 361, 492 Odyssey, The (McCaughrean), 99 O'Faolain, Eileen, 362 "Of Education" (Milton), 77 Oklahoma, University of, correspondence courses of, 505, 509, 517, 529, 537 Old Possum's Book of Practical Cats (Eliot), 106 Old Testament, 106, 276 Oliver Twist (Dickens), 103 Once-a-Month Cooking (Wilson and Langerborg), 615 On Christian Doctrine (Augustine), 248 One Hundred One Marvelous Money-Making Ideas for Kids (Wood), 668

online services: E-mail, 434, 435, 538 face-to-face tutoring vs., 434 great-books curriculum in, 481 home-school Websites, 650-51 Latin tutorials, 204, 403, 405 math tutorials, 504-5, 509 in modern languages, 403 quality of information on, 539, 542 resource lists on, 438-39, 649-50 in science education, 518 social relationships through, 434-35, 540 On Target for Tests series, 635 On the Revolutions of the Heavenly Spheres (Copernicus), 515, 522 Oooh Ahhh Chemistry, 195, 387, 399 Opera (Waugh), 533, 558 Opie, Mary-Jane, 557 Oppenheim, Joan, 152, 154 oral histories, 297-98, 446, 683-85 Orczy, Baroness, 350, 370 O'Reilly, Kevin, 301 organization, home-school parent's methods of, 604-5 Original Sin (James), 415 original sources, see primary sources Orwell, George, 498, 639 Osceola, 154 outlining: in great-books study, 467 in logic-stage history, 276-77, 280-81. 286-89, 291-94, 296-97 of research papers, 483, 485-86, 678 outsourcing, 647-55 Ovid, 493 Owen, Betty, 436 Owen, John, 188 Owen, Wilfred, 351, 498 Owl at Home (Lobel), 74 Oxford University Latin Course (Morwood and Balme), 405, 408, 410, 528, 530, 531, 532, 533-34 Oxlade, C., 520 PageMaker, 541 Paine, Thomas, 496 painting skills, 419, 420 PAL (Performance Assessment in Language), 629

Palestrina, Giovanni da, 310, 424

PAM (Performance Assessment in Mathematics), 630

papers: on great-books research topics. 482-86.574 on scientific topics, 516-17, 518, 519 typing and word-processing of, 433. as upper-grade special projects, 452, 559-68, 575, 576, 620-23, 660 see also compositions: writing Parin, Edgar, 148 Parish, Peggy, 536 Parker, Steve, 197, 391, 392, 399, 521 parts of speech, 81-82, 247 parts-to-whole teaching, 204-5, 234-36, 242 Pascal, Blaise, 496 Pasteur, Louis, 164 Payne, Elizabeth, 144, 308 Peacock, Graham, 198 Pearce, Querida L., 180, 191, 396 Pearson, Anne, 306 peer dependence, 590, 591, 592 penmanship, cursive, 68, 69, 75, 79, 91, 93, 96, 225 Pennsylvania, University of, 510 Pepperdine University, 486 Peppin, Anthea, 427 Perella, Nicholas J., 105 Perfection Learning Corporation Books Catalog, 107, 672 Performance Assessment in Language (PAL), 630 Performance Assessment in Mathematics (PAM), 630 Perkins, Simon, 188 Perols, Sylvaine, 187 Perrault, Charles, 102, 346, 367 Perseus Project, 650 Peter Pan (Barrie), 62, 74, 105 Petersen, Roger Tory, 391, 393 Peterson, Kathleen, 417 pharaohs, Egyptian, 283, 302, 308 Pharr, Clyde, 535 Phillips, Kimberly, 592 Phillips, Leslie, 460 Phoenician civilization, 279-93 phonics: for children with previous schooling, 676-77 combined reading and writing programs in, 65-66, 67-68 defined, 63 in dictation exercises, 92 first lessons in, 58

incidental. 223-24 preschool learning of, 34 primers on. 63-64 remedial use of. 676-77 whole language instruction vs., 62n. 232 - 36Phonics Pathways (Hiskes), 63-64, 66, 67, 68, 70, 72, 79-80, 676 physical education, 621, 624, 639-42 physics: Advanced Placement credits in, 506 eighth-grade study of, 376, 387-89, 399-401.447 fourth-grade study of, 168, 185-86, 196-98, 227, 231, 375 special research paper on, 563, 564 twelfth-grade study of, 502, 515, 524-25.576 Physics (Aristotle), 515, 521 Physics for Every Kid (VanCleave), 388 Physics Projects kits, 525 piano lessons, 217, 222, 223 Picard, Barbara Leonie, 363, 366 Picasso, Pablo, 550 picture books, 57 picture study, 215-16 Pied Piper of Hamelin, The (Browning), 103, 347, 367 Pilgrim's Progress (Bunyan), 88, 103, 346, 367, 496 Pinocchio (Collodi), 105 Pinsky, Robert, 342, 494 Pitcher, Molly, 165 Pitsco and Lego Dacta catalog, 674 plane geometry, 264, 500-508, 574, 632, 657 Planet Earth (Curtis), 179, 180, 182, 191 plants, in life-science curriculum, 169, 177-79, 190, 383, 392-93 Plath, Sylvia, 499 Plato, 85, 100, 109, 142, 302, 303-4, 340, 341, 361, 493, 569, 570, 571 plays: filmed versions of, 344, 436 modern, 350, 371 see also Shakespeare, William Plutarch, 493 Pocahontas, 155, 294 Poe, Edgar Allan, 347, 352, 368, 497 poetry, 103, 106, 347 memorization of, 87, 89 modern, 89

