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...FOR **DUMMIES** Series

Valuable Bonus CD Inside!

MACS FOR TEACHERS

3RD EDITION

The A+ Reference For Teachers!

by Michelle Robinette

Author of *The ClarisWorks Reference For Teachers*

Foreword by Steve Wozniak
Cofounder of Apple Computer, Inc.

The Fun, Easy, and Practical Way for Teachers to Master Using a Mac

The First Series of Computer Education Books Written By Teachers For Teachers

Improve Your Curriculum With Tons of Great Ideas for Using the Mac in the Classroom

Includes Troubleshooting and Glossary Sections by David Pogue!

IDG
BOOKS
WORLDWIDE

Macs® For Teachers™, 3rd Edition

Cheat Sheet

Common Keyboard Shortcuts:

Use these shortcuts to avoid spending time going to the menu bar with the mouse. Simply hold down the ⌘ key and press the letter listed below.

Desktop		*ClarisWorks*	
new folder	⌘-N	new	⌘-N
open	⌘-O	open	⌘-O
get info	⌘-I	close	⌘-W
put away	⌘-Y	save	⌘-S
undo	⌘-Z	print	⌘-P
cut	⌘-X	quit	⌘-Q
copy	⌘-C	undo	⌘-Z
paste	⌘-X	cut	⌘-X
select all	⌘-A	copy	⌘-C
eject disk	⌘-E	paste	⌘-V
		select all	⌘-A
		plain text	⌘-T
		bold text	⌘-B
		italic text	⌘-I
		underline	⌘-U

What'cha Got There?

Your Mac's model name is printed on the front. For the System and memory info, choose About This Macintosh from the ⌘ menu.

Your Mac model: _____

Your System version: _____

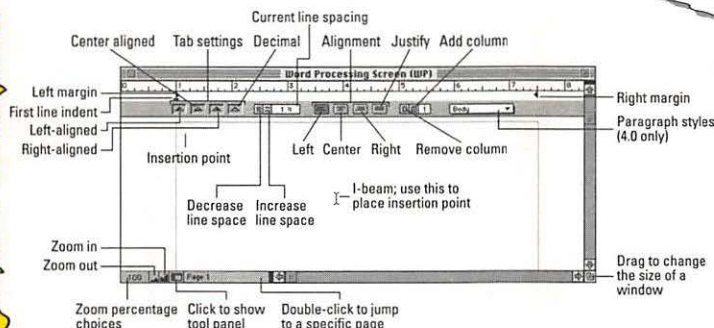**How much memory it's got:** _____

Always Do This

Read the screen! If you're not sure what to do next, read the screen and follow directions! We teachers are constantly telling students to read and find out — let's follow our own directions. More often than not, the screen in front of you holds the answer to your question.

When your computer screen freezes...

- Force quit the program by pressing the following key combination ⌘-Option-Esc.
- Restart the computer by pressing the reset switch (it's the button with the arrow that points to the left). This button does the same thing as turning the Mac off and on again.

The ClarisWorks Screen

Center aligned Tab settings Decimal Current line spacing Alignment Justify Add column

Left margin
First line indent
Left-aligned
Right-aligned

Word Processing Screen (WP)

Insertion point

Left Center Right Remove column

Right margin
Paragraph styles (4.0 only)

Decrease line space Increase line space

I-beam; use this to place insertion point

Zoom in
Zoom out

Drag to change the size of a window

Zoom percentage choices   Click to show tool panel   Double-click to jump to a specific page

Software You'd Like to Purchase (or have your school purchase)
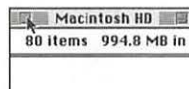
_____

_____

_____

_____

_____

_____

Working with Windows

Opening or closing a window

A window is simply your view into something that's normally closed. When a window is closed, it's not a window at all — it's represented by an icon (of a disk, a folder, or a file).

1. Double-click any icon to open its window.
2. To get rid of a window, click the *close box* in the upper-left corner.

Macintosh HD
80 items   994.8 MB in

Moving a window

Point to its striped *title bar* (where the name of the window appears). Hold the mouse button down, and drag the window into a new position.

Bringing concealed icons into view

Sometimes a window is too small to show you all the icons within it. If that's the case, you'll see gray *scroll bars* along the bottom and right side.

1. Point to one of the small arrows on the scroll bar, as shown, and press the mouse button continuously.

Macintosh HD
80 items   994.8 MB in c

3.2   Inspiration® 5.

Your view of the window will slide in the direction of the arrow, showing you what's hidden beyond the edges.

2. To make the window as large as necessary to view all the icons (limited by screen size), click the *zoom box*, as shown.

Macintosh HD
80 items   994.8 MB in c

ngMaze folder

Making a dimmed window active

Click in it.

Working with Icons

Finding a file

Each file you create is represented by an icon and is usually stored inside an electronic folder, which looks like a file-folder on your screen. Beginners and pros alike occasionally lose files or forget where they filed a certain file.

1. Choose Find from the File menu.
2. Type a few letters of the missing file's name.

   You don't have to type the whole name . . . only enough to distinguish it; type *Wonk* to find the file called *Willy Wonka Quarterly Earnings*. Capitalization doesn't matter.
3. Press the Return key, or click the Find button.

   The Mac roots through your files. It either displays the first icon it finds that matches your request, or shows you a list of *all* icons that match.
4. If the Mac finds the wrong file, choose Find Again from the File menu.

   Keep choosing Find Again until you find what you're looking for, or until the Mac beeps, telling you that it's done searching.

Renaming a file

1. Point to an icon's name, and click the mouse button.

   The icon's name is now highlighted (selected).
2. Type a new name.

   A file's name can be up to 31 letters long. If you make a mistake, backspace over it by pressing the Delete key.

   Note to IBM types: A Mac file name can have any kind of letters you want (uppercase, lowercase, symbols — anything but a colon) and doesn't have to have a period in it.
3. Press Return when you finish typing.

To insert a floppy disk

1. The metal part goes in first.
2. The label side should be up.
3. Push it into the Mac's disk slot until it makes a *chunk* sound.

Copying a file onto a disk

Drag the icon onto the disk's icon, and let go.

USA folder
4 items   27.5 MB in disk
Name
▷ ☐ Alaska
▷ ■ Hawaii
▷ ☐ California
▷ ☐ Connecticut

Macs for Dummies

Alternatively, you can drag the file into the disk's *window*, instead of on top of the disk's icon.

...For Dummies: #1 Computer Book Series for Beginners

What People Are Saying about Michelle Robinette and Macs For Teachers

"A great resource guide . . . I wish I'd had it two years ago when I first got my Mac."
— Susan Narduzzi, Carmel, NY

"Michelle Robinette has an excellent writing style. She is interesting and amusing to read. I would buy any of this series if she wrote it . . . I love her books!"
— Richard Hicks, Minneapolis, MN

"The best book — made my new Mac much less intimidating — your style was like calling a girlfriend for help. Two thumbs up."
— Shellie Brunsman, Springfield, IL

"Wittily written — just what teachers need — covered content simply and beautifully. Every teacher using Macs should have a copy available."
— Mary E. Sanders, Homer, AK

"This book is very helpful, specific to teacher's needs, very easy and enjoyable to read. I'm so glad someone is recognizing the education profession."
— Jeanette Stinebaugh, Quenemo, KS

"Michelle's book is a must for all teachers!"
— Sue Delaney, Lawrenceville, GA

"I can understand it! But best of all, Michelle has the key to how teachers survive. It's not self-sacrifice, it's humor! I love this book; I even put aside my new sci-fi book. Reading this book is fun."
— Lois R. Ayers, Bedford, PA

"Has Michelle Robinette written other computer books for the Mac? If so, I'd like to know about them . . . she is a great teacher."
— Katy Worcester, Butte, MT

"I've been doing my reports on the computer for a year, but nothing else. This book gave me the confidence to try other things."
— J. Beer, White Rock, BC, Canada

MACS® FOR TEACHERS™

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Foreword by Steve Wozniak

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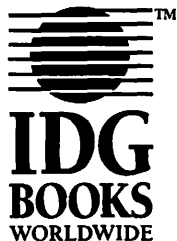
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Macs® For Teachers,™ 3rd Edition

About the Author

Michelle Robinette developed an interest in computers during her first year as an elementary school teacher when an Apple IIe was placed in her classroom. There were no instructions to follow — just a computer. She taught herself and eventually incorporated technology into the everyday functioning of her classroom. Eleven years later, Michelle has now moved on to the bright new world of the Mac and is currently the technology coordinator for an elementary school in metro Atlanta. She enjoys helping teachers overcome their "techno-phobia" and is constantly working to merge technology and curriculum in an effort to make the computer a part of the education process — not a subject within itself.

In addition to her writings for the *...For Teachers* series, Michelle is also a consultant with Apple Computer, Inc. She writes curriculum and staff development material for Apple's K-12 education market.

When she's not at the keyboard, Michelle has her hands full caring for her six-year-old daughter Jessie (who is already very computer literate, thank you), her four-year-old son John-Michael (who loves dancing to old John Cougar Mellencamp CDs), her husband John (whom Michelle describes as "too good to be true"), Sarah and Toby (her golden retrievers), and Chelsea (an old gray cat).

If Michelle could have it her way, every parent would spend a day as a teacher in order to fully appreciate the demands of the job — a rainy day without a recess break!

Other books by Michelle Robinette:

> *The ClarisWorks Reference For Teachers* (IDG Books Worldwide, Inc.)
> *Mac Multimedia For Teachers* (IDG Books Worldwide, Inc.)
> *Windows 95 For Teachers* (IDG Books Worldwide, Inc.)

ABOUT IDG BOOKS WORLDWIDE

Welcome to the world of IDG Books Worldwide.

IDG Books Worldwide, Inc., is a subsidiary of International Data Group, the world's largest publisher of computer-related information and the leading global provider of information services on information technology. IDG was founded more than 25 years ago and now employs more than 8,500 people worldwide. IDG publishes more than 275 computer publications in over 75 countries (see listing below). More than 60 million people read one or more IDG publications each month.

Launched in 1990, IDG Books Worldwide is today the #1 publisher of best-selling computer books in the United States. We are proud to have received eight awards from the Computer Press Association in recognition of editorial excellence and three from *Computer Currents'* First Annual Readers' Choice Awards. Our best-selling *...For Dummies*® series has more than 30 million copies in print with translations in 30 languages. IDG Books Worldwide, through a joint venture with IDG's Hi-Tech Beijing, became the first U.S. publisher to publish a computer book in the People's Republic of China. In record time, IDG Books Worldwide has become the first choice for millions of readers around the world who want to learn how to better manage their businesses.

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Eighth Annual Computer Press Awards ≥1992

Ninth Annual Computer Press Awards ≥1993

Tenth Annual Computer Press Awards ≥1994

Eleventh Annual Computer Press Awards ≥1995

Dedication

To my 3 Js: John, Jessie, and John-Michael.

Author's Acknowledgments

Contents at a Glance

Cartoons at a Glance

By Rich Tennant

"PROVING THAT BIGGER ISN'T ALWAYS BEST, A CONTRACT TO BUILD A COMPUTERIZED SONAR TRACKING SYSTEM FOR THE U.S. NAVY IS AWARDED TO TROOP 708 OF THE BAYONNE, NEW JERSEY EAGLE SCOUTS."

page 217

"A BRIEF ANNOUNCEMENT CLASS – AN OPEN FACED PEANUT BUTTER SANDWICH IS NOT AN APPROPRIATE REPLACEMENT FOR A MISSING MOUSEPAD."

page 189

"Okay young man, it's time to wash your hands, brush your teeth, and defrag your hard disk."

page 259

"Fortunately at this grade level the Mac is very intuitive for them to use. Unfortunately so is selling mousepads across the classroom."

page 9

"Before I go on to explain more advanced procedures like the 'Zap-Rowdy-Students-who-Don't-Pay-Attention' function, we'll begin with some basics."

page 149

"I think the cursor's not moving, Mr. Dunt, because you've got your hand on the chalk board eraser and not the mouse."

page 79

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Foreword

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Since the first time I was asked what I wanted to be in life, my answer has always been "an engineer like my father and an elementary school teacher like Miss Skrak (my 4th and 5th grade teacher)." I started Apple Computer largely by accident. The initial intent was to build a machine for a technical person (myself). But the usefulness of such modestly priced computers for average people has caused great changes in homes and in business — as well as in education. For the last several years I have spent almost full time supporting the local public schools while contributing equipment and technical support. I have, with a small staff, taught year-long courses for 5th through 8th graders, as well as for teachers.

Computers were simple machines in 1977, but they can be incredibly complicated to use and understand nowadays. To many students, the computer is as interesting and fun as a video game. Provide a computer and some software and, presto, the students will line up to use it. But today's students should be taught *how* to use the computer: to vary the look of text, to use fonts correctly, to align paragraphs and columns automatically, to include graphics, to emphasize items by various methods. And not to go crazy with all these capabilities.

The students learn much of this if motivated. But they lapse into sloppiness creating works no better than those created with a typewriter if they don't feel that computer quality has value. The big obstacle here is the teacher.

Teachers with normal (or *minimal*) computer experience don't assign tasks in a way applicable to computer solutions. For example, having the students create a computer timeline to demonstrate a unit on Egyptian history doesn't always come to mind for teachers. Also, most teachers cannot evaluate student work in terms of whether or not proper computer techniques were used. It is not uncommon to find teachers admiring a font stew or a rainbow decoration of colors — amazed that it's even possible. With just a little experience, teachers discover that such techniques are often a very *simple* way to add effect to a paper.

You can never learn enough about using your computer — which changes every time a new operating system is introduced. And I find it intimidating to newcomers (*teachers* included) to have tons of software that they don't yet know how to use dumped on them.

Miss Skrak always made me feel proud about my scientific and mathematics knowledge. I credit her for strengthening my education values. My parents told me that adults had done a pretty poor job with the world in a lot of ways — and that we students attend school to learn from mistakes and make a *better* world. They told me how elementary school teachers earn less money than many other types of workers. I felt my teacher was worth more than that. I grew up caring about and helping others, like teachers and childhood heroes do. I particularly cared about young people and their world.

Allocation of funds for computers is tight where I live. My district is lucky to have me. California ranks 47th in per capita spending on schools, and it's getting worse due to legislation of the past. I occasionally see cases where the schools get equipment — but not the staff training or funding to keep it maintained. Because the importance of the computer in education from elementary school through college is obvious, it may be time for school boards to reprioritize expenditures and requirements. But the ultimate question is how schools can obtain more funding, since computer costs are on top of funds required to teach every bit of material being taught when I was in school.

The materials covered by this book are very appropriate, and I am honored to write this foreword. The programs discussed represent the most commonly used ones in our schools — and are exactly the ones I use and teach.

Steve Wozniak
Co-founder of Apple Computer, Inc.

Introduction

○ ○

*1*am one of you.

I've spent eight years in the classroom — I know how important your job is,
I know that you are a well-educated individual, I know how hard you work,
and I know how difficult it is to fit one more thing into your daily schedule.
I'm also aware of how underappreciated you sometimes feel. (And there is
very little incentive these days to spend time learning something new.)

It seems to me that every time a school system jumps on a new bandwagon,
trains staff members, and gives them time to master a new concept, the
system turns around and decides to go in another direction. Remember the
phonics-versus-sight-reading debate? Remember open classrooms?

A wonderful veteran teacher I had the pleasure of working with once said,
"It's all a big circle; every ten years or so ideas resurface, and they just put
new names on them." I really believe that she is right — in most cases.
However, *that's just not going to happen with technology. It is here to stay, and
if you don't decide to join in this movement, you may eventually be left behind!*

Three years ago, I left the classroom to become the technology coordinator
for the elementary school in my neighborhood. I thought I'd landed the
perfect job. The description called for me to preview software and hard-
ware, train teachers, oversee our three computer labs, and come up with
plans to make relevant ties between curriculum and technology. The school
was only a mile from my home. And the best part of all — I had an office *and*
a phone.

If you're not a teacher, you couldn't possibly appreciate that final tidbit of
information.

College graduate that I am, I decided to research and pool all my resources.
Guess what? Every piece of published work out there was aimed at the
business executives who sometimes have those one-hour-or-more lunch
breaks and an assistant to screen out interruptions so that they can sit and
read about their new computer and all the wonderful things they can spend
their money on to make it really work for them.

Let me stop for a moment and examine this last sentence in teacher terms:

Business World	*Teacher's World*
Real lunch break	25 minutes max
Eat with colleagues in restaurant	Eat in cafeteria with 100 or more students
Ever-present assistant	Maybe an aide once a week for 30 minutes
Expense account	A what?

And here is the age-old answer we're always given if we complain about our jobs: *"But you have summers off!"*

Don't you just love that response? Let's see. After taking a graduate course or two in order to maintain my credentials, participating in the staff development that wasn't required (but was *strongly suggested* by the administration), and spending two weeks before school starts getting my room ready because pre-planning week was filled with everything but planning time, I probably only have about two weeks *off* in the summer.

And now they've put a computer in your room. Or maybe a beautiful new computer lab that cost thousands of dollars has been installed in your school. What are you going to do?

My Rationale

That, my fellow educators, is why I decided to write this book.

I want to tell you what *you* need to know, not what civilians need to know, about computers. I want to spare you weeding through those lofty computer manuals with vocabulary that could have been invented either by my 4-year-old (words like mouse pad, screensaver, icon, floppy disk) or a rocket scientist (megabyte, partition, disk cache, PRAM).

These manuals accompany every piece of software you purchase. And then you have the five or six manuals Apple included with your computer. Of course, we all have time to read these tomes that were probably written by someone who has never even stepped foot in the classroom as anything other than a student! In all honesty, less than half of each of these masterpieces is necessary reading.

When I first became interested in computers, I had no one to tell me the shortcuts or walk me through even the simplest procedures. Now I get a real thrill out of showing teachers ways to make their lives easier. I've noticed that most people in education who know a little about computers tend to treat the topic as some big secret that only a select few are allowed to know.

Above all, I want you to walk away from this book feeling comfortable with technology and its uses in the world of education. I want you to spread the word about technology, the Mac, and how it has helped you become a much better teacher.

What's New about This Revised Edition?

Believe it or not, I read every reader response card sent in by readers of my books (unlike school board members who ask for teacher comments and then tend to ignore the response and do the opposite). I took those comments and incorporated the requested information into this new edition. I would never profess to know all that you need, and I appreciate your comments and concerns.

I took those reader requests, updated the information in the second edition, inserted new information that wasn't around a year ago, and rearranged things a little to make the text easier to follow.

Along with updating information already within the book (including major additions to the recommended software lists), I include extended Internet and World Wide Web explainations, expanded ClarisWorks coverage (including a 5.0 update and a ClarisWorks for Kids sneak preview), all new classroom activities, more troubleshooting pointers, and a CD whose contents directly correlate with the book's content. In order to make room for all this new information, I had to cut some of the information found in the second edition of *Macs For Teachers*. Well, I felt that everything I'd originally written was important, so instead of cutting large amounts of information, I moved the information to the CD. Yes, on the CD you find some chapters that were original to the second edition and readable (and printable) files.

The Lesson Plan

In **Chapter 1,** I assume that you have a Mac and printer (or access to these in your school) and that the Mac is installed (put together and plugged in). Don't worry; you can complete this first task on your own. The Mac is very easy to put together, and I know that you are an educated individual who is

capable of reading and following simple directions. Macs even have symbols to help you match cables with the proper ports. In this first chapter, I explain how to turn your Mac on and how to use the mouse. I also describe the menu bar, go over some basic Macintosh syntax, and tell you how to turn your Mac off.

Chapter 2 covers some of the computer terminology that *techno-nerds* throw out to make the rest of us feel inferior: memory, hard disks, floppies, and so on. I also give you a list of words that are often overheard in computer circles and have no relevance to the world of education.

In **Chapter 3,** you're on your way. It's like the first day of school! I teach you all about folders, control panels, your computer's desktop, the apple menu items, icons, and keyboard shortcuts. I almost guarantee that you can keep working and fly right through this chapter. In this new edition, I use this chapter to give you an overview of Mac OS 8, the latest version of Apple's operating system.

After all the work you've done, in **Chapter 4** you finally find out how to put it on paper. I tell you all you need to know about the different types of printers and how to make them work.

Chapter 5 examines the major software categories: skill-and-drill, productivity, multimedia, and simulation. This chapter also explains the technology behind CD-ROMs.

I'm sure you'll keep working on into **Chapter 6** and **Chapter 7,** where you are introduced to ClarisWorks and the wonders of word processing. I help you create a personalized letterhead along with my all-time great time-saver, a lesson-plan template that enables you to throw away your lesson-plan book.

Chapter 8 teaches you how to use the spreadsheet function in ClarisWorks. Spreadsheet knowledge lets you create customized checklists.

In **Chapter 9,** you learn to create a database for your class. I also explain the mail-merge capabilities that enable you to send the same letter (with a personalized greeting) to each parent in your class.

In **Chapters 10, 11, and 12,** I help you fake your way through the three most popular educational software programs: Kid Pix Studio, The Student Writing Center, and The Print Shop Deluxe.

In **Chapters 13 and 14,** I explain the mysteries of the information superhighway. You learn how to get online and what you can do when you're there. In addition, you take a quick tour of the World Wide Web.

In **Chapter 15,** I give hints on using one Macintosh in a classroom full of students. At first, I thought this task was an impossibility. However, we teachers can be very creative when it comes to time and space.

Chapter 16 deals with the computer-lab situation and is worth reading even if your school doesn't have a lab. Who knows? You may become the crusader who persuades the PTA to make the investment!

Chapter 17 holds some ideas on getting your local community and board of education excited and involved in your technology pursuits.

Scanners, touch screens, and QuickTake cameras are just a few of the cool additions that any school's technology inventory would welcome. **Chapter 18** covers the neat things that you may like to add as you become more techno-literate.

Appendix A holds a whole set of new lessons from every curriculum area, for use in either the classroom or lab. These lessons can be adapted for any grade level. Sharing these lessons is my way of creating a springboard. Teachers are smart; just plant a seed of information and watch it grow. I'd love to hear back from any of you who really take off with these lesson plans and go in all kinds of directions. The lessons that appeared in the first and second editions of *Macs For Teachers* can be found on the CD located in the back of the book.

Make a copy of **Appendix B** for your technology coordinator or principal. This list of software titles is super! (I had to weed through tons of trash software to get to the treasures.) It *is* possible to get a lot for a little money. This list is also on the CD. Feel free to print a copy before you go on a shopping spree!

Appendix C, "Troubleshooting by David Pogue," was written by my buddy, David Pogue. He's the author of *Macs For Dummies,* 5th Edition (IDG Books Worldwide, Inc., 1996) and can answer just about any question you may have concerning your Mac or software.

In **Appendix D,** you find down-to-earth, easy-to-understand definitions for all those overused techno-terms.

Appendix E tells you all about the great CD you find in the back of this book.

Why Mac?

Personally, I use the Mac for economic reasons. Macs are in my school system, and, therefore, I have easy access to hardware and software. Apple computers are number one in educational circles and probably will continue to be for many years to come. And a Mac is very easy to learn and use on a daily basis — even for adults.

Macintosh is tops in education for many reasons. Above all, it is the easiest computer to operate. Children seem to pick things up much more quickly than adults — including colds, frogs, and other unmentionable objects. After reading this book and learning the basics, you'll find your students pushing you toward new heights in computers and technology.

You are a teacher because you love children, you love imparting knowledge, and you want to have a stake in our future. Computers and technology are going to be a large part of this future.

The Final Bell

I appreciate the fact that you lead a busy life and have very little time for business or pleasure reading. Keeping that in mind, I am committed to making this book succinct, informative, and enjoyable. And who knows? Maybe those classrooms of the future we keep reading about will really exist one day. And you, my friend, will be a few steps ahead of the game.

Conventions Used in This Book

This icon highlights items or activities that I highly approve of and feel would be worthwhile additions to your classroom environment.

This icon brings your attention to information that's crucial to basic computer operation — but I give it to you in easy-to-understand language.

Wake up and pay attention! This is critical information for teachers. No sleeping or daydreaming allowed during the lesson.

This icon points out great ways to integrate curriculum and technology.

This one points out some real *hands-on* learning activities. You know, the kind of stuff we do everyday in our classrooms.

This icon flags references to the great stuff you find on *The Macs for Teachers* CD, found in the back of this book.

This icon calls your attention to information that's specific to Apple's latest operating system.

Web Disclaimer

Because Web sites change so often, sites mentioned in this text may not be available by the time you read this book. If you have difficulty finding a site I've listed, try one of the great Web search tools or try working backward from the end of the address.

For instance, the following web address should take you straight to Apple's eMate page:

```
http://www.newton.apple.com/eMate300.html
```

But, if you have trouble, you can just enter

```
http://www.newton.apple.com
```

and go to Apple's Newton home page — from where you can probably get where you want to go.

Keep in Touch!

I love hearing from fellow teachers. I want the *...For Teachers* series to continue to meet the needs of educators. Let me know what you want to see in upcoming books or revised editions of this text.

IDG Books Worldwide, Inc., Attn: Michelle Robinette, 7260 Shadeland Station, Suite 100, Indianapolis, IN 46256. E-mail: feedback@idgbooks.com Web site: http://www.idgbooks.com

Or, for a faster response, write me online at mnette@aol.com

Also, please remember to fill out and mail in the reader response card in the back of this book.

Ode to Pogue

David Pogue is an *incredible* man.

I realized this while reading *Macs For Dummies*. He took an intimidating subject and turned it into an enjoyable learning experience. His wit and humor kept me going and eventually turned me into a computer addict.

After reading his book, I decided to give the genius a call — that's right, I just picked up the phone, dialed New York City information, and asked for the number. He not only accepted my phone call but was very warm and polite as well. Our discussion soon led to the need for more computer information for teachers. And thus a book was born — this book!

David agreed to be my accomplice in crime. We devised a plan to create a book that had the Dummies style and delivery, without calling it a Dummies book. (I explained that teachers wouldn't think very highly of that label.) And without hesitation he agreed to give whatever assistance was needed to create this literary masterpiece.

You see, David is a MacGod. In the kingdom of Mac, he knows all and sees all. It is rare to find someone with his high level of knowledge who is still willing and patient enough to share it with others. In that sense, David is a teacher. In fact, he's been one of the best teachers I've ever encountered.

I had supreme confidence in my own abilities in the field of education and using the Mac to enhance curriculum. What I needed was David to hold my hand (and allow a wee bit o' plagiarism) through the technical aspects of Mac use, care, and feeding. I hope some of his wit and wisdom have rubbed off on me over the past few months of our relationship — and if you enjoy this book, you have him to thank for the initial inspiration.

Some excerpts that appear are taken directly from *Macs For Dummies*, 5th Edition (IDG Books Worldwide, Inc., 1997). Appendixes C and D, and large portions of Part I, are paraphrased from this same supreme work.

Part I
For the First-Time
Mac User
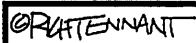
"Fortunately at this grade level the Mac is very intuitive for them to use. Unfortunately so is sailing mousepads across the classroom."

In this part . . .

There are at least four ways to become "one of those teachers who knows about computers." (We all have a few of these technically-literate individuals in our school, and our feelings for them usually range from contempt to sheer admiration.) You could wait for your school to provide some type of training that would be taught after school when you're busy grading papers, picking up your kids, or taking the dog to the vet. You could read the manuals that came with the Mac, which are almost as exciting as a PTA meeting. You could even enroll in a class taught at a local computer center and pay big bucks for information that addresses the needs of the business Mac user. The final way (and, in my opinion, the *ideal* way) to learn about using the Mac is to read this book!

Have you made a decision?

In this part, you're given the respect you deserve. I don't bother you with information you don't need. Instead, I give you the basics — the bare bones required to help you get up and running on the Mac — and nothing else.

Well, I may throw in a little teacher humor every now and then.

One last thought. . . .

You *can* do this. Think about what you are expected to be on a daily basis in your personal and professional life: mother/father, cook, chauffeur, accountant, custodian, wardrobe expert, laundry specialist, counselor, planner, curriculum creator, entertainer, artist, decorator. The list is endless.

This computer stuff is a piece of cake compared to those responsibilities!

Chapter 1

Mac Basics

○ ○

In This Chapter

▷ Turning the Mac on and watching what happens

▷ Using the mouse

▷ Making the most of Menu bars

▷ Meeting the desktop: icons, windows, and Macintosh syntax

▷ Using multiple windows and multiple views

▷ Shutting down

▷ Top Ten differences between your Mac and your students

○ ○

1 know how frustrating it can be to have a new student, a new set of text-
books, or a new piece of classroom equipment thrust upon you. It's not
that you don't welcome the new addition; it's just that things had been going
so smoothly. The thought of accommodating the newcomer is both frustrat-
ing and overwhelming.

The student will be fine. Just pair him up with your most sociable child. By
the end of the day, they'll be fast friends. The textbook may look brand new,
but you'll probably find very few changes after you get past the glossy,
graphically inviting cover — which allowed the publisher to call it a new
edition and charge your school system double the original cost. Finally, my
friend, trust me when I tell you that the computer is just as easy to conquer.
And you can have fun at the same time!

It's sitting there waiting to meet you. So think happy thoughts, roll up your
sleeves (or put on your reading glasses), and do it!

Switching the Mac On

In this first lesson, you're asked to locate the On button. To keep life inter-
esting, Apple has decreed that This Switch Shall Be in a Different Place on
Every Different Mac Model. Fortunately, after you know where yours is, it
pretty much stays in that spot for as long as you own your Mac.

You find the power switch in one of five possible places. Here goes:

A keyboard button	Every Mac keyboard has this key in the upper-right or upper-left corner. It has a left-pointing triangle on it: On many of the world's Macs, this key turns the machine on. If yours doesn't, you must have one of the other on-switch locations.
Back-panel switch	Feel around on the ends of your Mac's back panel. On many Macs, especially smallish or inexpensive ones, there's a plastic rocker switch back there. If you look at it, the On position is marked by a straight line, and the Off position is marked by a circle. Nobody can ever remember which is which. You may want to think of it this way: the O stands for Off. (Of course, it also stands for On . . . and they wonder why people are intimidated by computers?)
Round front-panel button	A couple of models (610, 6100, 6115) have a round nub of an On/Off button on the front panel, on the right side.
Back-panel push button	Only PowerBook laptops have this button. If your model number begins with a 1, you have to flip open the back panel, which is a pain. You then see the round, concave power button. (If your PowerBook model number begins with a 5 or higher, you turn it on with the triangle-labeled key on your keyboard.)
Keyboard push button	On PowerBook Duos only, a rubber capsule-shaped button on the keyboard is your On switch. (An identical button is on the back.)

Was your hunt for the elusive On Switch successful? Then turn the Mac on! You should hear a ding or a chord, and after a few seconds, an image appears on the screen.

What You Hope to See

After a few seconds, you should see this cute little smiling computer: 🖥

A few seconds after that, you are given a pleasant "Welcome to Macintosh" message. If you have a newer Mac, you also get a quick view of the Mac OS (operating system) logo.

Finally, you see a stream of little icons (the techno-term for little pictures) that appears across the bottom of your computer screen. Each of these icons represents a "little extra" you or Apple has added to an already extensive list of special capabilities that came with your Mac.

Your *desktop* should appear. Or, if your school has already installed a protection program (At Ease), you see something that looks like a file folder. If you see this file folder, ask someone in your school for the password that gets you to the desktop — and have this person disable At Ease for you.

Great job! You are ready to go.

The First Day of School

Well, you did it! The machine is on. It wasn't that hard, was it? Now, take some time for you and your Mac to get better acquainted.

Using the mouse

The mouse is the gray, soap-sized plastic box on the desk beside your keyboard. Having trouble visualizing it as a rodent? Think of the cord as its tail, and (if it helps you) draw little eyeballs on the sloping side facing you.

Now then, roll the mouse across the desk (or mouse pad), keeping the cord pointed away from you. See how the arrow pointer moves across the screen? For the rest of your life, you'll hear that pointer called the *cursor*. (And now you know that those technically literate teachers are not referring to the kid with the advanced vocabulary when they use this computer term.)

Try lifting the mouse off the desk and waving it around in midair like a remote control. Nothing happens, right? The mouse only controls the cursor when it's on a flat surface. (A ball on the bottom of it detects movement and moves the cursor accordingly.) That's a useful feature because it means that you can pick the mouse up when your run out of desk or mouse pad space, but the cursor stays in place on the screen. Only when you set the mouse down and begin to roll it again does the cursor continue moving.

One day, while working with a group of first graders in the lab, I came upon a sweet little girl who was slowly rolling the mouse up her leg. When I asked why she had the mouse on her leg, she replied, "I needed to get to the bottom part of my picture and I ran out of room. My leg's longer than that mouse pad — and it still works!"

People who use a mouse for the first time sometimes think that they are stuck when they get to the edge of their mouse pad. Simply pick that baby up and move it over.

What's on the menu?

Let's do some real computing here.

1. **Move the cursor up to the white strip at the top of the screen and touch the arrow on the word Special.**

   This white strip is called the *menu bar*. Pointing to something on the screen in this way has a very technical term: *pointing*. (I told you this would be a piece of cake!)

2. **Now put your index finger on the button on the mouse and press the button down. Hold it down. Don't let go.**

   If all goes well, you should see a list of commands drop down from the word Special, as shown in the following figure. Keep holding down the button.

Special
Clean Up Desktop
Empty Trash...
Eject Disk   ⌘E
Erase Disk...
Restart
Shut Down
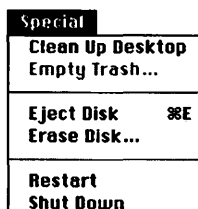
Congratulations — you just learned how to *click* the mouse (which is yet another term you can now use in front of those computer-nerd colleagues). You also learned how to pull down a menu (the list of commands).

3. Try letting go of the mouse button: The menu disappears.

You have only one more mouse skill to master — *drag*. The act of moving the mouse with the button down is called dragging. This movement is useful in the menu bars when you want to make a selection from the menu.

Let's try the act of dragging.

1. Point your mouse at the word Special on the menu bar.

2. Now here comes the tricky part: Click and hold down the mouse button. While you are holding down the mouse button, roll the mouse so that the cursor slides down the menu.

As you slide down the menu, your options are highlighted.

The only commands that don't get highlighted are the ones that are dimmed, or "grayed out." They're dimmed because they don't make any sense at the moment. For example, if there's no disk in the floppy-disk drive, choosing Eject Disk wouldn't make any sense, so the Mac makes it gray, which means it's unavailable to you.

3. Roll the mouse all the way down to the words Shut Down so that they're highlighted, as shown here.

```
Special
Clean Up Desktop
Empty Trash...

Eject Disk      ⌘E
Erase Disk...

Restart
Shut Down
```

4. If you've had enough for one session, release the mouse button — the Mac turns itself off.

If you are ready for more, and you want to slog ahead with this lesson, don't let go of the button yet. Instead, slide the cursor off the menu in any direction and *then* let go of the mouse button. The menu snaps back up like a window shade, and nothing happens. (You invoke a menu command only when you release the mouse while the cursor is *on* a command.)

PowerBook mouse buttons

If your Mac is a laptop Mac, you're probably halfway to the bookstore to return this book. Yes, it's true; your computer doesn't have a mouse. Instead, it has a trackball (which is essentially an upside-down mouse) or a trackpad. The principle is the same: Roll the ball away from you, and the cursor moves up the screen. Instead of a mouse button, you have one or two crescent-shaped buttons nestled against the ball or pad. The newer Powerbooks have just one button. (If you've got two buttons, they're identical in function.)

I won't mention this distinction again, because if you're smart enough to have bought a PowerBook, you're smart enough to translate future references to the mouse into trackball terms.

The Desktop — aka the Finder!

I don't know about your desk, but I certainly couldn't interchange the word Finder with my desktop. It's impossible to find anything on top of that piece of furniture. As a matter of fact, I'm not sure if I should call it a desk at all — I never sit behind it and work, because I never have the time!

Other than the fact that a Trash can comes with the territory, nobody's really sure why this "home base" screen is called the *desktop* — or the *Finder*. Move the mouse to the File menu and hold the button down. See the word Find? (If not, read the sidebar "All systems are go.") This command instantly roots through all your stuff and locates any file you ask for. Thus the name: the Finder. Used in a sentence, you may hear it like this: "Well, no wonder you don't see the Trash can. You're not in the Finder!"

What's an icon?

So now you've mastered the mouse! Take a look around the Mac screen. (Once again, if you see what looks like two file folders, ask someone in your school to disable At Ease.) You've already encountered menus (those words File, Edit, View, and so on, at the top of the screen). An *icon* is a small symbolic picture. Icons represent everything in the Mac world, and they all look different: One represents a letter you wrote, another represents the Trash can, another represents a floppy disk you've inserted. Here are some examples:

| A floppy disk | A folder | A word-processing program | A Memo |

You can move an icon by dragging it.

1. Point to the Trash icon.

2. Drag it to a new position. (Move the mouse while the button is down.)

Hey, this isn't so technical after all!

Macintosh windows and syntax

Point to the hard-disk icon (a rectangular box) in the upper-right corner of the screen. A hard disk is like a massive floppy disk. It's the filing cabinet that contains all your work, all your files, and all your software.

So how do you see what's in it? Where do you get to see its table of contents?

It turns out that any disk icon can be opened into a *window,* where you see every item inside listed individually. The window has the same name as the icon you opened. (It may already be open. If a window is open on your screen, choose Close from the File menu. Choose Close again and again until no windows are open on your screen.)

Before we proceed, though, it's time for a lesson in Macintosh syntax. No, don't moan; it's nothing like English syntax. In fact, everything you do on the Macintosh has this format: noun-verb. Not much poetic nuance, but it's sure easy to remember.

Let's try a noun-verb command, shall we?

1. Click the hard-disk icon in the upper-right corner of the screen.

It should turn black, indicating that it's *selected.* Good job — you've just identified the *noun.*

2. Move to the File menu and choose Open.

File	
New Folder	⌘N
Open	⌘O
Print	⌘P
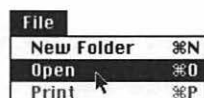
You guessed it! Open is the *verb*. And sure enough, your hard disk *opens* into a window, where you can see its contents.

Did any of that make sense? In the world of Macintosh, you always specify *what* you want to change (using the mouse), and then you use a menu command to specify *how* you want it changed. You'll see this pattern over and over again: *Select* something on the screen and then *apply* a menu command to it.

Look over the contents of your hard-drive window. Check out Figure 1-1. (Everybody's got different stuff, so what you see on your screen won't exactly match these illustrations.) You can do all kinds of neat things to a window. They're worth learning because you're going to run into windows everywhere after you start working.

CLOSE BOX - Click here to close the window. It's the same as choosing Close from the File menu.

TITLE BAR - Drag anywhere in this striped area to move the entire window.

ZOOM BOX - Click here to make the window large enough to show all its contents.

VERTICAL SCROLL BAR - It's gray, indicating that you can click the arrows or use the sliding square to adjust your view (top to bottom).

SIZE BOX - Drag in any direction to make the window bigger or smaller.

Figure 1-1: Your hard-drive window.

Macintosh HD		
64 items	550.9 MB in disk	476.3 MB available

HyperStudio for HD

America Online v2.7

Kid Pix Studio

System Folder

ClarisWorks 4.0 Folder

Student Writing Center™

HORIZONTAL SCROLL BAR - It's gray, indicating that there is something off to either side. Click the arrows to adjust your view or use the sliding square. If you're seeing everything in the window (left to right), the bar would be white.

Go ahead and try some of the little boxes and scroll bars. Click them. Tug on them. Open the window and close it again. No matter what you do, *you can never hurt the machine by doing "the wrong thing."* That's the wonderful thing about the Macintosh: It's the Nerf appliance.

Now try this. Make sure that your hard drive window is open. See the System folder? Even if you don't, here's a quick way to find it: Quickly type **SY** on your keyboard.

Presto! The Mac finds the System folder (which happens to be the first thing that begins with those letters) and highlights it, in effect dropping it in front of you with its tail wagging.

Try pressing the arrow keys on your keyboard: right, left, up, down. The Mac highlights neighboring icons as you do so.

Take a look at what's in the System folder. Of course, using your newfound noun-verb method, you can (1) click the System folder to select it and then (2) choose Open from the File menu.

But that's the sissy way. Try this power shortcut: Point to the System folder icon so that the tip of the arrow cursor is squarely inside the picture of the folder. Keeping the mouse still, click twice in rapid succession.

If all goes well, your *double-click* succeeded in opening a new window, showing you the contents of the System folder. (If it didn't work, you probably need to keep the mouse still or double-click faster.)

Remember this juicy golden rule: *Double-clicking* an icon is the same as opening it. The precious moments and treasured calories you save by using this shortcut will add up rapidly.

Using Multiple Windows and Multiple Views

Multiple windows and a great view add value to any home. The same is true with your Mac. However, unlike your beautiful new home, the Mac allows you to alter your view to best suit your needs. (If only I could alter the view of my neighbors' garage and unkempt yard as easily!)

Multiple windows

Right now, you should have *two* windows open on the screen: the hard-drive window and the System-folder window. (The System-folder window may be covering the first one up; they're like overlapping pieces of paper on a desk.)

If your computer is running Mac OS 8, you can simply drag an open window down to the bottom of the screen, and the window will turn into a tab. You can then click on the tab to access the window's contents at any time. This feature leaves your desktop uncluttered while at the same time allowing you to have easy access to items you frequently use.

1. **Click the title bar of the System-folder window and drag it downward until you see the hard-drive window behind it.**
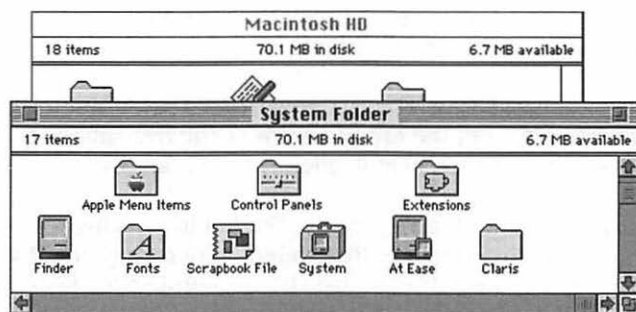
2. **Take a stress-free moment to experiment with these two windows: Click the back one to bring it forward and then click the one that *was* in front to bring it to the front again.**

If you need any more help fooling around with these windows, the Macintosh manual has a complete tutorial.