poetry (continued) reading of, 343, 350, 367, 368, 371 recitation of, 87-88, 89, 352 Pogany, Willy, 361 Polish language, 404 political rhetoric, analysis of, 456-57 Pollock, Steve, 522 Pontiac, 155 Pope, Alexander, 348, 466n pornography, 435 portfolios, of elementary- and middleschool home education, 616, 617 Post, Richard, 514, 523 Postman, Neil, 201, 208, 245, 516-17, 539, 560, 566 Potter, Beatrix, 105, 351 Potter, Paul, 521 Pound, Ezra, 351 Powell, Anton, 308 Power, Helen W., 665 Power-Glide Language Courses, 405-6, 407, 413, 527, 529, 530-32, 535-36, 537 Practical Home Schooling, 588 practical skills, education in, 582, 585, 600-601 Prado, Marcial, 536 Preliminary Scholastic Aptitude Test (PSAT), 624, 632-33 Latin curriculum as aid to, 658 math curriculum choices and, 266, 267, 502, 503, 657 preparation for, 575, 628, 636, 658 as scholarship qualifying exam, 632-33 premises, logical, 250, 251 Preparing the Research Paper (Davies and Rogal), 483, 486, 490, 562-63, 568 preschool programs, beginning reading instruction abandoned by, 35 preschool years, 56-76 daily schedule in, 56, 64, 67 general learning activities in, 59 informal teaching styles in, 60-61, 607 kindergarten phase of, 60-70 mathematical processes in, 59, 69, 76 reading preparation in, 57-58, 62, 607 reading skills learned in, 60-67, 70-75 resource list for, 70-76 science in, 70, 76 writing preparations in, 58-59, 67-69, 607 "Present Requirements for Admission to Harvard College, The" (Greenough), 527

President's Council on Physical Fitness and Sport, 641, 642 Pride, Mary, 588, 627 primary sources: in ancient history, 283-84, 303-4 evaluation checklist on, 277-78 in late Renaissance-early modern history, 294, 317-18 in logic-stage history curricula, 277-78, 283-84, 289, 294, 297-98, 303-4, 310-11, 317-18, 322-23 in medieval-early Renaissance history, 289. 310-11 memorization of, 135, 136, 137 in modern history, 297-98, 322-23 oral histories as, 297-98 resource lists of, 303-4, 310-11, 317-18, 322-23 in science education, 512, 515 primers, 63-64, 70-73 Princess and Curdie, The (McDonald), 74 Princeton University, 656 Principia (Newton), 515, 523 pronuntiatio, 453, 454 PSAT, see Preliminary Scholastic Aptitude Test public libraries, see libraries public school system: ages segregated in, 583 failures of, 34-36, 580-82, 583 home schoolers tested in, 628n religious neutrality of, 211-12, 213n, 414-15, 594, 595-96 removal of children from, 584, 585-86 special-education classes in, 581n sports programs of, 640 public-speaking skills: debate studies and, 451, 453, 454, 457-58, 459 in recitation work, 87 Purcell, Henry, 422 Putnam, James, 306 Pyle, Howard, 366 QuarkXPress, 541 Quicken, 541 Quirk, Thomas C., Jr., 188

Rabbit Hill (Lawson), 74 Rabelais, François, 511 Rackham, Arthur, 100 Railway Children, The (Nesbit), 74 Rainbow Resource Center, 670
Raleigh, Sir Walter, 145, 147, 309, 315 Ratnesar, Rumesh, 207n Rawlings, Marjorie Kinnan, 350, 371 RCA (Regina Coeli Academy), 649-50 read-aloud books, 75 Reader's Digest, 376, 393 reading: book reports and, 89 books on tape as supplement to, 86 child's readiness for, 66-67 choices of material for, 84-86, 99-107, 339, 349, 358-59 classic novels on video vs., 435-36 as curriculum priority, 55, 61 daily schedules for, 64, 67, 85, 87, 88, 96, 97, 224, 337, 339, 340, 345-46, 349. 354. 355. 356 discussions on, 337-39 ease of, 61-62, 64 of fiction vs. nonfiction, 337 free time for, 87, 88, 89, 339, 346, 349, 351 grade-specific historical stories for, 85, 89, 99-106, 336-37, 340-51 in grammar stage, 84-90, 99-107, 224-27 history vs., 336, 337 home-school parents' time for, 601 initial lessons in, 63-67 in kindergarten years, 61-67, 70-75, 224 of lightweight series books, 89-90 logic of, 44 logic-stage curricula in, 336-52, 363-66, 444, 445, 446-47 notebooks for, 85, 86, 87-88, 89, 225, 226, 227, 229-30, 329, 330 parental censorship of, 90, 339 phonics-whole language debate on, 62n, 232-36 poetry recitation and, 87-88, 89 preschool preparation for, 34, 35, 57-58, 62, 607 of primers, 63-64, 70-73 reading texts used in, 84-85 reinforcement programs on, 64-65 remedial instruction in, 676-77 resources for, 70-75, 358-73 in rhetoric stage, 461, 462, 466-67, 470-71; see also great books summaries of, 337, 341 testing vs. evaluation of, 618 video vs., 44-45, 349

workbooks on, 65-66 writing acquisition combined with, 65-66. 67-68 Reading Strands, 466, 467, 468, 471, 480, 481 reading texts, 84-85 recitation, 87-88, 89, 230, 351-52, 354, 355.356 record keeping, 616-26 of elementary- and middle-school portfolios, 616, 617-18 of notification, 616, 617 state requirements for, 616-17 of transcripts, 616, 618-24, 626, 658, 660 Recovering the Lost Tools of Learning (D. Wilson), 328, 452n, 564n Reece, Nigel, 427 Reed, Fiona, 390 Reeve, Henry, 497 Reeve, John, 315 Reeves, James, 362 Reflections on the Revolution in France (Burke), 211 Regina Coeli Academy (RCA), 649-50 Reit, Seymour V., 141 Relativity (Einstein), 515, 524 religion: classic rhetoric associated with, 545-47 in grammar stage, 211-13, 225, 226, 227 - 28in history studies, 212, 213, 227, 278, 415, 416 home-school decision motivated by, 580 at logic stage, 212, 414-17, 444, 445, 446, 447 public-school neutrality on, 211-12, 213n, 414-15, 594, 595-96 in rhetoric stage, 545-48, 566, 574, 575, 576 science and, 211, 212, 564 special projects on, 566 as textbook influence, 83-84, 116, 248, 263, 335 Renaissance, see late Renaissance-early modern history; medieval-early Renaissance history Republican Party, 459, 584 research papers: in great-books studies, 482-86, 574 outside evaluations of, 567-68 student's readiness for, 678

research papers (continued) in upper-grade special projects, 452, 559-68, 575, 576, 660 see also compositions; papers; writing Resisting the Virtual Life (Brook and Boal), 540, 542 Revere, Paul, 155, 369 rhetoric, study of, 453-60 curriculum suggestions for, 454-57 ethical applications of, 545-47 five aspects of, 453-54 political, 456-57 religious faith defended with, 545-48 research paper techniques derived from. 483-86 resource list for, 458-60 transcript credits and, 620, 621, 622 value of training in, 451-52, 454, 545 in weekly schedule, 451, 454, 458, 574 Rhetoric (Aristotle), 451, 452, 453, 454, 455, 458, 459, 545-46, 574 rhetoric stage, 449-576 art and music studies in, 549-58, 566, 574, 575, 576 computer skills in, 538, 540-42, 575, 576 curriculum summary for, 573-76 educational goal of, 473 English-language skills in, 461-71, 573. 574. 575, 576 ethical and religious issues addressed in, 545-48, 574, 575, 576 extracurricular activities of, 457-58, 459, 574, 575, 593 foreign-language studies in, 526-37, 574, 575, 576, 620-24 general guide to, 452-53 grading in, 618-19 great-books curriculum as focus of. 453, 472-99, 574, 575, 576 home-school time commitment for, 600 idea-centered learning in, 472, 549-50 Latin studies in, 527, 528, 529, 533-34, 574, 575, 576 logic background employed in, 44 major writing projects undertaken in, 452, 559-68, 574, 575, 576, 620-23 math in, 500-510, 574, 575, 576, 620-24 oversight of independent work in, 480-81,600

PSAT and SAT preparation in, 575 religion in. 545-48, 566 rules of rhetoric in, 451, 453-60, 574 sample daily schedule suggested for, 614 science education in, 511-25, 574, 575, 576. 620-24 self-expression in, 451-52 specialization decisions made in, 44, 452-53, 559-68 as stage of classical education, 44 transcript credits and, 616, 618-24 see also specific grade levels of rhetoric stage Richard I (the Lionhearted), King of England, 274 Rickman, David, 160 Ridpath, Ian, 523 Riordan, James, 103 Rip Van Winkle (Irving), 106, 347, 367 Robinson, Adam, 637 Robinson Crusoe (Defoe), 102, 346, 367 Rockwell, Robert E., 176, 187 Roehrig, Catharine, 308 Rogal, Samuel, 490, 568 Roget's International Thesaurus (Chapman), 464.469 Romance languages, 404 see also specific Romance languages Roman civilization, 53, 132, 133, 143, 144, 284, 304-8, 313, 340, 341, 362, 366 Roman myths, 52, 85, 99, 341 Romei, Francesca, 427, 428 Roop, Connie, 318 Roop, Peter, 318 Roosevelt, Eleanor, 165 Roosevelt, Theodore, 165 Rose Hill College, 488 Rossetti, Christina, 103, 347, 349, 352, 367-68 Rousseau, Jean-Jacques, 496 Rubenstein, Len, 391 Ruders, Poul, 422-23, 429 Rulebook for Arguments, A (Weston), 24, 454, 455-56, 457, 458, 459, 574 Rummy Roots, 205-6 Russell, Bertrand, 260 Russell, D. A., 534 Russia, history of, 295, 299, 321 Russian language, 404, 406, 413, 528, 530, 537 Ruth, Babe, 165 Rybolt, Thomas R., 182, 194

Sabin, Francene, 148, 151, 154, 161, 162, 163, 164, 165 Sabin, Louis, 152, 153, 163, 165, 166 Sacagawea, 155 Saint Anselm College, 488 Saint-Exupéry, Antoine de, 536 Saint George and the Dragon (Hodges). 101, 342-43 St. John's College, Annapolis, Md., 487 St. John's College, Santa Fe, N.Mex., 488 Saint Olaf College, 488 Sanchez, Isidro, 220 Sandburg, Carl, 89, 105, 351, 497 Sanderson, Ruth, 102 Santrey, Laurence, 151, 153, 156, 161, 162 SAT, see Scholastic Aptitude Test Sato, Koichi, 401 Savage, Stephen A., 308 Saxon math programs, 69, 115-16, 117-18, 120-21, 262-63, 265-67, 269-70, 443, 444, 445, 501-9, 602, 674, 677 Saxon Physics Home Study Kit, 514 Saxons, 366 Sayers, Dorothy, 27, 38, 51, 239, 350, 370, 452, 494, 559, 564 Scarf, Maggie, 153 Sceptical Scientist, The (Boyle), 515, 523 Schaeffer, Francis, 545, 547 Schall, Jason, 670 Schall, Lori, 670 schedules: of art studies, 419, 424-25, 550, 554, 555, 574, 575, 576, 599 books on management of, 601, 602, 614-15 daily, 603-4, 605, 608-14 flexibility in, 604 of foreign language studies, 406-9, 526, 530-33 grade-specific suggestions for, 608-14 of grammar work, 81, 96, 97, 226, 227, 354, 355-56, 461, 466 of great-books studies, 467, 472, 489-90, 574, 575, 576 of history studies, 129, 133-36, 138-39, 225, 226, 227, 272, 284-86, 290-91, 296, 299-300 of home-education programs, 598-615 of household tasks, 600--601 of job demands vs. home schooling, 398-99