IN MAC OS 8

A look at what's coming with Mac OS 8

With Mac OS 8, Apple has managed to incorporate just about every feature Mac users have been begging for over the past few years. Yes, they've taken the best and made it even better! I highlight and discuss in-depth each of the new features as they come up within the text. For now, here's a brief rundown of what you can expect if you upgrade:

✔ **Speed:** Everything happens faster — from opening files to emptying the trash to searching for files.

✔ **Multitasking:** Like children, your computer can now talk and chew gum at the same time. So go ahead, launch a program, make copies of a file, and empty the trash all at the same time.

✔ **OpenDoc:** This is now part of the OS architecture or basic curriculum for Macintosh. OpenDoc is something like an instructional framework — it breaks applications down into smaller building blocks that are all interchangeable. OpenDoc allows you to drag and drop between applications that have OpenDoc standards. This means that you can drag a document from your spreadsheet program and drop it in your presentation program completely intact.

✔ **Refined Menus:** My personal favorite new feature is the ability of the Menus to stay open after you click on them (a feature common to Windows users). You no longer have to hold the mouse button down to keep your menu in plain sight! In addition, Mac OS 8 now uses more pop-up windows within the menus that make it easier to access frequently used files, folders, and applications. All of this makes for a less cluttered desktop.

Another cool new trick that Mac OS 8 makes available for education is called Open Transport. This feature allows you or your class to share (yes, you both see it on the screen at the same time) and collaborate on a document or other project with another class, professional, or individual via the Internet, a Local Area Network, or Wide Area Network. With the proper equipment (a digital video camera) you can even video conference, seeing the other person and discussing the changes you make on the shared document you both have on the screen simultaneously.

✔ **Advanced Help Features:** The Mac OS 8 has some neat advanced help features that include tips customized to help you in a variety of different computing situations, as well as a neat Experts guide that takes you step by step through the actions involved in maintaining your computer and setting up your Internet access.

✔ **Creative Freedom:** Finally, for those power users out there, Mac OS 8 offers almost unlimited creative freedom. From enhanced 3-D modeling to Virtual Reality and everything in between, the Mac continues to maintain its place as the best computer for creative professionals.

Note: The upgrade is only available for PowerMac and 040 microprocessors.

What system?

If you bought a used Mac, or if you bought it some time ago and you're just now learning how to make it work, then you may have one of the earlier versions of system software.

Finding out which version of the system software you have is easy. Remember the Apple logo (🍎) in the upper-left corner of the screen? As you may recall, it's no ordinary logo — that apple is actually a menu, like the ones you already know about. Point your arrow cursor tip on the apple, hold the button down, and watch what happens.

As with any menu, a list drops down. Highlight About This Macintosh (slide your pointer down until About This Macintosh turns black) and then release the mouse button. A window appears.

This informative window indicates which version of the System software your computer has. This version number is important when you're purchasing software or additional peripherals (add-ons) for your computer.

In general, I'm going to assume that you're using System 7 (or 7.1 or 7.5 or 7-point-anything).

For now, if you don't see the Find command in the File menu, you should see its System 6 equivalent — Find File — under the Apple menu, which is marked by the Apple logo at the left side of the menu bar. Find File serves the same purpose as the System 7 Find command.

All systems are go

You know how your reading series comes out with a new version every few years? Well, Apple does the same thing: It keeps making minor changes to its computers, trying to make them better (and providing more incentive to buy them).

You've already encountered the System folder, which holds software the Mac needs for

itself — the "system software" or "OS" (for operating system). System 7.6 is Apple's latest OS software. (Mac OS 8 debuts in the fall of 1997, and it has lots of terrific features — see the sidebar later in this chapter.) Every Mac sold since mid-1996 is equipped with System 7.6.

Multiple views

One other aspect of windows will probably make all of you with type A personalities squirm with delight. Up until now you've viewed the contents of your disk as a bunch of icons. Nice, but wouldn't it be neat to see things in alphabetical order? Okay, it's a little obsessive, but it could make life easier.

1. **Make sure the System folder is the active window (the one in front).**

   You're going to use the System folder because it's got a lot of stuff in it. Remember how to choose a command from the menu?

2. **Locate the View menu at the top of the screen. From it, choose by Name. (That's *by,* with a lowercase *b*.)**

   Suddenly, the big icons are replaced by a neat alphabetical list of the window's contents.

The Final Bell of the Day

Yep, the bell just rang and the last bus has pulled out of the parking lot! You need to turn off your Mac and hit the road. Promise me here and now that you will never simply flip the switch on the back of your computer! Instead, I want you to drag your cursor (the little arrow that moves when you move your mouse) to the Special menu, choose Shut Down (notice how the inaccessible choices are gray instead of black), and let go of the mouse button. Your Mac (if it's a newer model) should automatically shut itself off. If you have an older Mac, you get a message telling you that it's okay to turn off your Mac, and you can then turn it off manually.

Another, better option for those of you running System 7.5 or higher is to choose Shut Down from the Apple Menu (as shown in Figure 1-2). My friend, David Pogue (the Mac god), tells me that you have fewer problems with your Mac if you use this method for shutting down your Mac.

```
About This Macintosh...

AppleCD Audio Player
Calculator
Chooser
ClarisWorks
Control Panels      ▶
Find File
Graphing Calculator
Jigsaw Puzzle
Key Caps
Note Pad
Scrapbook
Stickies
• Shut Down
```
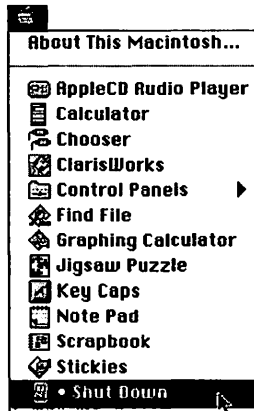
Figure 1-2:
Here is the
best way to
shut down
your Mac.

Rhap-so-dy *n* : an excessive display of enthusiasm

That's Webster's definition, and it's an accurate description of how Apple feels about its upcoming system software upgrade. Rhapsody is the code name for the new system software, and up until now it's been a mystery — leaving many Mac users wondering "What's going on?" So, in an effort to clear things up, here's the official lowdown straight from Apple:

Rhapsody is the code name of the first system software effort planned from the prospective union of Apple and NeXT. Its intent is to extend the existing strengths of both companies to provide a computing environment that is both stronger and more flexible — and, ultimately, better able to meet the needs of our customers — than currently available offerings. More specifically, Rhapsody targets the following goals:

✔ **High performance and stability**

Rhapsody will be an "industrial-strength" operating system (OS) — a stable, modern, fully preempted and memory-protected multitasking environment, with built-in capabilities for symmetric multiprocessing.

✔ **Superior Internet/intranet support**

Already, the Mac OS offers leading advantages in all three major Internet usage areas: access, creation, and delivery. These advantages, when backed by NeXT's extensively tested and deployed network-optimized technology — as well as full, built-in support for Java — should make Rhapsody an unparalleled Internet/intranet environment.

✔ **Ease of use**

Rhapsody will build on the ease-of-use tradition long established by the Mac OS. It will preserve the familiar "look and feel" of today's Mac OS user interface, while incorporating improvements from both Apple Labs and NeXT technologies — providing features that complement Rhapsody's superior power by making the user experience even simpler and more engaging.

✔ Compatibility

A key part of the Rhapsody architecture is a PowerPC-native compatibility environment for the Mac OS, designed to ensure that both existing Mac OS applications and current Macintosh peripherals can work without modification. Rhapsody will especially appeal to customers who require the highest system performance and throughput, in fields such as print publishing, Internet content development and publication, in-house application development, and video editing. However, because Rhapsody is based on coupling Apple's exceptional ease of use with superior performance and stability, we expect that the new operating system will ultimately meet the needs of all customers; our intent is to offer an initial developer release of Rhapsody during 1997. This will allow third parties to begin developing the next generation of applications for PowerPC processor-based systems in a timely manner. Our goal is to ensure that when Rhapsody is ready for general customer release (slated for mid-1998), users will be able to choose from among numerous software solutions that allow them to take advantage of the greatly increased stability and performance this environment offers.

Q: Does this mean that Apple is abandoning the Mac OS?

A: No. Our plans call for continued support of — and enhancements to — the existing Mac OS through semiannual releases. Thus, concurrent with our development plans for Rhapsody, we will continue to integrate the latest Apple technologies into the Mac OS, delivering updates every six months.

Q: What about the Mac OS "look and feel"?

A: Apple understands the value of a consistent user interface across operating systems — in terms of both ease of use and training and support efficiency. So Apple's plan is that Rhapsody's user interface will continue the tradition of unparalleled ease of use established by the Mac OS, while incorporating elements of NeXT user interface technology that can augment the familiar intuitive Macintosh interface.

Q: Which Macintosh models will Rhapsody support?

A: Initially, Rhapsody should support all currently shipping PowerPC processor-based Macintosh systems, from Performa computers through PowerBook and Power Macintosh models.

Q: What about existing applications — will they run on Rhapsody? And what about existing peripherals?

A: Apple is committed to enabling Rhapsody to run existing applications written for the current Mac OS, delivering performance that meets or exceeds current performance levels. This support will be achieved by hosting a native version of the Mac OS on a modern microkernel, enabling the Mac OS to run under Rhapsody in native mode, as opposed to emulation — thus providing outstanding speed and responsiveness. In addition, most existing networking setups, printers, monitors, and cards will be supported.

Top Ten Differences between Your Mac and Your Students

1. Your Mac never plays in the bathroom.

2. Your Mac always remembers what you told it the day before.

3. Your Mac doesn't have parents to make your life *interesting*.

4. Your Mac doesn't ask about recess every five minutes.

5. Your Mac never has excuses; it always finishes its work on time.

6. Your Mac gets along well with others.

7. Your Mac never loses its work.

8. Your Mac has never heard of *Rug Rats* or *Goosebumps*.

9. Your Mac follows directions.

10. Your Mac always speaks to you politely.

Chapter 2

High Tech in Teacher Terms

○ ○

In This Chapter

▷ How disks and memory work

▷ A look at a floppy disk

▷ The difference between memory and hard disks

▷ Why you should always SAVE, SAVE, SAVE

○ ○

*W*arning: The text you are about to read is not a reflection of me or my personality. I refuse to be labeled a computer nerd — my editor made me include this information. I had to do it!

Feel Free to Skip This Chapter

When was the last time someone told you that? I look at this chapter in the same way I face the endless stream of memos that are sent from the district office — worth scanning now, but certainly not crucial in your development as a computer aficionado. Later, you may want to come back and read the chapter on a more detailed level. By then it will all make more sense.

I must also apologize ahead of time because I promised you that I would only include the *essential* stuff. This information isn't essential, but it is worth knowing at some point. And it will allow you to converse at a much higher level with the other techno-wizards at your school.

Storing Things with Floppy Disks

Human beings, for the most part, store information in one of two places. Either we retain something in our memory, or, if it's too much to remember, we write it down on a scrap of paper that gets lost between school and home.

Computers work pretty much the same way as humans (except they don't have scraps of paper). They can either store what they know in their relatively pea-brained *memories,* which I cover in a moment, or they can write it down. A computer writes stuff down on disks.

The most common kind of disk is the *floppy disk.* Don't ask me why the computer world still refers to these as "floppy." In truth, these disks are quite rigid. Those of you who were around during Apple's IIe days know all about the large 5¼-inch floppies that truly were "floppy" and easy to bend or damage. The disks I'm referring to here are only 3½ inches and made of hard plastic.

Inside the protective hard shell is a circle of the same shiny brown stuff that videocassette tapes are made of. Instead of recording a Public Television special to share with your class at a later date, the computer records your documents: a letter to the superintendent, your class grades, or your first novel.

Floppy disks come in several capacities, but even the largest one holds only about 1,000 pages' worth of data. That may seem like a lot, but that's just text. Pictures, for instance, take up much more space; that same floppy disk can probably only hold one or two color pictures. You can see that floppies aren't very handy for storing lots of information.

Sliding shield
Plastic case
Protective liner
Sector
Track
Floppy disk
Write-protect hole
Plastic case
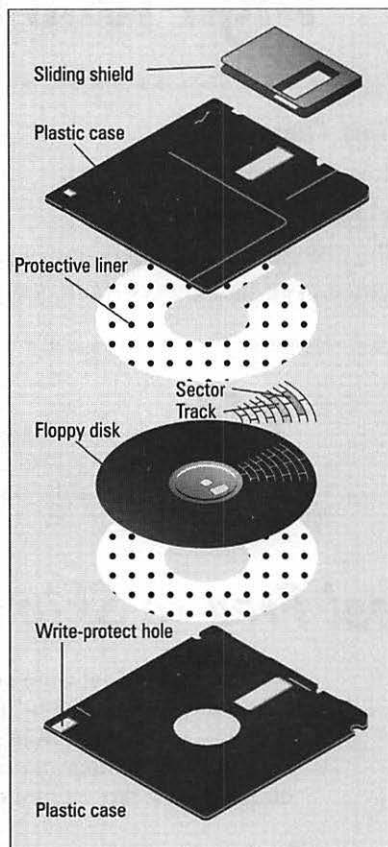
The Hard Disk

Nearly every Mac has an even better storage device built inside it: a *hard disk.* The concept of a hard disk confuses people because it's hidden inside the Mac's case. Because you can't see it or touch it, it's sort of conceptual — like teacher retirement accounts, I guess. But it's there, and a hefty chunk of your Mac's purchase price pays for it.

Hard disks differ from floppy disks in a few critical ways. A hard disk delivers information to the computer's brain about ten times faster than a floppy and costs about 500 times as much as a floppy. (Floppies are dirt cheap.)

Why all this talk of disks? Because this is where your life's work is going to reside when the computer is shut off.

Don't be confused if you hear (or see) the words *hard drive* and *hard disk* used interchangeably — they're the same beast.

Memory

Those of you who don't have children probably have better memories than the rest of us. Enjoy the ability you now possess to complete a task or a thought without interruption. Being able to recall where you last laid your keys or remember the last paragraph you read is a privilege that seems to disappear when you enter the world of parenting.

Students have remarkable memories. However, their memories seem to be more selective. For instance, how is it that they remember to put snack money in their pockets each morning yet forget their homework?

The Mac's memory is powerful, but when it is turned off at night, it forgets everything. It becomes a dumb, metal-and-plastic doorstop. That's because a computer's memory, just like yours, is kept alive by electrical impulses. When you turn off a Mac, the electricity stops. (Fortunately, few things can turn off a person, except possibly nose-picking — a common classroom occurrence — which fortunately has no long-term effect on our memories.)

Therefore, each time you turn on a Mac, it has to re-learn everything it ever knew, including the fact that it's a computer, what kind of computer it is, how to display text, and so on. It's like the first day of school when the kids seem to have forgotten everything over the summer.

When you turn on the Mac, there's a whirring and blinking; the hard disk inside begins spinning. When it hits about 3,600 rpm, the Mac starts reading the hard disk (or, if the analogy helps you, it "plays" the disk like a record player). It finds out: "Hey, I'm a Mac! And this is how I display text!" and so on. It's reading the hard-disk and copying everything it reads into memory. (If only students could re-learn their information as quickly as the Mac!) Without the hard disk, the Mac is like someone with a completely hollow skull — and we've all met that type.

Your Mac's memory doesn't hold as much as your hard disk: The hard-disk is used for long-term permanent storage of lots of things (like the name of every student you've ever taught), and memory is used for temporary storage while you work on one thing at a time (like who hasn't turned in homework today).

Who's Meg?

You often hear computer-literate teachers discussing megs. Trust me — they're almost certainly not talking about a new student in their class. Meg is short for *megabyte*.

What is highly confusing for most beginners — and it took me forever to keep straight — is that memory (fast, expensive, temporary) and hard-disk space (permanent, slower) are measured in the same units: megabytes. A typical Mac has between 16 and 64 megs of memory (silicon chips), but between 1 and 4 *gigabytes* of hard-disk space (spinning platters). (See the sidebar "Sinking in the sea o' terminology" for an explaination of megabyte and gigabyte.)

What is RAM?

I'll make this very simple: RAM is a type of memory. RAM (pronounced like the male sheep) stands for Random Access Memory. It's a term you hear a lot, and I feel compelled to give you an explanation.

The term RAM can be interchanged with the term memory. When someone asks, "How many megs of RAM do you have?," they want to know about your computer's memory capacity.

If you're dying to know how much RAM or memory your computer has, choose About This Macintosh (or About This Computer) from the menu. A window appears.

The number circled in Figure 2-1 shows how much RAM your Mac has. If you lop off everything after the comma, you're left with the number of megs of RAM. It's probably 4, 8, 16, or 32 megs. Older Macs may have less; high-powered expensive ones may have more.

Sinking in the sea o' terminology

OK, here's your life preserver. Hold on and read. If you're like me, you'll end up coming back to this passage a number of times before it's all completely straight in your head.

Megabyte: A unit of memory or storage capacity, nicknamed meg or abbreviated MB.

One meg equals 1,024 kilobytes, or K; a K is about the equivalent of one page from that oh-so-exciting history textbook.

Gigabyte: A unit of memory or storage capacity, nicknamed gig or abbreviated GB. One gig equals 1,024 megabytes.

This Mac has 8MB of RAM.

Figure 2-1:
You can check how much RAM you have.

About This Macintosh	
Macintosh	System Software 7.5 © Apple Computer, Inc. 1983-1994
Total Memory: 8,192K	Largest Unused Block: 4,058K
System Software 4,090K	
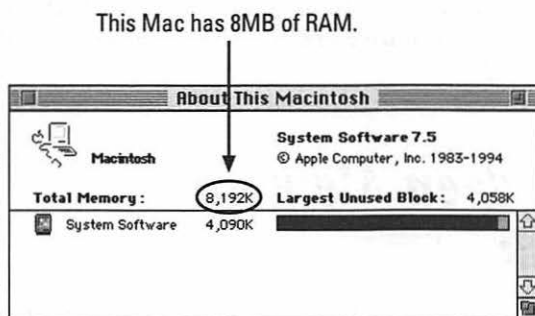
Putting It All Together

All right. Now that you know where a computer's information lives, let me take you on a tour of the computer's guts. If we were going on a school field trip, you'd be getting on the comfortable yellow bus at this point, and I'd be telling you to keep your hands inside the window at all times.

When you turn on the Mac, the hard disk spins, and the Mac copies certain critical information into its memory. So far, the Mac only knows that it's a computer. It doesn't know anything else that's stored on your hard disk; it doesn't know about the grades from your second-period English class or the children's book you've been writing — yet.

To get to any of this work, you need to transfer this information from your hard disk into memory. In simple terms, you have to open the file. (Remember double-clicking from Chapter 1?) Once opened, the file is in memory and ready for you to manipulate to your heart's content.

You can enter grades and average them, delete sentences from your daily journal, or type a letter to a worried parent. Remember, you're making all these changes while the document is in memory. If your three-year-old daughter comes in demanding attention and accidentally pulls the plug on your computer, the screen goes blank and the changes you've made disappear forever. You are left with only the original copy that was on your hard disk.

The message here is SAVE, SAVE, SAVE!

Saving is a very simple process that every Mac program comes equipped to offer. Most people use this command every five or ten minutes so that their work is always up-to-date and preserved on the disk. You can save your work to your hard disk or floppy disk. It is also important to make backups (on floppies) of everything on your hard disk in the event that you someday experience the inevitable hard-drive crash. (You learn how to use this save command in Chapter 7.)

Differences between Memory and a Hard Disk

1. You usually buy memory 8 or 16 megabytes at a time. Hard disks usually come in 1GB, 1.5GB and 2GB sizes (and so on).

2. Memory comes on chips — little brown mini-circuit boards. A hard disk is a big box made of metal (and sometimes housed in plastic).

3. You can only install memory inside the computer (something you can pay someone else to do or, with proper directions, you can accomplish yourself). A hard disk may be either inside the Mac (an internal hard drive) or a separate box you just plug into the back (an external hard drive).

4. Memory delivers information to the Mac's brain almost instantly. The hard disk sometimes seems to take forever.

5. Memory is sometimes referred to as RAM. A hard disk has no abbreviation.

6. Not every Mac has a hard disk (some people still use very old models with nothing but floppy disks). But every Mac has memory.

7. When the Mac is reading some information off the hard disk, a little light flickers on and off (usually on the front of your Mac or on the case of an external hard disk). You can't tell when the Mac is getting information from RAM.

8. As a very general rule, RAM costs about $12 per megabyte, and hard-drive space averages about 35 cents per meg.

9. Memory's contents disappear when you turn off the computer. A disk's contents stay there until you deliberately throw them away.

Ready for Action

Enough chalk talk. Let's take ourselves out of the classroom and have some fun!

Hop on the bus, boys and girls. We're going on an interactive field trip of sorts. In the next chapter, you're going to put your fingers to the keyboard, move your mouse, and actually manipulate your computer environment.

Chapter 3

What's on Your Desktop?

. . . .

In This Chapter
▶ Learning all about folders, windows, and icons
▶ Discovering keyboard shortcuts
▶ Taking out the trash
▶ Working with floppy disks
▶ Top Ten disk and window tips

. . . .

*M*y desktop is usually impossible to see. I'm a pile-maker. The pile in the center is for the new teacher down the hall, the pile on the corner is for Justin (he's been out with strep throat), the box of fat-free crackers is for me (I'm always on a diet), and the papers spread all over the desk are for next week's lesson plans.

In this chapter, I tell you about your Mac's desktop. Your Mac's desktop is what you see on your screen before you open a program (well, it's there while you're running a program, too, if you ever need it). Its menus contain accessories that help you use your computer and organize information more efficiently. I give you a few lessons on manipulating the items on your desktop. Take a look at Figure 3-1 and then read the rest of the chapter to find out all about desktop manipulation.
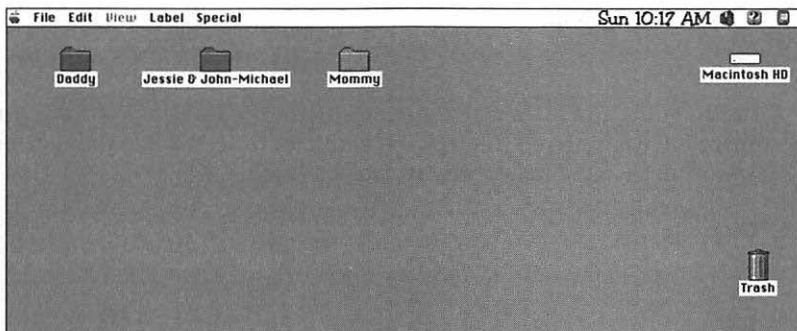
Figure 3-1:
A typical
Mac
desktop.

Foldermania

It's been said that your hard disk is like the world's largest filing cabinet. Consider it a place to store all your stuff. But a filing cabinet without filing folders would be about as convenient to handle as a kindergartner without a *potty pass*.

The *folders* on the Mac screen don't occupy any space on your hard drive. They're electronic icons whose sole purpose is to help you organize your stuff. The Mac provides an infinite supply of them. Want a folder? Do this: From the File menu, choose New Folder.

Ooh, tricky, this machine, eh? A new folder appears. Note that the Mac gracefully proposes *untitled folder* as its name. (Kinda like when you get a new student in your class and for weeks you say things such as, "My *new student* is really doing well.")

Notice something else, though? The name is highlighted in black. Remember our earlier lesson? Highlighted = selected = ready for you to do something. When text is highlighted, the Mac is ready for you to replace it with anything that you type. In other words, you don't even have to backspace over it. Just type away.

1. **Type** Third Grade. **Press the Return key.**

   The Return key tells the Mac that your naming-spurt is over.

   Now, to see how folders work, create another one.

2. **Choose New Folder from the File menu again.**

   Another new folder appears, this one, too, waiting for a title.

3. **Type** Class List. **Press Return.**

You're going to create one more empty folder. But by this time, your wrist is probably weary from the trek back and forth to the File menu. Don't you wish there were a faster way to make a folder?

There is.

Keyboard Shortcuts

Pull down the File menu, but don't select any of the commands in it yet. See the weird notations to the right of some of the commands in Figure 3-2?

Figure 3-2:
Some
commands
have pre-
assigned
shortcuts.

File	
New Folder	⌘N
Open	⌘O
Print	⌘P
Close Window	⌘W
Get Info	⌘I
Sharing...	
Duplicate	⌘D
Make Alias	
Put Away	⌘Y
Find...	⌘F
Find Again	⌘G

You can use a shortcut instead of the mouse.
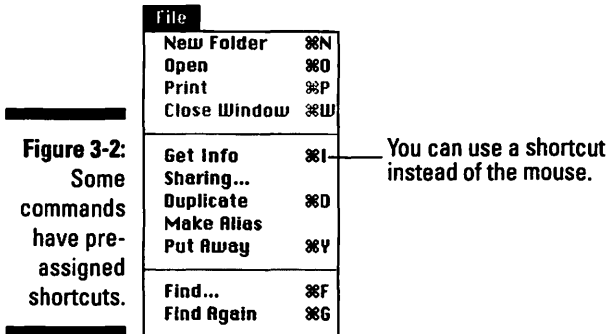
Get used to them. They're *keyboard shortcuts,* and they appear in almost every menu you ever see. You're by no means obligated to use them, but you should understand that they let you select certain menu items without using the mouse.

Unimportant info regarding other menu symbols

Writing Tools	▶
Find/Change	▶
Publishing	▶

Font
Monaco
New Berdina /ℋ𝒵
New York
𝔊𝔬 𝔈𝔫𝔤𝔩𝔦𝔰𝔥 𝔗𝔢𝔵𝔱 𝔐𝔗
Palatino
相
▼

Besides the little keyboard-shortcut symbols at the right side of a menu, you occasionally run into a little downward-pointing arrow or a sideways-pointing arrow, like these:

What these arrows are telling you is that the menu is so long, it doesn't even fit on the screen. The arrow is implying that there are still more commands in the menu that you're not seeing. To get to them, carefully roll the pointer along the menu all the way to that downward- or sideways-pointing arrow. Don't let it scare you: The menu commands jump upward, bringing the hidden ones into view.

When you type, you press the Shift key to make a capital letter, right? They call the Shift key a *modifier key* because it turns ordinary, well-behaved citizen keys like 3 and 4 into wild symbols like # and $. Welcome to the world of computers, where everything is much more complicated. Instead of having only one modifier key, the Mac has three of them!

Look down next to your spacebar. There they are: In addition to the Shift key, one says Option, one says Control, and another either says Command or has a little ⌘ symbol on it. It's that little cloverleaf symbol that appears in the File menu. Next to the New Folder command, it's ⌘-N. That means:

1. **While pressing the ⌘ key down, press the N key.**

   Bam! You've got yourself another folder.

2. **Type** 2nd Quarter Grades **and press Return.**

   You just named your third folder. So why have you been wasting a perfectly good afternoon (or whatever part of the day it is in your time zone) making empty folders? So that you can pretend you're getting organized.

3. **Drag the Class List folder on top of the Third Grade Folder.**

2nd Quarter Grades
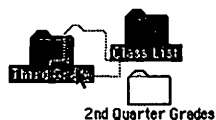
   Make sure that the tip of the arrow actually hits the center of the Third Grade folder so that the folder becomes highlighted. When it turns black, let go of the Class List folder — and watch it disappear into the Third Grade folder. (If your aim wasn't good, you now see the Class List folder sitting next to the Third Grade folder; try the last step again.)

4. **Put the 2nd Quarter Grades folder into the Third Grade folder in the same way — by dragging it on top of the Third Grade folder.**

5. **Double-click the Third Grade Folder.**

   Yep. Opens right up into a window, and there are your two darling folders nestled sweetly where they belong. If you were to double-click one of them, you'd open another window.

   Okay, so how do you get them out again? Do you have to drag them individually? That would certainly be a bummer if you had 50 folders in the Third Grade Folder.

   It turns out that there are several ways to select more than one icon at a time.

6. **Click above and to the left of the Class List folder. Without releasing the mouse button, drag down and to the right so that you enclose both folders with a dotted rectangle.**

If you're using System 7 or higher, each icon turns black as the dotted rectangle encloses it. (Otherwise, nothing turns black until you release the mouse button.) In any case, release the mouse button when both icons are enclosed.

Now that you have several folders selected, you can move them *en masse* to another location.

This was a somewhat unproductive exercise, of course, because we were working with empty folders. It becomes much more exciting when you start working with your own documents. All these techniques work equally well with folders and with documents.

Taking Out the Trash

There's one more icon-manipulation trick you might find valuable.

1. **Close the Third Grade folder by clicking its *close box*.**

The close box is that little box in the upper-left corner of the window, by the way. (You could also go to the File menu and choose Close Window, but why make it harder?)

2. **Drag the folder on top of the Trash can in the lower-right corner of the screen.**

Don't let go until the Trash can actually turns black (when the tip of the arrow cursor is upon it). When you do let go, notice how the Trash can bulges, a subtle reinforcement of how important it thinks it is. (I've experienced students with this same posture just before they utter answers that are completely off-base.) Anyway, this is how you throw things out on the Mac: Just drag them on top of the Trash can.

Gone, but not forgotten

Many teachers are pleasantly surprised when I tell them that emptying the trash doesn't mean your files are gone forever. That's right, if Johnny just "accidentally" trashed Susie's term paper, if you act quickly, there's a good chance it can still be recovered.

Here's how it works: When the trash is emptied, the Mac does a quick update of its directories and gets rid of all the references to the information you just emptied from the trash. The "trashed" information is still on the disk, but now your Mac has made it known to the world that the space once used by your files is now available to be used by other information (the new information will just be written over the top of the files you "trashed"). That means the next thing you save may take the place of the files you trashed ... unless you use a recovery program ASAP.

My favorite program for recovering trashed files is Norton Utilities (Symantec, $95) — every school and individual should own this program. Norton Utilities has features that enable you to easily recover trashed files. In addition, it can scan your floppies or hard disk for errors and repair most problems found.

If you need to rescue something, just double-click the Trash to open its window; drag whatever-it-was right back onto the screen.

So if putting something into the Trash doesn't really delete it, how do you delete it? Choose Empty Trash from the Special menu.

The Menu Items

Several menus appear across the top of the screen. As you get to know the Mac, you discover that menu wording changes from program to program. Right now, they say File, Edit, View, Label, and Special; in a word processor, they might say File, Edit, Font, Size, and Format. The menu names (and commands listed in those menus) are tailored to the function of the software.

One menu is *always* on your screen, though: the Apple menu, which is the at the left edge of the menu bar (see Figure 3-3). Among other things, this menu provides immediate access to some useful miniprograms known as desk accessories. *Desk accessories* are surefire, nonthreatening, and fun — perfect for your first baby steps into the world of using software.

About This Macintosh...

⊞ AppleCD Audio Player
▤ Calculator
⌦ Chooser
▦ ClarisWorks
▦ Control Panels ▶
👤 Find File
🔷 Graphing Calculator
▦ Jigsaw Puzzle
▦ Key Caps
▦ Note Pad
▦ Scrapbook
🔷 Stickies
▦ • Shut Down
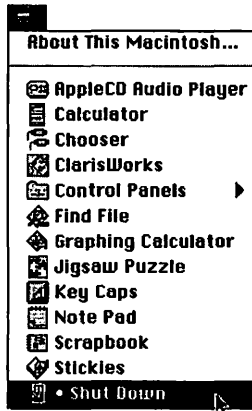
Under the Apple Rainbow

The chances of your Apple menu exactly matching the following list are pretty small. Unless the Macintosh is brand-new, you or somebody you love has probably changed what's in the Apple menu. And you should feel free to do so, too. If you use ClarisWorks a lot, then, for goodness' sake, put ClarisWorks into your Apple menu for easy access. If you haven't the least bit of interest in a time-waster like the Jigsaw Puzzle, then get it out of your Apple menu this minute.

Adding items to the Apple menu — and removing them

To add something to the Apple menu (or remove something), do the following:

1. **Open your hard drive icon.**

2. **Open your System folder.**

3. **Open the folder called Apple Menu Items.**

   Inside is an icon for everything your Apple menu contains.

4. **To add something to the Apple menu, drag it *into* this special folder.**

5. **To remove something listed in the Apple menu, drag its icon *out* of this special Apple Menu Items folder.**

Most people actually select the item and then choose Make an Alias from the File menu. Your Mac then puts a copy of that icon beside the original. Now, click on the alias icon and drag it into the Apple Menu Items folder instead of the actual icon.

Here, then, is the Basic Apple Menu Starter Kit — what's listed in your Apple menu the day you first turn on your Macintosh.

Apple CD Audio Player

If your Macintosh has a CD-ROM player attached, you may be surprised to learn that it can be used to play regular *music* compact discs, too, the kind sold in record stores. It's perfectly possible to type your lesson plan into ClarisWorks while the soothing strains of Brahms or Carly Simon play from your Mac's speaker.

The Apple CD Audio Player is simply a front panel for your *music* CD player, with buttons for play, stop, fast-forward, and so on. If you poke around a little, you discover that you can (a) change its color scheme, (b) type in the names of the songs on your favorite CDs — which will automatically show up if you ever insert those CDs into your CD-ROM drive again, or even (c) rearrange the tracks on your music discs, assembling them into "play lists" that feature multiple plays of your favorite songs and eliminating your least favorite ones entirely.

Automated Tasks

This little menu item contains several *AppleScripts* — little software robots, each programmed to execute one time-saving task. For example, the one called *Add Alias to Apple Menu* is a useful shortcut for adding something to the very Apple menu you're reading about. For example, to add ClarisWorks to your Apple menu, highlight the ClarisWorks icon. Then choose Add Alias to Apple Menu from your Apple menu; instantly, ClarisWorks is listed in said Apple menu.

Calculator

Guess what? It's a calculator. You *can* click the tiny buttons with your mouse, but tapping the keys on your keyboard's number pad is far simpler. You can also copy equations from your word processor and paste them in.

Chooser

This venerated little window lets you tell the Mac what kind of printer you're attached to. The Chooser occasionally serves other purposes, having to do with networks and fax-sending, too, but printing is its primary purpose in life.

Control Panels

This isn't a desk accessory at all; it's just a handy shortcut that makes the window full of control panels appear.

Find File

Find File is, for many, the single most useful program on the Mac. It enables you to find files you've lost on your hard drive somewhere. Find File can search for a file by name, when you created it, and so on.

Jigsaw Puzzle

Hours of rainy-day fun await! Choose Start New Puzzle from the Options menu, specify how large you like your jigsaw-puzzle pieces to be, and solve away (by dragging pieces into place). If you or your students are feeling particularly creative, you can paste *any* graphic into the Jigsaw Puzzle window — even a class photo — and make putting it together a whole new ball game. If you teach at the primary level, using the Jigsaw Puzzle is a great way to practice fine motor skills.

Key Caps

The primary function of Key Caps is to help you figure out what keys to press to apply the oddball symbols not found on the typical typewriter keyboard: ©, ™, ¥, and other exotic markings. After you open this little program, hold down the Option key on your keyboard; you see the "keys" in the Key Caps display change to show their hidden characters. From there, you can either (a) memorize the fact that, say, Option+Shift+C produces the Ç symbol, or (b) click the on-screen key to produce the desired symbol in the typing strip, which you can then copy and paste into your word processor.

Note Pad

Ah, yes, the Note Pad: the word processor of the impoverished. It's ideal for notes, ideas, grocery lists, and other typed blurbs that fit into a tall, narrow window.

Recent Applications

This handy menu command automatically lists, at all times, the five or ten programs you used most recently. (*If,* that is, you have the standard control panel called Apple Menu Options.) Use it this morning to launch, say, whatever program you were using at the end of yesterday.

Recent Documents

See the preceding — but this menu command lists the recent *documents* you worked on.

Recent Servers

This command only works if you're connected to a big network. If so, it lists the last bunch of computers *(servers)* you've logged on to. If not, it's useless.

Scrapbook

This grizzled Apple-menu veteran isn't profoundly useful today. Still, it's a handy place to paste graphics or text blobs you intend to use again some-day: a logo, the body of a resignation letter, and so on. When the window is open, you can paste something you just copied from another program by using the Edit menu. And to retrieve some material later, just use the Edit menu's Copy command.

SimpleSound

Apple's latest crop of Power Macs (such as the 7500, 7600, and 8500) come with a system-software oddity: The familiar Sound and Monitors control panels have been merged into a single, unified Monitors & Sound control panel. It duplicates the functions of its predecessors in every respect but one: You can no longer record new error beeps when you're looking at the Sound portion of the new control panel.

Nobody understands why this peculiar state of affairs came to be. However, at least the record-your-own-sounds feature isn't missing — it's just been moved to the SimpleSound desk accessory.

Stickies

For years, the good looks of Macs have been marred by dozens of yellow stick-on notes, slapped by their hasty owners on monitors, corners, and disk drives! At last you can jot down your phone numbers, memos, and brain-storms *on* the screen instead of taping them *to* the screen. Stickies is the glorious electronic equivalent of stick-on notes. Make a new note by choos-ing New Note from the File menu. Change the color by using the Color menu. Change the type style using the Note menu. And to make sure that you never forget to check your Stickies, choose Preferences from the Edit menu — and click "Launch at system startup."

Shut Down

This command does just what you'd guess it does — after politely inviting you to save your work in whatever programs you're running.

The Application menu

Do you see the tiny Note Pad icon at the right end of your menu bar? It's next to that question mark thing.

Do you see the tiny computer icon (or possibly some other icon) in the upper-right corner of your screen? That's called the Application menu. The icon that's showing indicates the current program that's running. If you see

the small computer, that means you're in the Finder or Desktop. Click on the icon and a list of currently open programs will appear. Highlight the name of the program you want to work with and let go of the mouse. That's how easy it is to switch between programs when you're using a machine as wonderful as the Mac.

the Application menu
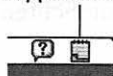
Note: If you're constantly getting "Not enough memory" messages, check your Application menu. More likely than not, the last person using your computer simply closed a window and never actually quit a program. Quit the programs that still remain open and your problem will more than likely be solved.

Extras, Extras, Read All about 'Em

On every Macintosh, inside the System Folder, is a strange little unexplained folder called Apple Extras. (If your Mac came with a CD-ROM, a copy of Apple Extras is probably sitting there, too.) This folder comes with assorted niche-market goodies: Some will astonish and delight you; others will baffle and annoy you. Because not a word of explanation is provided by Apple, here's a rundown of the Apple Extras.

Apple Video Player

If your Mac has a jack on the back marked "Video In," you're a lucky teacher indeed. You have a Performa, Power Mac, or LC model that's equipped with *video digitizing* circuitry — such as the Apple Video System card — meaning that you can plug a VCR or camcorder into that Video In jack. The Mac can convert your footage into digital movies (*QuickTime* movies). *QuickTime* movies are great fun to play with: You can cut, copy, or paste scenes, rearrange events, add credits, and otherwise pretend that you're a big-time Hollywood mogul.

As with any useful hardware, however, your video-capturing circuitry requires software. Tag, *Apple Video Player,* is it.

AppleScript

AppleScript is a programming language.

If you're still reading, then I'm surprised. Anyway, AppleScript can be used to write little robot programs that do certain Mac tasks for you: launching a program, making a printout, emptying the trash, and shutting down. Macs for teachers? Sure — CompSci teachers, maybe.

CDU

This little goody, included with many Performa machines, is a set of utility programs. *Utility programs* these days mean "unnecessary doodads that dress up the way your Mac works." In this case, CDU has features that (a) make your menus drop down without having to be *held* down with the mouse; (b) shut your Mac down (or dim the monitor) half an hour after you stop using it; (c) let you operate your menus completely from the keyboard; (d) add a clock to your menu bar; (e) require a password to get at your stuff; and so on.

HyperCard Player

HyperCard is a $200 "software construction kit" sold by Claris that enables savvy beginning programmers to construct their own address books, calendars, and so on.

HyperCard *Player,* on the other hand, is this free program that lets *other* people play the HyperCard "programs" that a HyperCard programmer has created.

Graphing Calculator

This enchanting little program was originally designed as a demonstration of the Power Mac's number-crunching speed: It was left running continuously in computer stores, impressive-looking graphs flashing across the screen.

However, Graphing Calculator is actually a fairly sophisticated, impressive math tool. You literally type any equation into the top blank, and this program will graph it, no matter how complex the equation. You may start with boring, static graphs like $y = x + 1$, and move on to 3-D displays like $z = xy$.

A couple pointers: Every equation must begin with $y =$ or $z =$. Copious help screens are hidden in your ? menu. And remember that you can capture any graph by dragging it directly into any "drag-and-droppable" program (such as the Scrapbook) — or you can simply use the Copy command to paste a graph into almost any program on earth.

LaserWriter Utility (or Apple Printer Utility)

These little programs are exclusively for use with networked laser printers. They perform all sorts of interesting power-user functions (such as *pre-downloading* [sending] fonts to the printer), but by far their most important real-world application is to turn off the annoying and wasteful *startup page* that spews forth from a laser printer whenever you first turn it on.

Special Needs

This folder traditionally contains two control panels that don't normally come installed in your Mac: CloseView and Easy Access. The former is for the visually impaired (it enlarges the screen image); the latter is for people who can't use the mouse. Easy Access lets you operate the Mac entirely from the keyboard.

Speech Recognition

Any Mac with a four-digit model number (except PowerBooks) can also follow your spoken orders! Install this software, known as PlainTalk Speech Recognition, and a $19 PlainTalk microphone, and you can give your Mac such commands as "Open ClarisWorks," "What time is it?," and even "Tell me a joke," and your Mac responds intelligently.

We're not talking *taking dictation* here, however, all your Mac can really do is *open* things (programs, the Trash, control panels, and so on). Still, it's a computer responding to a human voice, which is nothing to sneeze at, and it's good for at least a half hour of classroom entertainment.

Text-to-Speech

By far the most kid-friendly of the Apple Extras bunch, this installer puts *speech software* into your Mac's software. After the installer is finished, launch SimpleText; type up something funny for your Mac to say; and choose Speak All from the Sound menu. You even get a choice of different voices!

Techie note: If you dig around in the options of your software, you'll discover that America Online, ClarisWorks, WordPerfect, and even FileMaker can also read stuff back to you, after you install this Text-to-Speech software.

What's on Your Hard Drive?

Up until this point, we've pretty much ignored that little hard drive icon in the upper-right corner of your screen. Aren't you just a little bit curious? In the last chapter, I told you all about the hard drive and its purpose — that's where all your programs are stored and where you may end up saving some of your prized works.
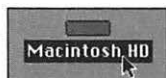
Let's take a look at what's on your computer's hard drive. Double-click the Macintosh HD icon.