of math studies, 109, 115, 117-18, 260, 261, 264, 267-68, 500, 501, 506, 604 of music studies, 419, 424-25, 550, 574, 575, 576, 599 organizational guidelines for, 604-6 of reading, 64, 67, 85, 87, 88, 96, 97, 224, 337, 339, 340, 345-46, 349, 354, 355, 356 rest periods accommodated in, 599 of science work, 167, 169, 171-72, 175-77, 179, 181, 225, 226, 227, 374, 377, 381, 384, 386, 388, 511, 513. 518-20 training in development of, 441-42 with two or more students, 678-79 weekly, 602-3 of writing work, 68, 90, 92, 96, 97, 224, 225, 226, 227, 329, 461 of yearly goals, 601-2 youngest children's needs accommodated in, 606-8 see also specific subjects Schlosser, Franz, 412 Schmidt, Gary D., 346, 367 scholarships, 632-33 Scholars' Online Academy (SOLA), 649-50 Scholastic Aptitude Test (SAT), 624, 627 ACT vs., 634 curriculum choices and, 266, 267, 502, 503, 632 fees for, 634 preparation for, 575, 628, 632, 636-37, 658 registration procedures for, 633, 634, 658 subject tests of, 633, 660 test centers for, 634 verbal section of, 464n Schola Tutorials, 405n, 649, 650 Schroder, Walter K., 323 science education: catalogs of resources for, 673-74 correspondence courses in, 517-18 educational goals of, 170, 181-82, 186, 375-76 equipment suppliers for, 195, 197, 520 evolution theory vs. creation in, 211, 380n extra activities in, 379, 384, 385, 387, 389, 621

foundational skills vs., 129, 168

science education (continued) four-year historical pattern in, 46 in grammar stage, 55, 70, 167-98, 225, 226, 227, 230-31, 374-75 hands-on experiments in, 76, 173, 178, 179-80, 182-86, 195, 197, 198, 377, 378, 382-83, 384, 386-87, 388, 673-74 historical correlations with, 167-68, 374, 377-78, 381, 384, 386, 388, 512-13, 516-17, 564, 678 in kindergarten years, 70, 76 logic of, 44 in logic stage, 374-401, 444, 445, 446, 447 memory work in, 378, 383-84, 385, 387. 388-89 national competitions in, 705-9 notebooks compiled in, 78, 169, 170, 172, 176, 178, 179, 182-83, 184, 185, 186, 230-31, 377-79, 381-89, 513-14 online resources for, 518 parts-to-whole instruction in, 236 philosophical and cultural implications in, 512, 516-17, 564 primary-source materials in, 512, 515 principles studied in, 511, 512, 513 - 14religious belief and, 211, 212, 564 reports written in, 378, 381-82, 384, 386, 388, 513-14, 516-17, 518, 519 resource lists for, 186-98, 389-401, 520 - 25in rhetoric stage, 511-25, 574, 575, 576, 620-24 software programs in, 433, 437, 438 specialization decisions in. 452 special projects in, 377, 379, 563, 564, 565, 621 for student with previous schooling, 678 testing vs. evaluation in, 378, 618 textbooks in, 169, 182, 376, 379-81, 384, 385-86, 387-88, 390, 393, 396-97, 399-400, 514 in time line, 374, 381, 384, 386, 388 transcript credits and, 620, 621, 622, 623, 624 upper-level papers in, 516-17, 621 video aids in, 210, 377, 435

weekly schedules for, 167, 169, 171-72, 175-77, 179, 181, 225-27, 374, 377, 381, 384, 386, 388, 511, 513, 518-20 women in science and, 193 science fairs, 379, 593, 621 Science in a Nutshell kits, 185-86, 192, 196-97, 392, 394, 399-400 Science of Taste, The, 387 Science Supplies for Science Projects. 673, 674 scientific method, 174, 374, 383 scientists, religious faiths of, 416 Scoring High series, 635-36 Scotland, rulers of, 135 Sculpey, 426, 556-57 sculpting, clay, 419, 420, 426, 551, 556-57 Seaver College, 486 secondary sources, 277 second grade: curriculum summary for, 225-26 daily schedule suggested for, 609 grammar work in, 81, 83, 96 handwriting work in, 79, 225 language-skills daily schedule in, 96, library use begun in. 131 math schedule in, 118, 225 medieval-early Renaissance history studied in, 134-35, 145-48, 225-26 reading materials for, 85, 88, 100-102 science studies in, 167-68, 179-82, 191-94, 226, 230, 375 writing work in, 91-93, 96, 225 see also grammar stage Segal, Erich, 493 self-esteem, academic, 581 self-expression: age-appropriate focus on, 53 external objects as vehicles of, 451 knowledge accumulation vs., 51-52, 53 self-government, fitness of well-educated populace for, 571-72 self-study, parental oversight of, 245-46, 286, 440-41, 480-81, 600, 602 self-supporting statements, 253 Self-Teaching Guides, 514 Seneca, 199 sentence diagrams, 333-34, 336 Sesame Street, 208, 209 Seton Home Study School, 505, 509 Seuss, Dr. (Theodore Geisel), 73, 232

seventh grade: art and music study in. 424-25, 446 chemistry studies in, 375, 376, 385-87, 396-99, 446 college planning in, 658 computers used for compositions in: 433 curriculum summary for, 445-46 daily schedule suggested for, 612-13 financial responsibility undertaken in. 441 foreign-language study in, 407, 408, 409, 446, 530, 531, 532 formal logic studied in, 445 grammar work in, 333, 335, 336, 355. 446 language-skills notebook in, 329-30 late Renaissance-early modern history in, 291-96, 316-21, 445 late Renaissance-early modern reading curriculum of, 336, 346-49, 366-69, 446 math in, 264, 265-67, 268, 445, 501, 503, 504, 507, 508 memorization work in, 352-53, 355, 378, 383-84, 385, 387, 388-89 outline skills added in, 291-94 religion in, 446 spelling and word study in, 330, 332, 333, 355, 445-46, 677 writing studies in, 352, 353, 355, 378, 446 see also logic stage Sewell, Anna, 373 sexual relationships, 593, 596 Seymour, Flora Warren, 155 Shakespeare, William, 85, 86, 88, 101-2, 106, 145, 310, 342, 343, 345, 364, 365, 366, 495, 566, 671-72 guidelines for initial reading of, 344 Sharp, Margery, 373 Shaw, George Bernard, 350, 371 Shearer, Cyndy, 671 Shearer, Rob, 671 Shelley, Mary, 349, 496 Shelley, Percy Bysshe, 349 Shenk, David, 542 Sherman, Dennis, 490 Sherwood, Elizabeth A., 187, 191 Shimer College, 487 Short History of Western Civilization, A (Harrison, Sullivan, and Sherman), 474, 479, 490