The window that opens up has a list of folders, files, and applications. Yours won't look exactly like mine (shown in Figure 3-4), but a few things are common to all Macs.

		Macintosh HD		
62 items		551.2 MB in disk	476 MB available	
		Name	Size	Kind
▷	☐	**Print Shop Deluxe**	11,352K	folder
▷	☐	**ProPhone folder**	1,469K	folder
▷	☐	**QuickCam**	875K	folder
	⬧	**ResEdit**	644K	application
▷	☐	**Scrabble Deluxe**	1,304K	folder
▷	☐	**Sierra**	27,572K	folder
▷	☐	**Sim City 2000**	3,861K	folder
▷	☐	**Student Writing Center™**	10,032K	folder
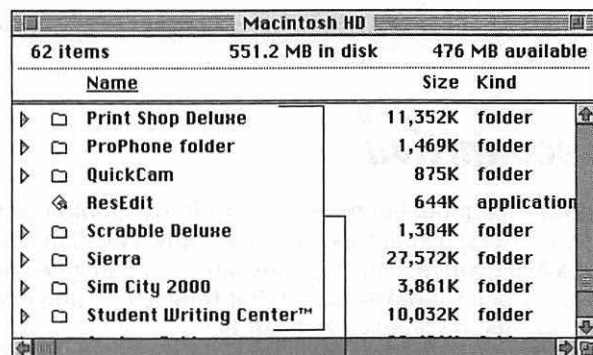
Figure 3-4: Here is what is on my hard drive.

A list of the Mac's hard drive contents

Having Fun with Floppies

For our next trick, you're going to need a floppy disk. If you didn't buy a box of blank disks with your Mac, you're going to need some eventually. If you don't have a blank disk handy, you can use one of the white System disks that came with your Mac.

1. **Put the disk into the disk-drive slot.**

   The Mac gulps it in with a satisfying *kachunk.* If it's a brand-new disk, you're asked if you want to initialize it.

   Go ahead. Click Initialize. You're then asked to name the disk: Type a name, click OK, and then wait about 45 seconds while the Mac prepares the disk for its new life as your data receptacle.

Macintosh HD

my stuff

If it's *not* a new disk — for example, if you're using one of the disks that came with your Mac — the floppy-disk icon shows up on the right side, just beneath your hard-disk icon.

To see what's on the disk, double-click the icon. As you no doubt are tired of hearing repeated, a double-click on a disk icon opens its contents window.

This is important stuff: In your lifetime, you'll do a lot of copying from floppy disks *to* your hard drive (such as when you buy a program and want to put a copy of it on your hard drive). If you're smart, you'll also do a lot of copying onto floppies *from* your hard drive (such as when you make a backup copy of all your work, in preparation for the inevitable day when something goes wrong with your hard disk).

2. Double-click your hard-disk icon.

If its window was closed, it now opens. If the window was open but hidden behind the floppy-disk window, the hard-disk window comes to the front.

3. Drag the Class List folder on top of the floppy-disk icon.

██	Macintosh HD	██
13 items	58.9 MB in disk	17.9 MB available

teach-text Bailey's Book House Class List

System Folder ClarisWorks 3.0 Folder Kid Pix

Macintosh HD

my stuff
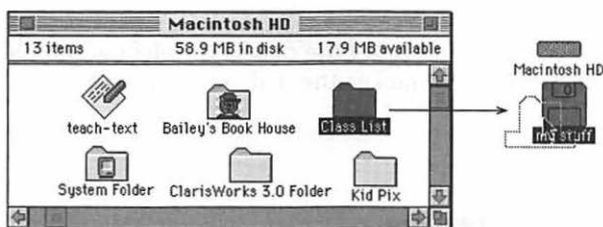
If you already trashed your Class List folder, no big deal. Choose New Folder from the File menu (or press ⌘-N) to create a new folder. Drag that instead.

The point is that, on a Macintosh, making a copy of something is as easy as dragging it to the disk you want it copied onto. You can also drag it into the disk's window (if it's open) instead of onto its icon.

Copying something *from* floppy *to* your hard disk is equally easy. Open the floppy-disk window (by double-clicking the floppy-disk icon). Then drag whatever icons you want onto the hard-disk icon (or onto the hard-disk window). For example, in Figure 3-5, two files are being copied from a floppy disk — not just into the hard-disk window, but into a *specific folder* on the hard disk:

Okay. So you made a copy of your third-quarter math grades, or you just copied this week's lesson plans onto your hard disk. Now what? How do you get the disk out?

Figure 3-5:
The Math
and
Science
folders are
being
copied to
the Class
List folder.
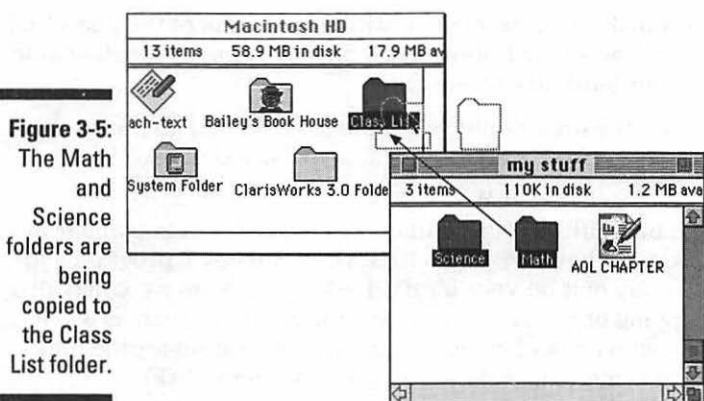
Well, you wouldn't be alone if you guessed that you use the Eject Disk command in the Special menu. But you'd be sort of wrong. The Eject Disk command does spit out the disk — but it leaves the disk's icon on the screen so that the Mac thinks it's still available. The minute you try to go on with your work, the Mac starts displaying messages demanding that you give the disk back to it.

A much better way to get rid of the disk is to select it and choose Put Away from the File menu. That makes the disk pop out, *and* its image disappears from the screen.

Desktop Protection

No, I'm not about to offer you some sleazy insurance policy. I'm going to tell you about two programs that may just save your life one day. . . . Okay, they just save your work and possibly keep your Mac in proper working order!

Desktop programs are also referred to as *security systems.* The two most popular protection systems in schools are At Ease (Apple Computer 800-800-APPL, ext. 2775) and FoolProof (SmartStuff Software 503-231-4300).

At Ease places a set of folders over the top of the desktop. Through an easy setup procedure, you decide what programs students are allowed to access. Those accessible programs are then given a button on the folders. Students simply click a button to open a program instead of accessing the program from the computer's hard drive. You can also set up At Ease so that files can be saved *only* to floppy disks.

FoolProof (my personal preference) allows the students to see the actual desktop (as does newer versions of At Ease). You simply decide, through a very easy set-up procedure, which files, accessories, and menus the students are allowed to access. I like this type of protection because it lets the student see the actual working environment . . . you know, that "real world" kinda thing we're supposed to be preparing them to be a part of!

Top Ten Window, Disk, and Trash Tips

"I don't do windows," you say? After reading the following tips, you'll find windows so easy to do that you may even consider cleaning the Venetian blinds.

1. To rename an icon or disk, click carefully on its name. Wait for a second or so, until a rectangle appears around the name. That's your cue to type away, giving it a new name. Press Return when you're done.

   It works a little differently in System 6. Just click an icon and start typing. No rectangle, no waiting.

2. If you're looking at a windowful of file icons, you can select one by typing the first couple of letters of its name.

3. Don't forget that you can look at a window's contents in a neat list (choose "by Name" from the View menu). Once in a list view, when a folder is highlighted, you can press ⌘-→ to expand it (as though you clicked the triangle to view its contents) and ⌘-← to collapse it again.

4. In System 7, every time you choose Empty Trash from the Special menu, the Mac asks you if you're absolutely sure. If you prefer your computer to simply vaporize the Trash contents without asking, select the Trash icon. Choose Get Info from the File menu and click the "Warn before emptying" check box so that the X disappears.

Trash Info

Trash

Where: On the desktop

Contents: The Trash is empty.

Modified: Thu, Oct 20, 1994, 8:16 PM

☐ **Warn before emptying**
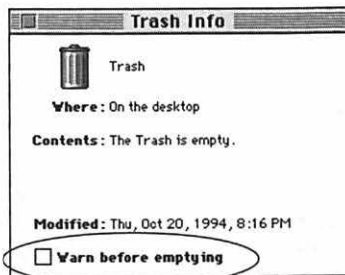
5. If you're trying to make a copy of a floppy disk, and you have only one floppy-disk drive, you find that the Mac can only copy a little bit at a time. It winds up asking you to insert one disk, then the other; one disk, then the other . . . until your wrists are swollen and bleeding.

A better, faster idea: Copy the entire disk to your *hard disk,* eject the floppy, insert the blank floppy, and then copy the stuff from the hard disk to the new floppy. Using the hard disk as an intermediate holding tank in this way eliminates the disk-swapping. (Just trash the superfluous copy from your hard disk when it's all over.)

6. If you have a very important document, you can prevent it from getting thrown away by accident. Click its icon. Choose Get Info from the File menu. Select the Locked check box. Now, even if you put it in the Trash and try to empty the Trash, the Mac simply tells you that there's a locked item in the Trash, which it won't get rid of.

7. You already know how to copy a file from one disk to another. You can copy it on the *same* disk, too. Click the icon and choose Duplicate from the File menu.

Or, while pressing the Option key, drag the icon onto a new window or folder.

8. Isn't it frustrating to open a window that's too small to show you all of its contents?
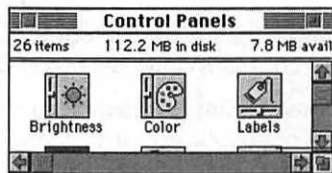
It's hard to see the entire contents of this window.

Of course, you could spend a weekend fussing with the scroll bars, trying to crank the other icons into view. Or, using error-and-trial, you could drag the lower-right handle (the resize box) to make the window bigger.

There's a much quicker solution. Click the *zoom box* in the upper-right corner of the window. The Mac automatically makes the window *exactly* large enough to show all the icons.

9. You don't have to be content to leave the Trash stranded way down there at the bottom of your screen. You can move it anywhere you want, just by dragging it. That's especially handy if you're lucky enough to have one of those screens that looks like it was taken from the movie theater and don't feel like packing a week's worth of supplies every time you want to make a journey to the Trash corner.

10. You don't have to eject disks and clean up your windows before you shut down the computer. The disks pop out automatically, and the windows are right where you left them the next time you turn on the Mac.

Zoom box
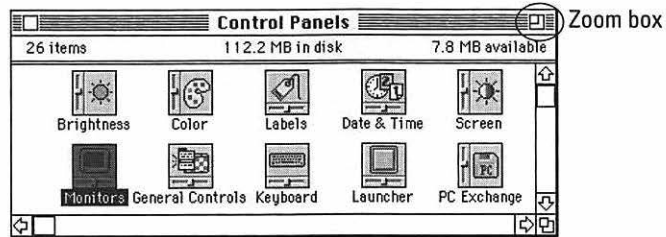
Chapter 4

A Printing Primer

*Y*ou did all this work, and now it's time to print. I must first tell you that this subject could become *very* deep. If, after reading this chapter, you feel the need for more knowledge on printers and fonts, please get *Macs For Dummies,* 5th Edition. David Pogue goes into much more detail on the subject. I will try to give you the information you need right now, however. The extra stuff is worth learning about later on, if you're the curious sort.

A Primer on Printers

Printers come in all kinds of configurations and prices. You can spend next to nothing and get a printer whose printouts are so jagged that they look like something scribbled by an angry middle-schooler. Or you can spend a thousand clams or so and get a printer whose printouts resemble professional typesetting.

The three types of printers I discuss are:

- ✔ dot-matrix
- ✔ inkjet
- ✔ laser

Dot-matrix low-cost, low-quality

I'm talking about the Apple ImageWriter II. If you were a teacher during the '80s, your school was probably full of these babies (mine still is). It's called a *dot-matrix* printer because it prints by firing little pins against a ribbon that strikes the paper. The resulting collection of dots forms the letters.

These printers are in many of our schools because they're cheap and they were the first ones available to work with those wonderful Apple IIc and Apple IIe computers — computers that were often our first introduction to the world of computing. If your school has just begun to purchase Macintosh computers, those same printers that are connected to your IIe or IIc machines will work with your new Macs. They will serve you well until your budget has room for upgrades.

The ImageWriter is slowish and so noisy that people regularly buy mufflers for them. The print quality isn't anything to write home about — yet it is a good machine for the school setting. The ImageWriter uses ribbons that are considerably cheaper than ink cartridges (and you can also purchase color ribbons). The ImageWriter uses *pin-fed paper* (attached sheets of paper with little holes running along each side) that you can load and then have fed out of the box. Pin-fed paper keeps you from constantly having to reload paper.

Inkjet low-cost, high-quality, low-speed

Inkjet printers create a printed image by spraying a mist of ink on the paper.

The two most popular ink-jet printers are the Apple StyleWriter and the Hewlett-Packard DeskWriter. Their quality almost matches that of a laser printer. The StyleWriter is very small, very lightweight, and almost silent (that's more than I can say for some students), whereas the DeskWriter takes up more desk space and makes a little more noise. You can feed all kinds of nonliving things into both printers: labels, envelopes, tagboard, whatever. And they cost less than $300. Both the Apple StyleWriter and the Hewlett-Packard DeskWriter also come in color versions — for a slightly higher price.

So what's the catch? Well, both the StyleWriter and the DeskWriter create an image by spraying ink on a page. Therefore, the printing isn't laser-crisp if your stationery is even slightly absorbent. Note, too, that inkjet-printed pages smear if they ever get the least bit damp.

Laser high-cost, high-quality

If you can afford to pay something like $1,200 for a printer, though, some real magic awaits you: *PostScript laser printers*. Don't worry about the word PostScript for now. Just look for the word PostScript in the printer's description, as if it were some kind of seal of approval.

A PostScript laser printer can print any text, in any style, at any size, at any angle — and everything looks terrific. PostScript laser printers can also print phenomenal-looking graphics, like all the diagrams in Macintosh magazines. They're quick, quiet, and hassle-free. Most can print envelopes, mailing labels, and paper up to legal-size (but not tagboard).

Oh, How I Love Those "Fancy" Letters

If you have a computer-friendly coworker who's produced some incredible-looking parent letters or student handouts, you probably noticed some pretty "fancy" lettering on those documents. To computer nerds, those "fancy" letters are better known as *fonts*. Your computer comes loaded with some basic fonts. System 7 fonts are shown in Figure 4-1.

Chicago	Courier	Geneva
Helvetica	Monaco	New York
Palatino	Σψμβολ	Times

Figure 4-1:
The basic fonts of System 7.

Fonts are fun

The basic set of fonts that came with your Mac let you accomplish some amazing stuff because you not only can change the size of your letters, but you can also change the style and color.

We get to the how-to portion later in Chapter 7. Right now I just want you to be aware of the possibilities that await you.

Every word-processing program in use today allows the user the flexibility of choosing a font style and making changes within that style. Notice the different ways I altered the fonts in Figure 4-2.

Chicago	Chicago	Chicago
Helvetica	Helvetica	Helvetica
Palatino	Palatino	Palatino

You can also purchase additional fonts from any software vendor. Literally thousands of different fonts are out there — and they are very cheap.

Fonts enable you, the teacher, to make what your students or their parents *need to* read fun, exciting, and eye-catching. How many of us look twice at those boring memos that are written in standard print? However, a nice memo is easy to create and makes someone want to read it simply because of the way it looks.

Knowing a little about fonts inspires you to look at a page in a magazine or an ad in the newspaper in a new way. You start to notice the creativity behind the advertising game and how fonts express different feelings.

School fonts!

Many software companies are beginning to see the light and create fonts specifically aimed at the school market. You know, letters that look like the manuscript or cursive we try to teach our students! There are even fonts that look like a kid's handwriting. I've arranged to give you a couple of free "school-type" fonts on the CD that came with this book. If you crave more, check out these companies:

School Font Collection: Mountain Lake Software (800-669-6574)

Schoolhouse Fonts: Signature Software (541-386-3221)

Loading a new font

So you decide to go out and buy some of the nice fonts you hear so much about. How do you get them onto your machine?

It's easy. If you are using System 7 (which I hope most of you are by now!), quit all your programs.

1. **Insert your new disk into the computer. Double-click the icon of the disk to open it.**

   You should see a number of little suitcases, each one labeled with the name of a font that you purchased.

2. **Now open up your hard drive (double-click the hard-drive icon in the upper-right corner of your screen) and find your System folder.**

   You don't have to open this folder.

3. **Decide which fonts you'd like to install, highlight them, and drag them over to the System folder.**

4. **When the System folder is highlighted, let go of the mouse.**

   Remember, do not open the System folder. Simply drag the suitcase on top of the folder until it is highlighted and release the mouse. (I'm really a teacher. See how I repeat the information I want you to remember?)

System Folder   A Font File
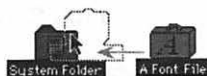
   You see a message alerting you that the Mac is going to install the font for you. Just smile, wave, and click OK. Wasn't that easy?

How to Print

Bet you haven't had a lesson with that title since about first grade. (Unless, of course, you teach first grade.)

The hardest part of printing on a Mac comes at the very beginning — an unfortunate fact for the novice who simply wants to get going.

When you first plug a printer into the Mac, it's like a kid on the first day of school — not smart enough to notice that it has a new friend. You have to tell the Mac explicitly. We get to that stuff in a moment.

Imagine that you work in a big school with lots of technology money; you have three different kinds of printers and a few dozen Macs, and they're all wired together into a giant network. You want to print something. You have to be able to tell the Mac the following stuff:

✔ What *kind* of printer you want to use (laser, StyleWriter, whatever)

✔ If there's *more than one* of each printer connected to the network

✔ Which *printer(s)* you have connected

That long-winded explanation is supposed to help you understand why there's a desk accessory in your Apple menu called the *Chooser*. Using this gadget, you can specify what kind of printer — and which one — you want to use.

If you're a one-person operation, of course, this stuff is utterly superfluous. But you have to go through it, anyway. What the heck — maybe your school will get that multimillion dollar technology grant, and you'll know exactly what to do!

The Chooser

After the Mac is connected to the printer, turn both machines on and follow these steps:

1. Choose Chooser from the menu. You should see something like this:
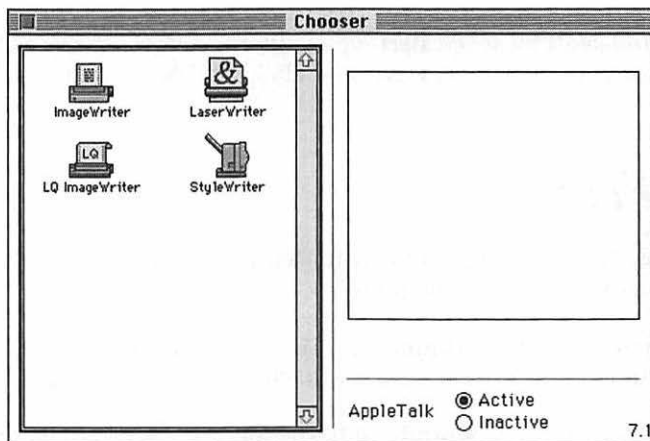
Your screen may look different, of course. The icons that appear in the left half of the window depend upon which *printer drivers* have been placed in your System folder. A printer driver is a little piece of software that teaches the Mac how to communicate with a specific printer. Its name and its icon match the printer itself, as you can sort of tell from the preceding figure.

2. **If you see a printer driver icon in the Chooser window that matches your printer, you're in luck! Click it.**

   If you selected a laser printer, you should see its name show up in the *right* side of the Chooser window, as shown here:
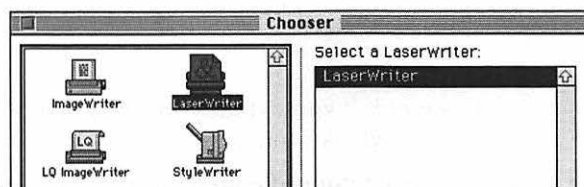
Good going! Everything's coming up roses. If the names of several printers show up on the right, then you're either part of a school network with several printers or you're an unexpectedly wealthy individual. Congratulations!

If you don't see *any* icons in the left half of the Chooser window, somebody has probably taken them out. No matter — reinstall all these icons by running the Installer on your original white System-software disks (or the start-up compact disc) and performing a *custom install* for the printer drivers. (Don't reinstall the whole system!) Now you can repeat this Chooser business, and everything should go fine.

If things still aren't going well — for example, if you click the driver icon but your printer's name doesn't show up in the right side of the window — see Appendix C of this book, "Troubleshooting."

Anyway, after you click a printer driver icon, a couple of things happen. If you're selecting a laser printer, you're told to turn on *AppleTalk*. AppleTalk is related to LocalTalk, the networking system described previously; remember that if you have a laser printer, you're supposedly part of a network even if just one Mac is attached to it. So make sure that the little AppleTalk setting (in the lower-right corner of the dialog box) is active if you have a laser printer. Conversely, make sure that AppleTalk is *inactive* if you have a StyleWriter.

Note: Some of the newer inkjet printers, from both Apple and Hewlett-Packard, are networkable. Therefore, turning off AppleTalk would not be the right thing to do.

3. Close the Chooser.

But when you close the Chooser, you get a soon-to-be-annoying alert message:

> ⚠   **You have changed your current printer. Please choose "Page Setup..." in all of the open applications.**
>
>   **[OK]**
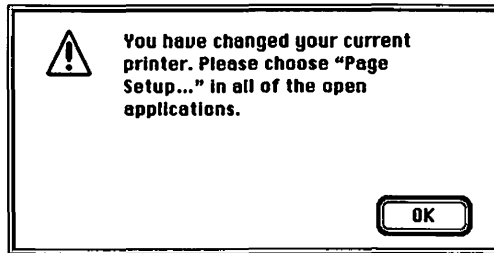
It tells you (as if you didn't know) that you just changed to a new printer. Its advice, though, is sound.

4. Choose Page Setup from your File menu after you select a printer driver. A dialog box appears.

5. Don't _do_ anything in this box; just click OK.

You just introduced the Mac to its new printer. All of this is a one-time operation, by the way. Unless you have to switch printers or something, you never have to touch the Chooser again.

Background printing

In the Dark Ages of the 1980s, when you printed something, the printer's soul took over your Mac's body. You couldn't type, you couldn't work, you couldn't do anything but stare at the screen that said "Now printing." It was a dark and stormy era, a time of wild children waiting for their stories to print. Only when the paper came out of the printer were you allowed to use your computer again.

Since then, some clever Apple engineer figured out how to allow _background printing_. When you use this handy feature, the Mac sends all the printing information at a million miles an hour into a _file_ on your hard disk and immediately returns its attention to you and your personal needs.

Then quietly, behind the scenes, the Mac shoots a little bit of that file at a time to your printer. It all happens during the microseconds between your keystrokes and mouse clicks, making it seem as though the Mac is printing in the background. In time, the printer receives all the information it needs to print, the paper comes gliding out, and you've been able to keep working the whole time.

In practice, you have to consider a few background-printing realities. First of all, a document takes much longer to print in the background than it would if the Mac devoted all its brainpower to printing. Similarly, making your Mac concentrate on two things at once also bogs down what you're doing: While something's being printed in the background, the word processor slows down (letters don't appear immediately after you press the keys), windows seem to take longer to open, and so on. Finally, background printing isn't available for ImageWriters (unless you buy a program called a *spooler*, especially designed for the ImageWriter).

Turning the Background Printing feature on and off is easy. Select Chooser from the menu. In the lower-right side of the box, you see the On/Off buttons. Go for it.

If it's 2:00 on a Friday afternoon, and you need to print your five-page parent letter as quickly as possible, turn off background printing.

After all that . . . how you actually print

Okay. Suppose you followed all the directions and the printer is plugged in (and via the Chooser, the printer has been introduced to the Mac). You created a beautiful document using some really cool fonts. The moment has arrived. You actually would like to *print* the thing.

1. **Choose Print from the File menu.**

   This dialog box appears; it looks different depending on your printer, but the one pictured here is what you see if you have a 'Writer.

```
┌─────────────────────────────────────────────────────────┐
│ DeskWriter                                   3.1  ┌─ OK ─┐│
│ Quality:              Pages:                      └──────┘│
│   ◉ Best                ○ All                    ┌────────┐│
│   ○ Normal              ◉ From: [3]  To: [3]     │ Cancel ││
│   ○ Draft                                        └────────┘│
│ Copies:               Page Order:                ┌────────┐│
│   [2]                   ☐ Print Back to Front    │Preview ││
│                                                  └────────┘│
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│                                                  │  Help  ││
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```
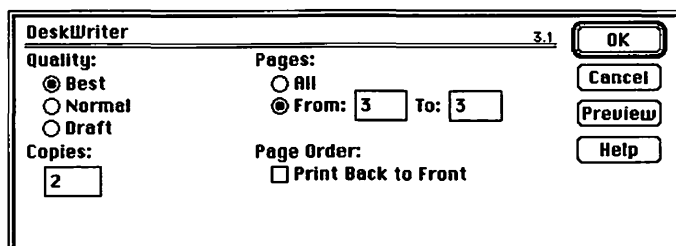
You can specify how many copies you want by clicking and typing in the Copies box.

The main thing you do in this dialog box is tell the Mac which pages of your document you want it to print. If you just want page 1, type a 1 in *both* the From and To boxes. If you want page 2 to the end, type 2 into the From box and leave the To box empty.

Some printers (Lasers and 'Writers) give you the option of printing "back to front." This means that when you pick up your pile of printed papers, the first page of text is on top.

Note: Instead of using the mouse to click between the blanks in a dialog box, use the Tab key to jump from box to box.

2. Click OK.

You did it, my friend!

Canceling printing

If you want to interrupt the printing process, ⌘-. (period) does the trick — that is, while pressing the ⌘ key, type a period. Several times, actually. Even then, your printer takes a moment (or page) to respond to you.

Note: This procedure doesn't work when you are printing in the background.

Chapter 5

A Guided Tour through the Software Jungle

● ○ ●

In This Chapter

▷ Skill-and-drill software

▷ Productivity software

▷ Multimedia software

▷ Edutainment software

▷ Simulation software

▷ A look at the ideal world and the day-to-day reality

○ ○

School administrators don't always agree on the intended outcome of
their technology pursuits. Some will tell you that their main goal is to
raise test scores; they display class scores on overhead projectors, compare
scores with rival counties, and basically make you feel like you haven't been
teaching anything significant for the past year. Often, these schools are
looking for a quick fix and hope that technology can cure what we teachers
just can't seem to get right. Other administrators take a more global ap-
proach and feel that if we use technology in teaching children to be better
thinkers and problem-solvers, we will produce confident and successful
individuals — who, in return, may produce higher test scores.

The software jungle can be very confusing. It's filled with numerous prod-
ucts to meet the goals of a diverse group of users; and whether you're
spending your own money or the limited funds provided in your school's
technology budget, you anticipate a tight squeeze on available cash. You
simply don't have room for a costly purchasing mistake. In this chapter, I
examine the four major types of software intended for student use. I give
you the straight facts (and, of course, a few of my opinions on each cat-
egory), while providing you with some valuable ideas for incorporating each
type of software into your school setting.

Check out my extensive list of quality software!

In Appendix B you'll find my thorough list of high-quality educational software. Believe it or not, this list took longer to write than any other chapter in the book! Read through the collection, take a few notes, and share the list with friends. If you feel like you need a printed copy, don't spend your time waiting for a turn at the copier; instead simply print the list from the CD included with this book. Yes, I had those crafty CD-developers add the list to the disc! It'll print out exactly as it appears in the book. You can then offer the information to your technology committee, take it with you on shopping sprees, or keep it on hand for your classroom wish list.

Skill-and-Drill Software

In the simplest of terms, *skill-and-drill software* is a form of electronic flash card. (The difference is you don't have to hold this software with your thumb, artfully covering the upper-right corner, so that the students can't see through to the answer on the back.) Don't misunderstand me. Today's skill-and-drill software is beautifully crafted, and some good programs out there do a super job of reviewing skills. Most of the programs concentrate on a single skill (multiplication facts, addition, and so on) or a single subject area (math, science, or reading, for example).

The granddaddy of all skill-and-drill software is *MECC* (Minnesota Education Consulting Consortium). How's that for a name? But MECC has produced some incredible programs over the years, and many of you may be familiar with what MECC created for those wonderful — and now very lonely — Apple IIc and IIe computers.

Skill-and-drill software has its place within the school. Some things, such as multiplication facts, need to be continually reviewed — and there's no magic way to get children to memorize these facts without practice. The best forms of skill-and-drill software give *immediate feedback* and *helpful corrections:* Here's what you did wrong, here's how to fix it.

Skill-and-drill and me!

Without skill-and-drill software, I might have missed out on acceptance to graduate school. You see, I don't test well — I never have. When I found out that I needed to take either the GRE or the GMAT to enter grad school, I became quite the nervous teacher. (Unlike the MacGod, I did not graduate summa cum laude from Yale.) Anyway, I opted for the GMAT when I found out that it lasted an hour and dealt only with analogies. I was told that the computer lab at the education school had a program to help you study for this hour-long brain burner of a test. Guess what? It was pure skill-and-drill: It not only told me the correct answer, but it also analyzed my response and told me how I *should* have addressed the problem. I used this program for two days in a row and then went to take the test. I scored so well that the evaluator had to look at my answer sheet again. And I owe it all to our friend, Mr. Skill-and-Drill. (I'm sorry to report that the university couldn't tell me the name of the program — this was in 1984. But there are many great test-preparation programs on the market covering all the major entrance exams.)

The kids love drills that come in the form of a game, which most of today's programs include. But not all skill-and-drill software needs to be a game. Some of the programs I enjoyed the most in those early days of MECC and the Apple IIc were just like flash cards: They flashed up a multiplication problem, gave you so many seconds to respond, and then took away the problem. At the end of the game you were given an accuracy score. It was pure learning without the distraction of animated characters and soaring rocket ships — and it worked because kids enjoy a challenge and love to be given another chance to improve their scores! This type of skill-and-drill software works especially well in the one-computer classroom where a teacher wants to give everyone a fair amount of computer time each day and is interested in monitoring progress.

But skill-and-drill software has its drawbacks. I already mentioned that most programs focus on a single skill or subject area. This restriction can prove troubling when budgets are limited and you want to purchase programs that please the masses. The prescribed age range for each program can also be a disadvantage. Most programs are grouped by preschool, early elementary, elementary, middle, or high school — with the majority of the software being aimed at kindergarten through grade 6. Thus, the restricted number of kids who will benefit from the purchase is once again a problem. Finally, skill-and-drill software does very little to encourage creative thinking and problem-solving (unless you count searching for the spaceship that contains the ugliest monster in the *creative-thinking* category). I feel that such skills must be encouraged in this rapidly changing world.

If you can't pay attention to me, you won't get a turn!

How often have these words come out of your mouth? I know that I should want students to be interested in the computer and begging for a turn — but not during a lesson that took me days to prepare. Let's face it: In a one-computer classroom, the whole class is intrigued by the noises coming out of the machine that you've tried to place out of their line of vision. And some of the best skill-and-drill software is usually very noisy. (The sound effects in these programs are cool and very realistic). But have no fear. Almost all these programs have control panels where you can switch off the sound, vary the number of problems presented, and set the level of difficulty. Although hearing the rocket blast off or the alien capture you is half the fun. (Oh, I forgot, learning isn't supposed to be about fun!) I cured this noise problem without ruining the fun by purchasing head-phones for my classroom. The cheap ones work just fine; I picked up a set for each com-puter in our lab at a local drugstore for $1 each.

Productivity Software

As the name implies, *productivity software* lets you walk away with a *product* of some sort. And, in answer to your next question — yes, a printer attached to your computer would be great when you're using most productivity software. However, it's not a necessity. Remember the art of saving? You can have each child save work to a disk; then, at a more convenient time, take the "product" to a computer with a printer. (I know, there is no convenient time, unless you can squeeze it in during your 30-minute "break" somewhere between using the rest room, checking out resources from the library, calling the *concerned parent,* and preparing for your next class.)

In my job as a technology coordinator, I'm required to integrate the class-room curriculum with technology. It's unrealistic to think that a school could purchase software on each individual area of the curriculum. Don't get me wrong: Some great programs are very specific and usually skill-and-drill. Yet I can't justify spending taxpayer dollars on a piece of software that may be used by one grade level to highlight a topic being taught for a single semester. By using productivity software, you can create activities for *all* levels and *all* subjects with just a single program. (I love productivity software, as you can probably tell.)

Another great benefit of productivity software is the power you give stu-dents. You are not giving them a predesigned format where they are simply participants. You are giving them the tools they need to solve their prob-lems or interpret a topic. Look at some examples using ClarisWorks:

That's edutainment!

Isn't that a great name? Edutainment software is a hybrid of sorts, combining aspects of skill-and-drill software with the simulation software titles. Kids learn while "playing" on the computer. Pretty sly, I know, but it works! Many of the titles in this area involve students in an adventure of some type or in a mystery. Along the way to solving the mystery or experiencing the adventure, students pick up a few fun facts or delve deeper and deeper into a subject area.

Parents especially love this type of software because it usually doesn't require a lot of prior knowledge on their parts — they sometimes enjoy the adventures as much as their kids! Teachers enjoy the titles for the same reason; in a one-computer classroom, a student or group of students can work alone with little teacher supervision.

✔ *Second-grade* students can write five sentences and then choose a way to show that they know the subject in each sentence. The opportunities are endless. They can change the font of the subject, underline the subject, type the subject in a different size, type the subject in a different color, or do any combination of these things.

✔ *Fifth-graders* can survey other students each week and compile the survey results on a spreadsheet. Then, using the Make a Chart command, they can turn their results into a visual image to share in a school newspaper — kinda like the graphs you see each week in USA today.

✔ *Middle or high school students* can use the database to enter information on a variety of environmental or social issues; later, the students can call upon this database to help find information to aid in the creation of call-to-action letters for specific causes. They can even use the database to create address labels for mailing envelopes.

In other words, most productivity programs are like those knives sold on late-night TV: They slice, dice, chop, and even julienne!

Other forms of productivity software help students create published products. These products can be based on any areas of the curriculum. Book-publishing software that lets the student write, illustrate, print (front to back, no less), fold, and staple is easy for any age group to use. This type of creative involvement between the student and the computer helps make the learning more meaningful and personal.

Software pirates

Remembering that software is a copyrighted item is very important. When you purchase a software program, you are allowed to use that software on only one computer (or a specified number of computers, if you purchased a lab pack or site license). You can't share your program with a friend or load it on your computer at home — that's illegal. Software piracy is a huge problem today. Register your software purchases and honor the terms of your registration agreement.

Multimedia Software

Now we come to the kids' favorite type of productivity programs: the drawing, painting, and *multimedia* programs. I consider these programs to be a form of productivity software because a product is created. If used correctly, the product can be integrated into any area of the curriculum. Yet, to some parents and even some educators, these programs are pure fluff that should never be included in the education environment — kids shouldn't spend school time drawing and coloring.

I beg to differ. Multimedia software can be a great asset to any technology curriculum.

Multimedia programs allow for the purest form of assessment: authentic assessment. We need to allow students more chances to "show what they know," instead of prescribing a test to tell us how bright they are. Here are a few examples showing how students can use one of the Kid Pix programs:

✔ Why not have *kindergartners* practice letter recognition and handwriting skills by using each of the paint tools in Kid Pix to create different versions of the same letter? Then, if they are ready to extend the learning a little further, they can use Kid Pix stamps of images that start with that letter — or even better, they can use the text tools to type words starting with that letter.

✔ *Fifth-graders* can create an advertisement for a product that might have been sold during the period of westward expansion. Using the text tool, they can add descriptive words and phrases to justify the purchase of the item. Wouldn't this activity tell a teacher whether the student understood the hardships facing the travelers?

Everything is frozen on my screen!

What a bummer! Today's computer programs have more QuickTime movies, more interactive elements, and an overabundance of cool sounds. All this improvement is great. However, I sometimes think software developers have forgotten those of us who are still working in schools that have a *few* PowerPCs and tons of old LCIIs with a mere 4MB of RAM — slow processors. Our trusty old LCIIs (and many of the new higher-end machines) have a hard time when it comes to running these flashy new programs, and inevitably the screen will freeze at the most inopportune moment!

If your computer screen freezes, you have a couple of options:

✔ *Force quit* the program by pressing the following key combination: ⌘-Option-Esc.

Hopefully, a dialog box will appear, asking if you want to force quit the program. Click Force Quit, cross your fingers, and say please three times. If your computer is still frozen after this, try the next option.

✔ Restart the computer by pressing the *reset switch* (it's the button with the arrow that points to the left). This button does the same thing as turning the Mac off and on again.

✔ *Middle school students* can create a slide show that could be aired later via closed circuit television to the entire school. Topics for the show can be based on any topics in their curriculum — or the topics can be chosen to arouse social awareness.

Simulation Software

This final type of software is relatively new to the market. Many of the programs have been labeled *edutainment* — a new word in the software industry. Yet, as contrived as it sounds, this hybrid term describes well the programs in this area.

Simulation software is often labeled as interactive because the student becomes part of the software. Simulation software is incredibly fun, of course, and most of the quality programs involve a high level of thinking and reasoning. The only drawbacks involve the time necessary to complete an activity and the limits of your computer's memory.

Getting caught up in the activities is easy: crossing the plains in the 1800s on the Oregon Trail, finding Carmen as she travels through history (Where in Time is Carmen Sandiego?), or building a new town that will prosper and

---

Ask 3, then me

A little conversation in a computing classroom is all right. Yes, sometimes kids can explain things better than a teacher. To be quite honest, the kids usually solve a problem quicker than I can. So, my rule in a whole-class computing situation is "Ask 3, then me." This simply means that students must ask three friends for help before they come to me. Try it, and I bet you'll never again be bombarded with a roomful of impatient hands waving in the air.

---

grow in SimCity. But, before you know it, it's time to leave the lab or take the class to PE. It borders on cruelty when you ask a child to leave an adventure unsolved or incomplete, and that situation often occurs when you use simulation software in the school setting.

Most of the programs are now available on disk or CD-ROM, and either way, they usually require a large amount of memory. Always check the package or ad to be sure that you have the proper requirements to run the software. If your school is like most in the country, you're probably working on machines that have 4MB of RAM and a limited amount of hard-drive space, which makes it difficult to run some of the programs. (Some of the promotional material may say that a program will run with a minimum of 4MB, but it won't be nearly as smooth as you'd like — and it will be *very* slow.)

Are there really fewer Mac programs than Windows programs?

No, no, no, and no. This common misconception is constantly fueled by the way in which computer stores stock their shelves. Giving Windows programs three times more sales space than their Mac counterparts does tend to paint a bleak picture for the Mac software scene.

Take a short walk down those "Windows Aisles": Notice that just about every box containing a CD reads "Windows 95 and Mac." That's right, that same box could have just as easily been placed on the lonely Mac aisle —

but that would have been too easy. Because CDs can hold more than 600MB of information, most of the new software releases have been coming out in cross-platform versions (both Mac *and* Windows on the same CD).

If you still need a little reassurance, call MacWarehouse (800-255-6227), MacConnection (800-800-0019), or MacZone (800-248-0800) for a complete listing. You can find over 200 pages of Mac "stuff" in each of their catalogs!

A RAM Refresher

In Chapter 2, I talk about memory and I tell you that RAM stands for Random-Access Memory. You pronounce this acronym the way it reads, like the sheep: ram. And you will hear this word quite frequently. RAM is memory; it delivers information to your Mac's brain almost instantly.

Remember the menu? Pull down that menu and highlight About This Macintosh. Then release the mouse button. A window appears (as shown in Figure 5-1).

Look here for your RAM.

Figure 5-1:
Your Mac's
RAM is
important
when you
want to add
software.

```
About This Macintosh

                        System Software 7.1
    Macintosh LC II     © Apple Computer, Inc. 1983-1992

Built-in Memory:    4,096K   Largest Unused Block:   6,668K
Total Memory:       8,192K

  At Ease          140K   ■
  System Software  1,376K
```
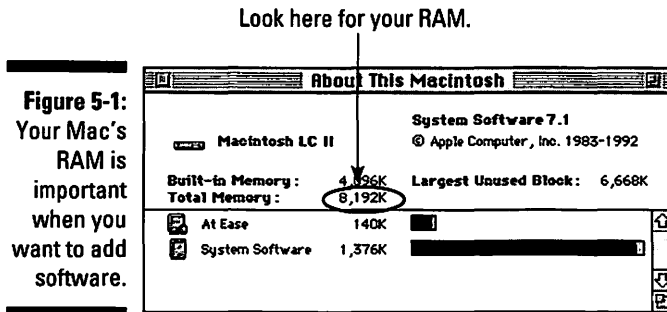
Media center alternatives

The media center in your school often can be a viable alternative for a complete lab situation. Simulation programs work as a great addition to a media center in the form of a minilab. With a center used this way, students can come on their own, possibly after finishing required classroom work, and stay for a while.

The media center could also have a few computers set aside for skill-and-drill software that teachers could request from a media specialist. This strategy could be a way to customize learning to meet the needs of all students.

In the media center at my school, we also have one computer that's connected to a laser printer and a modem — and is reserved solely for teachers. Teachers use this computer to create their newsletters, enter grades on gradebook programs, or send and receive e-mail correspondence. (I often ask teachers to preview software on this computer as well.) They like knowing that they have their own "space" to complete computing activities.

The number shown in Figure 5-1 would be the amount of RAM your Mac has. If you lop off everything after the comma, you're left with the number of *megs* of RAM. It's probably 4, 5, 8, 16, or 32MB. Older Macs have less. Higher-priced Macs have more. Take this opportunity to write the figure on the cheat sheet in the front of this book. This number comes in handy when you're shopping for software.

Let's Be Realistic

In an ideal world, I'd have one lab for each type of software: skill-and-drill, productivity, multimedia, and simulation. I'd also like to have minilabs within each classroom to allow small groups of students access — and possibly allow each student a fair amount of time on the computer each day. However, that's not possible within most of our schools, and time constraints often control what can be done within the labs. So, if I had to make decisions:

1. I'd first choose to have a productivity/multimedia lab where teachers could sign up for at least an hour at a time with the freedom to come back on consecutive days to complete a project.

2. My second choice would be to have a multimedia lab like the productivity lab, where teachers could sign up for large blocks of time on successive days to complete involved multimedia projects. I'd make sure that the lab was equipped with Macs with major amounts of memory (32MB of RAM or more and 2GB or more of hard-disk space), a scanner, a QuickTake Camera, and a video camera.

3. Then I'd choose to have a skill-and-drill lab that worked on a rotation schedule in order to give everyone in the school a chance to use the lab. Time slots for this lab could be 30–45 minutes each.

4. And last, I'd choose to have a simulation lab where the students could sign up individually for large blocks of time (which would allow for *really* experiencing the simulation).

CD-ROM Explained

CD stands for *compact disc*. ROM stands for *read-only memory*. Read-only memory means that you can only read, see, or hear what's on the CD. You can't make any changes to the contents of the CD.

So what do I need to take advantage of this acronym?

The requirements are minimal, and so is the cost when compared with other add-ons in the computer universe.

What do all those numbers beside a software title mean?

That's a good question, my friend! The numbers next to a software title indicate the *version* of the software (for example, *ClarisWorks 5.0*). It's important to know which version of the software you're working with when you want to share files between computers or send a file to a friend (who may have another version of the same software).

You see, most versions of a software program can "read" (open and allow you to work with) anything earlier (that's to say, "lower") than itself: ClarisWorks 5.0 can read ClarisWorks 4.0 or 3.0. However, an earlier software version can't read a version newer than itself: ClarisWorks 2.0 can't read ClarisWorks 4.0

files. Are you totally confused? Let me throw in another factor. You can purchase converters that allow earlier versions of a software program to read the most recent version!

And that's where the upgrade issue comes into play. For a little more than you'd pay for a file converter (and sometimes for free), you can upgrade to the newest version of a software program. If you or your school registered the software when you made the original purchase (as any good citizen would), you are sent notices when the software manufacturer releases an upgraded version.

You need a CD

You probably know what a music CD looks like. I'm embarrassed to say this, but I just recently purchased a CD player for my stereo system. (I'll always call new releases *albums,* and I'll never get rid of my turntable.)

Anyway, a CD is a flat, thin, shiny disc that has a diameter of about five inches. The ones that play music look exactly the same as the ones you use in a computer. The information is formatted on the plain side (the side without the graphics or title). However, a computer CD does much more than play music. The technology behind this wondrous creation is truly amazing. You see, a CD can hold a bizillion times more information than a regular computer disk, therefore allowing it to contain animation, incredible sound, and bedazzling graphics — all of which would consume hundreds of floppy disks.

You Need a CD-ROM Drive

The other part of this equation is the CD-ROM drive (the $200 to $400 thing you use to play the CD). I told you in the beginning of this book that I'm not a techno-nerd, so I won't even begin to try and explain how this baby works. I *will* tell you that all new Macs come with CD-ROM drives built in (internal). Or, if your school is like mine and full of lower-end Macs, you can purchase an external CD-ROM drive and plug it into the back of the Mac. (I've done it. It's *très* easy!)

CD-ROM drives come in an array of speeds. Most newer Macs are equipped with at least an eight-speed (8x) CD-ROM drive. Anyway, the speed refers to how fast the CD spins, which determines how fast information on a CD-ROM can be accessed or "read." This speed becomes a critical component when you use a lot of reference discs that are chock-full of data spread throughout the CD's available 600MB! Buy the fastest CD-ROM drive you can afford.

If you purchase an external CD-ROM drive, you find some software inside the box. This software tells the Mac that it has a new neighbor sitting beside it on the desk. Don't fret; installing software is an easy task and takes less than five minutes. Simply pop the floppy disk in your disk drive and follow the instructions for installation.

Note: Installing a CD-ROM drive is easy. Running a sometimes-memory-hungry CD-ROM on a Mac with only 4MB of RAM, however, may be less than appealing. Check into purchasing additional RAM for your Mac if you decide to add a CD-ROM drive.

The Internet connection

The newest and coolest feature found in reference CDs is a connection to the information superhighway. It's a natural! Now you can have the printed information, *and*, with the click of a button, your CD can access your Internet account and make up-to-the-minute information available to you whenever you want it. Reference information will always be current. (Now, if we could only teach the kids how to cite their references!)

Where's the Card Catalog?

As I mention earlier in the book, kids today have it easy. (I never imagined I'd hear myself utter those words.) They don't even have to leave their computers to look up a term, get a good quote for an article, or find out the state flower for Georgia. It's all available on CD.

Because CDs can hold so much information, they are the perfect medium for reference software. Over the past few years, reference software has exploded onto the scene. As a matter of fact, most of what you consider *mainstream* reference materials are now available on CD.

Reference CDs can be divided into two categories: *general learning* and *specific learning.* In the general-learning CD category, you find the basics: dictionaries, thesauruses, encyclopedias, and an atlas or two. Specific-learning CDs target one area of learning, such as the ocean, and contain a vast array of information on that individual subject. The specific-learning tools often include fun activities that actually take the learner into the subject and involve lots of interaction in the research process. The student learns from experience. (With general-reference CDs, the student is given information in more of a textual format.) There are some exceptions to this rule, as you'll see in the next chapter.

Good reference CDs are easier to use than their hardcover counterparts. When you venture into specific-learning software, the ease of use is immediately evident — the software manufacturer has taken information from a variety of sources and compiled it onto one CD. This task would take a child forever to accomplish.

A good reference CD should also be easy to use and — when it comes to dated material — should offer yearly updates at a nominal cost.

The CD that doesn't act like a CD

Recent trends have shown that many software companies are putting traditional productivity software on CDs, instead of just on floppy disks. Many of the programs aren't intended to be run from CD each time they are used. Placing a program on a CD simply makes it easier to install onto your hard drive; you don't have to switch back and forth from four or five disks during installation. The CDs are also easier to store than a pile of disks, and they take up less space.

Note: If you don't have a machine with a CD-ROM drive, you can usually contact the software company for floppy disk versions of the software.

Part II
ClarisWorks — The Loaded Spud
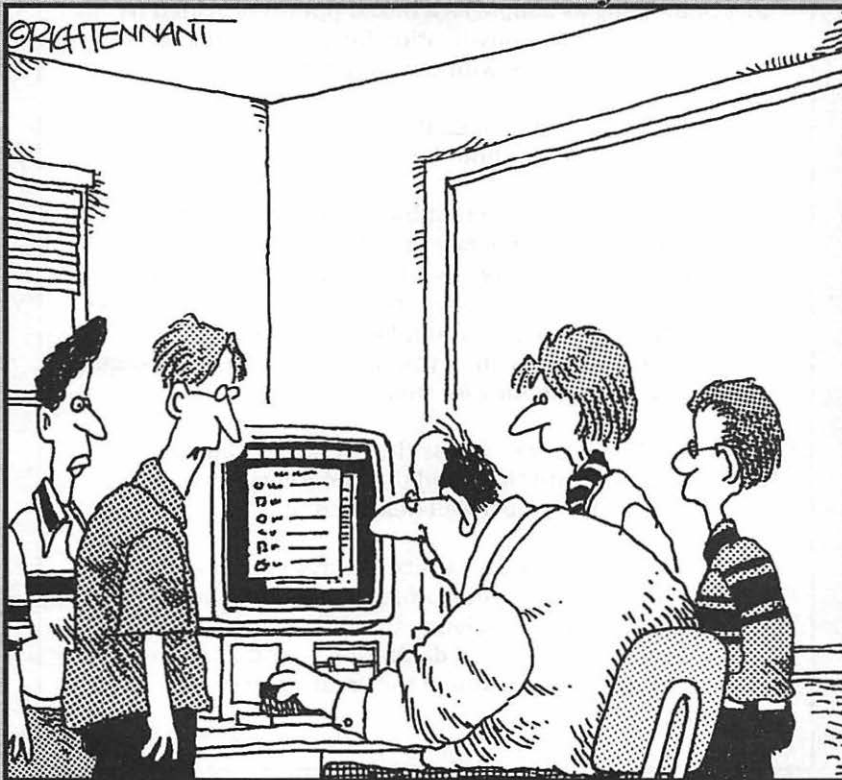
In this part . . .

*E*verything in education is centered around the children — and justifiably so! However, it sure would be nice if a few perks were thrown in every once in a while for those of us down in the trenches.

For example, I'll never forget the day my school cafeteria added baked potatoes to the teachers' lunch bar. We were all so excited! Looking back, it seems ridiculous, but it also proves how deprived we poor teachers sometimes are. Something as simple as a baked potato provided us with happiness and conversation for weeks. (And we became oh-so-creative with our toppings.)

Imagine what would happen if teachers were *always* allowed to leave the school for lunch!

ClarisWorks is much like that baked potato I so artfully loaded on my lunch tray last year. It will cause you to chatter excitedly for days as you show colleagues your incredible creations and brag about how much easier day-to-day tasks have become. And like the potato, ClarisWorks has everything you need in one neat package. How's that for stretching an analogy?

Later in this book, we discuss the wonderful things your *students* can do with this spud of a program. But right now, I want to give *you* a well-deserved perk.

In this part, I show you a variety of ways in which ClarisWorks can make your professional (and maybe personal) life easier. You learn about the world of word processing, templates, and databases — and I take you step-by-painless-step through the creation of each document.

Chapter 6

An Overview of ClarisWorks

In This Chapter

▷ What is ClarisWorks?

▷ The ClarisWorks components

▷ ClarisWorks basic training

▷ Assistant, please

▷ Check your spelling

*1*n Chapters 1–5, I show you all the Macintosh basics. Now it's time to get busy.

There are two major 'Works programs: ClarisWorks and Microsoft Works. They're very similar. I admit that all the activities in the next three chapters can be completed on either program. Use the program that you prefer. Then make the necessary adjustments. (I just prefer ClarisWorks.)

What is ClarisWorks?

ClarisWorks is Swiss-army-knife software. Just look at all you get, even if you don't know what they are yet: a word processor, a database, and a spreadsheet. Now how much would you pay? But wait. You also get a graphics program that can even serve as a basic page-layout system. And if you call now, they even throw in a little communications program (to use if you own a modem — a phone hookup for your Mac).

All these modules are neatly bundled into a single program. You can write a letter and put a graphic in it, or you can design a flyer that has a little spreadsheet in it, and so on. This section will be worth reading, even if you don't own ClarisWorks yet, because ClarisWorks works exactly like most other Mac programs.

Marvelous Modules

As I mentioned earlier, ClarisWorks has it all. Here's a brief description of each module:

Word Processing: You know that a word-processing document is something you type: a memo, lesson plans, and newsletters.

Drawing: This is the ClarisWorks version of MacDraw. In this kind of document, you toy around with lines, shapes, and colors to produce logos, maps, classroom layouts, diagrams, and other important visuals. You can move and manipulate in various ways the shapes that you can create.

Painting: This is the ClarisWorks version of MacPaint or Photoshop. Painting is another way of making graphics. Unlike the Drawing mode, where you can create only distinct circles, lines, and squares, the Painting tools enable you to create shading, freeform spatters, and much more textured artwork.

Database: An electronic index-card file, much like FileMaker. You type in your lists — household expenditures, record collections, classroom books — and the program sorts them, prints them, finds certain pieces of info instantly, and so on.

Spreadsheet: A computerized ledger sheet, almost exactly like Excel. It crunches numbers, for example, and it calculates your car's mileage per gallon, your bank account, how much of the phone bill your teenage daughter owes — that kind of thing.

Communications: You need this kind of program if you want to use your modem for dialing up local "electronic bulletin boards," pay-by-the-hour online services like CompuServe, or your local school's computer system. You can't use a program like this to dial up an online service (such as America Online). Instead, you have to use a special program provided by that company.

To make ClarisWorks strut its stuff, I'll show you in the following chapters how to create a class-list database, personalized stationery, customized checklists, lesson-plan templates (templates are stationery documents that remain constant and let you add changes to them each time you pull them up), and much more! But first, let's continue with our overview.

A shameless plug

As you can probably tell from this chapter, ClarisWorks is an amazing program. Believe it or not, this portion of the book only scratches the surface when it comes to what ClarisWorks can actually do! So, if you find yourself awake at night pondering other uses for ClarisWorks in the classroom, you might want to check out another book I've written: *The ClarisWorks Reference For Teachers* (from IDG Books Worldwide, Inc., ISBN # 1-56884-853-6).

In *The ClarisWorks Reference For Teachers*, I give you tons of great ClarisWorks tips; introduce you to basic layout and design principles; include an expansive ClarisWorks trouble-shooting chapter; give you instructions for creating a ClarisWorks slide show; tell you all about labels, letters and lists; explore the ClarisWorks Drawing and Painting modules; and include tons of great fonts and templates on the CD that comes packaged with the book. But hey, don't take my word for it... go out and see for yourself!

What's New with Version 4.0?

Claris did some great things with the introduction of Version 4.0. I give you a brief rundown here and introduce you to a few of my favorite new enhancements in the chapters that follow.

Overall Enhancements

The best overall enhancement is the addition of drag-and-drop clip art libraries. The capability to drag and drop means the end of cut and paste. The libraries of clip art are grouped by category (education, holidays, flags, and so on). After you open a library, adding an image is as quick as clicking on the image of your choice, dragging it to the "ideal spot," and then dropping it (letting go of the mouse button) in place. (See Figure 6-1.)

The addition of the Mailing Label Assistant and Certificate Assistant is a big plus to those of us in the education biz. ClarisWorks walks you step-by-step through the creation of mailing labels (complete with the Avery label style numbers) and makes creating custom certificates a breeze!

Click on image. Keep mouse button
down and drag image to document.

Figure 6-1:
Now you
can just
drag and
drop
clip art.
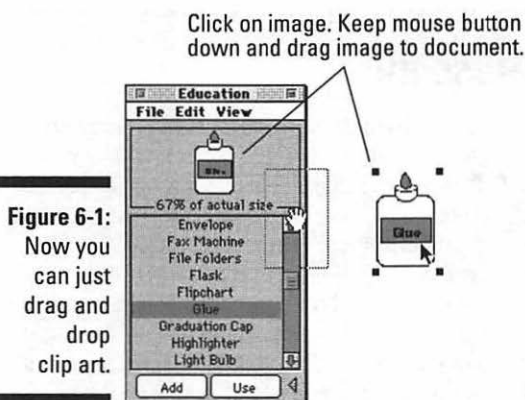
Jumping on the Internet bandwagon, ClarisWorks 4.0 also features HTML
(Hypertext Markup Language) translators. This addition allows a user to
create and read World Wide Web documents.

New word-processing features

Now it's easy to integrate outlines, numbered lists, and bulleted lists into
your text. Just select the text you want to format and choose the style from
the style pop-up ruler. If you insert a new item in the middle of your outline
or list, the numbering or other annotations adjust themselves.

Endnotes are now an option. I was honestly shocked when a friend told me
that footnotes were "old-fashioned." In Version 4.0, Claris has made
endnotes an easy addition.

There are also a few new enhancements in the area of formatting. In Version
4.0, you can insert multiple headers, sections, headers, and footers. All the
new formatting options are found under the Format menu.

New database features

I'm most impressed with the new features in this area. List view lets you
view, manipulate, and organize your data quickly and easily. In addition,
there are also new field types in Version 4.0:

Names: This field type allows you to enter a name in the typical order (first
name and then last name) and when you sort alphabetically, ClarisWorks
will look at the first letter of the last name.

Radio Buttons: Radio buttons are great for speedy data entry. A simple click in the radio button records your data.

Pop-Up Menus: These menus work like the radio buttons, only instead of clicking inside a button, you highlight an item in a menu that pops up when you click on the field's area.

Check Boxes: This field inserts a check box in front of the field name — kinda like those forms you fill out at the doctor's office. (See Figure 6-2.)

Serial Numbers: Choosing a serial field will automatically insert a number each time a new record is added. You tell the computer what number to start with, so this would be a great feature for those of you who assign numbers to each of your students.

Record Info: This field can be programmed to automatically enter one of the following: the date or time the record was created or modified, or the name of the person who created or modified the record.

Figure 6-2:
Check boxes and radio buttons make your database even better.

Volunteers Please

☒ Read to Class

☒ Provide Snacks

☒ Organize Field Trips

☒ Room Mother/Father

Zip
◉ 30000
○ 30001

New spreadsheet features

In Version 4.0, you can shade cells with a color or pattern. You can shade individual cells or a range of selected cells. In addition, the new Fill Special feature allows you to increment data automatically by month, year, quarter, and more.

New drawing features

In the Drawing environment, you can now free rotate (a full 360°). This is a great feature when you're using the Draw environment for page layout and design.

ClarisWorks Boot Camp

I want to take this time to review a few ClarisWorks basics with you. The information listed here is common to all areas of ClarisWorks. Becoming familiar with this information will help you in all your ClarisWorks endeavors.

The New Document dialog box

This dialog box appears each time you open ClarisWorks. Your two choices are shown in Figure 6-3: Create a new word processing document and Use Assistant or Stationery.

Figure 6-3:
The New Document dialog box is where you start in ClarisWorks.
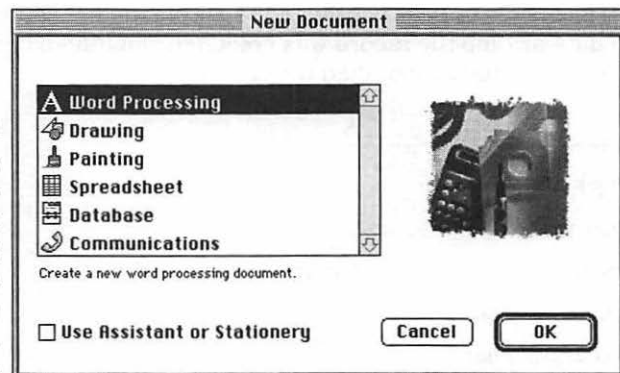
"Create a new word processing document" means what it says. You're starting from scratch with nothing to guide you.

"Use Assistant or Stationery" gives you assistance in creating a variety of predesigned ClarisWorks documents or lets you go right to a stationery item you've already created (maybe your weekly lesson-plan form).

So what is stationery? When you create a document that you know you will be using again and again (like your lesson-plan form), ClarisWorks gives you the option of saving this document as *stationery:* Each time you open your lesson-plan form, a copy of the original appears, ready for you to fill in. The original is never altered, and you don't spend unnecessary time reentering items that recur every week. Saving a document as stationery is an option each time you save something in ClarisWorks.

The latest offering from the folks at Claris

ClarisWorks for Kids is the first complete cross-platform productivity software solution designed specifically for grades K–5. (Check out the demo on the CD.) Yes, it's ClarisWorks for the junior set! Gone are the complicated menus, and in their place you find great icons, kid-style fonts, more clip art, tons of templates, and if you have Internet access, there's one button access to the Web. All this along with a huge supply of sounds and movies makes it easy for the younger set to write, paint, graph, or create a great list.

Teachers will like the fact that the dialog boxes, menus, and even a student's work can be read out loud. The 50 activities that are included are a good way for teachers to get started using the program. Teachers can design templates using ClarisWorks 4.0 and open them for use in ClarisWorks for Kids. My favorite feature is the kid-friendly filing system — if you've ever tried to teach kids how to save a document, you too will appreciate ClarisWorks for Kids' easy filing system.

The word-processing rulers

We go into each of these controls in Chapter 7. For this overview, I want you to be aware of the incredible amount of control ClarisWorks gives you. Isn't this great? My typewriter sure didn't make writing this easy!

Controls indent   Text alignment   Paragraph formatting

Tab controls   Line spacing   Column settings
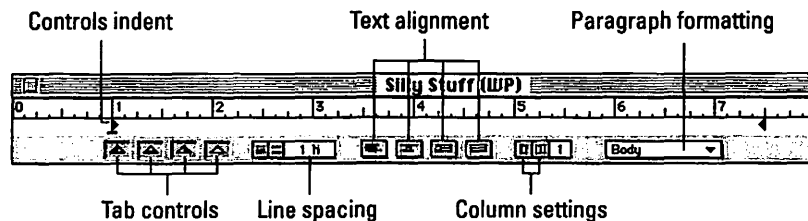
The Open dialog box

This dialog box appears when you choose Open from the File menu (see Figure 6-4). You use the Open dialog box when you want to retrieve saved work. If your work is saved on a floppy disk, simply put the disk in the computer after this box appears. The computer reads the disk, and the disk's contents appear in the scrollable window.

If your work is saved on your hard drive, you may have to do some digging to find out exactly where it is saved.

If you saved your work in a ClarisWorks folder, it should appear when you choose Open from the File menu. Simply highlight the name and click Open (or double-click the name).

A folder   A document   A stationery document
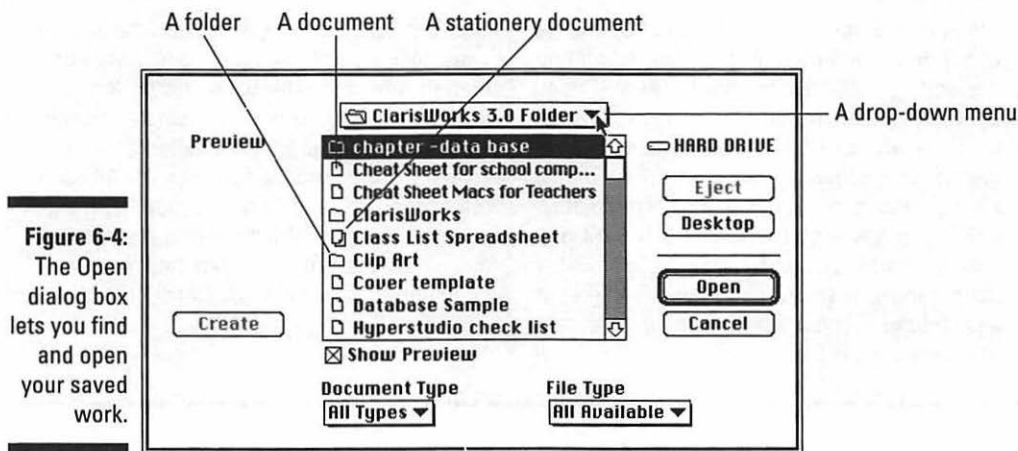
Figure 6-4:
The Open
dialog box
lets you find
and open
your saved
work.

Preview

⊟ ClarisWorks 3.0 Folder ▼ ——— A drop-down menu

▢ chapter –data base   ⬦   ⊂⊃ HARD DRIVE
🗋 Cheat Sheet for school comp...
🗋 Cheat Sheet Macs for Teachers   [Eject]
▢ ClarisWorks
🗐 Class List Spreadsheet   [Desktop]
▢ Clip Art
🗋 Cover template   [Open]
🗋 Database Sample
🗋 Hyperstudio check list   ⬦   [Cancel]
☒ Show Preview

[Create]

Document Type   File Type
[All Types ▼]   [All Available ▼]

If you saved your work on the hard drive, pull down the drop-down menu (also called a pop-up menu!) at the top of the dialog box. Then choose Hard Drive. The hard-drive contents appear in your scrollable window. Just find your work! You practice this procedure in Chapter 7.

The View buttons

In the lower-left corner of the ClarisWorks screen, you see an odd-looking array of controls:

[100 | ▲▲ ▢ | Page 1 | ⬦]
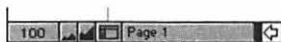
As you can tell, ClarisWorks makes it extremely easy to blow up your work. (Obviously, I mean *magnify it;* destroying it is up to you.) A quick click on either of those little mountain buttons makes your work appear smaller or larger. Or jump directly to a more convenient degree of magnification by using the percentage pop-up menu. Click and hold where it says 100. A list of percentages appears for you to choose from. You won't be changing the size of the actual printed work — only how it's displayed on the screen.

The final control (to the right of the mountains) enables you to view or hide the tool palette. These tools are used primarily in the drawing and painting modules of ClarisWorks.

The Save dialog box

Saving a document is a very important skill. Let me take this opportunity to introduce you to the Save dialog box (as shown in Figure 6-5).

After you type something wonderful (and you choose Save from the File menu), your demanding computer requires that you give your masterpiece a title. In its manipulative way, the computer also asks that you store that document someplace.

Use this drop-down menu to find the folder you want to save your work in.

Figure 6-5:
The Save
dialog box
will soon be
familiar
to you.

After deciding where to save your work and giving your work a name, click here.

Name your work here.
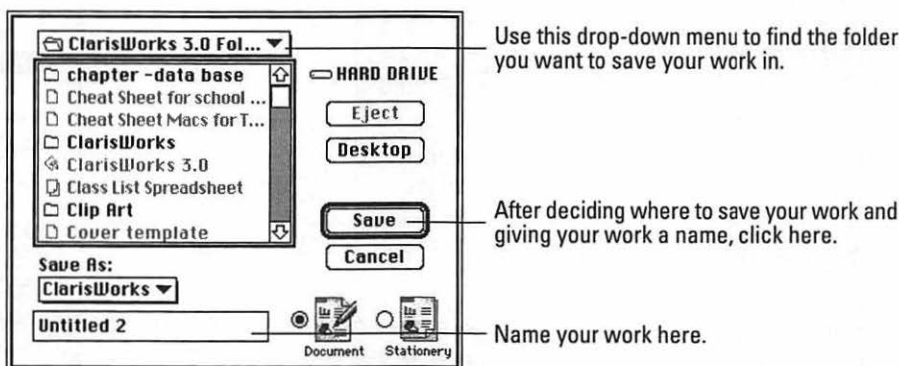
Saving to a disk

In schools, many computers are set up to require you to save your work to a disk. If that's the case, simply insert the disk when this dialog box appears. The disk's contents (if any) appear in the scrollable box. Then type in the name of your file and click Save.

Saving to a folder

Other schools set up a folder on the hard drive for each teacher. If that's the case, you may have to do a little digging to find your folder.

If your folder is inside ClarisWorks, it should show up in the dialog window immediately after you choose Save from the File menu.

If the folders are kept on the desktop, click the Desktop button (or choose Desktop from the drop-down menu at the top of the box). You should see your folder as one of the choices in the scrollable window.

If the folders are kept on the hard drive, pull down the drop-down menu at the top of the box and choose Hard Drive. Find your folder and open it (double-click it, or highlight it and click the Open button). Now you're ready to save to your folder.

So, let's get busy! Jump into Chapters 7, 8, and 9 where we put all this information into practice.

An easy way to avoid learning this stuff

This business about the "Save Where?" dialog box is, as anybody will tell you, the most confusing thing about the Mac. After years of experience, a few professional beginners (including myself) have adopted the following cheat — and we never lose another file.

Whenever you save a file, you are faced with the Save dialog box. Name your file, and then click the Desktop button. Only then should you click the Save button.

Go ahead and ask — "What's the point?"

Easy. When you're done working for the day and you return to the desktop, you won't have to wonder what folder your document's icon fell into. Your new file will be sitting right there, on the desktop — in plain sight.

```
ClarisWorks 3.0 Fol... ▼
□ chapter -data base       ⬜ HARD DRIVE
□ Cheat Sheet for school ...
□ Cheat Sheet Macs for T...    [ Eject ]
□ ClarisWorks
⬦ ClarisWorks 3.0             [ Desktop ]
□ Class List Spreadsheet
□ Clip Art
□ Cover template              [ Save ]
Save As:                      [ Cancel ]
[ClarisWorks ▼]
[Jessie]                      ◉ Document  ○ Stationery
```
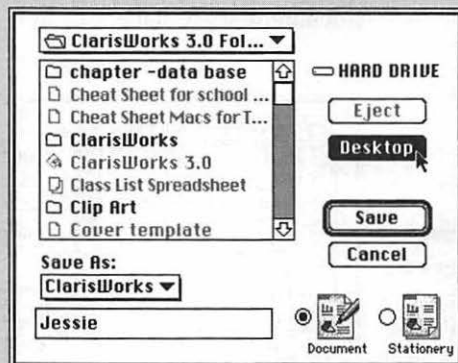
At this point, it's child's play to drag the icon into the folder where you want it.

Avoid Embarrassment — Check Your Spelling

You have to get the information out quickly, so you whip up a handout to send home in the afternoon, Later that evening, you pull the handout from your book bag, and staring you right in the face is a misspelled word! We've all made this mistake at some point in our teaching career; it's one of the most embarrassing things a teacher can do — teachers are supposed to know how to spell (or type).

Here's how to avoid this embarrassing situation:

After you enter all your text, choose Writing Tools from the Edit menu. A submenu should pop into view with Check Document Spelling as a choice. The Spelling dialog box comes up on your screen.

Cheating!

Just as you eventually had to memorize those multiplication tables and throw away the cheat sheet, I feel that learning to create a slide show on your own is important. However, if you're short on time (and what teacher isn't?) and you're using either Version 3.0 or Version 4.0 (or after September of 1997, 5.0) of ClarisWorks, a cheat sheet that doesn't involve writing on your palm with a messy ballpoint is waiting for you.

To find the handy cheat sheet, follow these steps:

1. **Choose the Assistant or Stationery box when you open ClarisWorks.**

   A list of available assistants appears.

2. **Scroll down until you see Presentations and then double-click Presentations to open this file.**

   What appears is a hand-holding lesson that allows you to create a really neat presentation.

The catch is that ClarisWorks has done it all for you — this lesson isn't a tutorial by which you can learn each step involved in the process. This assistant is more of a fill-in-the-blank worksheet; and like any good teacher, I frown upon cheating. I won't call your mother this time, but I expect you to learn how to do this task on your own, eventually.

Now just sit back and relax while ClarisWorks does all the hard work. As the computer scans your work, any words that may seem questionable are pulled up. When a word appears to be questionable, Claris tries to give you a list of possible words you may have been trying to spell. In the example shown in Figure 6-6, I might have been trying to type "the" when I entered "teh." Isn't the computer smart?

Each time ClarisWorks comes up with a questionable entry, you have five choices:

- **Replace** — You can replace the word with the word ClarisWorks has highlighted in its list of choices, a word you highlight from the list, or a word you retype where the original word was displayed (just delete the word and type in your correction).

- **Check** — This button is a good one to use if you don't see the word you intended to use in the list ClarisWorks gives you, and you decide to try to spell it again yourself. Delete the original word, type in your own, and then click Check. If you spelled the word correctly this time, you see Status: Correct Spelling at the bottom of the dialog box. Then all you have to do is press Replace, and your problem is fixed.

✓ **Skip** — Allows you to skip the word if you know the spelling is correct, but the word is not in the computer's dictionary. This problem often comes up when I type in strange computer program names like HyperStudio. Clicking Skip leaves the word untouched.

✓ **Learn** — This key is important. You should click Learn the first time the computer pulls up your last name, city, or child's name as a misspelled word. Doing so adds the word to the ClarisWorks dictionary, and from that point on the word will not be pulled up as a misspelled word.

✓ **Cancel** — Clicking Cancel takes you back to your document and stops the computer from completing the spelling check.

Figure 6-6:
ClarisWorks checks your spelling and makes suggestions.

Spelling		
Word: teh		Replace
⌘1 the		Check
⌘2 ten		Skip
⌘3 tee		
⌘4 ted		Learn
⌘5 tech		
⌘6 tea		Cancel
Status: **Questionable Spelling**	3 Words Checked	
	2 Questionable Words	◁
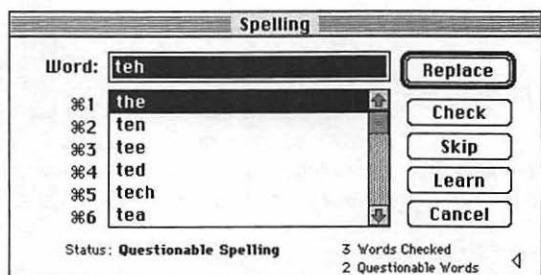
When the entire document has been checked, the word Done flashes up and the Status message reads Finished checking spelling. Click Done, and you're ready to print your handout without the worry of embarrassment.

Note: If you need to check only a single word or small passage, highlight the word or passage and choose Check Selection Spelling from the Writing Tools menu. ClarisWorks takes you through the same spell-checking process discussed earlier, only this time the text you highlighted is all that is checked.

Chapter 7

The Wonderful World of Word Processing

*W*ell, here it is, folks, the reason most people use the computer: word processing. Don't let the name fool you. You aren't actually processing the words into anything . . . you're typing. Not only that, you are typing without a little bottle of white-out at your side. Word processing is typing made easy. So go ahead and have some fun.

Supply List for Word Processing 101

As your instructor, I expect you to come to class prepared. Don't worry — you're not going to need to take a trip to the local mall or computer store.

This supply list is short and simple. You need two folders. (Not folders you can hold in your hands — electronic folders.) These folders can be found free, right now, at your local menu bar.

1. **Choose New Folder from the File menu. (Make sure that you have no programs or windows open.)**

2. **When the folder appears, it's ready to have a name typed in. Name this first folder *School Stuff.***

3. Now, repeat the whole process — but this time name the folder *Funny Anecdotes.*
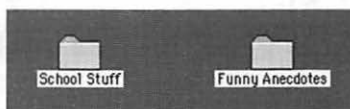
4. Finally, drag the Funny Anecdotes folder into the School Stuff folder.
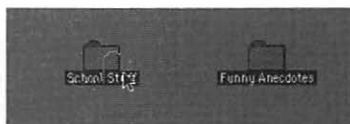
Word Processing 101

Find the ClarisWorks icon on your hard drive. It may be inside a folder, which you can open by double-clicking. In any case, when you find the program icon, double-click it. You are presented, after a moment, with a menu screen that looks like the one shown in Figure 7-1 (if you have Version 4.0):

Figure 7-1: A brand- new document can be opened from this menu bar.
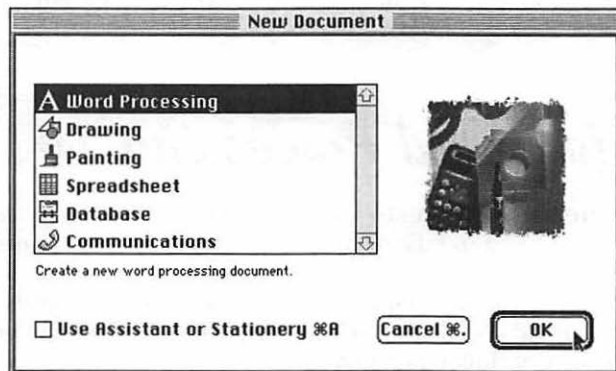
Choose word processing. You then see a blank screen and some changes on your menu bar.

Figure 7-2:
A blank
slate awaits
your words
of wisdom.
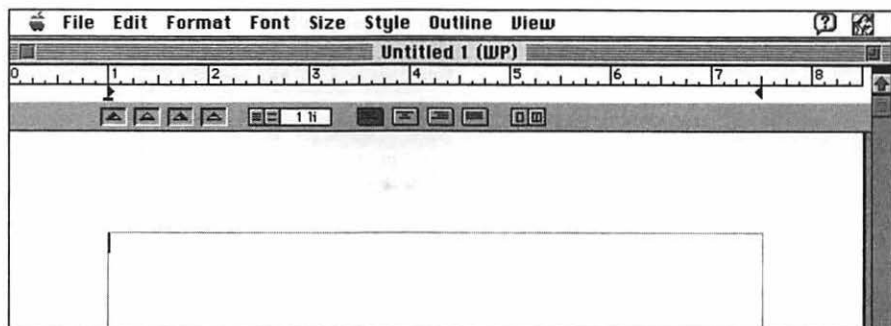
Rules of word processing

The first rules of typing on a computer are going to be tough to learn, especially if, like me, you've been typing since high school. But they're super-crucial. Here they are:

✔ **Don't press the Return key at the end of each line.**

I'm dead serious here. When you type your way to the end of a line, the next word automatically jumps down to the next line. If you press Return in the middle of a sentence, you mess everything up.

✔ **Put only ONE space after a period.**

This was a hard one for me to swallow, too. But it's true!

If that last statement gives you uncontrollable muscular facial spasms, I don't blame you. After all, I'm telling you to do something that you were explicitly taught not to do by your sharp-tongued high school typing teacher.

Nonetheless, don't put two spaces after a period. Typewriters print letters onto paper by slapping tiny metal blocks against a ribbon, and every block (every letter) is the same width — including the space. But on a Mac, every letter has a different width. Look how much wider this W is than this I, for example. On the Mac, a space is already extra wide, thus saving you that precious calorie you would have exerted to press the spacebar a second time.

Why aren't you supposed to press Return at the end of each line?

For the first time in print (in case you missed the other editions of this book), here's an actual example of the kind of mess you can get into by pressing Return after each line of text. Start with the original passage. Suppose you decide to remove Mr. Robinette's title, "the principal," because everybody already knows what kind of guy he is.

You want to get rid of this text.

```
┌─────────────────────────────┐
│ ▣  ▦▦▦ Note Pad ▦▦▦        │
├─────────────────────────────┤
│ Attempting to stop the fight,│
│ the principal, Mr. Robinette,│
│ lost his footing and fell into the│
│ bleachers.                   │
│                              │
└─────────────────────────────┘
```
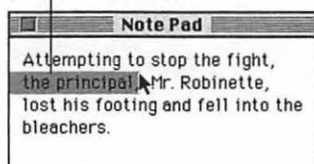
But suppose you'd been foolish enough to press Return after each line of
text. If you remove those highlighted words, the words "Mr. Robinette" flop
back to the left side of the line, but the rest of the sentence stays where it is,
looking dumb.

Look what happens if you press Return after each line.

```
┌─────────────────────────────┐
│ ▣  ▦▦▦ Note Pad ▦▦▦        │
├─────────────────────────────┤
│ Attempting to stop the fight,│
│ Mr. Robinette,───────────────│
│ lost his footing and fell into the│
│ bleachers.                   │
│                              │
└─────────────────────────────┘
```
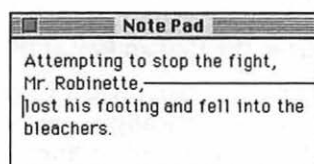
On the other hand, if you hadn't put Returns into your text, you'd get this
figure, where everything looks peachy.

```
┌─────────────────────────────┐
│ ▣  ▦▦▦ Note Pad ▦▦▦        │
├─────────────────────────────┤
│ Attempting to stop the fight,│
│ Mr. Robinette lost his footing│
│ and fell into the bleachers  │
│                              │
│                              │
│                              │
│                              │
│                              │
│ ◣           1                │
└─────────────────────────────┘
```
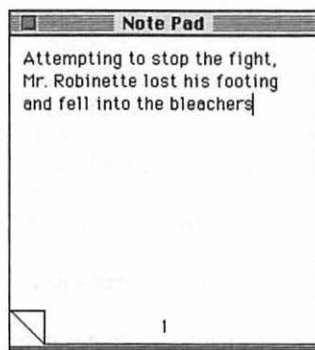
Typing on a computer has a few other rules, too, but breaking them isn't
serious enough to get you investigated by the school board. So dig in.

You should see a short, blinking vertical line at the beginning of the typing area: the _insertion point_. It's called the insertion point because it shows you where the letters appear when you start to type.

Type the passage below. If you make a typo, press the Delete key, just like Backspace on a typewriter. Don't press Return when you get to the edge of the window. Just keep typing, and the Mac creates a second line for you. Believe.

The teacher's screams could be heard throughout the school as the student attempted to recapture his snake and return it to the aquarium.

See how the words automatically wrap around to the second line? This feature is called, with no small measure of originality, _word wrap_.

But suppose, as your novel is going to press, you decide that this sleepy passage really needs some spicing up. You decide to insert the word _terrified_ before the word _screams_.

Remember the blinking cursor — the insertion point? It's on the screen even now, blinking calmly at the end of the sentence. If you want to insert text, you have to move the insertion point.

There are two ways to move the insertion point. First, try pressing the arrow keys on your keyboard. You can see that the up- and down-arrow keys move the insertion point from line to line, and the right- and left-arrow keys move the insertion point across the line. Practice moving the insertion point by pressing the arrow keys.

If the passage you want to edit is far away (on another page, for example), using the arrow keys to move the cursor is inefficient. Your fingers would be bloody stumps by the time you finished. Instead, grab that mouse:

1. **Using the mouse, move the cursor (which, when it's near text, looks like this I) just before the word _screams_. Click the mouse.**

> The teacher's screams could be heard throughout the
> school as the student attempted to recapture his snake and
> return it to the aquarium.

This is as confusing as word processing ever gets — there are two little cursors, right? There's the blinking insertion point, and there's this I, which is called an I-beam cursor (it looks like an oversized capital letter I). In fact, they're quite different. The blinking insertion point is only a marker, not a pointer. It always shows you where the text typing will appear. The I-beam, on the other hand, is how you move the insertion point to a different location; when you click with the I-beam, you set down the insertion point.

2. Type the word terrified.

The insertion point does its deed, and the Mac makes room on the line for the new word. A word or two probably got pushed onto the next line. Isn't word wrap wonderful?

So much for inserting text: You click the mouse (to show the Mac where you want to start) and then type away. But what if you need to delete a bunch of text? What if you decide to edit out the first half of our sample text?

Well, unless you typed the challenging excerpt with no errors, you already know one way to erase text — by pressing the Delete key (which is called Backspace on some keyboards). Delete (or Backspace) takes out one letter at a time, just to the left of the insertion point.

That's not much help in this situation, though. Suppose you decide to take out the first part of the sentence. It wouldn't be horribly efficient to back-space over the entire passage deleting the correct information just so that you could work on the beginning.
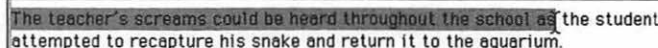
Instead, you need a way to edit any part of your work, at any time, without disturbing the stuff you want to leave. Once again, the Macintosh method saves the day:

1. Using the mouse, position the I-beam cursor at the beginning of the sentence.

This takes a steady hand. Stay calm.

2. Click just to the left of the first word and keep the mouse button pressed down. Drag the I-beam cursor to the end of the word *as.*

As you drag, the text gets highlighted, or selected.

> The teacher's screams could be heard throughout the school as the student attempted to recapture his snake and return it to the aquarium.

If you're especially clever and forward-thinking, you have selected the blank space after the word *as,* as well.

All right. In typical Mac syntax, you've just specified what you want to edit by selecting it (and making it turn black to show that it's selected).

3. Press the Delete key.

Bam! The selected text is gone. The sentence looks pretty odd, though, because it doesn't begin with a capital letter.

4. **Using the mouse, position the cursor just before (or after) the letter *t* that now begins the sentence. Drag the cursor sideways across the letter so that it's highlighted.**

> the student attempted to recapture his snake and return it to the aquarium.

Here comes another ground rule of word processing. See how you just selected, or highlighted, the letter *t?* The idea here is to capitalize it. Of course, using the methods for wiping out (and inserting) text that you learned earlier, you could simply remove the *t* and type a **T**. But because you selected the *t* by dragging through it, replacing it is much easier.

5. **Type a capital** T.

The selected text gets replaced by the new stuff you type. That, in fact, is another ground rule: *Selected text gets replaced by the new stuff you type.* As your Macintosh proficiency builds, keep that handy fact in mind; it can save you a lot of backspacing. In fact, you can select 400 pages of text and then press one single key to replace all of it. Or you can select only one letter, but replace it with 40 pages of typing.

Hint: If you make a change that you didn't mean to make, go to the Edit menu and choose Undo. This step will undo your last action.

Take a moment now for some unsupervised free-play. Try clicking anywhere in the text (to plant the insertion point). Try dragging through some text. If you drag perfectly horizontally, you select text just on one line.

> Breathlessly, he ran into the workroom only to find a line of ten other teachers waiting for the copy machine. His eye began to twitch uncontrollably as he realized the parent letter would not be going home that afternoon.

If you drag diagonally, you get everything between your cursor and the original click.

> Breathlessly, he ran into the workroom only to find a line of ten other teachers waiting for the copy machine. His eye began to twitch uncontrollably as he realized the parent letter would not be going home that afternoon.

You *de-select* (or, equally poetically, *un-highlight*) text by clicking the mouse. Anywhere at all.

Try pointing to a word and then double-clicking the mouse: You easily select exactly that word, without having to do any dragging.

Please Save Me!

No, I can't save you from that conference with the parent who "used to be a teacher" and seems to think she can handle things better than you. But I can save you from the severe bouts of depression suffered by those who simply create and print . . . only later to find small, yet crucial, errors — such as incorrect spelling. Teachers *never* make spelling mistakes. And if they do, there's always a parent ready to circle this gross error and bring it to their attention.

It may terrify you — and it probably should — to find out that you've been working on an imaginary document. It's being preserved only by a thin current of streaming electricity. It doesn't exist yet, to be perfectly accurate, except in your Mac's *memory.*

You may recall — if you happened to wade through Chapter 2 — that *memory is fleeting.* (Specifically, I mean computer memory. Yet, isn't it amazing how so much of this terminology applies to students?) In fact, the memory is wiped away when you turn the Mac off — or when your curious toddler thinks the little red light on the surge protector switch needs to be pushed. At that moment, anything that exists on the screen is gone forever.

Therefore, it is very important to save, save, save. When you save your work, the Mac transfers it from transient, fleeting, electronic memory onto the good, solid, permanent disk (either your computer's hard drive, a floppy disk or if you choose, an external hard drive). There your work remains, safely saved. It will still be there tomorrow. It will still be there next week. It will still be there ten years from now, when you're ready to retire and write your memoirs.

In ClarisWorks, the save command is located in the File menu. Try to save the wonderful sentence you typed about the teacher and the snake.

1. **From the File menu, choose Save.**

   You are now presented with the Save File *dialog box,* because the computer needs to have a little chat with you before proceeding.