Sibbet, Ed. 315 Silberstein-Storfer, Muriel, 220 Silicon Snake Oil (Stoll), 542 Simon, Seymour, 192-94 Singer, Isaac Bashevis, 351 Sir Cumference and the First Round Table (Neuschwander), 122 Sir Gawain and the Green Knight, 101, 342, 343, 345, 363, 494 Sitting Bull, 155 sixth grade: , art and music study in, 422, 423, 424, 445 college planning begun in, 657-58 curriculum summary for, 444-45 daily schedule suggested for, 612 earth science and astronomy in, 375, 376, 384-85, 393-96, 445 foreign languages in, 404, 407, 408, 409, 445 grammar studies in, 333, 335, 354, 445 handwritten work done through, 433 language-skills notebook in, 329-30 logic study in, 444 math in, 261, 262-64, 266, 267, 444, 657 medieval-early Renaissance history in, 286-91, 309-16, 444 medieval-early Renaissance reading curriculum for, 336, 342-46, 363-66, 445 memorization work in, 352, 354 outline techniques in, 286-89 religion in, 445 spelling and word study in, 330, 332, 354, 444-45, 677 writing work in, 289, 352-53, 355, 378, 445 see also logic stage Sizer, Theodore R., 569 Skip Counting Songs, 122 Slime Chemistry, 195, 387, 399 Slobodkin, Louis, 103, 556 Slouka, Mark, 542 Slow and Steady, Get Me Ready (Oberlander), 59, 70 Smith, A. G., 147, 160, 316 Smith, Christine, 220 Smith, Ray, 536 Smithsonian Institution, 589 Snow White and the Seven Dwarfs, 250-52, 254-57 Sobel, Donald J., 373

social development: of home schoolers, 36, 40, 587, 588, 589-93.646 online relationships and, 434-35, 540 Social Studies, 125 social workers, home schoolers visited by, 645.646 Sockley, C., 520 Socratic dialogue, 467 Softer, Ruth, 190 software programs, 433, 436-38, 439 see also computers SOLA (Scholars' Online Academy), 649-50 Solzhenitsyn, Aleksandr, 498 Songs of Innocence (Blake), 103, 496 Sophocles, 492 Sorlorzano, Lucia, 664 Sovak, Jan, 188 Spanish language studies, 404, 406, 407, 412, 413, 528, 529, 530, 536 Speare, Elizabeth George, 362, 369 special-education classes, 581n specialization: decisions on, 44, 452-53, 500-501 in upper-grade major research projects, 452, 465, 482, 559-68, 575, 576 special needs, 645 speeches: memorization and recitation of, 89, 137 as primary-source material, 297 speech impediments, 581n spelling, 79-81 for children with prior education, 677 completion of work in, 462 daily schedules for, 80, 81, 95, 96, 97, 224, 225, 226, 227, 328, 330, 353, 354, 355 logic-stage work in, 330-33 notebook compiled for, 80-81, 94, 229, 329-30, 332 phonics-based rules of, 65, 80, 229, 677 testing in, 618 vocabulary study vs., 329, 332 workbooks with exercises in, 80-81. 97-98, 224, 225, 226, 227, 229 Spelling Workout series, 80-81, 91, 95, 96, 97-98, 224-29, 330-32, 333, 353-54, 355, 357, 444-45, 446, 463, 611, 612, 677

Spenser, Edmund, 101, 342-43, 345, 495 Sperry, Armstrong, 366 Spier. Peter. 320 Spinechillers books, 89 Spirin, Gennady, 101 Sporting Spirit, The (Orwell), 639 sports: in college, 639, 661 extracurricular involvement in, 593, 639 - 42special upper-grade projects on, 563, 567 Spotter's Guide (Henbest and Harris), 179. 180, 181, 182, 191, 385, 395 spreadsheet program, 541, 543 Springer, Douglas R., 460 Spyri, Johanna, 105 Stack, Peggy Fletcher, 417 Stadium Discere Tutorials, 649 Stahl, Georg Ernst, 168 Stamper, Silas, 76 standardized tests, 627-38 ACT, 632, 634, 637 Advanced Placement, 506, 575, 627, 631-32 for college admissions, 627, 632-34 for college credit, 627, 631-32 preparation materials for, 635-38 PSATs, 266, 267, 502, 503, 575, 624, 628, 632-33, 636, 657, 658 resource lists for, 634-38 SATs, 266, 267, 464n, 502, 503, 575, 628, 632, 633, 634, 636-37, 658, 660 yearly administration of, 628-31, 634-35 "Stand Back," Said the Elephant, "I'm Going to Sneeze" (Thomas and Tripp), 74 Stanford Achievement Test, 635 Stanford University, 656 Stanmark, Jean, 270-71 Stargazer's Guide to the Galaxy, The (Pearce), 180, 182, 191, 385, 396 Stark, Fred, 392, 522 Stars and Planets (Muirden), 179, 182, 191 state history, 137, 139, 298 states, capitals of, 137-38, 160, 326 Steedman, Scott, 150, 309, 320 Steel, Flora Ann, 100 Steele, Philip, 308, 316 Steele, Richard, 472

Steinbeck, John, 498 Stevenson, Augusta, 152, 155, 161, 165, 166 Stevenson, Robert Louis, 104, 165, 214, 350.370 Steward, Jennifer, 615 Stewart English Program, 333, 335-36, 355, 356, 358 Stine, R. L., 339 Stoll, Clifford, 542 Stoppard, Tom, 498 Story of Painting, The (Beckett), 552, 557 Stott, Carole, 324, 396 Stowe, Harriet Beecher, 497 Strickland, Carol, 551, 557 Strong Start in Language, A (Beechick), 52n, 98 Strunk, William, 468, 471 Stuart Little (E. B. White), 74, 92 Sullivan, George, 160, 326 Sullivan, Richard, 490 Supreme Court, U.S., 159 Sutcliff, Rosemary, 343, 361, 362, 364, 366 suttee, 213 Sweet, Waldo E., 410, 534 Sweet Valley High series, 89, 90 Swift, Jonathan, 102-3, 346, 348, 367, 496 Sydow, Dan Parks, 544 syllogisms, 256-57 syntax, 243, 402-3 Tacitus, 493 Tahta, Sophy, 180, 191 Taking the SAT, 633 talk, early language skills enhanced by, Tallis. Thomas, 424 Tanaka, Shelley, 327 Taylor, Barbara, 177, 187 Taylor, Mildred D., 372 Taylor, Nick, 318 Teaching Home, 588, 650 teaching techniques: dialogue, 244-45 for discussions on literature, 337-39 for grammar exercises, 334 for grammar-stage history, 129-30 for grammar stage of knowledge accumulation, 55 in home-education circumstances, 582-83