```
┌─────────────────────────────────────────┐
│  ┌───────────────────────┐  ⊂▭ Macintosh HD │
│  │ 🖿 ClarisWorks 4.0 Folder ▼ │              │
│  ┌─────────────────────────┐  ┌──────────┐ │
│  │ 🖿 ClarisWorks          ⇧│  │  Eject   │ │
│  │ 🖹 ClarisWorks 4.0 Read Me│ └──────────┘ │
│  │ 🗀 ClarisWorks Assistants │ ┌──────────┐ │
│  │ 🗀 ClarisWorks Libraries  │ │ Desktop  │ │
│  │ 🗀 ClarisWorks Scripts    │ └──────────┘ │
│  │ 🗀 ClarisWorks Stationery │ ┌──────────┐ │
│  │ 🗀 ClarisWorks Styles   ⇩│ │  New 🗀  │ │
│  └─────────────────────────┘ └──────────┘ │
│  Save As:                     ┌──────────┐ │
│  ┌───────────────┐            │  Cancel  │ │
│  │ ClarisWorks ▼ │            └──────────┘ │
│  └───────────────┘            ┌──────────┐ │
│  ┌─────────────────┐          │   Save   │ │
│  │ Untitled 1      │          └──────────┘ │
│  └─────────────────┘    ◉ 🖎 ○ 🖎          │
│                         Document Stationery│
└─────────────────────────────────────────┘
```
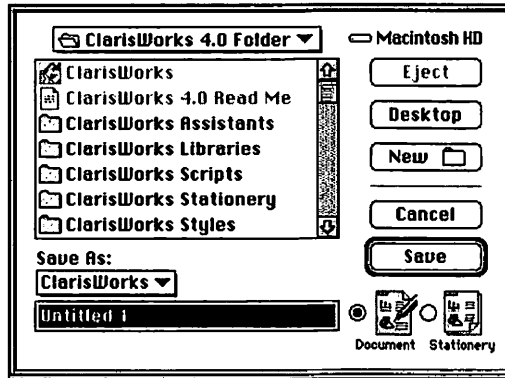
What the Mac wants to know is "Under what name would you like me to file this precious document?"

And how do you know this? Because in the blank where it says Save As, there's a proposed title that's *highlighted* (selected already). And what do you know about highlighted text? *Anything you start typing will instantly replace it.* The Mac, in its cute but limited dialogy way, is trying to say that it needs you to type a title.

Make a promise to me now that you will always name your work before clicking the Save button. There's nothing worse than a file, a floppy disk, or a folder that doesn't have a name!

2. **Go ahead, do it. Type** Snake Episode.

At this point, you could just click the Save button. The Mac would take everything in perilous, fleeting memory and transfer it to the staid, safe hard drive, where it would remain until you're ready to work on it some more.

However, there's a bunch of other stuff in this dialog box. Because the Save File box can be a major source of confusion to beginners, I think a tour is in order.

Navigating the Save File (and Open File) box

Refresher course: Your computer helps you organize files by providing electronic folders and folders within folders.

Well, the point of all that complicated-looking stuff in the Save File dialog box is a miniature version of that filing system.

1. Go to the File menu and choose Save (if you haven't already done so).

```
┌─────────────────────────────────────────────┐
│  ┌─────────────────────┐   ⊂⊃ Macintosh HD   │
│  │ 🗁 ClarisWorks 4.0 Folder ▼│                 │
│  │ 🗀 ClarisWorks Assistants  ⬆│ ┌──────────┐ │
│  │ 🗀 ClarisWorks Libraries    │ │  Eject   │ │
│  │ 🗀 ClarisWorks Scripts      │ └──────────┘ │
│  │ 🗀 ClarisWorks Stationery   │ ┌──────────┐ │
│  │ 🗀 ClarisWorks Styles       │ │ Desktop  │ │
│  │ 📄 HTML Primer              │ └──────────┘ │
│  │ 🐢 Introduction to ClarisWorks⬇│ ┌────────┐│
│  │                             │  │ New 🗀 ││
│  │ Save As:                    │  └────────┘│
│  │ ┌─────────────────┐         │  ┌────────┐│
│  │ │ ClarisWorks ▼   │         │  │ Cancel ││
│  │ └─────────────────┘         │  └────────┘│
│  │ ┌─────────────────┐         │  ┌────────┐│
│  │ │ Snake Episode   │         │  │  Save  ││
│  │ └─────────────────┘    ◉ 📄 ○ 📄└────────┘│
│  │                        Document Stationery │
└─────────────────────────────────────────────┘
```
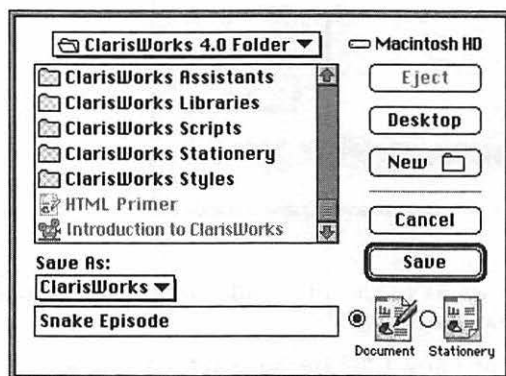
You may decide that none of the files shown in the window suits you. But on your desktop (your computer screen) sits the great little School Stuff folder that (I hope) you created in the beginning of this chapter (see "Supply List for Word Processing 101").

To use that folder to hold your Snake Episode, you need to go to the desktop.

2. Click the Desktop button.

You see all the items currently on your desktop, including your School Stuff folder.

```
┌──────────────────────┐
│   🖥 Desktop ▼         │
│ ┌──────────────────┐  │
│ │ 🗀 Daddy          ⬆│ │
│ │ 🗀 For Bill        │ │
│ │ 🗀 Jessie & John-Michael│
│ │ 🗀 Mommy           │ │
│ │ 📄 My Lab Schedule │ │
│ │ 🗀 School Stuff    │ │
│ │ 🗑 Trash          ⬇│ │
│ └──────────────────┘  │
└──────────────────────┘
```

You open this folder by either double-clicking the name or highlighting the name and then clicking the Open button. *Voilà*. Your School Stuff folder is open.

Now we see that there is a folder inside the School Stuff folder that's titled Funny Anecdotes. I think the Snake Episode is pretty darn funny, so file it there.

3. **Highlight the Funny Anecdotes folder and click Open (or simply double-click Funny Anecdotes).**

   If you haven't already done so, type in the name for your story, **Snake Episode**.

4. **Now click the Save button.**
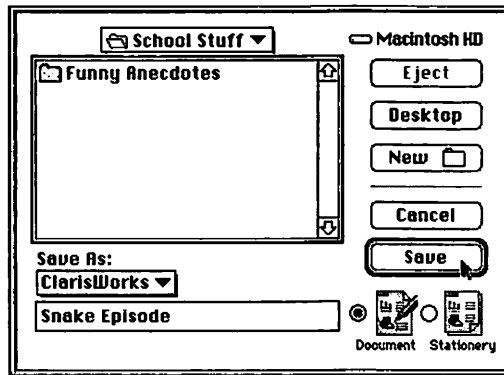
You're done! Your document has found a home. It's been snugly tucked away in the Funny Anecdotes folder, which is inside the School Stuff folder.

I know, it's scary to put your trust in a machine; you probably feel like printing your work and running to the nearest copy machine to make five or six extra copies — but don't. Let's prove that you really did save this document.

Look for the Application menu on the upper-right side of the screen. It lists all the programs that are running at once. Choose Finder from the Application menu. When you choose Finder, the folders, window, and Trash can pop up. And there we see our School Stuff folder. Go ahead. Open it up (double-click). You see the Funny Anecdotes folder. Open that one, too. And, if everything went well, you should now see your Snake Episode document (as shown in Figure 7-3).

You did it! Technology can be trusted.

Figure 7-3:
Your Snake
Episode
document is
nestled
inside a
folder
within a
folder.

School Stuff		
1 item	119.2 MB in disk	918K available

Funny Anecdotes

Funny Anecdotes		
1 item	119.2 MB in disk	918K availa

Snake Episode
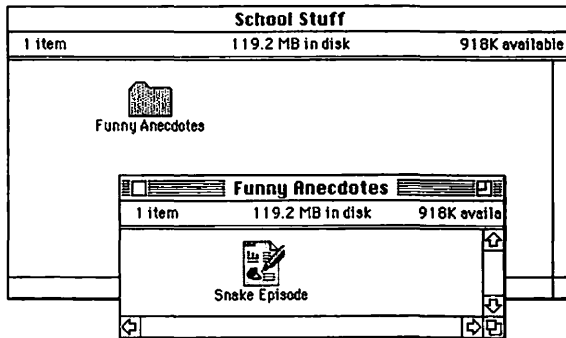
Closing a file, with a sigh

You created your lesson plans, it's 5:15, and everyone's out of the building. You save the work in the Lesson Plans folder you proudly created at the beginning of the school year and are ready to hit the road. It'll be there tomorrow, ready to print.

Click the close box in the upper-left corner of the window.

In the Mac's universal language of love, clicking the small square up there means "close the window," as you may recall. If all went well, the window disappears.

How to find out what you're doing

No, I'm not going to help you rethink your career decision — although there are days when we all wonder about that mysterious force pulling us back each September.

Just because you closed your document doesn't mean you left the program. In fact, if you pull down the Application menu on the top-right side of the screen, you see that ClarisWorks is, in fact, still running. (It's the one with a check mark beside it.)

Hide ClarisWorks 3.0
Hide Others
Show All

At Ease
✓ ClarisWorks 3.0
Finder
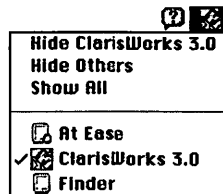
But they told me NEVER to save to the hard drive

This warning isn't uncommon. Many schools request that teachers and students refrain from saving their work on the computer's hard drive. Imagine how quickly the computer's hard drive space would fill with clutter in a school with more than 1,000 students and another 50 or so teachers!

It's very wise for teachers to purchase a box of disks (either preformatted for the Mac or those you can format yourself) on which to save work.

The procedure for saving to disk is similar to what you just learned. This time, after you choose Save, slide your disk into the computer. When you see the contents of the disk open, click the bottom box under Save As. Type in the name of your document. Click Save. The computer saves the information to your disk.

Now you are free to carry this disk to any computer (provided it has ClarisWorks loaded) and do your work. This practice comes in handy in schools with limited numbers of computers scattered throughout the building. (Be sure you stick a label on the outside of your disk.)

You can bring the Finder to the front by choosing its name from the Application menu — without exiting the word processor. They both can be running at the same time, but only one can be in front. If you're asking yourself, "What in the world is she talking about," turn back to Chapter 1 for a refresher course.

In fact, that's the amazing thing about the Mac (using System 7 or higher). You can have a bunch of programs all running at once. The more memory your Mac has, the more programs you can run simultaneously.

If you want to completely quit ClarisWorks, make sure that it's still the active program. Go to the File menu and choose Quit.

How to retrieve a document

Pretend it's tomorrow. You're at school and the principal asks to have a look at your plans for next week. You are in complete control.

You turn to your Mac. Double-click your hard drive icon (usually in the top right hand corner of your screen) and double-click ClarisWorks. Here's where it gets tricky, but you can handle it. If you saved your work to a disk:

1. **Click the Cancel button when the dialog box appears asking you to select a type of document.**

The worrywart's balm

From the way I describe the terrifyingly deli-cate condition of a document that's on the screen (that you haven't *saved* yet) — that is, precariously close to oblivion, kept alive only by electric current — you may think that clos-ing a window is a dangerous act. After all, what if you forgot to *save* some work? Wouldn't closing the window mean losing that critical memo?

Not really. If you try to close a document, the Mac won't *let* you proceed until it asks if you're sure you want to lose all the work you've done. It will say something like:

Click Yes if you do want to save your work. Click No if you were only goofing around or showing off your Mac to somebody and don't want to preserve your labors. Click Cancel if you change your mind completely about closing the document and want to keep working on it.

Save changes to "Snake Episode" before closing?

Yes

No   Cancel
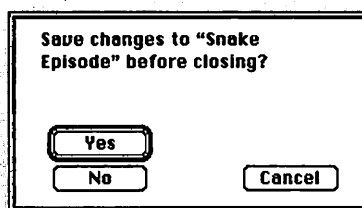
2. The dialog box disappears, and you just see your Menu bar. From the File menu, choose Open.

3. Insert your disk. The Mac automatically reads the disk and shows its contents. Click the document you want to work on. When it's high-lighted, click Open.

(Or simply double-click the document name — double-clicking accom-plishes the same thing as highlighting something and then clicking Open.)

If you saved your work to the computer's hard drive:

1. Go to File and choose Open.

The ClarisWorks 4.0 folder appears with a list of choices.

2. Locate the folder titled Weekly Lesson Plans and highlight it. Click Open.

3. The folder's contents are listed. Find the plans you want to work on, highlight your choice, and click Open.

Your plans are there, just the way you left them (ready to be printed and handed to your principal). Hey, why does the principal want to see your plans, anyway?

Save Me Again!

Now, how about making some changes to a document that you already saved?

Prepare to test your retrieval skills. Find the *Snake Episode* document and make some changes.

Now, if that toddler plays with the little button again (or you forget to pay the electric bill and the electricity is shut off), you lose all the work you added to this priceless document.

Therefore, you have to use that trusty Save command each time you make changes that are worth keeping. The Save dialog box does *not* appear on the screen each time you use the Save command (like it did the first time). Only the very first time you save a document does the Mac ask for a title (and folder location).

You probably know horror stories about people who lost hours of work when some glitch made their computers crash. Well, usually it's their own darned fault for ignoring the two most important rules of computing:

Rule 1: Save your work often.

Rule 2: Never forget Rule 1.

"Often" may mean every five minutes. It may mean after every paragraph. The point is to do it a lot. Some word-processing programs have *auto-save* features that complete this task for you every few minutes.

Trust me on this one. The day — no, the minute — you forget to save something you typed, you'll experience what's called a *system crash*. Result: loss of your entire document to the technology wasteland.

Stationery

The Mac has a neat feature that allows you to save a document as Stationery. Stationery is a special type of document that retains your original saved piece and gives you a copy of that document to add to — or alter — and then save with a different name.

Stationery

Here's how it works. When you click the Stationery button in the Save box, that document is saved as it is and can't be altered and saved under the same name again.

Let's talk lesson plans again. Say you wrote the times and activities that take place week after week. Before you filled in the specifics, you save this "skeleton" of your plans as a Stationery document. The next time you pull up the document, make changes (fill it in with specifics), and go to Save — ClarisWorks won't let you save it under the same name as the template. That's good news: Your template or stationery is always there, ready for you to fill in.

What you are really doing: Save As

In reality, you are using the Save As command. Save As means that you are saving a document previously saved under another name with a different name this time. That sounds very confusing. Read it again slowly and raise your hand if you have questions.

We get into this stuff later in this chapter when you create your own stationery. You'll get it — I promise.

Always Have a Backup

You know all about this rule. At my school, we call it CYA (Cover Your You-Know-What). We apply this rule to notes sent by parents, memos from the county, proof of in-service credit, and so on. You have to look out for yourself in the education jungle, and I always want to have proof when a dispute arises.

The same is true in the world of computing. Only here, your protection comes in the form of backup disks. If it's important enough to spend time working on, it's important enough to back up. This means making a copy of the things you saved on your hard drive. Yes, even your trusty hard drive can fail. Therefore, make backups of its contents as often as possible — once a week is a good schedule.

The idiot-proof guide to backing up

Put a blank floppy disk in the disk drive. (If it's a brand new disk, you are asked to *initialize* it; do so.)

Now, select the icons of the documents you want to back up. Drag them, together or one by one, onto the floppy disk icon. If the floppy fills up, insert another one and continue. Label the floppy disks "backup" (and note the date). Keep them away from magnets and telephones.

If you're a businessperson, you may even want to invest in a *backup program*, which essentially does the work for you automatically. DiskFit, Redux, and Retrospect are some popular backup programs. If you have a Performa, you already own a backup program, you lucky dog, called Apple Backup.

Now Let's Do a Little Customizing

After you understand all the word-processing basics, and start to feel comfortable with this new version of typing, you can try out a few tricks and tips!

Select

The first thing you must do before making any type of modification is select the text you want to change. You know that you made a selection successfully when your text is highlighted. You can select in a number of ways:

✔ To select an entire document, choose Select All from the Edit menu.

✔ You can select text by placing the insertion point to the immediate right of the last word or letter you want to delete and then clicking and dragging to the left. (Or start at the left and drag right — it doesn't matter.)

✔ One of my favorite ways to choose a word, a line, or an entire paragraph is by double-, triple-, or quad-clicking.

Go ahead and try multiple clicking. Click once to place your cursor in the middle of a word. Click again and you select the whole word; click a third time and you get the whole line, and a final click selects the entire paragraph.

If multiple clicking doesn't work the first time you try it, you probably allowed too much time between your clicks. Try again, but this time don't pause between your clicks.

Cut/Delete

If you want to cut the selected text, do one of the following actions:

- ✔ Start typing what you want to replace the highlighted text with.
- ✔ Press your delete key and watch the text disappear.
- ✔ Use the keyboard shortcut, ⌘-X, to cut the text when it's highlighted.

Copy & Paste

I use the copy command quite often when I'm preparing how-to handouts for the teachers at my school. If a teacher wants directions for creating columns in a word-processing document, I open a chapter or article I've already written on the subject, select the text that answers her questions, and choose Copy (⌘-V) from the Edit menu. I can then close that document with everything still intact — I didn't cut anything out, I simply made a copy. Next, I open a new word-processing document, place my insertion point where I want the new text to appear, and choose Paste from the Edit menu (⌘-V). You can copy and paste between different documents or within one document. Learning to use the copy command saves you a great deal of extra typing.

Undo

The Undo command reverses your last action and only your last action. If you make a mistake and realize it immediately, go to the Edit menu and choose Undo. The suffix attached to this command depends on what you just did (and expect to undo): Undo Typing, Undo Placement, and so on.

Form and format

One of the important differences between a typewriter and its replacement — the personal computer — is the sequence of events. When you use a typewriter, you set up all the formatting characteristics before you type: the margins, the tab stops, and (for typewriters with interchangeable type heads) the type style.

But the whole point of a word processor is that you can change anything at any time. Many people type the text of an entire letter (or proposal or memo) into the Mac and then format it. When you use a typewriter, you may discover, after typing the entire first page, that it's slightly too long to fit, and your signature has to sit awkwardly on a page by itself. With a Mac, you see the problem and nudge the text a little bit higher on the page to compensate.

Word processing has other great advantages:

- ✔ No cross-outs
- ✔ Easy corrections that involve no white-out and no retyping
- ✔ A permanent record of your correspondence that's electronic, not paper
- ✔ A selection of striking typefaces (fonts) in a wide range of sizes
- ✔ Paste-in graphics

I think it's safe to say that once you try it, you'll never look back.

The return of Return

With all the subtlety of a Mack truck, I remind you that you're forbidden to use the Return key at the end of a line. Still, that rectangular Return key on your keyboard is important. You press Return at the end of a paragraph, and only there.

To the computer, the Return key works like a letter key — it inserts a return character into the text. It's just like rolling the paper in a typewriter forward by one notch. Press Return twice, and you leave a blank line.

The point of Return, then, is to move text higher or lower on the page. Check Figure 7-4 for an example.

Drag through this area and press Delete to move the rest of the text up.
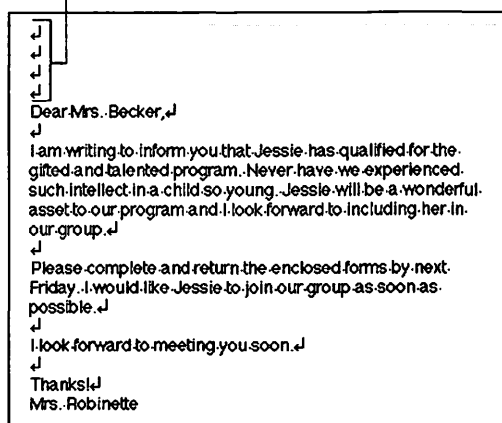
Figure 7-4: The Return character moves text down on the page.

Dear Mrs. Becker,

I am writing to inform you that Jessie has qualified for the gifted and talented program. Never have we experienced such intellect in a child so young. Jessie will be a wonderful asset to our program and I look forward to including her in our group.

Please complete and return the enclosed forms by next Friday. I would like Jessie to join our group as soon as possible.

I look forward to meeting you soon.

Thanks!
Mrs. Robinette

So, if you want to move text up on the page, drag through the blank space so that it's highlighted. Then press Delete. Of course, you just selected the usually invisible Return characters. If you delete them, the text slides up the page. (See the sidebar, "Seeing the unseen," if you need to satisfy your curiosity right now.)

Combine this knowledge with your advanced degree in Inserting Text. (Remember? You click to place the blinking insertion point and then type away.) You can see how you make more space between paragraphs or push all the text of a letter down on the page.

Come back and play with the other preferences when you find some time.

Appealing characters

Another big-time difference between word processing and typing is all the great character formatting you can do. You can make any piece of text bold, italic, underlined, all of the above, and more. You also get a selection of great-looking typefaces (fonts) — only a few of which look like typewriter stuff.

Here's the scheme for changing some text to one of those character formats. Go for it.

1. **Select some text by dragging through it.**

   Remember, you can select a single word by double-clicking it. To select a bunch of text, drag the cursor through it so that it turns black. The highlight-effect identifies what you want to change.

   ClarisWorks keeps its Bold, Italic, and Underline commands in the Style menu.

Seeing the unseen

I said that returns are usually invisible. However, every time you press the Return key, the Mac actually does plop down a symbol onto your screen. Same thing with the Spacebar. Same with the Tab key.

In ClarisWorks, the command to see these neat symbols falls under the Edit menu in the Preferences category. Choose Preferences from the Edit menu and you see another screen with lots of choices — some neat options, but none truly crucial. Notice the box that reads Show Invisibles. Click this box to see all those clever characters. Otherwise, leave it blank — and only the computer sees them.

Font-crazed kids

Be warned, kids go crazy with these options. I guess we don't give them enough choices or creative outlets these days. Who knows? Anyway, after introducing the concept of character formatting, I usually let them have an entire period to get familiar with their options. Then, when it's time to put what they learned into practice, I find it best to set a few limitations. Otherwise, they spend the entire work period playing with character formatting, instead of generating a product.

2. From the Style menu, choose Bold.

You can apply several of these formats to the same text, too, although you won't win any awards for typographical excellence. Try changing the typeface (font) also. The various fonts are called things like New York, Chicago, Times, and Geneva. To change the font, go to the Font menu and take a look at your choices. The final trick involves changing the size of your text. You can do this by going to the Size menu. Your font looks its best if you choose only from the sizes that are written in an outline or hollow-style format — not those written in solid. Trust me on this one; it will print, yes, but it won't look as good as it could.

> New York 12 point plain
> *New York 14 point bold italic*
> New York 18 point plain shadow
> New York 24 point plain outline

By applying a variety of styles and adjusting the size, a single font can appear in many different ways. Before you know it, those parents are going to be waiting eagerly for the next school notice, just to see your font creativity.

Formatting paragraphs

Whereas type styles and sizes can be applied to any amount of text, even a single letter, *paragraph formatting* affects a whole paragraph at once. In ClarisWorks, these styles are easy to apply. Clicking four times within a paragraph highlights the entire passage. Then, by choosing any of the four

justification options located just below the menu bar, you can have your text become left-justified, right-justified, centered, or fully justified. You can also determine the amount of space between each line. Take some time now to play with your options before going on to the next exciting lesson.

Setting tabs/using the ruler

ClarisWorks takes the agony out of setting tabs and using rulers. Take a look at the ruler in Figure 7-5.

The solid black triangles on the left and right control the indents. Simply click and slide the triangles to the desired position. Don't worry, changing your indentation will not affect your margin settings.

Figure 7-5: The ClarisWorks ruler.
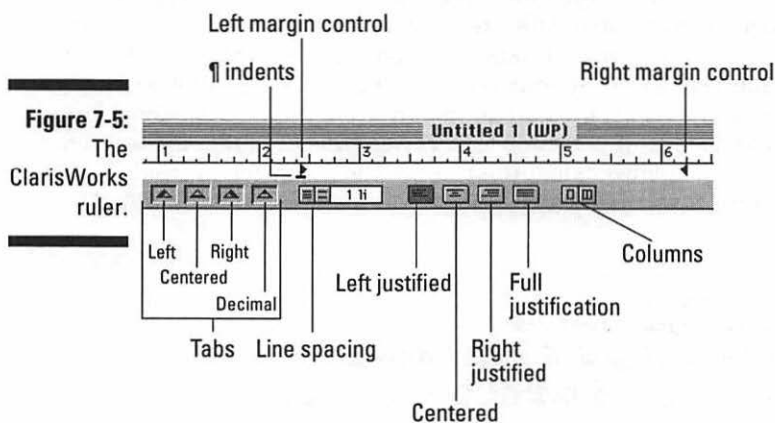
Tabs are nearly as easy. Choose the type of tab marker you desire (left, centered, right, or decimal) and click the triangle that represents that type of tab. As you click, drag the triangle to the desired position. You can set as many tabs as you need; the little triangles simply reappear after you drag one off — you have an unlimited supply.

You can hide this ruler by choosing Hide Rulers from the View menu.

Guide to power typing

Because you *can* format text after you've typed it doesn't mean you *have* to. Most users get used to the keyboard shortcuts for the common style changes, like bold and italic. They're pretty easy to remember: In ClarisWorks, you get italic by pressing ⌘-I, and bold with ⌘-B.

You can press either key combo just *before* you type the word. For example, without ever taking your hands off the keyboard, you could type ⌘-B once to turn bold *on* for the next burst of typing and ⌘-B again to turn it off — all without ever having to use a menu. Handy, huh?

Top Ten Word Processing Tips

1. Select a word by double-clicking. Then, if you hold down on the second click and drag sideways, you select more text in complete one-word increments.

2. Never, never, never line up text using the spacebar. It may have worked in the typewriter days, but not anymore. (And it may look fine onscreen, but it won't line up correctly when you print.) So instead of using spaces to line up columns, rely on tab stops to get the job done. Practice setting tabs and use them!

3. You can select all the text in your document at once by using the Select All command (to change the font for the whole thing, for example). Its keyboard equivalent is ⌘-A.

4. Aesthetics Rule of Thumb: Don't use more than two fonts within a document. (Bold, italic, and normal versions of a font only count as one.)

5. Don't use underlining for emphasis. You're a typesetter now. You have *italics!* Underlining is a cop-out for typewriter people.

6. The gray box in the scroll bar at the right side of the window tells you, at a glance, where you are in your document:

The position of the box in the scroll bar tells you whether you are at the beginning . . .
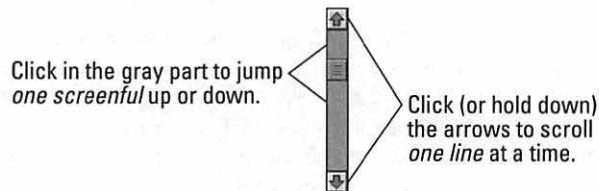
. . . in the middle . . .

. . . or the end of your document.

By dragging this box, you can jump anywhere in the document.

You have two other ways to move around:

Click in the gray part to jump *one screenful* up or down.

Click (or hold down) the arrows to scroll *one line* at a time.

Click in the gray area above or below the scroll box to jump one screenful up or down.

Click or hold down the button with the up- or down-arrow to move up or down your document one line at a time.

7. You already learned how to *copy* some text to the Clipboard, where it rests until time to paste it somewhere else. Another useful technique is to *cut* text to the Clipboard. Cut works just like Copy except it snips the selected text out of the original document. (Cut-and-paste is how you move text from one place to another and is not to be confused with the skills required to go from kindergarten to first grade.)

8. It's considered uncouth to use "straight quotes" and 'straight apostrophes.' They harken back to the bygone days of typewriters and mimeograph machines. Instead, use "curly double quotes" and 'curly single quotes.' See the difference? In ClarisWorks, you can make this switch easily. Choose Preferences from the Edit menu. In the dialog box that appears, choose Smart Quotes.

9. If there's an element that you want to appear at the top of every page, like the page number or the date, don't try to type it onto each page. Not only is that a waste of effort, but the minute you add or delete text from somewhere else, this top-of-the-page information becomes middle-of-the-page information.

   Instead, use the Insert Header or Insert Footer (for the bottom of the page) command found in the Format menu.

10. Be painfully aware that what you see on the screen isn't always what prints out. The number one source of rude surprises happens when you write with a Mac connected to *one* printer (like a StyleWriter) but print on a different one (like a laser printer). Because the typefaces are handled differently for each printer, you discover that sentences, lines, and page endings in printout form don't necessarily match what you see on the screen. This is another problem that I experience when creating documents at home and waiting to print them at school on the laser printer.

The solution is simple. Before you print, trick the Mac into thinking it has that laser printer already attached, so you can see what it's about to do to you. From the Apple menu (🍎), select Chooser. You should see the name of several printers there, like StyleWriter or LaserWriter (which is used for *all* brands of laser printers). Click the one you *plan* to print on, even if it's not currently connected.

If you don't see more than one printer icon in the Chooser, you have to reinstall them from your System or printer disks.

Get Busy!

Feel like a word-processing expert? If you're tired of reading and practicing, how about getting busy?

Note: The *Macs For Teachers* CD contains a sample letterhead that you can use by simply changing my name — if you're not ready to learn a new skill right now.

Creating a letterhead

Every year, I like to create my own stationery for those times when my messages need to have a more personal tone provided by (dare I say) *handwritten* notes. Yes, even I still send home handwritten notes. They let a parent know that, in this age of technology, there's still a warm, loving individual behind the teacher's desk.

1. **Open a new word-processing document.**

   You remember: Double-click ClarisWorks to open the program. When the New Document dialog box appears, choose Word Processing.

2. **From the ruler, choose the alignment setting of center justification.**
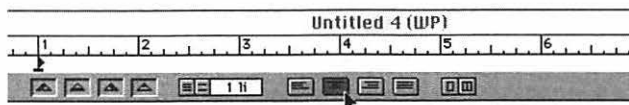
3. **From the Font menu choose Times. Then choose 24 points as your Size and bold and italic as your Style.**

4. **Type your name and then press Return. Type the name of your school and then press Return again.**

> *Mrs. Robinette*
> *Norton Elementary*

5. Now let's add another skill to your repertoire. First, click the small picture of a page that sits in the bottom-left corner of the screen (just to the left of the page number).

`100` `Page 1`

After you click this button, a *tool box* appears to the left of your work area. See the arrow in the top-left corner of this tool box? Click it. (It should become highlighted.)

6. If you are using ClarisWorks 4.0, go to the File menu and choose Library.

A pop-up menu appears with a list of available clip art libraries. Select the library that you want to view and scroll through your clip art choices. When you find the graphic that you want, click on it (a hand appears), and with the mouse button still pressed down, drag the picture onto your page.
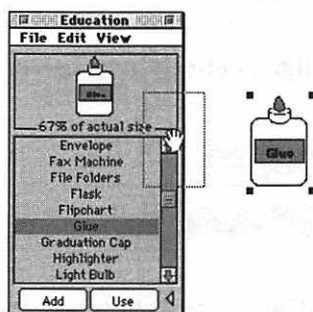
7. **If you are using ClarisWorks 3.0, go to the File menu and choose Insert. When the dialog box appears, double-click the Clip Art folder.**

   Take a look at the list of clip art that Claris so thoughtfully installed for you! Scroll through your choices. If you see one that makes you curious, *don't* choose it. Instead, highlight the choice and then click the Create button in the lower-left corner of the dialog box. This action creates a preview of the artwork that allows you to make a choice without going back and forth between your document and the Clip Art folder. Yeah, the choices aren't that incredible — but they are free. (You can purchase clip art for very reasonable prices and easily add the images to your files.)

8. **Highlight your Clip Art choice and click the Insert button. (I choose the Macintosh — big surprise.) The image appears on your stationery.**

9. **Now, class, we should all be in the same spot at this time, looking at our document with *some type* of picture *somewhere* on the screen.**

   Do you see the little squares at the corners of your picture? (If you don't see *four* black squares — the graphic's "handles" — you need to click in the graphic and start all over again. Make sure you choose the arrow in the tool box *before* you choose your picture.) These squares help you adjust the size of your picture. Point to one of the squares; click and drag the corner. You can do some pretty strange things to your graphic.

Can't find Clip Art?

If you are using an earlier version of ClarisWorks (earlier than 3.0), you won't find a Clip Art file already installed. Instead, after highlighting the arrow in the tool box, go to the Apple Menu () and open the Scrapbook.

I know, there aren't many to choose from, but you can add to the collection later. For now, find something you can live with. When the picture you have chosen is on the screen, go to the Edit menu and choose Copy. Remember the clipboard we learned about in Chapter 4? Well, your picture is on that baby right now!

Close the Scrapbook (click the little box in the top-left corner of the window). You should see your stationery again. Go to the Edit menu and choose Paste. You've added Graphics.

---

10. **Now, whenever the squares are visible, you can also move that graphic anywhere on the document. Simply click in the center of your graphic and drag to the top-right corner of your stationery.**

(Click off the graphic to make the squares go away. Click on the graphic to make them appear again.)
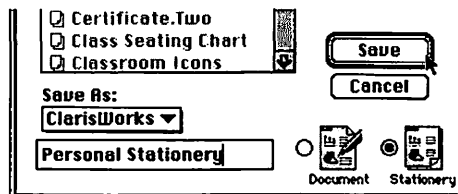
11. **Symmetry is everything, so let's put another Mac in the top-left corner. Who can remember how we accomplish this amazing feat? That's right: Copy and Paste.**

If the four corners are showing around your graphic, simply go to the Edit menu, choose Copy, go back to your stationery, and choose Paste. Follow Step 10 (mentioned previously) to maneuver that baby into place. Looking good!
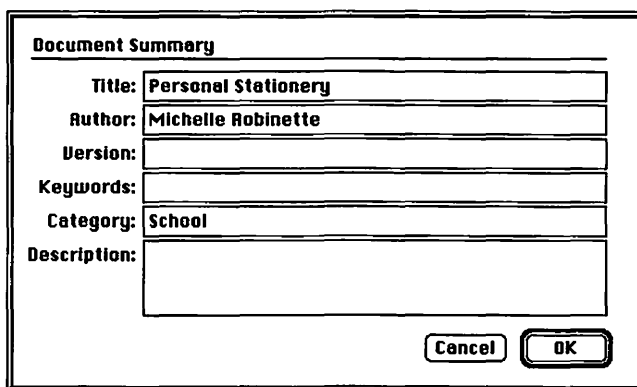
Mrs. Robinette
Norton Elementary
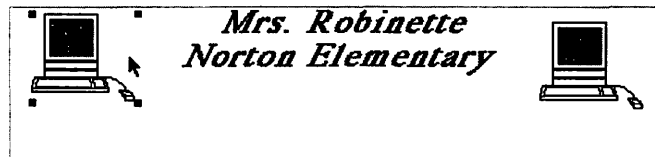
12. **Now we are ready to save this as a Stationery file that you can pull up quickly and easily. Go to the File menu and choose Save.**

When the dialog box comes up, notice the choices in the bottom-right corner: Document and Stationery. You want this to be saved as Stationery, so click the button. Now the Save As box is highlighted and ready for you to name your creation. Let's call it *Personal Stationery.* (Remember, just start typing over the highlighted area; your words automatically replace *Untitled 1.*)

Certificate.Two
Class Seating Chart
Classroom Icons

Save As:
ClarisWorks ▼
Personal Stationery

Save
Cancel

○ Document   ● Stationery

13. Click Save.

14. A Document Summary appears for you to make a few notes about this supreme piece of work. Type *Personal Stationery* for the title, put your name as the author, and create a name for the category.

Document Summary

Title:	Personal Stationery
Author:	Michelle Robinette
Version:	
Keywords:	
Category:	School
Description:	

[Cancel] [**OK**]

The rest you can fill in later if you need more detail. For now, this will do.

15. Click OK. You did it!

If you want to prove that you really have created a Stationery file, go to File and choose New. When the screen appears, click Use Assistant or Stationery. Then, beside the word Category, you see the title General with a black arrow pointing downward. Click General and look at the list. Personal Stationery comes up in the scroll box. I'm proud of you.

The beauty of saving something as Stationery is that when you open the document, ClarisWorks creates a copy and names it *Untitled,* thus leaving your original stationery document intact. You can rename your new document when you save it.

Turn down the corner of this page; the Stationery file function is useful when you create a lesson plan and checklists. Think how much time you can save by not having to set things up each time you get ready to create those required weekly communications.

Saving as Stationery in earlier versions of ClarisWorks

If you are using a version of ClarisWorks before 3.0, saving as Stationery is a little more involved. First, choose Save As from the File menu. Type a name for your document. Before clicking Save, pull down the Save As drop-down menu. Choose ClarisWorks Stationery.

Creating a personalized lesson-plan template

Creating a personalized lesson-plan template is one of those I-should-have-done-this-a-long-time-ago things. You know what I mean — things like putting up a multipurpose bulletin board that lasts the whole year instead of coming up with a new masterpiece every month.

Lesson-plan templates can be used in different ways. First, you can create a standard template with all the "little details" filled in — you know, those things that you write in your plan book day after day and week after week: lunch times, recess duty, Special Ed times, bus call, and so on. This template can then be run off on your trusty copy machine, and you can fill in the remaining blanks by hand. This option is a good option, and it's the one that I used when I didn't have access to a computer in my classroom. A standard template saved me tons of time that I usually spent with a ruler and pencil, getting the plan book set up just the way I wanted it.

Option number two is great if you have access to a computer on a regular basis. You create your template, save it as a stationery document, and then fill in your blanks (the actual lessons) on the computer each week. This process requires you to create text blocks so that you don't lose all your formatting each time you press Return. When you finish filling in all the information on your template, you simply print up as many copies as you need.

Either way you choose, you can save major amounts of time, and your lesson plans look oh-so-professional.

I've also included a lesson-plan template on the CD at the back of this book.

Here's how to create a personalized lesson-plan template:

1. **Open a new word-processing document.**

   A blank page appears, ready for you to do a little work.

2. Choose Insert Header from the Format menu.

Your header appears on the screen.

3. Design a header that suits your individual needs.

I like to include a space for the day of the week, as well as the date, because my classroom isn't always the same from day to day.

4. Click below the bottom line of your header and create the perfect plan sheet.

Don't leave out anything. (I put details on here that any substitute teacher could understand, and my plans are usually so complete that I don't have to write extensive notes when I'm going to be out!)

Leave space between each of your headings so that you can fill in your blanks later on. Pressing Return gives you lines of white space. If you run out of room, don't worry about going on to a second page. (I always make front-to-back copies on the school's copy machine.)

Remember: Don't fill in the plans yet; this is just a template.


```
Mrs. Robinette              Day
3rd Grade                   Date

8:00 - 8:30 - Attendance, Lunch Count, and Morning Work



8:30 - 9:15 - Language Arts
```

5. After you enter all your information, check your plan's spelling and then choose Save from the File menu.

6. When the Save dialog box comes up, choose Stationery from the lower-right corner before typing in a name for your lesson-plan template.

7. Click Save, and your wonderful template now has a permanent spot in the Stationery folder.

To open your template later, just click the Assistant or Stationery box on the opening screen. Your template is listed with all the other Stationery files.

8. If you don't have easy access to a computer, you can just pull this template up, print it once, use your school's copy machine to make enough copies to last you for a few weeks, and then fill in the specifics for each lesson.

9. **If you do have access to a computer (you lucky soul), I suggest that you type in your information while you have the template on the screen.**

   Normally, entering new information in front of all those Returns you entered in Step 4 would shift your formatting, but if you enter your text in a *text frame,* the text exists on its own and won't alter your other formatting.

   If you left the appropriate amount of space for adding text, creating text frames is a breeze.

10. **Click to place your cursor where you want your frame to begin and hold down Option/Alt as you drag a text frame the width of the space that you need. (Don't worry about the depth of the frame, because the box expands downward as you type.)**

    That's all there is to creating a text frame.

11. **Type in your information and create your next text frame. Continue until you complete entry of all your lesson-plan information.**

Remember: Because you saved your plan as Stationery, you can make as many changes to your text as you like without ever harming your original template (shown in Figure 7-6).

Figure 7-6:
See how
you can
create
different
documents
from one
template?

Mrs. Robinette ———————✏️ *Day*
3rd Grade ✏️ *Date*

8:00 - 8:30 - Attendance, Lunch Count, and Morning Work
Write spelling words 3x each.

8:30 - 9:15 - Language Arts

Verbs
1. Read a passage from today's paper and have the students clap their hands when they hear a verb.
2. Give each student a page from the paper and have them highlight at least 10 verbs.
3. Have the students use five of the verbs they found in sentences. |

Chapter 8

I May Spread a Few Sheets, but I Don't Do Windows

● ◎

In This Chapter

▷ Getting to know spreadsheets

▷ Using spreadsheets in business and education

▷ Creating customized checklists

▷ A potpourri of ideas for spreadsheet use

● ◎

*W*hat I'm about to tell you is completely true. I once had a student (let's call him Johnny) whose mother was obsessed with his academic performance in first grade. Johnny was a bright child who was already reading chapter books when he entered my class. At our first conference in November, his mother brought in a scrapbook filled with every piece of work I'd sent home since the beginning of the school year. Now, I don't believe in giving letter grades in first grade, so most of the papers I'd sent home had positive images like smiley faces or check marks. This parent had converted these images into her own 4.0 grading scale and was concerned about her child's *grades*. I assured her that Johnny was doing fine and jokingly added that his scores in first grade would not affect his Harvard admission. She then looked at me very seriously and said, "Are you sure?"

Parents like that make us all realize how important good record-keeping can be. Most districts now require months of information-tracking on a student before they even discuss special-area placement. I find that good checklists can help me keep track of the important stuff (like grades and homework) and the not-so-important stuff (like ice cream money). I'm just not the anecdotal-record kind of gal — but hey, you can even create a spreadsheet to help you keep track of anecdotal information.

What Is a Spreadsheet?

Spreadsheets have nothing to do with the actions you go through when making your bed. A *spreadsheet* is simply an electronic form of the old-fashioned ledger, and spreadsheets are generally used in the business arena.

Business

Our friendly businessperson uses spreadsheets to crunch numbers. You know, they take some numerical information, enter some formulas, and let the computer do the math for them. They end up with information that they put in publications called profit and loss statements, quarterly reports, or a number of other venues — all of which are foreign to most teachers.

Education

When I first encountered spreadsheets, I didn't look at all the numbers. I only saw this wonderful layout and thought, "With a little manipulation, I can turn this into a wonderful customized checklist."

I admit that you can take a basic spreadsheet, enter student names and grades, and then create formulas that average grades for you. However, it's much easier (and relatively cheap) to purchase your own gradebook program that does your math for you and even prints out a report for those documentation-crazed parents like Johnny's mom.

Let's Make a Spreadsheet!

I'm going to give you step-by-step instructions so that you can create your own checklist. Then I show you some other neat ways to use spreadsheets to keep track of classroom activities. And guess what? You can even save spreadsheets as Stationery and recustomize them for other classroom needs (see Chapter 7 for details on Stationery).

And, you get a few spreadsheet samples on the *Macs For Teachers* CD.

1. **Open up ClarisWorks.**

   You remember: Go to your hard-drive icon, find ClarisWorks, and double-click.

2. **When you see this screen, choose Spreadsheet (big surprise, right?). Then press Return (or click OK).**
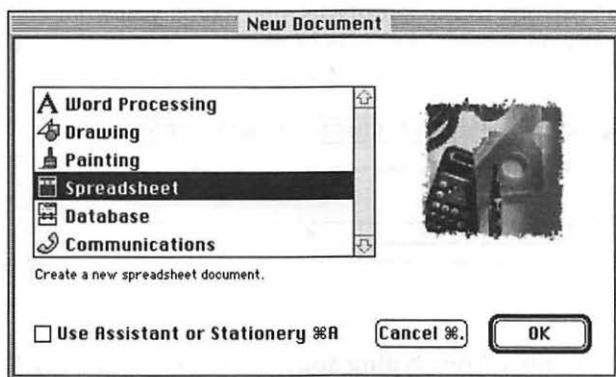
You are then presented with a confusing-looking page full of lines, letters, and numbers. The menu-bar choices look a little different, too. Don't worry.

3. **Now spread that sheet! First go to the View menu and choose Page View.**

This action keeps your document the size of the page you'll be printing it on. Otherwise, this sheet scrolls endlessly down the hall all the way to your principal's office.

4. **Next, click in the *cell* (that's what boxes are called in spreadsheets) located at A1. The cell should become highlighted. Go to the Format menu and choose Column Width.**

A box pops up with a space for you to type in a column width. The default is 72 pixels or screen dots. Type in 150 and press Return. The column automatically extends to a width large enough to accommodate even the longest name.
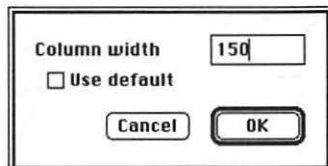
5. Cell number A1 should still be highlighted. Type the word Name.

What? You don't see it in the cell? That's because what you enter first appears in the box at the top of the lettered columns, called the *editing strip*. The box to the left of this space tells you what cell you are working on.


— the editing strip
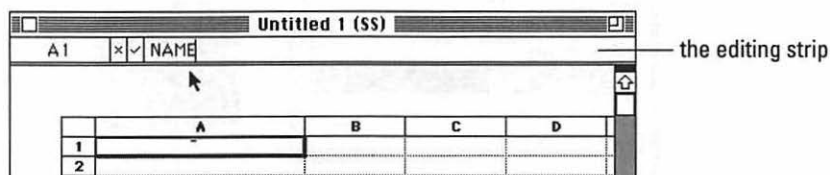
6. Press Return. Your typing appears in the cell. Notice that the next cell down is now highlighted.
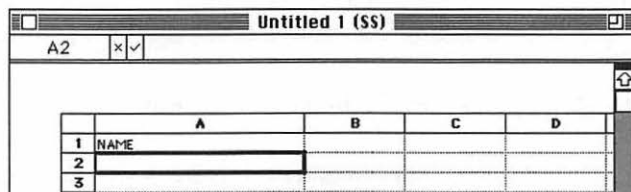
7. Now enter the names of every darling in your class. After typing each name, press Return.

Set up the student names in a way that best suits your style (alphabetized, first name, and so on). You can save this checklist as Stationery. When you pull it up each time, all you have to enter is headings for your columns — not names.
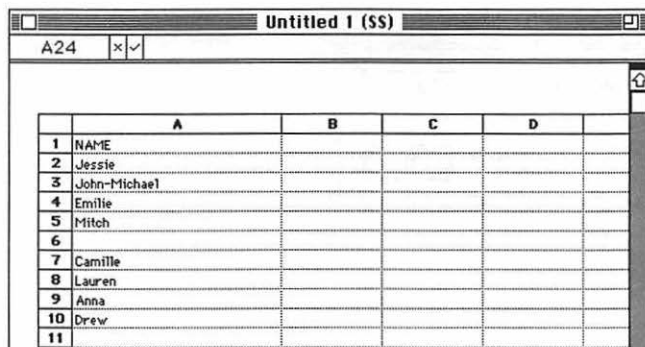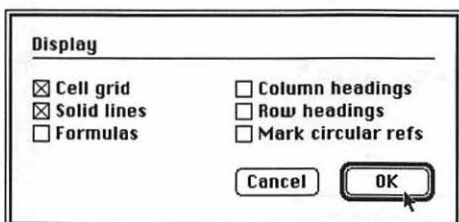
I like to enter the names in clusters according to the group they sit with, because that's usually how I travel around the classroom and keep track of work.

Now that you've entered your names, clean this baby up and save it as Stationery before putting in any specific information.

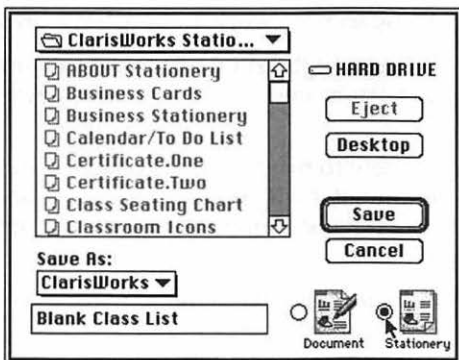**8. Go to the Options menu and choose Display.**

The display dialog box pops up.

```
┌─────────────────────────────────────────┐
│  Display                                 │
│  ──────────────────────────────────────  │
│  ⊠ Cell grid        ☐ Column headings    │
│  ⊠ Solid lines      ☐ Row headings       │
│  ☐ Formulas         ☐ Mark circular refs │
│                                          │
│              ( Cancel )  ┌─  OK  ─┐       │
│                          └────────┘       │
└─────────────────────────────────────────┘
```

I'm not going to explain each of the choices that now greet you — just do what I say. Choose Cell grid and Solid lines, and make sure the other boxes are empty. You just eliminated any extra lines and made your work much easier to read. Click OK.

Wow! Doesn't that look a little better?

9. Before going any further, choose Save from the File menu and name the spreadsheet *Blank Class List*. Be sure you click the Stationery icon in the lower-right corner of the dialog box that appears. Follow all the instructions as they appear on the screen.
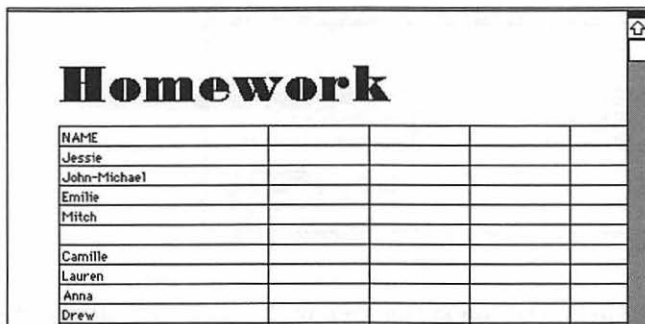
```
┌──────────────────────────────────────────────┐
│  🗁 ClarisWorks Statio... ▼                    │
│  ┌────────────────────────┐  ⊂⊃ HARD DRIUE    │
│  │ 🗋 ABOUT Stationery    ⇧│                   │
│  │ 🗋 Business Cards      ▓│   (  Eject  )     │
│  │ 🗋 Business Stationery ▓│   ( Desktop )     │
│  │ 🗋 Calendar/To Do List ▓│                   │
│  │ 🗋 Certificate.One     ▓│                   │
│  │ 🗋 Certificate.Two     ▓│   (  Saue  )      │
│  │ 🗋 Class Seating Chart ▓│                   │
│  │ 🗋 Classroom Icons     ⇩│   ( Cancel )      │
│  └────────────────────────┘                   │
│  Saue As:                                     │
│  ┌─────────────────┐                          │
│  │ ClarisWorks ▼   │                          │
│  ├─────────────────┤   ○ 📝     ● 📑           │
│  │ Blank Class List│     Document  Stationery  │
│  └─────────────────┘                          │
└──────────────────────────────────────────────┘
```

Your document should still be on the screen. Now you can adapt this spreadsheet for a specific use. Ready?

10. Go to the Format menu and choose Insert Header. A header appears at the top of your spreadsheet and cannot be altered by any information you put in the spreadsheet itself.

You should now see a flashing cursor in the upper-left corner of your document. The next part is easy.

11. Name your checklist *Homework*. Just like in your word-processing activities, you can choose your fonts, their size, and their style.

Homework				
NAME				
Jessie				
John-Michael				
Emilie				
Mitch				
Camille				
Lauren				
Anna				
Drew				

12. Now, click back on the actual spreadsheet in the cell just to the right of the word *Name*.

We need to work across this row and put in dates or assignment numbers. I'm making this a checklist for homework assignments, so at the top of each of the columns I'm putting a homework due date. Go ahead — just click in the block, type a date, and press Return. Enter all your dates.

When you press Return to enter your date, the next cell down becomes highlighted. You have two ways to navigate between the cells: Either click in the next cell you want to work in, or use the arrow keys.

13. Now you can go back and highlight and format to your heart's content. Look in the Format menu for Font, Size, Color, and Alignment choices.

At this point, you're ready to print the checklist. You don't necessarily have to save this creation if it will be used only for this singular purpose — you have a personal stationery template waiting for you to customize for other needs.
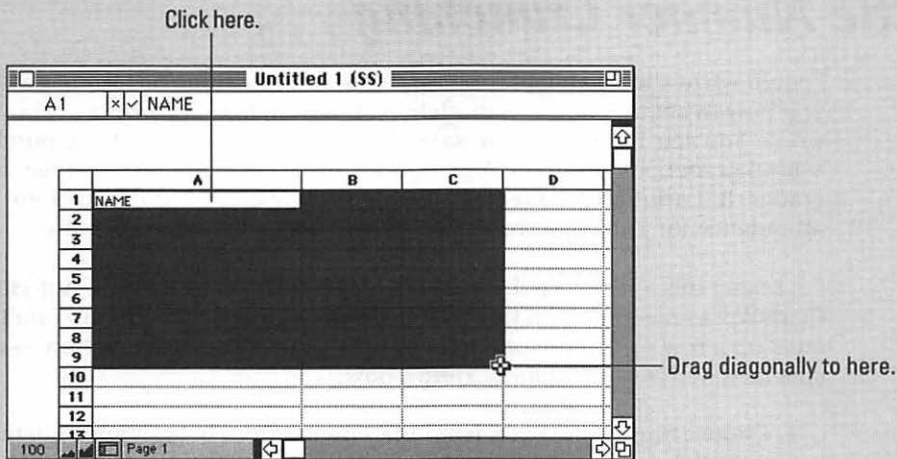
14. So now choose Print from the File menu.

Don't waste your time!

Yes, you can format as you go — making things bold, italic, underlined — but why bother? This is definitely one of those times where formatting should take place after you complete all your entries. Then simply go back and highlight everything you want to format. Remember to click where you want to start and then drag. (The first cell you click in is a hollowed outline; don't worry, it's selected.) When choosing cells, you need to start in a corner and drag to the opposite corner.

After you highlight the area you want to format, you see all your choices in the Format menu. You can even use different colors for your headings (if you have a color monitor).

Don't go crazy. Choosing funky fonts or outrageous styles may make your document difficult to read — or the lettering may become too large for your column size. You want your work to be easy to read, and you don't want to reformat in order to accommodate your offbeat style choices.

Click here.

| | Untitled 1 (SS) | |
| A1 | ×✓ NAME | |

	A	B	C	D
1	NAME			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

100 ▦ Page 1

Drag diagonally to here.

4.0 Fill Special

If you're fortunate enough to have ClarisWorks Version 4.0, you can fill cells in a special way. The Fill Special command allows you to fill a selected row or column of cells with sequential information like days of the week, numbers, times, or months. Is this great or what? All you have to do is select the row or column you want to insert the cells in, choose Fill Special from the Calculate menu, and decide which type of fill you want to use. What will they come up with next?

So You Want to Use Spreadsheets to Do a Little Number Crunching . . .

I could write a whole chapter on formulas and functions or take pages to tell you how to set up your own gradebook program in ClarisWorks . . . but I won't. You see, I think you can save time and peace of mind if you purchase a good gradebook program. A gradebook program won't just average your grades; it'll print custom reports, create seating charts, and keep your attendance for you. My favorite is EasyGrade Pro by Orbis Software.

I'm taking this space to tell you about a cool little feature called AutoSum. ClarisWorks has provided this neat little shortcut key called AutoSum that adds up a row or column of numbers with a quick press of a button — no special functions or formulas. Here's how:

1. **Choose Show Shortcuts from the File menu to bring your Shortcuts palette into view.**

2. **Select the cells you want to add.**

   Include an empty cell at the end of your selection — your total appears here.

3. **Click the AutoSum button on the shortcut palette and watch as the answer appears in the empty cell.**

Select cells to add.   Click AutoSum shortcut.

Favorite Ice Cream	1st Grade	2nd Grade	3rd Grade
Vanilla	25	12	16
Chocolate	16	32	12
Strawberry	10	30	5
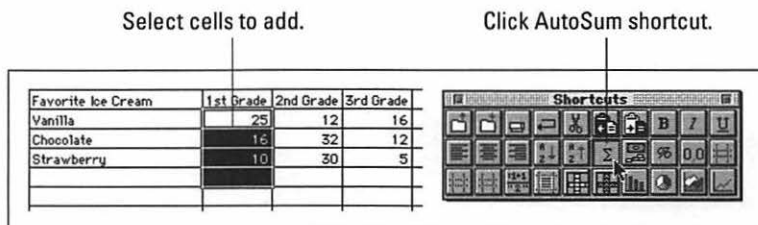
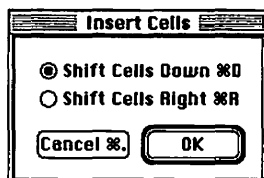# Making a Few Minor Adjustments

You enter all your information and suddenly realize that you left out a student's name or forgot to enter an important step. Don't fret; read on and discover how easy it is to make adjustments to your spreadsheet.

Inserting rows or columns

You always have times when you need to add a row or column — you know, a new student joins your class or you add a few dates to a project.

✔ If you want to insert a new row, select the row below where you want the new row to appear. To insert a new column, select the column that's directly to the right of where you want the new one. After you make your selection, choose Insert Cells from the Calculate menu, and a new row or column appears to the left of the cell you highlighted.

✔ If you don't select a complete row or column before you choose the Insert Cells command, the following dialog box appears:

```
╒═══════ Insert Cells ═══════╕
│                            │
│  ◉ Shift Cells Down ⌘D     │
│  ○ Shift Cells Right ⌘R    │
│                            │
│  [Cancel ⌘.]  ( ⎯ OK ⎯ )   │
╘════════════════════════════╛
```

The computer is assuming that you want to insert a new row and has chosen Shift Cells Down by default. If you want to insert a column, choose Shift Cells Right. Click OK, and the computer does the rest of the work for you.

Note: This command is sometimes confusing to the beginner. If you mess up and get a row or column where you didn't intend for one to be, immediately choose Undo from the Edit menu and your last action is reversed.

Deleting rows or columns

Deleting the information in an entire row or column is easy. Just click on the *row header* (the 123s) or the *column header* (the ABCs) of the row or column you want to delete. When the cells are highlighted, press the Delete key.

Resizing rows or columns

There are two ways to accomplish this feat:

- ✔ The quick and surefire way to get your row or column to the desired size is to use the mouse to click and drag your row's or column's border. Just move the standard plus-sign spreadsheet pointer over the row or column headers (the 123s and ABCs) until you see the pointer turn into a thick line with arrows. When you see the arrows, click and drag until you like the way things look.

- ✔ Another option is to select a cell within the row or column you want to change. Then choose Column Width or Row Height from the Format menu and type in the desired size before clicking OK. This is great for times when you need a group of rows or columns to be exactly the same size.

Now That You've Done It

One wonderful thing about writing a book for educators is that I know how incredibly bright my readers are. Therefore, I'm not going to explain the steps involved in using spreadsheets in other ways; I'm simply going to throw some ideas out there. You resourceful sponges can soak it up and go from that point. Spreadsheets are fun to play with and really easy to customize.

- ✔ Is there a child you're trying to get placed in a Special Education program, and the psychologist wants you to track specific behaviors for a time period before placement will be considered? (Gosh, is that ever frustrating — you know the kid needs help, and you have to jump through hoops to get it!) Instead of trying to keep handwritten records on scraps of paper, create a checklist with the behaviors, along with a space in which to write stuff. Then blow Mr. or Ms. Psychologist's mind when you come back with specific dates, types of incidents, and comments!

A.D.D. CHECKLIST

Behavior	Tally	Dates	Notes / Details
Daydreaming			
Out of seat			
Destructive			
Harms others			

✔ The same type format could be used for a child with behavior problems that you are trying to correct. Make a form that the child could take home every day — a form detailing the behavior during specific periods of time. I like to leave these forms on the child's desk as a visual reminder throughout the day.

✔ Projects and papers are sometimes hard for kids to conceptualize. Why not create a checklist containing each step in the process and include due dates? This form also helps parents keep track of progress and avoid those day-before-the-assignment's-due trips to the library.

✔ How often are you asked for a list of the students in your class? Having this list saved on the computer makes it easy for you to whip that baby out at a moment's notice.

✔ When we were sharing one Mac among all the teachers in one grade level, I would create a checklist for each subject area and use those sheets to record grades. Then, when it was my turn for the computer, I'd enter the grades in my gradebook program for easy averaging at report card time.

Chapter 9

An Introduction to Databases

In This Chapter

▷ Getting to know databases

▷ Creating your own class-list database

▷ Navigating your database

▷ Developing columnar lists with your info

▷ Using databases and Mail Merge

○ ○

*H*ow many of you expect parents to fill out those horrible, 5 x 7-inch, white index cards on registration day? Parents hate them and you hate them, but you know they're necessary for record-keeping. Well, a database takes the place of all those awful little cards. A database is an electronic list of information that you can customize to meet your own needs.

A database is also why you get all that lovely junk mail. You see, companies sell database lists to other companies who in turn sell to two others who sell to two others, and so on, and so on. Anyway, probably tons of companies have the equivalent of a little index card with your vital information.

Your Class-List Database

It takes only a short time to set up the format for your database: After that, you're on your way to total (or close to total) organization. Unfortunately, the exercise won't do anything for that drawer in your desk where you dump everything.

Note: If you're shy on time and want to learn this skill later, try using the database included on the *Macs For Teachers* CD.

You decide what information is important to you and how it will be displayed. Before starting, you need to find the ClarisWorks icon on your hard drive and open that program up. When you see the selection screen, double-click Database (or just click Database and then click OK), as shown in Figure 9-1. Don't freak when you see the first screen (Figure 9-2)!

Figure 9-1:
The
ClarisWorks
selection
screen.

New Document

A Word Processing
Drawing
Painting
Spreadsheet
Database
Communications

Create a new database document.

☐ Use Assistant or Stationery ⌘A   [Cancel ⌘.]   [OK]
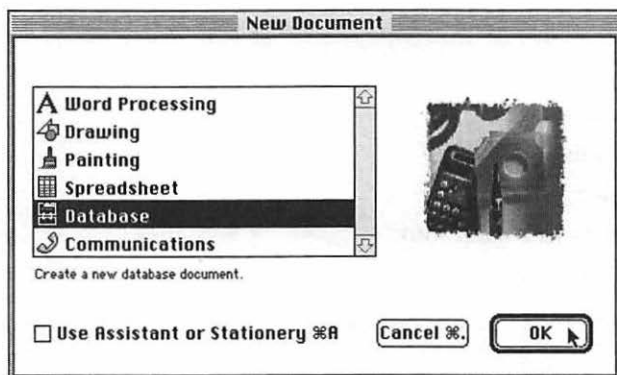
Figure 9-2:
The first
screen
of the
database
program
may
intimidate
the weak at
heart!

Define Fields

Name	Type

Name [   ]

Type
◉ Text   ⌘1   ○ Time   ⌘4
○ Number   ⌘2   ○ Calculation ⌘5
○ Date   ⌘3   ○ Summary   ⌘6

[Create]   [Options...]
[Delete]   [Modify]
[Done]
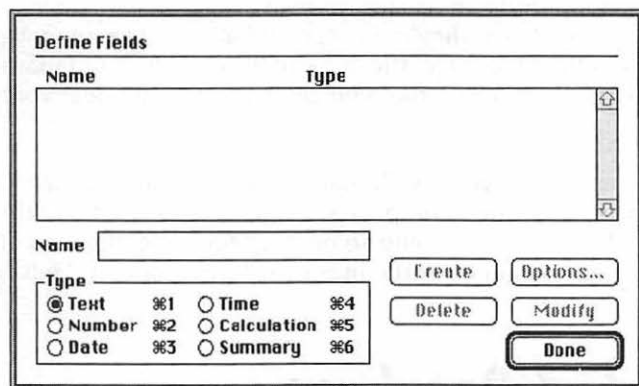
Setting up your fields

TRY THIS

The screen that confronts you may look confusing, but this is where you assert control. The computer is waiting for you to tell it what blanks *(fields)* you want to fill in for each child in your class: name, address, phone, parents, and so on.

You're about to type the names for these blanks. As always, if you make a typo, just press the Delete key to backspace over it. Here we go.

1. **Type** First Name. **Press the Return key.**

2. **Type** Last Name **and press Return.**

3. **Type** Parents Formal **and press Return.**

   "Mr. & Mrs. Robinette," for example.

4. **Type** Parents Casual **and press Return.**

   "John & Michelle," for example.

5. **Type Address. Return.**

   See how each field name appears in the list above?

6. **Type** Phone (H). **Return.**

7. **Type** Phone (W). **Return.**

8. **Type** Special Info. **Return.**

9. **Type** First & Last. **Press Return.**

   You filled in all your fields, and your screen should look something like Figure 9-3.

Figure 9-3:
You are
defining the
fields of
your
database.
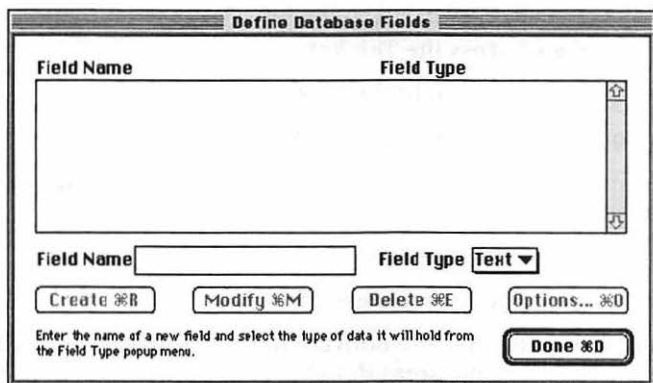
10. **Click the Done button in the lower-right corner.**

    The dialog box goes away.

    When you see what you created, things should begin to make a bit more sense — you now have the blanks (fields) to be filled in for each person on your list. (Don't worry if the field names are too long to show up in their entirety; you still know what they are.)

    Note: In *The ClarisWorks Reference For Teachers,* I show you some cool ways to enhance your database. Learn how to increase the size of your fields, change the font, insert clip art, add a colorful background, and much more!

Filling in the blanks

Computer nerds would call this next step *data entry*. Put simply, you are going to fill in the blanks you just created. To advance from one blank to another, press the Tab key or click inside the blank you want to work on. Are you ready?

1. **Make sure that you can see the dotted rectangle for each field — like the ones here. If not, press the Tab key.**

First Name	
Last Name	
Parents Formal	
Parents Casual	
Address	

   The little blinking cursor should be in the "First Name" blank. (If it's not, click there.)

   I'll set this first one up using my daughter's info.

2. **Type** Jessie **and press the Tab key.**

   The cursor should jump to the "Last Name" box.

3. **Type** Robinette **and press the Tab key.**

4. **Now enter** Mr. & Mrs. Robinette **in the "Parents Formal" box and press Tab.**

   You should now be in the "Parents Casual" box.

5. **Type** John & Michelle **and press Tab.**

6. **You are going to enter the address in the "Address" box, so type** 4705 Somewhere Drive **and press Return.**

   The cursor didn't jump to the next box. Instead, you expanded this box by pressing Return.

7. **Now type** Anywhere, GA 30202 **before pressing the Tab key.**

   The box collapses back to its original size. Don't worry, your information is still there.

   Continue now with the "Home Phone" blank.

8. **Type** 963-7139 **and press Tab.**

   Next, in the "Work Phone" section, you can enter two phone numbers (one for each parent or guardian).

9. **Type M- 963-1953 and** D- 963-2159. **And yes, once again, press that Tab key.**

   Of course, that Mom and Dad designation won't work for all your students. You can work out your own system for labeling the two phone numbers in this field.

   For the next step, you should be in the "Special Info" box.

10. **Type this word for word:** Precious child — very bright for her age.

    Don't question it, just type. (Remember, she's a teacher's kid. Aren't they all extremely bright?) Press the Tab key, of course.

11. **Type** Jessie Robinette **in the "First & Last" box.**

    You did it! You just filled in your first card!

    Now, if you have all the information in front of you, pull up another blank card by going to the Edit menu and choosing New Record. *Voilà!* A new blank card appears ready for you to fill in.

    Keep filling in cards until you have entered your entire class (or all the names for your Christmas-card mailing list). Then don't forget to SAVE!

12. **Choose Save from the File menu.**

13. **When the dialog box appears, type in a name for your database (how about** *Class List Database*) **and click Save.**

You know what to do if you want to print a couple of copies of your class info (maybe one for home and one for your plan notebook): Go to the File menu, choose Print, and follow directions!

You may want to wait, however, and read the activities that are coming up. I show you a variety of ways to customize this information.

Using Your Database

You created the ultimate database, entered all the information, and even found time to use the restroom and get a cup of coffee. So now what can you do with the last ten minutes of your planning period? Why not give that database of yours a good workout?

You can utilize all the information you entered in a number of ways:

- ✔ Search for specific information (Which mothers can volunteer for field day?)
- ✔ Sort the list (day-care buses, car riders, bus riders)

✔ Create lists (phone numbers, bus numbers, birthdays)

✔ Create Mail Merge letters

Jumping from record to record

When your database contains many records, you may want to move through your database at a faster pace than that provided by your scroll bar. Here are a few options for quicker movement:

Click to move forward or backward one card.

Slide bar up or down to view records quickly.

Type the number of the record you would like to view.

✔ Use the Bookmark slider to move from record to record.

✔ Click the top of the flip book to move back one record at a time.

✔ Click the bottom of the flip book to move forward one record at a time.

✔ Type in the number of the record you want to view.

Finding

Sure, you could spend your valuable 40-minute planning period flipping through records to find the information that you need, but a quicker way to get your eyes on the information you need is to use the Find command.

If you've done prior searches, all the records for your database may not currently be in view on your screen. Choose Show All Records from the Organize menu before you begin the Find process.

1. **From the Layout menu, choose Find.**

   Don't freak when you see a new blank record pop up in front of you. In reality, this isn't a blank record, it's a Find Request form.

2. **Type the information that you want to find in the space provided in the Find Request form.**

   In my example, I want to locate all the students living in Oakdale. The more information you enter on this request form, the more focused your search becomes.

When you chose the Find command, you probably noticed that the following extra choices appeared on the left side of your screen:
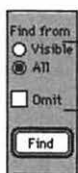
Find from
○ Visible
◉ All
☐ Omit
[Find] —— You can use these choices to narrow your search.

- **Visible:** Clicking this button instructs the program to search *only* the records currently visible.

- **All:** Clicking All instructs the program to search *all* the records in the currently opened database.

- **Omit:** Placing an *X* in this box inverts the Find operation so that ClarisWorks selects the records that don't match the requests you've created.

3. Click the Find button to begin your search.

After the search is complete, the records that match your search are the only records visible; all other records are hidden.

Sorting

The ability to sort records quickly is one great reason for using a database.

If you've done prior searches, all the records for your database may not be showing. If you want to sort all your records (and not just the ones that are showing), choose Show All Records from the Organize menu before you begin a sort.

To sort records, follow these steps:

1. Choose Sort Records from the Organize menu or choose New Sort from the Tool panel on the left side of your screen.

When the Sort Records dialog box appears (as shown in Figure 9-4), you see a list of all your fields on the left side of the box.

The sorting order   The field to be sorted

Figure 9-4:
The Sort
Records
dialog box.

```
╔═══════════════════════ Sort Records ═══════════════════════╗
║  Field List                        Sort Order               ║
║  ┌──────────────────┐⬆  ┌────────┐ ┌──────────────────┐⬆    ║
║  │First Name        │   │ Clear  │ │.l Last Name      │     ║
║  │Last Name         │   └────────┘ └──────────────────┘     ║
║  │Parents Formal    │   ┌────────┐                          ║
║  │Parents Casual    │   │« Move »│                          ║
║  │Address           │   └────────┘                          ║
║  │Phone (H)         │   ┌────────┐                          ║
║  │Phone (W)         │⬇  │   OK   │                     ⬇    ║
║  └──────────────────┘   └────────┘                          ║
║                         ┌────────┐                          ║
║                         │ Cancel │                          ║
║                         └────────┘                          ║
║                         .l ◉ Ascending order                ║
║                         l. ○ Descending order               ║
╚═════════════════════════════════════════════════════════════╝
```
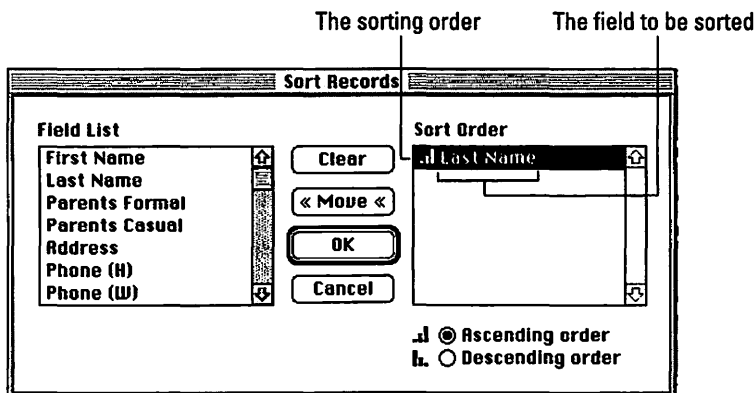
2. Choose the field that you want to use as the basis for your sort.

In most cases, I sort by name in order to create alphabetized lists.

3. When your field is chosen (it should be highlighted), click the Move button.

When you click Move, the field you selected shifts to the Sort Order side of the dialog box.

The next step requires that you decide upon the order in which you want to sort: Ascending order means that you sort from A to Z or numbers that increase in value 1, 2, 3, and so on; Descending order means that you sort from Z to A or numbers that decrease in value 10, 9, 8, and so on.

4. Choose either Ascending order or Descending order.

5. Click OK and let the sort begin!

Making a columnar list

Just the facts, ma'am. I know you just entered lots of information that you certainly don't need on a daily basis. The beauty of the ClarisWorks data-base is that you're never locked into one particular way to view your information. You can create a list that contains only the information you need from the database. So why print the entire list? Let's create a list of student names with the parent names and home phone numbers.

1. If it's not already open, open your database.

You remember: Double-click ClarisWorks. Click Cancel, go to the File menu, choose Open, and find your database.

2. Now go to the Layout menu and choose New Layout.

A layout is simply a way to view the information in your database.
A dialog box appears.

```
┌─────────────────────────────────────────┐
│  New Layout                              │
│                                          │
│  Name  [Layout 2                    ]    │
│  ┌─Type──────────────────────────────┐   │
│  │ ○ Standard    ◉ Columnar report   │   │
│  │ ○ Duplicate   ○ Labels            │   │
│  │ ○ Blank        [ Custom ▼ ]       │   │
│  └───────────────────────────────────┘   │
│                                          │
│            [ Cancel ]  [[  OK  ]]        │
│                         ▶                │
└─────────────────────────────────────────┘
```
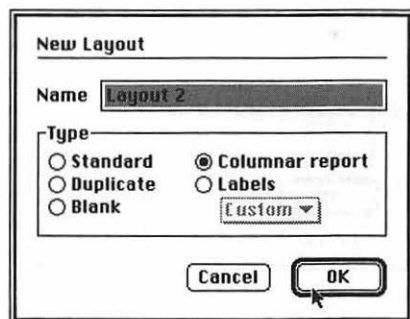
3. Choose Columnar report and click OK.

I know it sounds strange — but this is the one we need. Yes, another
dialog box appears. This time we're going to tell it what information
(from the database) we want to include on our customized list.

```
┌──────────────────────────────────────────────────┐
│  Set Field Order                                  │
│                                                   │
│  Field List                   Field Order         │
│  ┌──────────────────┐┌─┐      ┌─────────────┐┌─┐  │
│  │ First Name       │↑│ [Clear]│             │↑│  │
│  │ Last Name        │ │       │             │ │  │
│  │ Parents Formal   │ │ [Move] │             │ │  │
│  │ Parents Casual   │ │       │             │ │  │
│  │ Address          │ │ [[ OK ]]│            │ │  │
│  │ Phone (H)        │ │       │             │ │  │
│  │ Phone (W)        │↓│ [Cancel]│            │↓│  │
│  └──────────────────┘└─┘      └─────────────┘└─┘  │
└──────────────────────────────────────────────────┘
```
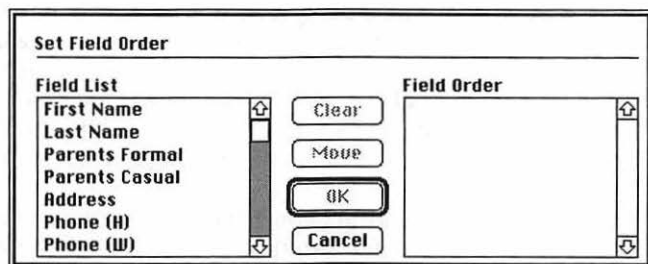
The list on the left shows the fields in your database (Field List). The
empty list on the right is waiting for your information (Field Order). It
is important to enter the information in the order that you want it to
appear on your list.

**4. Scroll down and begin with the last field on your database: "First &
Last." Highlight this field.**

5. Click Move (which is no longer grayed-out, thanks to your selection).

The field should move over to the Field Order list.

6. **Continue by adding the "Parents Casual" field and the "Special Info" field.**

Your screen should look like this:

```
┌──────────────────────────────────────────────────────┐
│  Set Field Order                                       │
│  ───────────────────────────────────────────────────  │
│  Field List                     Field Order           │
│  ┌─────────────────┐┌───┐┌──────────┐┌─────────────┐  │
│  │ First & Last    ││ ⇧ ││  Clear   ││ First & Last ⇧│ │
│  │ Parents Casual  │└───┘└──────────┘│ Parents Casual││
│  │ Special Info    │     │« Move «│  │ Special Info  ││
│  │                 │     └──────────┘                 │
│  │                 │     ┌──────────┐                 │
│  │                 │     │   OK   ♙ │                 │
│  │                 │┌───┐└──────────┘                 │
│  │                 ││ ⇩ ││  Cancel  ││              ⇩││
│  └─────────────────┘└───┘└──────────┘└─────────────┘  │
└──────────────────────────────────────────────────────┘
```
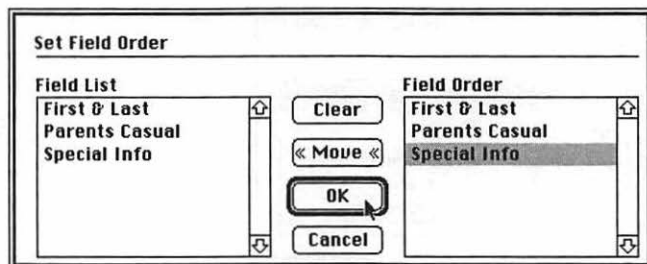
7. **Click OK.**

The customized list should appear on your screen. Save your list and print a few copies!

Creating a Mail Merge document

Mail Merge doesn't accurately describe what we are about to do — it sounds as if we are about to mix your mail with someone else's. In reality, *Mail Merge* allows you to merge or replace general information in your letter with specific information from your database. Mail Merge doesn't have to be used for your classroom. Why not create a customized Christmas letter and have personalized greetings for each of the lucky people on your Christmas card list?

Let's start out with an easy project: a letter home to the wonderful parents of those sweet darlings you see Monday through Friday. Pretend that you just finished a unit on Egypt and the kids have created a museum of Egyptian artifacts within your classroom. I'm going to show you how to create a customized invitation note that you could send home with each student.

Ready?

1. **With your class-list database open, choose New from the File menu and open a blank word-processing document.**

2. **Type the following standard invitation:**

Pretty boring? Wait and see what we're going to do to this plain Jane.

```
10-14-97

Dear Parents,

I'm so proud of everyone's work on our Egyptian Studies unit. We
have had a wonderful time! I hope that you can come and visit
the Egyptian Museum the class created. Your child is a wonderful
asset to my class.

Thanks!

Mrs. Robinette
```
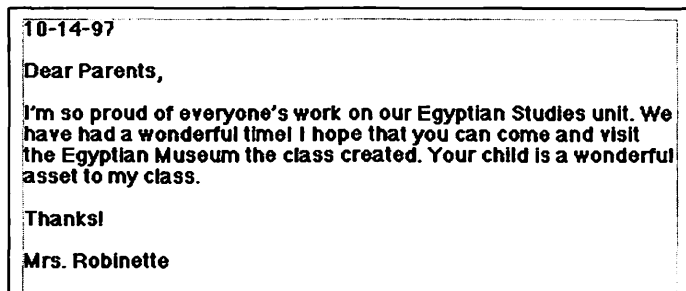
3. Go to the File menu and choose Mail Merge.

You see a dialog box that offers the line Class List Database.

4. Choose your database by double-clicking it (or by selecting it and clicking OK).

Another (even smaller) dialog box appears. It's tiny, and it would be easier if you moved it to a corner of your screen. (Click in the title bar and drag!)

Now this next part is fun.

5. Look at your invitation. Highlight *Parents* (but don't highlight the comma).

Go to that tiny box and make a decision: Do you want this letter to be casual (calling the parents by first name) or formal?

In the box under field name, you see all the fields you set up.

6. Choose the way you want to address the parents (*Parents Formal* or *Parents Casual*) and highlight it, and then click the Insert Field button.