.

informal preschool, 60-61 leader-disciple relationship developed as. 583 in logic stage, 244-46, 286 in math. 110-12, 115, 116, 501 narration, 83, 86, 87, 93, 128, 129-30, 134, 135, 137, 215, 276, 337, 341 of one-on-one tutoring, 55, 65, 244-45 parenting vs., 56, 582 in parts-to-whole vs. whole-to-parts method, 204-5, 234-36, 242 picture study, 215-16 public-school remedial program and, 582 in self-direction supervision, 245-46, 286, 440-41, 480-81, 600, 602 time commitments necessitated by, 286 of visual technology vs. word-centered curriculum, 44-45, 207-10, 432 Teaching the New Basic Skills (Murnane and Levy), 570 Teach Your Child to Read in 100 Easy Lessons (Engelmann, Haddox, and Bruner), 64,70 Teague, Ken, 144 team sports, 639-40 technology: brain development affected by, 540 imaged-based focus emphasized by, 207 - 10sociocultural implications of, 516, 517, 539-40, 542 teen romance novels, 339, 596 telephone use, 606 telescopes, 396 television: cartoons on, 89-90 family reading activities vs., 606 image-based learning presented on, 44-45 parental supervision of, 435 in preschool years, 57 right-hemisphere brain stimulation by, 208 video teaching aids on, 207-10 see also videos Temple University, 488 ten Boom, Corrie, 372 Tending the Heart of Virtue (Guroian), 594, 597 Tennyson, Alfred, Lord, 103, 347, 348, 368, 497

tenth grade: art and music studies in, 552, 555, 575 curriculum summary for, 574-75 foreign languages studied in, 531, 533 grammar studies in, 464, 465, 574 great-books studies in, 467, 476-77, 480n, 489, 493-95, 574 Latin studies in, 407, 575 logic studies in, 677-78 math in, 266, 501-2, 503, 504, 507, 508, 509, 574 modern languages studied in, 407, 575 PSAT and SAT preparations in, 575, 633.658 reading instruction in, 466, 467, 468 religion in, 575 research paper written in, 482, 485, 489, 560, 562-63, 574 rhetoric and debate studied in, 451, 453, 454, 456-57, 458, 574, 575 sample daily schedule outlined for, 614 science education in, 513, 515, 516, 518, 519, 522-23, 574 transcript credits and, 620, 621, 622-23 writing studies in, 468, 574 see also rhetoric stage Test Best series, 636 testing: ACT, 632, 634, 637 Advanced Placement, 506, 575, 627, 631-32, 637 GED, 625, 660 grading procedures for, 618-19 in grammar stage, 132, 617 in grammar work, 357, 618 in history studies, 132, 618 initiation of, 617-18 in logic stage, 263, 357, 618 in math. 263, 618 notebook evaluations and, 78, 617, 630 preparation for, 629-31 PSATs, 266, 267, 502, 503, 575, 624, 628, 632-33, 636, 657, 658 SATs, 266, 267, 464n, 502, 503, 575, 628, 632, 633, 634, 636-37, 658, 660 in science education, 378, 618 standardized, 627-38 student behavior in, 263 textbooks: adherence to, 290 Christian beliefs in, 83-84, 116, 248, 263, 335, 671, 672

in Latin, 201, 203, 205, 404-5, 410-11 logic-stage reduction in use of, 245 schedule goals developed in conjunction with, 602 in science education, 169, 182, 376, 379-81, 384-88, 390, 393, 396-97, 399-400.514 used copies of, 674-75 see also specific subjects Thanksgiving, religious content of, 213 theater, upper-grade projects on, 566 theology, 211 see also religion thesaurus, 464, 469 thesis statements, 483, 484, 560 third grade: chemistry studies in. 168, 182-85. 194-96, 226, 230, 375 curriculum summary for, 226-27 daily schedule suggested for, 609-10 grammar studies in, 83, 84, 96, 226 language-skills daily schedule in, 96, 226 late Renaissance-early modern history in, 135-36, 148-56, 226 Latin studies in, 199, 201, 203, 227, 404 math schedule in, 118, 226, 585 reading materials in, 85, 88-89, 102 - 4writing studies in, 91, 93-94, 96, 226 see also grammar stage Thomas, Patricia, 74 Thomas Aquinas, Saint, 494 Thomas Aquinas College, 486 Thompson, Virginia, 271 Thoreau, Henry David, 497 Three Musketeers, The (Dumas), 103, 106 Through the Looking-Glass (Carroll), 74, 103 Thucydides, 492 Tierney, Tom, 147, 150 time line, historical: customary Christian division of, 274n fine-arts events recorded in, 421, 423-24 in history studies, 274-76, 281, 284, 291, 296 proportional representation in, 275 scientific events recorded in, 374, 381, 384, 386, 388 Time Machine, The (Wells), 105, 350, 370

time management: books on, 601, 602, 614-15 of daily schedules, 603-4, 605, 608-14 flexibility in. 604 grade-specific suggestions for, 608-14 of household tasks, 600-601 of job schedules vs. home schooling, 598-99 organizational guidelines for, 604-6 of weekly schedules, 602-3 of yearly schedules, 601-2 voungest children and, 606-8 Time Quest series, 326-27 Timetables of History, The (Grun and Boorstin), 474, 479, 490, 515, 554 Tobin's Lab, 674 Tocqueville, Alexis de, 497 toddlers, home-school accommodation of care for, 606-7 Tolkien, J.R.R., 342, 363 Tolstoy, Leo, 498 Tomb, Eric, 222, 430 Torbiak, George, 675 Torbiak, Karen, 675 transcripts, high-school, 616, 618-24, 626, 658, 660 Treasure Island (Stevenson), 104, 350 Tredennick, Hugh, 303, 361 Trelease, Jim, 75 trigonometry, 501, 502, 504, 506, 508 Tripp, Wallace, 74 trivium, 37, 43-44, 45 content stage of, 51, 53 primary source readings in, 125-26 rhetoric stage and, 452-53 Truman, Harry S., 165 Trumpet of the Swan, The (E. B. White), 62, 74, 92 Tubb, Jonathan, 306 Tubman, Harriet, 166 Tufts University, 650 Tunberg, Jennifer Morrish, 412 Tunberg, Terence O., 412 Turnbull, E. Luica, 100 tutoring, 648-49 of English-language skills, 55 face-to-face vs. online, 434 fees for, 203, 648 in foreign-language studies, 203-4, 403, 405, 407, 527, 529 in math, 55, 262, 503 sources for, 648-49 supervision of, 648, 649

Twain, Mark, 104, 166, 347, 348, 349, 368, 498 twelfth grade: art and music activities in, 552, 555, 576 College Board testing in, 633, 658 computer programming as elective in, 538, 541-42, 576 foreign languages in, 531, 532, 533, 576 grammar studies in, 464, 465, 576, 677 great books in, 473, 478, 490, 497-99, 576 math in, 266, 501, 502, 503, 504, 506, 507, 508, 509, 576 religion in, 576 science education in, 515, 516, 517, 518, 519, 524-25, 576 transcript credits and, 620-21, 622, 623 writing instruction in, 468, 469 writing project in, 452, 465, 482, 559-68, 576, 660 see also rhetoric stage 20,000 Leagues under the Sea (Verne), 104, 347 Two Worlds of Childhood (Bronfenbrenner), 590n Tyler, Jenny, 141 Type It (Duffy), 433, 436 Typing Master, 433, 436 typing skills, 433, 436 United States, see American history university education, see college Uno, 69 unschooling, 584-85 Usborne Book of World History (Tyler), 126, 127, 128, 129, 130-31, 133, 134, 135-36, 137, 138-39, 140-41 Usborne First Book of the Recorder (Hawthorne), 217, 223 Usborne History of the Twentieth Century (Hopkinson), 136, 137, 138, 141 Usborne Illustrated Dictionary of Science (Sockley, Oxlade, and Wertheim), 514, 520 Usborne Illustrated Encyclopedia of the Natural World (Watts), 170-75, 179, 187 Usborne Piano Course, 217, 223 used books, sources for, 674-75

VanCleave, Janice P., 386, 387, 388, 390, 391, 394, 396, 397, 399, 401 Van Doren, Charles, 466, 468, 470, 475, 479, 514, 632 Van Rose, Susanna, 395 Veith, Gene Edward, 570 Venezia, Mike, 218, 430-31 Vennema, Peter, 362 verbal development, brain function and, Verges, Gloria, 144, 147, 150-51, 160 Verne, Jules, 104, 347, 349, 368 Vernon, Louis, 369 Viadero, Debra, 261n videos, 377 of classic novels, 435-36 of English grammar course, 465 for foreign languages, 436 in grammar stage, 207-10 image-based learning and, 432 in logic stage, 432, 435-36, 439 as science teaching aids, 210, 435 sources for, 439 Vikings, 146, 147, 311, 312, 313, 314, 315, 316, 365, 366 Viorst, Judith, 536 Virgil, 100, 142, 303, 340, 341, 493 Visual Basic, 541, 544 Visual Factfinders series, 179, 180, 181, 191, 394, 395 Vocabulary from Classical Roots (Fifer and Flowers), 330, 332, 333, 355, 356-57, 445, 446, 454, 458, 462, 463-64, 469, 573, 613, 658, 677 vocabulary study, 330-33, 469 in daily schedule, 332, 353, 354, 355, 445, 446, 463 notebook for, 331 in rhetoric stage, 462-64, 573 spelling work replaced by, 329, 332, 462 for students with prior education, 677 vocational training, classical education vs., 569-70 volunteer work, 668 Wagoner, Jean Brown, 151, 156 Wallis, Charles G., 522 War of the Worlds (Slouka), 542 Washington, George, 156 Washington, Martha, 156 Watercolor for the Artistically Undiscovered (Hurd and Cassidy), 420, 426

Waterfield, Robin, 521 Waters, Kate, 161, 320-21 Watts, Lisa, 187 Waugh, Alexander, 553, 558 Weekend with, A, . . . series, 429 Weidensaul, Scott, 189 Weil, Ann, 165 Weiss, Jim, 106 Weissman, Alan, 188 Wellington, Jerry, 198 Wells, H. G., 105, 350, 370 Welton, Jude, 557 Wenzel, Paul, 104 Wertheim, J., 520 Wesleyan University, 487 Western Canon University, 481 Weston, Anthony, 24, 454, 455-56, 457, 459 What Color Is Your Parachute? (Bolles). 667,668 Wheelock, Frederick M., 411, 534 Wheelock's Latin (Wheelock and LaFleur), 405, 407, 408, 411, 528, 530, 531, 533, 534 White, E. B., 62, 74, 90, 92, 373, 468, 471 White, John S., 493 White, T. H., 343, 364 Whitehead, Alfred North, 549 White House, 161 Whitman, Walt, 497 Whitman College, 489 whole language, phonics vs., 62n, 232-36 Why Johnny Can't Read and What You Can Do about It (Flesch), 234n Wiggin, Kate Douglas, 373 Wiggins, Colin, 558 Wijngaard, Juan, 101 Wild, Anne, 316 Wilde, Oscar, 350, 371 Wilder, Laura Ingalls, 106, 351, 373 Wilder, Thornton, 498 Wilkens, Steve, 547 Wilkie, Katharine, 164 Willard, Barbara, 366 Wilsdon, Christina, 189 Wilson, Barbara Ker, 362 Wilson, Douglas, 202-3, 247, 248, 258, 328, 404, 405, 411, 452n, 482, 564n, 601, 678 Wilson, Elizabeth L., 107, 339-40 Wilson, Martha, 201, 203, 205, 404, 405, 411