```
┌─────────────── Mail Merge ───────────────┐
│ Field Name          Merge Database:      │
│ ┌─────────────┐    Class List            │
│ │ First Name  ⬆│                          │
│ │ Last Name   │                          │
│ │ Parents Forma│   ┌──────────────┐       │
│ │ Parents Casual⬇│  │ Select Data... │     │
│ └─────────────┘   └──────────────┘       │
│ ┌──────────────┐  ┌──────────────┐       │
│ │ Insert Field │  │ Print Merge... │      │
│ └──────────────┘  └──────────────┘       │
└──────────────────────────────────────────┘
```
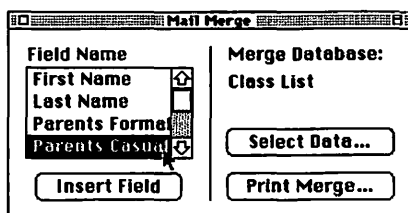
Look at your document! A place holder has taken the place of *Parents* — and in each letter you print, a different set of names will appear. (One set for each child in your database. Are you getting it?)

```
10-14-97

Dear «Parents Casual»,

I'm so proud of «Child's Name Possessive» work
```

7. **Now go to the word *everyone's*. Highlight *everyone,* but leave the *'s*. Go to the little Mail Merge box and choose "First Name." Click Insert Field.**

   Once again, a place holder takes the place of the highlighted words, and each letter you print will have a different child's name in the possessive form in that spot!

   We'll do one more bit of customizing.

8. **Highlight the words *your child* and go to the Mail Merge box. Choose *First Name* and click Insert Field.**

   You know what happens next. Magic time!

9. **Look at that Mail Merge box. See the Print Merge button? Click it.**

```
▣▦▦▦▦▦▦▦▦▦▦▦ Mail Merge ▦▦▦▦▦▦▦▦▦▦▦▦ ▣

Field Name              Merge Database:
First Name         ⇧    Class List
Last Name
Parents Forma
Parents Casual     ⇩    ( Select Data... )

( Insert Field )        ( Print Merge... )
```
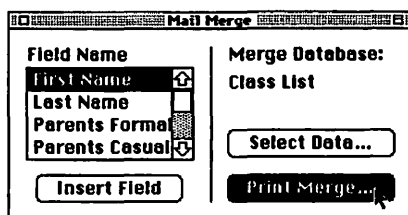
The normal print screen comes up for you to make the standard printing decisions. Go for it! As you probably figured out, the possibilities are endless (as shown in Figure 9-5).

You can address the parents...

...and speak to them about their child.

```
10-14-97

Dear John & Michelle,

I'm so proud of Jessie's work on our Egyptian Studies unit. We
have had a wonderful time! I hope that you can come and visit
the Egyptian Museum the class created. Jessie is a wonderful
asset to my class.

Thanks!

Mrs. Robinette
```

Figure 9-5:
Mail Merge
can make
your life
easier!

Part III

Acting Like You Know What You're Doing
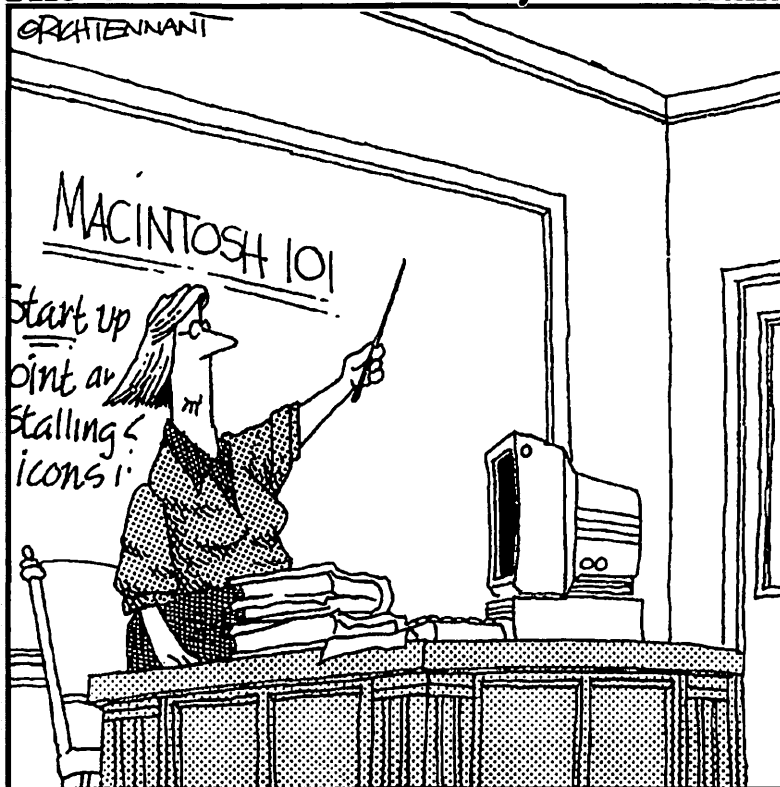
CRICHTENNANT

MACINTOSH 101

Start up
oint an
talling
icons i

"Before I go on to explain more advanced procedures like the 'Zap-Rowdy-Students-who-Don't-Pay-Attention' function, we'll begin with some basics."

In this part . . .

Kids do it every day in the classroom. You know what I mean: They mouth the answer to that multiplication problem as the other 85 percent of the class screams out the answer.

I'm going to help you fake it through three of the more widely used programs in educational circles: Kid Pix Studio, The Student Writing Center, and The Print Shop Deluxe. I try to include programs that would be appropriate for a variety of grade levels and uses.

Take your time and see what you think.

I'm only scratching the surface on each of these programs. You can dig deeper when you have time (ha!). Or you can even do the unmentionable and read the manuals!

Chapter 10

Faking Your Way through Any Kid Pix Program

● ●

In This Chapter

▷ Zipping through a brief history of Kid Pix

▷ Using the toolbox

▷ Creating a slide show from saved work

● ●

*K*id Pix is the grandpappy of all drawing programs. It's been around the longest and still ranks as the most popular program in its class. This gem appeals to a wide range of ages as well, which makes it a valuable addition to most schools' software libraries. And the sound effects are awesome!

A Bit o' Confusion

Listen carefully as I explain this next bit of software rationale. Brøderbund, the company behind Kid Pix and many other successful software programs, first released Kid Pix as a stand-alone program. It was wonderfully fabulous, and everyone had to have it — but still there was a thirst for more! So Brøderbund soon came out with Kid Pix Companion, which added some neat features to your original Kid Pix purchase. A few years back, Brøderbund wised up and packaged both of these programs together under one title, Kid Pix 2. Does all that make sense?

Well, now that you understand the straight scoop on Kid Pix history, let me throw you a curve. Brøderbund has a new CD that they confusingly titled Kid Pix Studio — a CD version that blows all the others out of the water when it comes to special features. (See the sidebar for more information.)

If you or your school owns any of the programs or combination of programs mentioned in these last very confusing paragraphs, you may pass GO, collect $200, and participate in all the upcoming activities.

What's so great about Kid Pix Studio?

Kid Pix Studio comes on a CD and has three totally new components: Moopies, Stampimator, and Digital Puppets. Because I don't have room to give details on how to maneuver through each of these new components, I give you a brief breakdown of each:
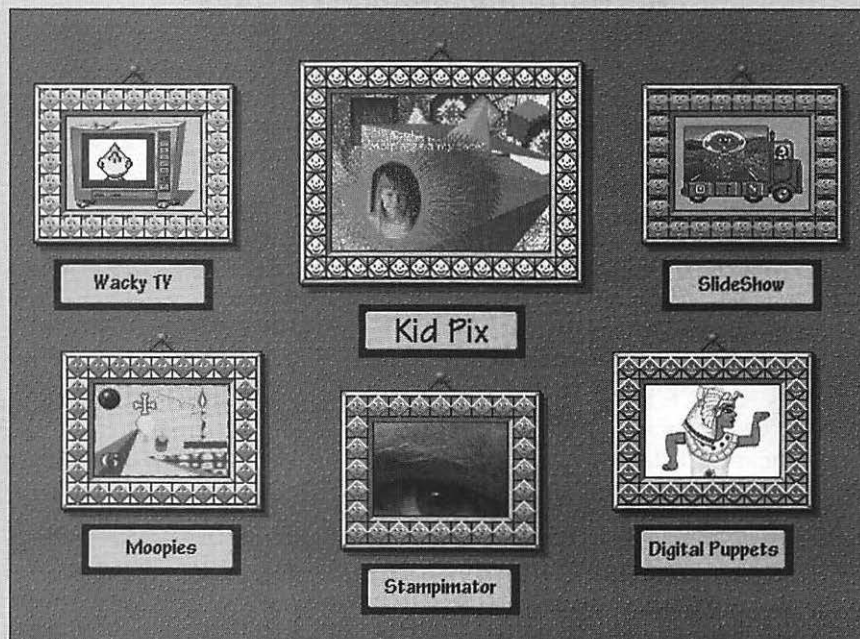
Moopies: The paintbrush tools take on lives of their own in this mode.

Stampimator: In this mode, you can create animation paths for up to four stamps of your choice. Create a background picture (maybe a beautiful garden scene) with the regular Kid Pix tools and then add your animation (say, a few birds and bees flying from flower to flower) to make your picture come to life.

Digital Puppets: Choose one of ten different puppets and move the puppet by typing on the keyboard. When you come up with a combination of movements you like, simply press the record button at the bottom of the screen to record your puppet show. Inserting a cool sound track from any number of the Kid Pix provided sound files is a great way to add excitement to your show.

In addition to the three activity components, the smart folks at Brøderbund have also added tons of colors (click the arrows at the bottom of the color bar to see all the shades), a large assortment of stamps, hundreds of pictures you can use as backgrounds, and a newfangled sound library that contains a vast array of cool sounds (Boogie Woogie is my personal favorite).

Opening Kid Pix Studio, Kid Pix 2, or Kid Pix

Go to your hard drive, find the appropriate icon, and double-click. (If your school has installed At Ease, it's even easier! Look at the screen, point to the Kid Pix 2 icon, and click.) If you're using Kid Pix Studio, click the Kid Pix button in the center of your screen.

Tools of the Trade

The first screen that greets you has a blank sheet of paper and a row of interesting-looking icons down the left side (the *toolbox*) and across the bottom (as shown in Figure 10-1). What's neat about these icons is that, if you learn to use each of the tools represented by the icons, you can master most of the more advanced "adult" drawing programs
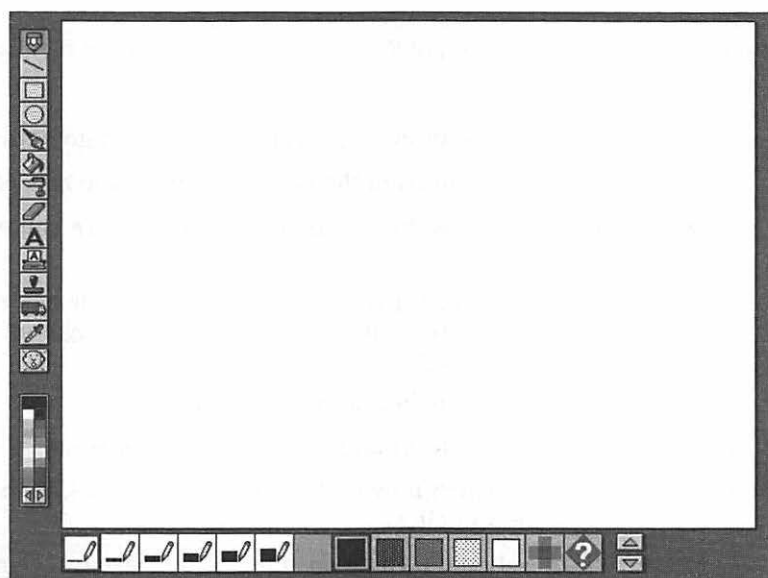
Figure 10-1:
The Kid Pix
screen.

Oh no! 🔲

This little guy is a lifesaver if you remember to use him right away. When you click on him, he undoes your last action. That means, if you make a mistake, go straight to him. Don't try to fix it in another way; he can correct only the latest action.

Let's Create a Masterpiece!

The best way to learn this program is to actually do it as it's being described — step by fun step. I want you to create and save three pictures using Kid Pix. Don't worry — I'm going to hold your hand along the way. After you create and save the pictures, I'm going to show you how to use them in a really super slide show.

Picture 1

You opened up your version of Kid Pix and now you have a blank paper (on screen) in front of you.

1. **Click the pencil icon (in the top-left corner) and let go of the button.**

2. **Choose the color green from the color palette on the row of tools.**

3. **Now draw a line across the bottom of the page where you want some grass.**

   Your mouse controls your pencil strokes — holding the mouse button down and moving creates a line. When you lift your finger off the mouse button, you stop drawing.

   Be sure that the line touches both sides of the page.

4. **Now click the paint bucket and leave the color as green.**

5. **Move the cursor, which now looks like a paint bucket, to the area you drew in for grass and click.**

   That whole area should turn green. If the whole page turns green, that means you left an open area when you drew your first line. The paint "spilled" into the rest of the picture. If this happened, click the "Oh no!" man. That last action is undone.
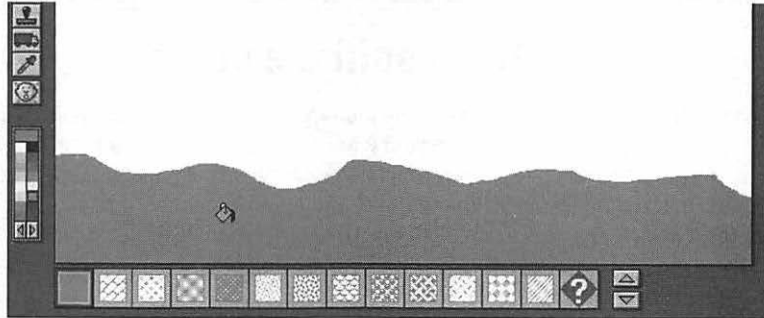
6. **Let's use the paint bucket again and choose sky blue as our color. Dump it above your grass.**

   I know, I'm not the artsy type. Be more creative if you'd like.

7. **Now go to the stamp icon and click.**

   You see a row of small stamps appear at the bottom of the screen. Find one that you like. If you don't like any of these, click the arrow at the end of the row, and you see more.

8. **When you see a stamp you like, click it. The image becomes your cursor.**

9. **Move the stamp to the desired location and try this:**

   a. Push the option key (the stamp gets big).

   b. Push the shift key (the stamp gets bigger).

   c. Push the option and shift keys together (the stamp gets the biggest!).

10. **Choose the location and size you want and then click the mouse.**

11. **Enough for this picture. Go to the File menu and choose Save a Picture. Name this work of art *Picture 1*.**

Don't spill the paint!

Notice the very tip of the spilling paint. The location of this tip of spilling paint is where the paint is "dumped." Many children get frustrated when they can't get the paint to go where they want it. When drawing figures that will later be filled with paint from the bucket, be sure all the lines are closed. If not, the paint spills out of the shape and fills the entire page.

—Paint goes where the tip of spilling paint is placed.

Even a small opening will cause paint to spill.

Another good tip is to have students stay away from the fine-line width when drawing. It's too difficult to be sure lines are closed when using such a fine point.

Using thin lines to draw makes it more difficult to ensure closed lines.

Picture 2

1. **Go to the File menu and choose New.**

   A nice clean sheet of paper pops up in front of you.

2. **Choose the circle tool and the color black.**

   Across the bottom of the screen you see some new choices on how your shape can be filled (or not filled). Play around. Click and drag. As you drag, you pull a circle. The same premise works with the square tool. Fill your page with shapes.

3. **Choose the paint bucket and a bright color, such as red. Dump it for your background.**

   Pretty visual, huh (see Figure 10-2)?

4. **Go to the File menu and Save this masterpiece as *Picture 2*.**

Figure 10-2:
Does your
masterpiece
look this
good?
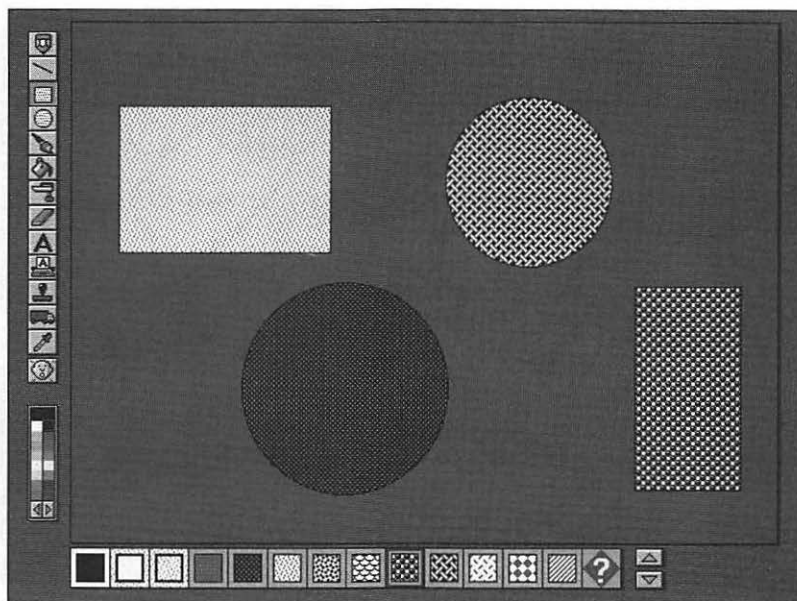
Picture 3

1. **Go to File and choose New.**

2. **This time we're going to pretend that we are Andrew Pollock. (Isn't he a modern artist?) Click the paintbrush and choose a color.**

    Across the bottom of the page you see a variety of choices for your brushstrokes. Try each one of them. Alternate colors between your tries. Go ahead — fill the page! (Check out my effort in Figure 10-3.)

3. **Let's say that you aren't comfortable with this wildly modern image in front of you. Go to the eraser icon and click.**

    At the bottom of the screen some new choices appear. The first four are eraser sizes and shapes. Choose one and erase part of your master-piece by clicking and dragging over what you want to get rid of.

As you erase, a hidden image appears.

Eraser sizes

Blows up your picture
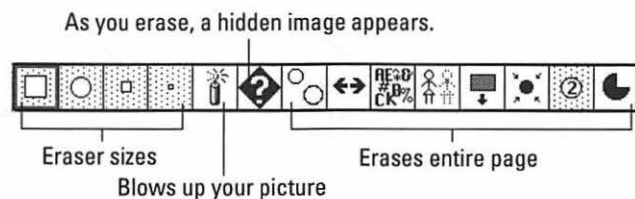
Erases entire page

Figure 10-3:
Did you fill
the page
like this?
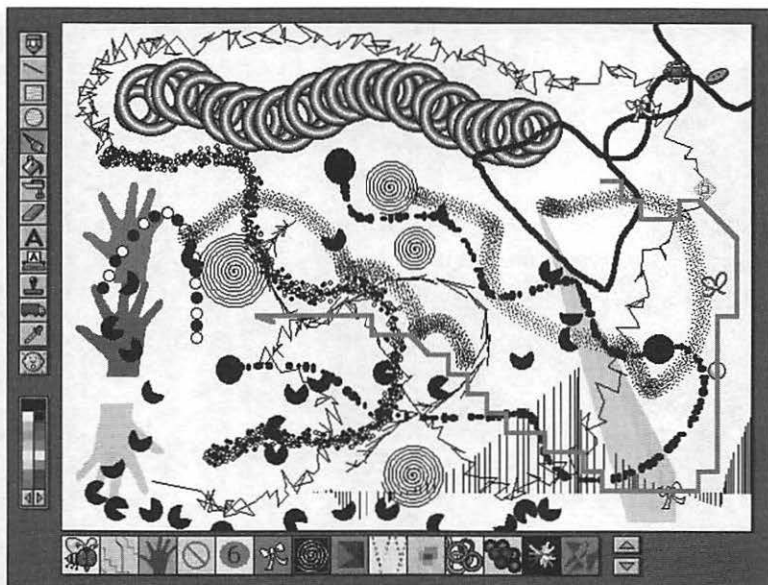
The dynamite explodes, or erases, the whole picture. The other icons, with the exception of the question mark, also clear your entire page. The question mark allows you to erase your picture while uncovering a hidden Kid Pix 2 image.

4. **Choose the dynamite, move it to the center of your picture, and click.**

Now go back and use all your newfound talents to create another masterpiece. This time you're going to add some words to your work of art before saving it.

5. **If you are using Kid Pix Studio, click the TypeWriter icon.**

Choose a letter style you like from the bottom of the screen (you can choose colors, too), click where you want your text to begin, and start typing.

6. **If you are using Kid Pix or Kid Pix 2, go to the letter A icon and click.**

You see some letters across the bottom of the screen. You can click and drag letters where you want them to appear on the screen or hold down the Option key and click the letter A icon again. The previously mentioned letters are replaced with letter styles. In this view, you can choose the style of letter you prefer and then click where you want to begin typing on the screen. (Don't forget, you have a choice in color as well!)

7. Type The End **on your picture (as I've done in Figure 10-4).**

8. **Go to the File menu and save this as** *Picture 3.*
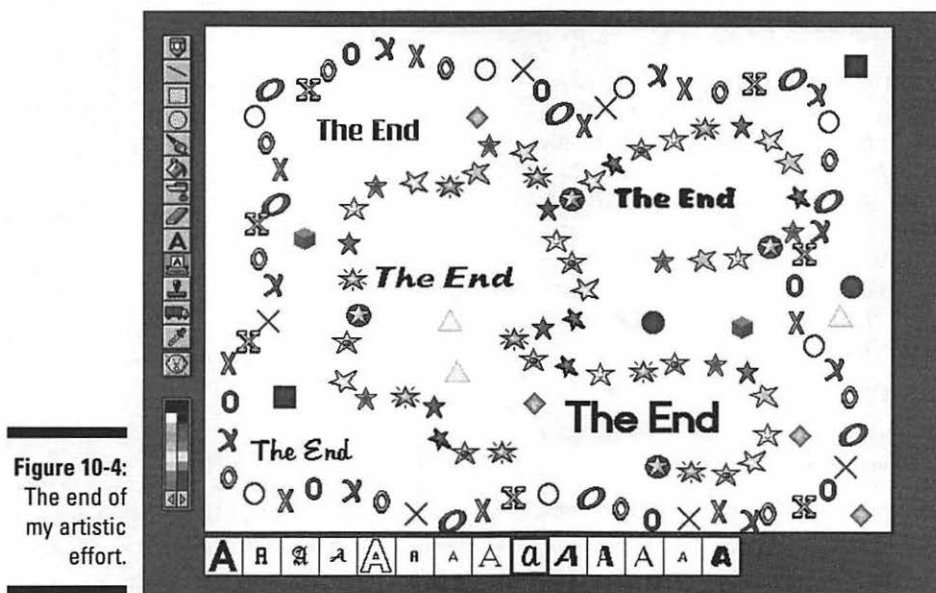
Figure 10-4:
The end of
my artistic
effort.

I'm sure you'd rather keep playing — this program is addictive. So do what you must. Come back to this chapter when you're ready to create a slide show to highlight your creative works.

Printing? If you want to print a picture, simply go to the File menu and choose Print — and make your decisions about size, number, quality, and so on. You know the dialog-box drill by now!

Draw Me

A neat opening activity for teaching Kid Pix to a class of readers or early readers is to choose the Draw Me option from the Switcharoo menu. A silly sentence appears and is then read aloud. Here's an example: "I'm a hairy eyeball ten feet tall on a funny fat cow that goes moo-meow and I howl at the moon." And then the program invites the students to draw what they just read and heard described. This is also a good source to use when teaching a unit on descriptive language.

You gotta try this!

If you use Kid Pix for whole class projects or work in a lab situation, there are times when you might like to have a simple template or outline of a project ready for the kids when they sit down at the computer: you know, a story web already drawn, the columns already in place, or the beginnings of a simple picture graph. Giving students something to start with saves lots of time — a blessing in a classroom or lab situation. Providing a template will enable your students to get started on the learning instead of spending precious time setting up their environments.

Here's what you need to do:

1. **Create your Kid Pix document. Save your document and then close Kid Pix.**

2. **Select your saved document (click it once to highlight).**

3. **From the File menu, choose Get Info. When the Get Info window pops into view, you see a box in the bottom right-hand corner that's titled Stationery pad.**

4. **Click inside that Stationery pad box; an X will appear.**
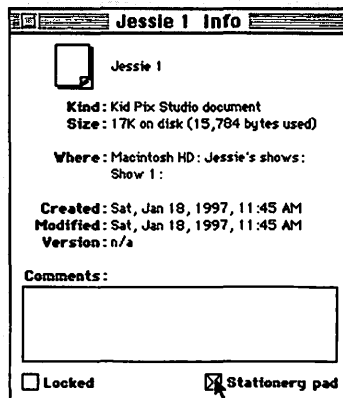
Jessie 1 Info

Jessie 1

Kind: Kid Pix Studio document
Size: 17K on disk (15,784 bytes used)

Where: Macintosh HD: Jessie's shows: Show 1:

Created: Sat, Jan 18, 1997, 11:45 AM
Modified: Sat, Jan 18, 1997, 11:45 AM
Version: n/a

Comments:

☐ Locked   ☒ Stationery pad

You just turned your original template into a stationery document — you notice that the icon representing the document now looks like a pad of stationery.

The first time a student opens your newly created stationery document, a window comes up asking him or her to give the document a name. You see that the original remains the same, and your student now has a personal copy.

Creating a SlideShow

Up until this point, the differences between the earlier versions of Kid Pix have not made a difference in your ability to learn the program. However, getting to the SlideShow component is different in each of the programs.

✔ In Kid Pix 2, simply go to the Switcharoo menu and choose Switch to SlideShow.

Hey, can I put my Kid Pix drawing in my ClarisWorks document?

Of course you can! It's an easy way to custom-ize your word-processing documents — much more original than any store-bought clip art. Here's how:

1. **Create your Kid Pix masterpiece.**

2. **While still in Kid Pix, click the Moving Van icon and choose a selection tool from the bottom of the screen.**

   I like to use the lasso.

3. **Select your Kid Pix image (click and drag to encircle it).**

   When you let go of the mouse, a dashed line indicates your selection.

4. **Choose Copy from the Edit menu and then quit Kid Pix.**

5. **Open a new ClarisWorks word-process-ing document. Choose the pointer from the Tool Panel, and then choose Paste from the Edit menu.**

   If you don't see the Tool Panel, choose Show Tools from the Options menu.

   Note: It's very important that you first select the pointer, otherwise your image will be en-tered as text and you won't be able to resize it or move it freely around your document.

   Voilà! Your Kid Pix artwork is now part of your word-processing document.

✔ In Kid Pix with the Kid Pix Companion added, you have to quit Kid Pix and look inside the Kid Pix folder on your hard drive. You should see the SlideShow icon within the folder. Double-click the icon. The SlideShow program opens. If you don't see the SlideShow icon, you don't have Kid Pix Companion on this computer. Sorry.

✔ If you're using Kid Pix Studio, choose Return to Studio from the File menu. When you're back at the opening screen, choose SlideShow.

After you open the SlideShow program, you see a bunch of empty trucks staring at you (as shown in Figure 10-5). Your mission — should you choose to accept it — is to fill three of these trucks with pictures you create.
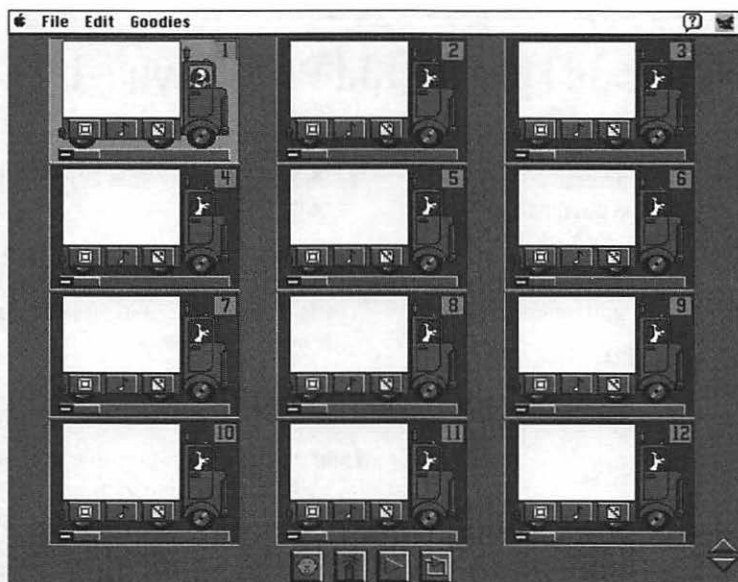
Figure 10-5:
The
SlideShow
program.

1. **Click the picture frame at the base of the first truck.**

   A screen pops up telling you to "Pick a Picture." You should see your saved Kid Pix masterpieces. If you don't, pull down the arrow above the scroll bar, choose Desktop, and then Hard Drive. Open up your Kid Pix 2 file to find your pictures.

2. **Choose Picture 1 and click Open.**

   The picture is now loaded on the first truck. Go ahead and load your other pictures on trucks 2 and 3 as you did in the first step.
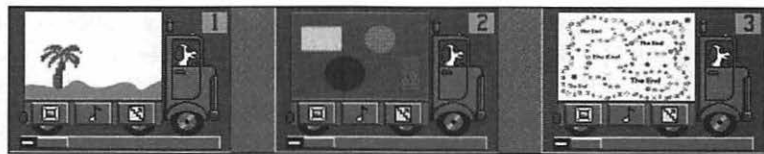
3. **Now we get to add some sound! See the musical note at the base of the trucks? Click the note on the first truck.**

   You see another dialog box; this one is asking you to Pick a Sound. Play around. Choose a few of the pictures and select Preview. You can press Select when you find one you like — or choose the microphone and record your own voice as narration! Add sounds to each of your pictures.
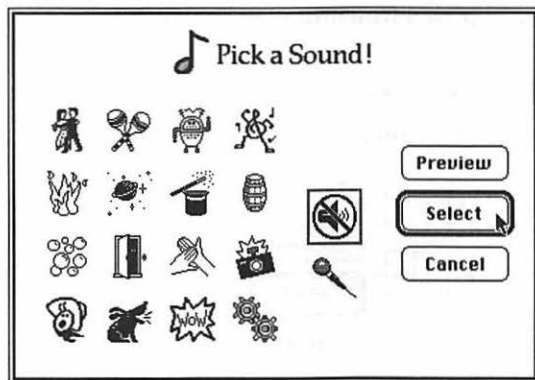
If you choose the microphone, you get another dialog box that works just like your tape recorder.
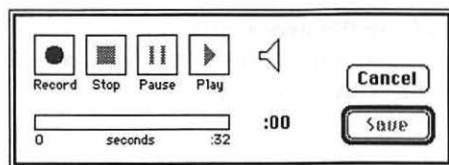
4. **Click the last square at the base of the truck to select a *transition choice*.**

The transition (a fade or dissolve) takes you from one slide or picture to another.

If you choose the scissors icon in the Pick a Transition dialog box, the transition is quick. Choose any of the others for some really neat special effects.

5. Go ahead and pick a transition for each truck.
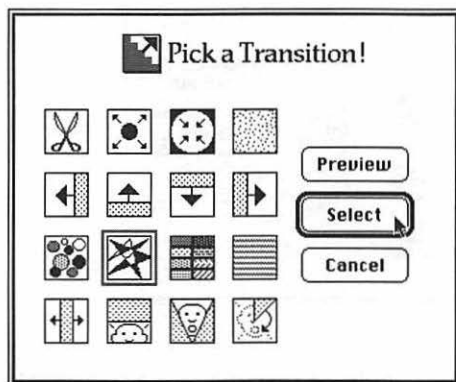
6. You did it! Your show is complete.

You know if you made all the necessary choices if each icon/picture, sound, and transition becomes filled with color. To view the SlideShow, press the arrow at the bottom of the page.

The square arrow plays your show in a *loop* (over and over again).

7. You can Save your show, or simply choose Quit from the File menu.

Our little show is very simple and somewhat silly. However, the educational possibilities are endless! In Appendix A, you see ideas for using Kid Pix to enrich your curriculum.

A few tips

✔ Never use the smallest choice pencil width. It's too hard for children (and adults) to be sure they close all their lines. When the paint bucket is used, paint inevitably spills out.

✔ Pictures look best when the kids draw their own artwork and don't use stamps.

✔ The mixer tool messes up your artwork fast! Be ready to use the "Oh no!" man or expect to lose all your work.

✔ Kid Pix is not a word processor. Be sure your typing is correct before you leave the text tool. You can't just go back and insert your cursor where you want to make changes. You have to erase, refill the background, and then retype your words. This task can be frustrating to students who are used to word processing.

✔ Allow the kids to use the dynamite tool only twice (or so) in a sitting. Without headphones, the noise will drive you crazy. The kids tend not to get any work done because they have too much fun blowing things up!

✔ The line tool (just below the pencil) is great for those students who say they "can't draw anything." By pressing the Shift key, the line straightens even more.

✔ Put lettering on the page after the background color has been added. Otherwise, the holes in letters such as O and P are very difficult to fill with the background color.

✔ To get higher-quality sound when recording, hold down the ⌘ key as you choose the microphone icon. This cuts your recording time down to 16 seconds, but greatly improves the sound quality.

✔ Saving your SlideShow as a Stand Alone (an option when you choose Save) enables anyone with Kid Pix 2 to view your program without the original pictures. This option is great for teachers who want to send SlideShows on a disk to class pen pals.

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Chapter 11

Faking Your Way through The Writing Center and The Student Writing Center

● ○ ● ○ ○ ○ ● ○ ○ ○ ● ○ ● ○ ● ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ○ ○ ○ ● ○ ○ ○ ● ○ ● ○ ● ○ ● ●

In This Chapter

▷ An overview of The Writing Center capabilities

▷ Step-by-step instructions on creating a class newsletter

▷ Grab a graphic

▷ New features included in The Student Writing Center

○ ○ ● ○ ○ ○ ● ○ ● ● ○ ○ ● ○ ○ ○ ● ○ ● ○ ● ○ ● ○ ● ○ ○ ● ● ○ ○ ○ ○ ○ ● ○ ○ ● ○ ○ ○ ● ○ ● ○ ● ○ ○

*T*he Writing Center and The Student Writing Center are great programs for beginning word-processing instruction. Either of the programs works well as a first step before teaching ClarisWorks. The programs are user-friendly and nonintimidating; and, in addition to all these qualities, they both enable students to create some really nice stuff. Both The Writing Center and The Student Writing Center introduce students to general word processing terms (font, alignment, and style) and products (reports, news-letters, and letters).

A Little Honesty Goes a Long Way

The Learning Company has been around educational computing for a while. I began using their products in the days of the Apple IIe and IIc. All their products — Reader Rabbit, Super Solvers, and Treasure series included — are top-notch, solid performers.

When they came out with The Student Writing Center, an upgrade from The Writing Center, I was pleased to see the company honestly guiding schools and individuals toward sticking with The Writing Center if lower-end machines (like the Classic models, LCIIs, and LCIIIs) were being used — equipment that just isn't powerful enough to squeeze the most out of the upgraded features included in The Student Writing Center. Imagine that: a company telling you that you shouldn't necessarily purchase an upgrade the organization spent time and money creating. Honesty is so refreshing.

The Writing Center

Don't feel as though you're using an inferior product if your school hasn't upgraded to The Student Writing Center. The Writing Center is a great program that is more than capable of meeting your school and personal needs. Read the next few pages and learn the basics for operating in The Writing Center environment.

That Song!

When you open The Writing Center, a song that at first sounds rather upbeat greets you. This same song, when played by a lab full of computers day after day, soon grates on your last nerve. The first chance you get, go to the Edit menu and choose Preferences. Deselect the Sound box (by clicking — and getting rid of — the x) as shown in Figure 11-1. Now we can continue.

Figure 11-1:
No more
"music for
your ears."

Preferences
☐ Sound   ┌─ Ruler ─┐   ⦿ Inches   ○ Picas   [OK]
☐ Show Ruler   ○ Centimeters   ○ Points   [Cancel]
☐ Show Invisibles
☐ Convert Color Pictures to Black & White on Screen   [Help...]
[Set Default Picture Folder...]   ""
Click on your choices. Then click on OK.
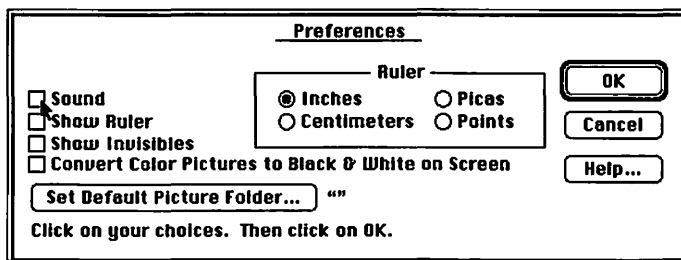
An Overview

The Writing Center offers two basic choices — a report or a newsletter. Headings are optional with both. Within a newsletter, you can also determine the number of columns.

ON THE CD

This program comes with 17 folders full of clip art, which makes finding a graphic for your writing an easy task. Not only that, but after you insert a graphic, the text automatically wraps around the image, giving the work a customized look. Look in Appendix E for information about where printouts of all your possible picture choices can be found on the CD.

The program comes with some standard *templates*. Just like the automatic forms you can create when word processing, a template for The Writing Center can do the same thing, and much more. For example, you can create awards, cards, and invitations. In addition, you can save your personal creations as templates.

Creating a Newsletter

TRY THIS

I'm not going to review word processing with you. By this point, I'm sure you're an expert. (If not, head to Chapter 7.) Instead, we're going to jump into desktop publishing and create a newsletter.

My blurb about the lovely song included with every program probably made you curious, and (I hope) you opened The Writing Center. But you couldn't get to the menu bar to make that adjustment, could you? That's because the program wants you to make some decisions first (as shown in Figure 11-2).

The Writing Center™

Report or Letter Newsletter Custom Open Saved Document

Quit

Help...

Click on your choice above.
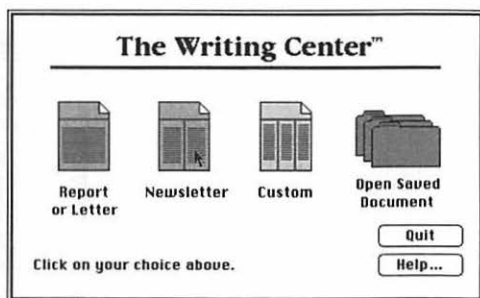
Figure 11-2: Choosing a newsletter.

1. **For our lesson, you need to choose Newsletter.**

   This program is a little different from others. To make it more "kid friendly," there are no little boxes for you to click; simply click on top of the picture you are choosing.

   Now you have a Newsletter Layout dialog box. Our choices are Heading or No Heading.

2. Click on top of the newsletter with a Heading.
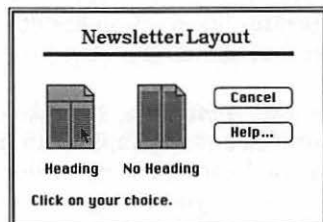
Finally, we come to a screen (as shown in Figure 11-3) that looks somewhat familiar. (Oh yeah, the menu bar is usable now, if you want to stop and make that little sound adjustment I mentioned earlier.)
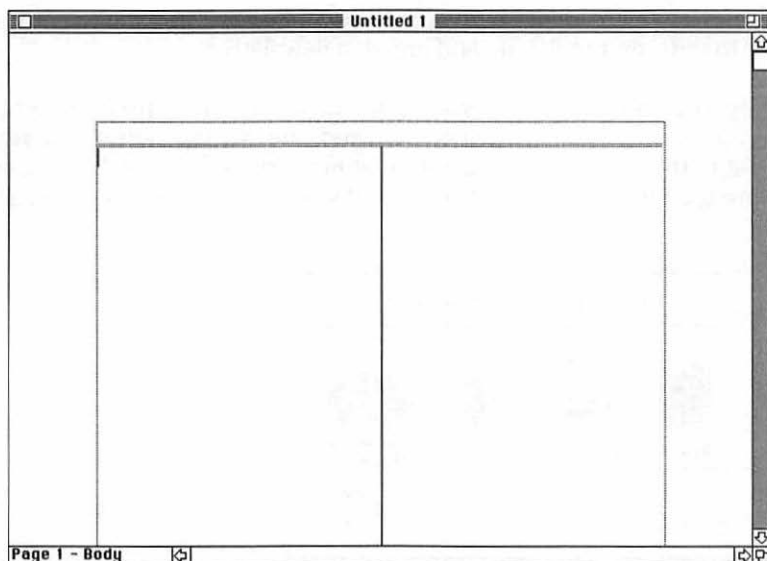
Figure 11-3:
A blank
newsletter
screen.

As you can see, the page is already divided for you. Your insertion point is located below a double row of dotted lines. The space above this set of dotted lines is called the *heading*.

3. Click above the dotted lines, and your insertion point moves to the heading.

4. Now make this really look like it was created by a teacher. Go to the Picture menu and select Choose a Picture.

5. **In the dialog box that appears, double-click the Pictures folder — or simply click the Open Folder button at the bottom of the screen.**

    If your hard-drive icon appears first, open the Miscellaneous folder. Then choose the Pictures folder.

6. **A new list of folder choices appears. Use the arrow keys on the scroll bar to find the folder titled Nice for Headings and open the folder.**

7. **Scroll down until you come to the title Worm in Apple. Highlight the name; the picture appears for you in the preview area to the left of the picture choices.**

8. **Under the picture there's a Place in Document button. Click this button.**
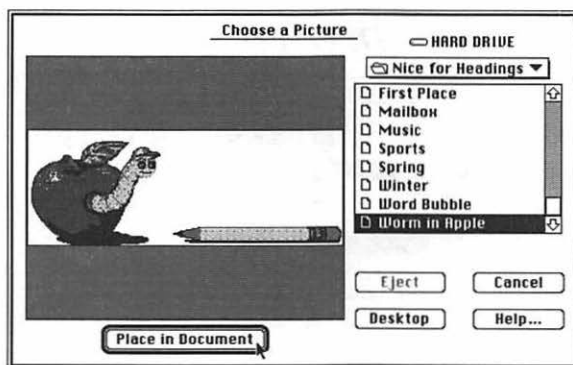
    Looking good! Now let's think of a title for our little newsletter.

9. **Click inside the heading and your insertion point appears in the top-left corner.**

10. **Go to the Text menu and choose Alignment.**

11. **When the dialog box appears, choose Align Right and then click OK.**
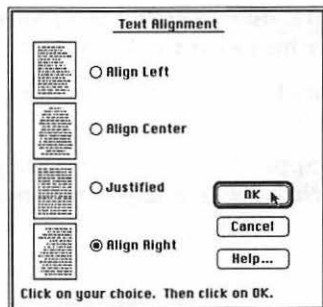
12. Now go back to the Text menu and choose Font.

What appears is one of my favorite features within The Writing Center. This dialog box allows you to see what your font looks like before you use it within the document.

13. Choose the following: Font (Times), Size (48), and Style(s) (Bold, Italic). See how the Sample box changes? Click OK if you're pleased with the selection.
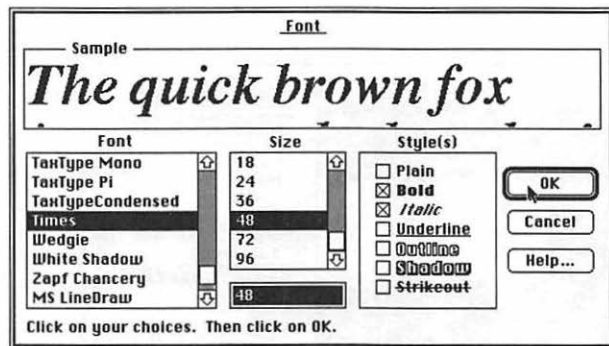
14. Now type Robinette's **(or any other name) and press Return.**

15. Type Weekly **and press Return.**

16. Type Newsletter **and press Return.**

Figure 11-4 shows the finished heading — how do you like it?

Figure 11-4:
Ta-da!

Creating the body of your newsletter

I'll walk you through the creation of a story. You can then work on the remainder of the newsletter yourself.

1. **Click below the heading, and your cursor moves to the left column of the paper.**

2. **Go to the Text menu and choose Alignment. This time choose Align Center.**

   Notice that your cursor automatically moves to the center of the column. Now for the first headline.

3. **Go to the Text menu and select Font.**

   This time choose Geneva, 14, and Bold for your font, size, and style.

4. **Type** SOCIAL STUDIES **and press Return.**

5. **You need to change the font before entering your story. Make it smaller and change the alignment to Justified.**

6. **Now type an imaginary story. Go ahead; type anything.**

   I need you to put a couple of paragraphs down so that a picture can be inserted later. Figure 11-5 shows some sample newsletter text.

Figure 11-5:
A sample newsletter story.

Robinette's Weekly Newsletter

SOCIAL STUDIES
The students have enjoyed our first week of study about the Middle Ages. We have been learning all about knights and castles this week. I'm glad they are so excited about this period in history.

Adding a picture

1. Go to the Picture menu again. Highlight Choose a Picture.

2. When the dialog box appears, double-click the Picture folder. Open the Miscellaneous folder again; this time choose the Fun and Fantasy folder.

3. Within this folder, choose the Knight. Click on the Place in Document button.

   I know this isn't where you probably want your picture. And gosh, is it big! Don't worry — we can fix everything.

   Do you see the little boxes around your graphic? This means that your graphic is selected and ready for you to manipulate. Whenever you see these boxes, you can simply click in the center of the graphic and drag it to the desired position.

   But you say it's too large? Well, you have two options.

4. Either click on one of those little boxes and pull in on the picture to adjust the size, or go to the Picture menu and choose Resize Picture.

5. When you get the graphic the size you want, move it to the desired location and click outside the picture to place it.

   Here's the really cool part. If you place your graphic on top of text, the text wraps around the picture. Go ahead, try it!

   If you decide to place the graphic somewhere else, simply click on the image. Your little boxes reappear, indicating that the graphic is ready for you to manipulate it all over again. So resize it, move it, or even get rid of it by pressing Delete. You are in control of this situation.

SOCIAL STUDIES
The students have enjoyed our first week of study about the Middle Ages. We have been learning all about knights and castles this week. I'm glad they are so excited about this period in history.

SOCIAL STUDIES
The students have enjoyed our first week of study about the Middle Ages. We have been learning all about knights and castles this week. I'm glad they are so excited about this period in history.

That's basically all there is to know in order to fake your way through this program. When you finish with this first column, text wraps to the top of the next column. Continue working in this same manner. Your newsletter can be as many pages as you want. Figure 11-6 shows the emerging newsletter.

Figure 11-6: Now your newsletter is really looking good.
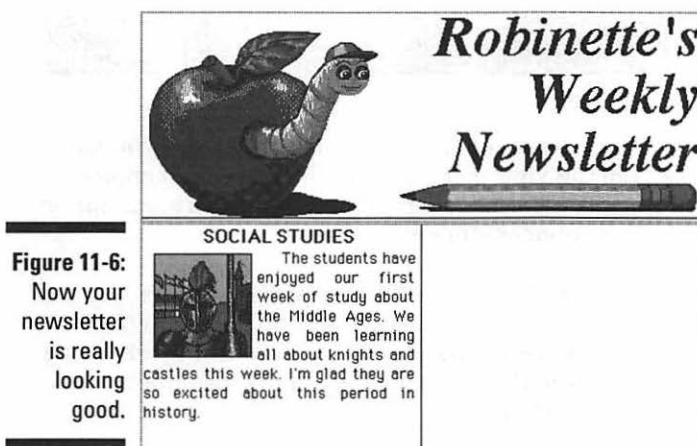
The Student Writing Center

While the overall operations of The Writing Center and The Student Writing Center are similar, the programmers at The Learning Company added some substantial upgrades when they created the "new and improved" version. The first thing you notice is the increased number of product options that greet you in the opening screen (see Figure 11-7).

Figure 11-7: The Student Writing Center asks you to choose a document.
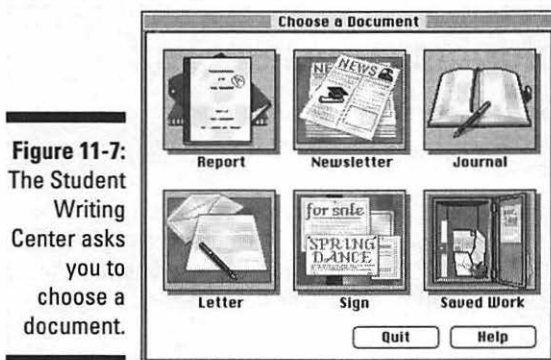
After you choose your document type (or open an already saved piece of work), you notice a few changes in the document window. In addition to the menu bar, you now have an icon bar and a ruler with buttons. Both of these added features make it easier for you to access frequently used program functions.

In addition to the easy access provided by the rulers and icons, you may choose Short Menus from the View menu to limit the number of choices provided by each of the menu bar headings. Short Menus is a great option when you're working with younger students.

In addition to the new "look and feel," The Student Writing Center also has some great new functions. If, for instance, students choose the Report layout, they can now have help creating a bibliography entry by choosing Create Bibliography Entry from the Report menu. I think the added online Help program is also an added bonus.

The Journal layout is another neat function. Each student can have his or her own password to access a private journal. Students can flip through journal entries by clicking dates on the calendar or by clicking the Find button, searching for specific words or phrases.

This updated software has an all-new set of clip art, along with the addition of borders and letterheads. Check out the printable reference I included on the CD of clip art you can find in The Student Writing Center and The Writing Center.

Coming soon to a software store near you

The Ultimate Writing & Creativity Center is the newest product on The Learning Company's drawing board. It's aimed at students in grades 2 through 5 and includes the following:

✔ A full-featured word processor

✔ 1,000 writing projects and ideas

✔ A paint program

✔ A multimedia presentation tool

✔ Interactive animated help character

✔ Spell checker

✔ Journal feature

✔ Yellow "stickies" to allow teacher, parent, and peer feedback without altering the original document

Writing Center tips

✔ Use the Spell Check feature (in the Reference menu) before printing your work.

✔ Don't use too many fonts. The patchwork-quilt effect gets confusing for the reader. Try to limit yourself to three or four different font styles.

✔ Too many graphics clutter up your reading space. You want your newsletter to be visually pleasing — not overstimulating.

✔ Remember that the graphics on the screen appear black and white on your page, unless you are working with a color printer.

✔ Allow students to become "columnists" and contribute weekly articles for the newsletter.

✔ The Border choice under the Text menu allows placement of a border around a selected text block.

✔ Students can draw pictures in Kid Pix, save them, and then place them in a Writing Center document by choosing Desktop in the Choose a Picture dialog box. They then open the hard drive and Kid Pix to find the picture. Finally, they simply place the picture in the document and manipulate it as if it were a Writing Center graphic.

Chapter 12

Faking Your Way through
The Print Shop Deluxe

○ ○

In This Chapter
▷ Installing The Print Shop Deluxe
▷ Making a card in The Print Shop Deluxe
▷ Exploring the tool palette

○ ○

*T*he Print Shop put Brøderbund on the map as a major software producer.
First created for use on the old Apple IIc and IIe computers, The Print
Shop was and still is a major hit. Back then, everything (including all the
great clip art) was contained on four huge 5¹/₄" floppy (you know, the ones
that are really floppy) disks. Then, as Brøderbund came up with additional
graphics, the company sold them in packages called The Print Shop Com-
panion. I loved it then, and I love it now — fundamentally, it's still the same.

However, when Brøderbund came out with its latest version of this old
classic, The Print Shop Deluxe CD Ensemble, all the information that re-
quired numerous disks was packed onto one CD with a new user interface
(how things look). That last change really threw folks a curve. Everyone was
comfortable with the interface they'd been using for years, and the new
interface was a little intimidating to some.

Getting Started

Obviously, because it's called a *CD Ensemble,* you need a CD-ROM drive to
use this program. Like you're required to do for most of the programs that
now come on CDs, you need to install a portion of the program on your
computer's hard drive.

1. **Place the CD in your CD-ROM drive. When the CD's icon comes up on your desktop, double-click it to open the window.**

2. **Double-click on the PSD CD Install icon and follow the directions that appear.**

   If your computer has a limited amount of hard drive space, click on the Install button in the upper-left corner of the window. You see a pop-down menu appear, offering you the option of a Limited Install — this option won't use up as much of your hard drive space, but it does limit what you can create without the CD itself in your computer.

3. **After everything's installed, you have to restart your computer.**

4. **After you restart your computer, double-click on your hard drive. Find the Print Shop Deluxe folder and give it a double-click. In the window that appears, double-click the Print Shop Deluxe icon.**

   You are prompted to personalize your copy of the program, enter your name (or your school's name), and click OK.

Now you're ready to go!

Pick a Card, Any Card

The first screen you see is the main menu — shown in Figure 12-1. Here you see the five choices for new products: greeting card, sign, banner, letterhead, and calendar. Three smaller buttons let you open previously-saved work, give you access to a help feature, and allow you to cancel and quit the program.
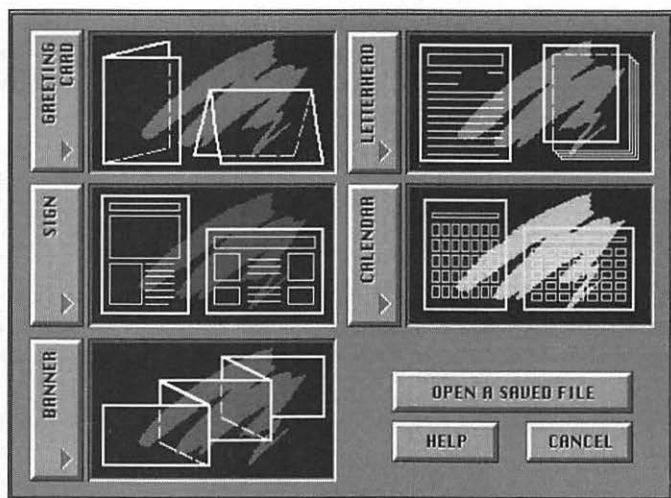
Figure 12-1:
Here's the deal: The deck's stacked in your favor with so many personalized possibilities.

In this chapter, I teach you how to make a card with The Print Shop Deluxe. Follow my directions step by step, and you'll be rewarded with a great thank-you note when you're finished. Teachers can always use a thank-you note.

1. Click the Greeting Card button.

A screen of greeting card options appears, as shown in Figure 12-2.
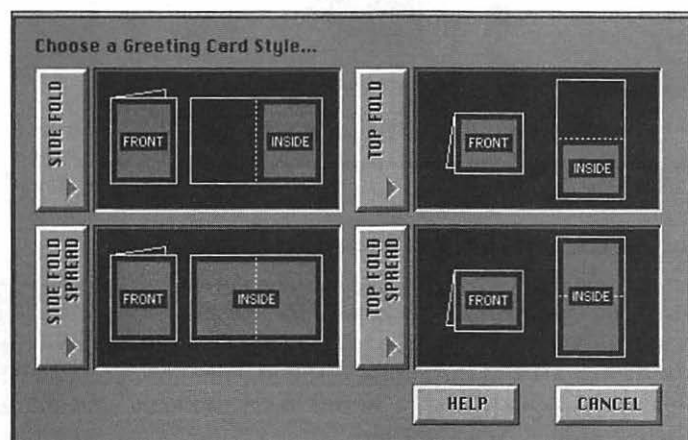
Figure 12-2: Choosing a greeting card style.

2. Click the Top Fold button (also known as landscape).

A screen showing your backdrop options appears. Click through your choices, and you see a sample appear on the right side of the dialog box.

3. Choose Blank Page from the Backdrop dialog box. Click OK.

I always choose Blank Page when the Backdrop choices appear. Why, you ask? Well, most of the backdrops are very involved and require tons of ink (a rare commodity in the school setting) and, in addition, most of the backdrops only look their best when printed in color. If you have a color printer and plan to print only one project, you may want to try a backdrop on your next project. If, however, you want to print one card for each student, a color background on each one can be costly (color ink cartridges are *très* expensive). I usually print one card and then use the copy machine to make the rest of my cards.

Some color inkjet printers don't have a black ink cartridge. To draw something in black, the printer must mix all its colors. Thus, on these printers, it takes more ink to print black that it takes to print in color.

A dialog box appears (as shown in Figure 12-3), prompting you to choose a Layout. The Layouts show you different options for using text, graphics, borders, and special effects on your card.
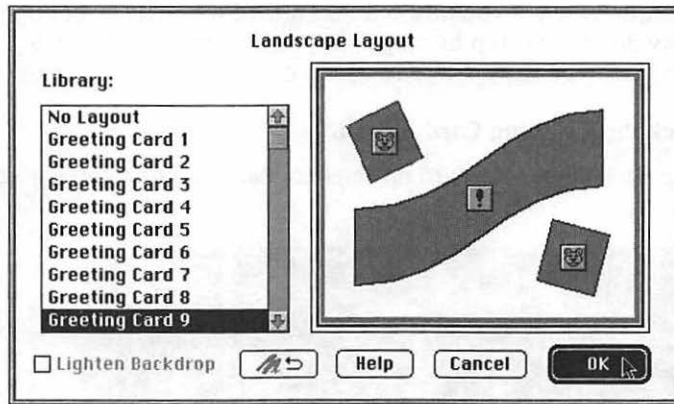
4. Choose Greeting Card 9. Click OK.

The front of your card appears on your screen, as shown in Figure 12-4. The gray shaded areas are called *placeholders*. Placeholders show you what elements will be in that position after you finish designing your card. The icons and the shape of the placeholders tell you what type of element will be in that spot. In this case, you have a headline, two square graphics, and a border.

Figure 12-4:
Your
headline,
graphics,
and border
placements
appear in
positions
marked by
icons.
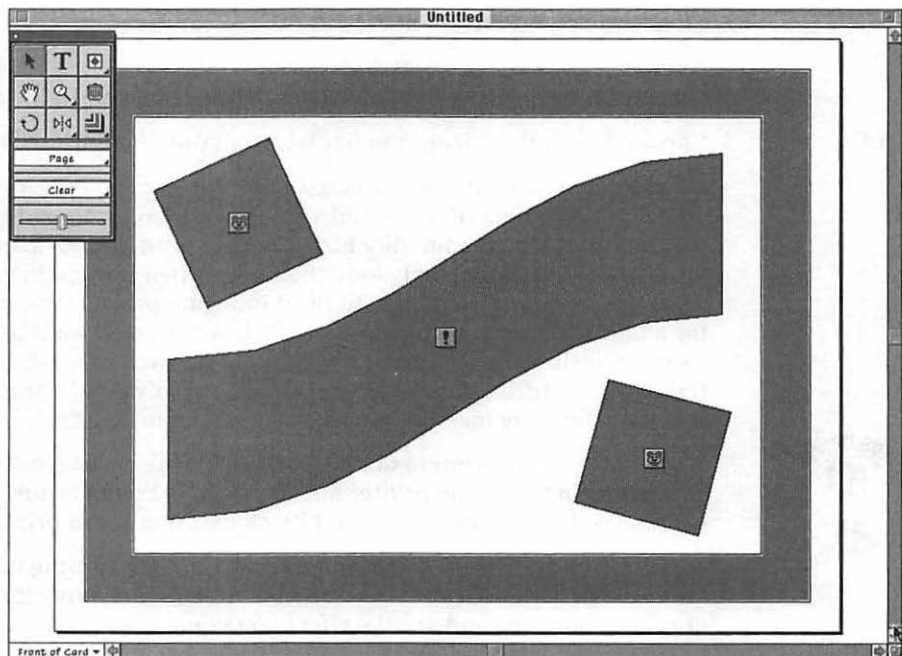
5. Double-click on the Headline placeholder.

The Headline Text dialog box appears, as shown in Figure 12-5. You should see a cursor in the upper-left corner of the dialog box.

Figure 12-5:
Enter text
for your
card's
headline.
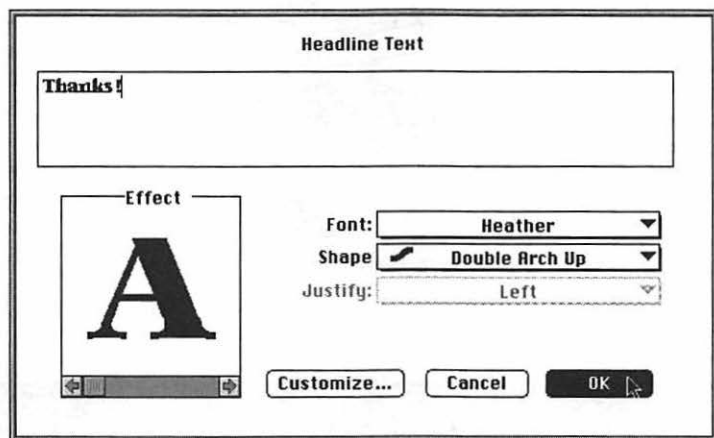
6. Type the word Thanks! **and click OK.**

You probably notice some other options in this dialog box. If you're feeling confident, try changing the font of your headline, altering the shape of your headline, or for those of you willing to accept a challenge, click the Customize button and do a little experimenting.

7. Double-click the Border placeholder.

The Border dialog box appears. On the right side, you see a list of border styles. Click on a border style and a sample appears in the box on the right side.

8. Choose the Joined Lines border and click OK.

The border pops into view on your screen. If you don't really like my choice, double-click on the border and the Borders dialog box appears again. Make your own choice and click OK.

9. Double-click one of the graphic squares.

The Square Graphic dialog box appears (shown in Figure 12-6). You get tons of great graphics to choose from. On the left side, you see a list of graphic possibilities. Click a graphic and the image appears in the box on the right side.

Figure 12-6:
Some fun graphics for your card.
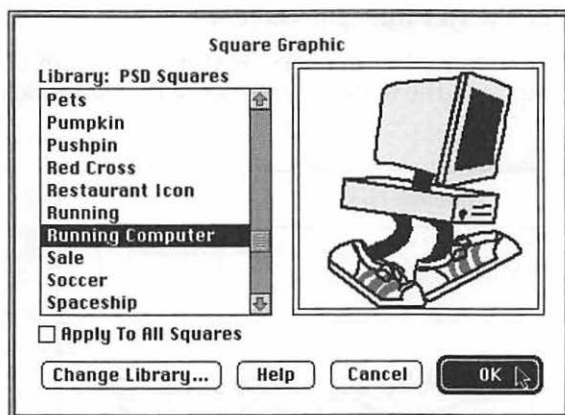
Placeholder information

Among the more-confusing aspects of this newest version of The Print Shop Deluxe are the icons or placeholders that appear on the layouts. I think Brøderbund put these in to make things easier, but to the first-time user they can be a little confusing.

Remember, to work with an area that's represented by a placeholder, simply double-click that area of the layout to activate the windows that allow you to make your selections.

Note: Just because your layout is filled with placeholders doesn't mean you have to use each of them. If you want to get rid of a placeholder, click it once to select it and then press the Delete key.

Square graphic   Headline   Ruled lines   Border   Miniborder

Text block   Row graphic   Column graphic
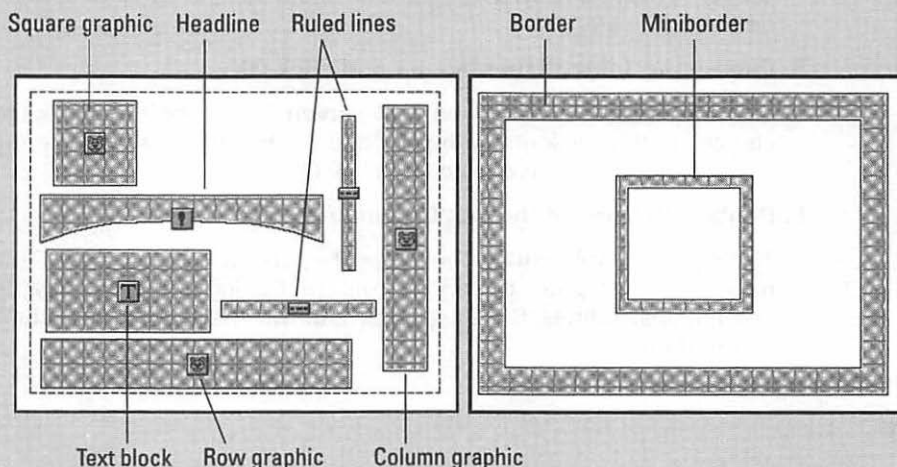
10. Choose a graphic and click OK.

I chose Running Computer.

Note: If you want to change the size of your graphic, click one of the little black boxes that appear when you place the graphic. (If you don't see the boxes, click the graphic once and they should pop into view.) Click one of the small black squares and drag the corner to make the graphic smaller or larger. When you get it just right, let go of the mouse button.

Click and drag the square
to resize your graphic.
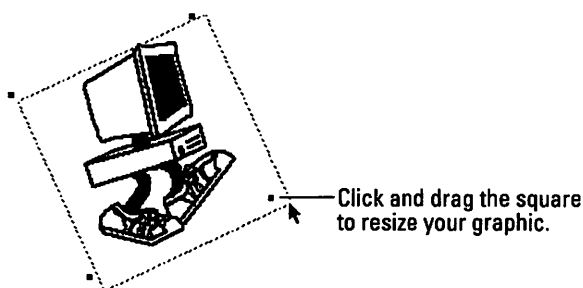
11. Repeat Steps 9 and 10 to fill in the other graphic area of your card's front.

You're finished with the front now. You've done a great job . . . don't you like that positive reinforcement!

12. Open the Navigation pop-up menu in the lower-left corner of the screen. Click Inside of Card (see Figure 12-7).

Now you're going to be faced with many of the same choices you made when creating the front of the card — except you'll be *interior* decorating this time!

13. Choose No Layout from the Backdrop dialog box and click OK.

14. Next, choose Greeting Card 16 from the Layout dialog box.

The inside of your card appears. This time the placeholders look a little different — a good opportunity to learn some new techniques.

15. Follow Steps 5 through 10 to insert your headline text and choose a graphic for the inside of your card.

16. Double-click the Row Graphic placeholder (refer to the Placeholder information sidebar).

The Row Graphic dialog box appears (shown Figure 12-8). Scroll through your choices or choose Switch Libraries to gain access to more choices.

Figure 12-7:
Navigation
throughout
the card
is only a
click away!

— Click here to navigate!

Figure 12-8:
Pick your
preference
from the
graphics
"rows"
library.
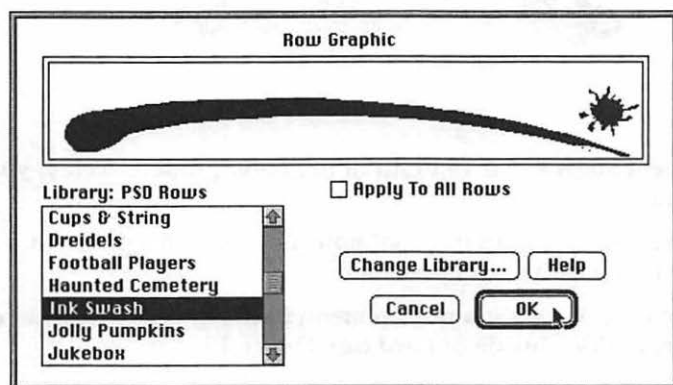
17. **Click OK to place your Graphic.**

18. **Choose Back of Card from the Navigation pop-up menu in the lower-left corner of the screen.**

   The back of a card isn't supposed to be the focus of attention, so choose No Layout from the Layout dialog box.

19. **Double-click the Text tool on the tool palette.**

   A funny-looking cursor appears. Click and drag a small text placeholder near the bottom center of your card.

20. **Double-click your newly created Text placeholder.**

   A cursor appears. Before typing anything, go to the Text menu (at the top of your screen) and choose Extra Small from the Size submenu.

21. Type in a witty closing statement.

I typed **A Robinette Creation**.