Wilson, Mimi, 615 Wind in the Willows, The (Grahame), 105 Windows, 541, 543, 544 Wingate, Philippa, 151, 316 Wisconsin, University of, 489 Wise, Bob, 34-35, 600, 604, 607 Wise, Deborah, 600 Wise, Jay, 33, 35 Wise, Jessie, 33-40 on college preparations, 624, 657, 659 educational background of, 33, 37-38, 39, 61-62, 583 home-school teaching by, 33-34, 35-37, 39-40, 61n, 66, 583, 586-88, 596, 599-607, 618, 640, 641, 677 on music lessons, 217, 422 on public-school deficiencies, 581, 583 on testing, 628, 629, 630 on tutors, 648 Wise, Morrell, 427 Wolf, Rachel, 557 Wolfe, Gregory, 597 Wolfe, Suzanne M., 597 Wood, Heather, 668 Wood, Robert, 198 Woodhouse, Jayne, 321 WordPerfect, 433, 541 word-processing programs, 433, 538, 541, 543 word study, 329, 330, 331, 332, 333 see also vocabulary study Wordsworth, William, 88, 103, 347, 348, 352, 367, 496 World Book, 249, 376 World of Faith, A (Stack and Peterson), 416, 417 World War II, 296, 297, 321, 322, 326 Wright, John Henry, 535 Wright, Michael, 556 Wright, Orville, 166, 324 Wright, Peter, 544 Wright, Rachel, 316 Wright, Wilbur, 166, 324 Writer's Choice Grammar Workbook series, 464, 465, 468, 469, 470 writing: ball-and-stick tradition of, 68 continuous-stroke method of, 68, 75, 90 copying exercises in, 90-91, 224, 225, 230

creativity in. 93, 330 as curriculum priority, 55 cursive penmanship in, 68, 69, 75, 79, 91, 93, 96, 225 daily schedule for, 68, 90, 92, 96, 97, 224, 225, 226, 227, 329, 354, 355, 356, 461, 573 dictation and, 90, 91-92, 93, 94-95, 96, 97, 225, 226, 227, 230, 329, 352, 354 first-grade skills in, 79, 225 • grammar stage in, 90-95, 224, 225, 226, 227, 230 in great-books education, 480, 482-86 of historical research papers, 482-86 homeschool programs in, 107 keyboard skills in, 433 in kindergarten years, 67-69, 224 letter reversals in, 79 of letters, 92-93, 95, 225, 226 logic and, 44 in logic stage, 289, 329, 330, 352-53, 354, 355, 356, 373, 378, 381-82, 444, 445, 446, 447 in major upper-grade projects, 452, 482-86, 559-68, 575, 576, 620-23, 660 muscular coordination needed in, 67 - 68notebooks for, 90, 92, 94, 95, 230, 329, 330 of numbers, 69 preschool preparation for, 58-59, 67-69, 607 reading skills combined with, 65-66, 67-68 of research papers, 474, 475, 476, 482-86, 559-68 resource lists for, 75-76, 373, 467 in rhetoric stage, 461, 462, 467-69, 471, 482-86, 559-68, 573 for students with previous education, 677 see also compositions Writing Company, 671-72 Writing Exposition, 24, 353, 467, 468, 471, 475, 573, 613 Writing Strands, 24, 84, 89, 93-95, 96, 97, 107, 283n, 289, 334, 344-45, 352-53, 354, 355, 373, 381, 388, 444, 445, 446, 454, 458, 465, 467, 468, 471, 475, 480, 482, 515, 574, 610, 611, 612, 613, 677

764 Index

Wyatt, Sir Thomas, 102 Wyeth, N. C., 343, 346, 367 Wyss, J. D., 351, 372

- Yates, Elizabeth, 369 Yeats, William Butler, 351, 498
- Young Person's Guide to Music, A (Ardley

and Ruders), 422-24, 429

You Read to Me, I'll Read to You (Ciardi), 106 Zallinger, Jean, 105 Zaner-Bloser: catalog, 673 grammar, usage, mechanics series, 84, 93, 96, 97, 98, 333, 335, 336, 354, 358 writing resources, 68, 75–76, 90, 91, 108 Zeinert, Karen, 318 Ziarkowski, Carmen, 222 Zorn, Steven, 218













(CONTINUED FROM FRONT FLAP)

complete ordering information, answers to common questions about home education, and advice on practical matters such as working with your local school board and preparing a high school transcript.

You *do* have control over what and how your child learns. *The Well-Trained Mind* will give you the tools you'll need to teach your child with confidence and success.



JESSIE WISE, a former teacher, is a home education consultant, speaker, and writer. Her daughter, SUSAN WISE BAUER, whom she educated at home, is a novelist and teaches literature at the College of William and Mary. Both live in Virginia.

> Jacket photograph by Steven Peters/Tony Stone Author photographs by Colonial Photography Printed in the United States of America 8-99

hether you're teaching your child at home or supplementing his or her classroom learning, *The Well-Trained Mind* will provide you with the techniques, curriculum, and resources necessary to ensure that your child's education is the best it can be. Using the pattern of classical education—rigorous, language-rich, and comprehensive—you'll learn how to:

Instruct your child from preschool through high school in all levels of

READING

WRITING

HISTORY

GEOGRAPHY

MATHEMATICS

FOREIGN LANGUAGES RHETORIC LOGIC ART MUSIC

SCIENCE

Locate and purchase necessary books, materials, and projects Get your child involved in clubs and team sports Work with your school board Satisfy your state's educational requirements for home schoolers Get support from local home schooling organizations Keep grades, administer tests, and assemble portfolios that demonstrate your child's strengths Prepare a high school transcript

Study for the SATs and achievement tests Make use of universities, tutorials, correspondence courses, and the Internet

Apply (and get in) to top colleges