```
                        A Robinette Creation
```
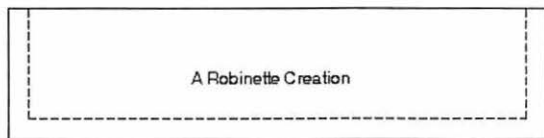
22. You're done! Choose Print from the File Menu.

After printing, fold your paper in half and then in half again to create your card.

You may also want to save your work. The Save command is found in the File menu.

The Tool Palette

You probably can't help but notice the tool palette on your screen. Most programs now offer these palettes as a means of giving the user easy access to frequently used commands.

Figure 12-9 gives the low-down on what *The Print Shop Deluxe* tool palette can do for you.

Figure 12-9:
The Print Shop Deluxe tool palette.

Text Tool:
Enter text and select text to edit.

View Tool:
Zooms in or out.

Pointer Tool:
Selects, moves, and resizes objects.

New Objects Tool:
Adds new objects to your current project.

Hand Tool:
Moves your current project around within the window.

Delete Tool:
Deletes a selected object.

Rotate Tool:
Rotates selected objects.

Frame Tool:
Places a frame (thin line, thick line, no line, double line, or drop shadow) around a selected object.

Color Control Panel

Flip Tool:
Flips a selected graphic object horizontally, vertically, or both.

Item Selector

Tint Slider   Color Bar

I've barely scratched the surface when it comes to all the possibilities that are lurking within this great program. Use the basic knowledge you obtained here to dig deeper and go a step or two further!

Part IV
Going Online

The 5th Wave — By Rich Tennant

"A BRIEF ANNOUNCEMENT CLASS — AN OPEN FACED PEANUT BUTTER SANDWICH IS NOT AN APPROPRIATE REPLACEMENT FOR A MISSING MOUSEPAD."

In this part . . .

*E*verybody's talking about the information super-highway. Read on and find out what all the buzz is about. A modem is the required mode of transportation. The World Wide Web is one interesting place to stop for a visit. So fasten your seat belt and start your engine!

Chapter 13

What Is the Information Superhighway, and How Can I Hitch a Ride?

○ ○

In This Chapter

▷ What is this Internet thing anyway?

▷ The Internet's value in education

▷ The modem's role

▷ Who are you going to communicate with?

▷ What are you going to do online?

▷ Minding your manners

▷ Scheduling creatively

○ ○

*A*re you tired of simply nodding your head and grinning like you understand everything being said when your friends use words like Web site, Internet access, download, and Netscape? Or maybe they're throwing around acronyms like FTP, URL, ISP, and BBS? I've been there myself, and I know how you feel. Read this chapter and I promise to explain what everybody's talking about without insulting your intelligence. Then I want you to take the next step and "surf the Net" yourself!

What Is the Internet?

The Internet is a worldwide network of computers that are connected by telephone lines and various other types of connections. Computers are able to communicate with one another when they are equipped with the right

hardware and software (you find out more about these requirements later in this chapter). Are you with me so far? Within this tangled mass of telephone lines we like to call the Internet, a number of different networks exist independently and serve a variety of purposes. You see, your computer actually becomes part of the Internet when you connect to one of these services.

Here's a brief list of the most common services offered on the Internet:

- ✔ **E-mail (electronic mail):** E-mail is mail sent from your computer screen to someone else's computer screen.

- ✔ **Online services:** These services have names like America Online, Prodigy, and CompuServe. Online services offer user-friendly interfaces and a host of services, including e-mail, WWW access, magazines in electronic form, travel services, research aides, and much more.

- ✔ **WWW (World Wide Web):** This system is very popular and gives you access to pages and pages of graphics-rich, informative (and sometimes not so informative), and searchable resources.

- ✔ **Newsgroups and Bulletin Board Services (BBS):** These are the equivalent of an electronic bulletin board. However, instead of bulletin boards like those in the front of your local grocery store that contain all kinds of information, the newsgroup bulletin boards are organized by topics.

- ✔ **FTP (File Transfer Protocol) software and FTP sites:** This software allows you to download files from FTP sites throughout the world. Apple, Claris, Brøderbund, and all the other "biggies" in the computer world maintain FTP sites where you can download software upgrades, demo versions of a new product, or product information.

- ✔ **Gopher:** This program helps you find information on the Net. The results of a *Gopher search* are displayed in menus. These menus may contain individual files, documents, or links to other computers.

FYI: Because we're all educators, I should give you a little history lesson now. The Internet was first started in the 1960s by the Department of Defense as a means for military researchers and universities to communicate. Soon other governmental agencies and universities began to use the service to communicate. As its popularity grew, the Internet (originally named ARPANET for Advanced Research Projects Administration Network) expanded outside the United States. In the early 1990s, the Internet was opened up for commercial access, and that's how you and I now have access to what was originally meant for the private use of the Department of Defense!

What's So Great about the Internet in Education?

✔ **Communication:** The Internet offers the next best thing to face-to-face interaction — direct communication with an expert resource. If you have students interested in space travel, they can use the Internet to communicate directly with NASA scientists. A French class can easily send letters to someone in France. Or a whole class can collaborate with a class in another state (or country) to complete an ongoing study on pollution. The opportunities are endless!

✔ **Research:** The Internet is the most powerful research tool available. Textbooks are out of date before they ever reach the students' hands; information on the Internet is constantly being updated and is, therefore, always current. In addition, with the correct software, students can experience online field trips that allow them to be part of scientific expeditions where they can observe live video feeds, ask the scientists questions, and make suggestions.

✔ **Communication:** Many schools now have their own Web pages. They use these pages as a means of communication, posting schoolwide information (PTA meetings, fund-raiser information) and specific classroom information (homework assignments, field trip dates). In addition, a school Web page is a great place to show off student work. Publishing multimedia projects, poetry, and reports on the Web is a wonderful way to instill student pride.

✔ **Instruction:** Imagine having the resources you need for your lessons as close as a click of the mouse. That's right, all those materials you spend hours searching for in vain in your school media center are waiting for you on the Internet. Why not go a step further and have your students find your resources for you — bet that makes them remember the content!

Another added Internet benefit

Recently, while working with a group of eager third-grade students, I discovered something incredible — the Internet requires students to use reading and critical thinking skills. Yes, in order to fine-tune a search for Internet information, kids must put their brain cells through some pretty rigorous exercises, and then they must actually *read* the pages they pull up. If after reading they discover that what they pull up isn't what they're looking for, that all-important critical thinking jumps back into action. The exercise is about more than clicking here and there to jump from page to page — using the Internet actually enhances your already existing language arts curriculum.

Telecommunicating

Telecommunicating is a sophisticated word for what happens after you connect your phone to a modem that's attached to your computer. I transmitted this entire book, and my two previous titles, through telecommunications. That's right: I've never stepped foot in my editor's office. I've never even been in the same state! Every word that you see in this book was sent from my computer to my editor's computer via telephone lines. Incredible, isn't it?

What's a Modem?

A *modem* is the initial means of connection to the world of online computing. The word modem comes from *modulate, demodulate,* two terms left over from the prehistoric age of telecommunications. Basically, the modem takes what's on your computer and magically transforms it into ones and zeros (binary code). The binary code is then sent to another modem that unencodes the data. This all happens, by the way, faster than you can say *recess!*

Later, after you've decided that you'd like to access the world of telecommunications from every classroom and office in your school, you might invest in a schoolwide network that includes a network connection to a network modem hidden away somewhere in the school. However, the first step towards that goal is through the use of a modem — a modem is less expensive (initially) than a network modem and is the perfect way to get your feet wet in telecommunications.

A modem is a small rather inconspicuous device that's about the size of a box of pencils (only a little thicker). Modems can be external and sit beside your computer, or they can be housed inside your computer's hard plastic shell. There are even small PC card modems that are the size of credit cards and are used with laptop computers. One wire from the modem plugs into the phone jack in the wall of your classroom (ha, ha!), home, or media center. The other wire goes into the modem port on the back of your computer.

If you're now off the floor and finished laughing about a phone jack in your classroom wall, you're not going to believe what happens next. Using the little box as a translator, your computer can speak its native language to other computers worldwide — it doesn't matter whether you're using a Mac or a Windows machine. And the message is sent in the same way that you would send a message: by making a call over the phone lines.

You may already have a modem

I know that this sounds a little crazy, but you may already have a modem and not even know it! If you or your school recently purchased a computer, it probably came with a built-in, or internal, modem. Get out the literature that came with the computer and do a little reading — you may be pleasantly surprised! (Most "school" computers don't come with modems, but most "consumer" computers do come with modems.)

Speed

Faster modems cost more. And who cares about speed? You will, the moment your students try to send or receive information over the phone line. Every minute is precious in a school full of eager-to-learn students. The faster the modem, the faster you can send or receive information, thus saving valuable time and money. Buy the fastest modem that your school's funds can allow.

Modem speeds vary. (Modem speeds are measured in *bits per second,* abbreviated *bps.*) You won't find many modems at less than 14,400 bps (about $100), and I strongly suggest purchasing a 33,600 bps modem (about $200) if it's within your school's budget. And 56,000 bps will soon be the standard! Another bonus is that most of today's new computers come bundled with an internal modem or an external modem as part of their overall package. An ISDN (highest-speed) connection is a device that allows high-speed access through regular telephone lines. (The telephone company must set up this service for you.)

Where you can stick it

Boy, have I ever wanted to say that to a few students!

No, really — I have!

Anyway, location is an important consideration when using a modem in your school. Most schools opt for a central location, such as the media center, for a number of reasons: The media center has more room, phone lines already lead into the area, and the media center usually has a computer.

When the Mac or PC makes a phone call, it ties up the phone line just as effectively as a teenager ties up the phone line. While your computer is using the modem, nobody can use the phone. In the school setting, this situation requires installation of a *dedicated line,* a phone line that is only to be used with the specified computer and modem. A dedicated telephone line is an expensive necessity.

At home, you need to keep the following in mind if you can't afford an expensive dedicated line:

✔ When you are using the modem and someone picks up the telephone in a different room, it will usually disconnect the modem from whatever service you are connected to. Spend a few minutes before you go online, informing the family that you're about to go online to avoid this situation. There's nothing worse than being disconnected in the middle of an important file download or while chatting online with a really interesting person.

✔ If you have the call waiting service, disconnect it before going online by having the modem dial *70. This will prevent any calls from coming through while you're online and disconnecting your online session.

Who are you gonna call?

After you have a modem and a phone jack to plug it into, you still need to get software to control it. Without some kind of modem software, you can't do much more than stare at it.

School telephone lines

More than likely, your school has an *integrated phone system* — if you have to dial 8 or 9 to get an outside line, your school's phone system is integrated. Having an integrated phone system means that, along with each phone call you make, your telephone handset sends signals through an electronic switch box before your call exits the building. Because you're dialing out with a modem rather than an especially configured handset, sometimes the modem has difficulty getting a dial tone (and in some cases, when you can get a dial tone, you still have to configure the modem to dial an 8 or 9 to get out). Unless your phone system is configured specifically for modem communications, dead air is all you hear when your modem attempts to connect. To solve this problem, have the phone company make an adjustment to one or more of your lines or have a dedicated line installed.

America Online, Prodigy, and CompuServe

Commercial services, also known as *online services,* used to run on a pay-by-the-hour rate, and most have package prices for schools. Now these services generally charge a monthly fee for unlimited (or almost unlimited) usage.

Shop around for the best rates. (I was really taken for a ride the first time that I purchased an account for my school.)

Remember that you can't use ClarisWorks as a means of *hooking up* to online services that have their own software (AOL, Prodigy, and so on). You can, however, send ClarisWorks documents to others *via* online services, and you can find lots of neat ClarisWorks templates to download from online services.

WWW: The World Wide Web

The World Wide Web is another connection option. Pages on the WWW are full of cool graphics and interactive text. Clicking programmed text that appears highlighted on Web pages allows you to jump around inside the Web and access tons of cool information.

Accessing the WWW requires an Internet user account (something like a charge card you set up for billing your online time) and some type of Web browser software (software that allows you to search the Web). You can't use ClarisWorks to access the Internet or the WWW. Contact your Internet service provider for details on connection to the World Wide Web and names of software options.

Note: You can use ClarisWorks to access the WWW in a roundabout way if you go through a local university system. Many universities offer something called shell accounts that set your computer up as a dumb terminal. You dial up the university and then, through their computer, you are connected to the WWW. This service is somewhat limited and is still only text-oriented.

What are you gonna do?

After you're connected to another computer (or after you *go online,* as savvy users say), you and your students can do all kinds of neat stuff.

- ✔ Type messages back and forth to other people. Give students a real-life reason to write! Isn't that exciting!?!

✔ Leave typed electronic mail messages for people to find later. This feature is called *e-mail,* and it's really cool. Some very progressive schools in my area already have e-mail within the school itself — if you're having a bad day, you can e-mail a fellow teacher and request a joke or some other type of pick-me-up.

✔ Send documents (written with ClarisWorks, of course) to others. This feature is one of the biggies. Students across the world can now share reports, pen pal letters, and much more with ease. No more waiting two months to hear back from your sister classroom across the country. With a modem and a phone line, communication is instantaneous!

✔ With fax software added to your modem (most modems come with this tidbit), you can send any document created on your computer to anyone with a fax machine. Some of the fax software has capabilities that allow you to receive a fax (via your computer) as well! I use this feature a great deal for sending documents that I create in ClarisWorks.

✔ Look it up. If you belong to one of the information services (America Online, CompuServe, or Prodigy), you can do all kinds of other things. As with other electronic bulletin board systems (BBSs), these services give you access to tons of information. Look up information in encyclopedias and magazines, read movie reviews, check stock prices, and search for ideas on using technology in the classroom. Consult with thousands of other educators who "surf the Net."

✔ Create your own Web page. A *Web page* is a site on the World Wide Web (WWW), a site that you create to tell about yourself, your school, your class, or your family. Many schools around the country maintain spots on the Web. Web pages require special formatting known as HTML (HyperText Markup Language). ClarisWorks 4.0 includes an HTML translator — read on to find out more.

Miss Manners on Netiquette (Minding Your Online Manners)

Cyberspace (the Internet) is a classroom where your students can be judged purely by their thoughts. What a wonderful opportunity for students!

Kids and adults tend to type things that they might not feel so comfortable saying out loud, so take note of these warnings and add a few rules of your own.

Telecommunication terms

Baud: Baud and bits per second (bps) refer to how fast a modem can send/receive information. The higher the baud rate, the faster that information can get from one place to another.

BBS (Bulletin Board Service): A BBS is a system that enables people to post messages and read messages posted by other people. Many schools maintain their own BBSs.

Downloading: Downloading means to move information from another computer to your computer via a modem, via a network, or by other methods.

e-mail (Electronic Mail): Electronic mail is the term for letters and messages sent to others through a computer modem or via a network. (If your school or school system is networked, you can send e-mail within your school or to other locations within the network.)

Freeware: Freeware is software, templates, fonts, or clip art that doesn't cost anything — yes, freeware *is* free of charge!

Internet Service Provider: An Internet service provider supplies you with the connection that you need to access the Internet.

Modem: A modem is a small electronic device that translates what you create on your computer into sounds that can be sent through a phone line and received by another modem and computer at the other end of the phone line.

Online Service: An online service is a commercial service that provides information through a user-friendly interface. Examples include America Online, Prodigy, and CompuServe.

Shareware: Shareware refers to software, templates, fonts, or clip art that's available for a small fee (usually under $25) that is requested by the creator.

Uploading: Uploading means to move information from your computer to another computer via a modem, via a network, or by other methods.

WWW (World Wide Web): Also known as the Web, the World Wide Web is a part of the Internet that's full of cool graphics and text links that allow you to jump from site to site by clicking on hot spots or highlighted text. Accessing the WWW requires a software program known as a browser.

✔ Never give out personal information online unless you know that the need is legitimate. That means no phone numbers and no addresses.

✔ Don't type in all capitals. Leave your Caps Lock key alone. All capital letters are hard to read and have a special meaning in the soundless realm of online speech (using all caps means that YOU'RE SHOUTING). It also means that you're a rank beginner who doesn't know this rule. (Early in our cyber-relationship, MacGod Pogue had to painfully teach me this rule after I sent him an e-mail written in all caps! See, I was a beginner, too!)

✔ Don't worry about the flaming. *Flaming* means unmodulated ranting and raving. Being teachers, we are all quite used to this form of communication from parents. Flaming happens quite often online. You may go online and leave an innocent message inquiring about grade-book programs for your school. When you return the next day, you may find that some cyberjunkie has responded with a message like this:

"It's ill informed IDIOTS like you that give classroom technology a bad name! ARE YOU CRAZY? You need to stop worrying about making your life easier and get on with the business of TEACHING! Use technology to help the kids — not YOU!"

✔ Online, no one can hear you smile. You can't read someone's expression when they write to you online. You can't see them rolling their eyes or pretending to gag as they read your message. I guess some folks with too much extra time on their hands (obviously they weren't teachers) came up with the following symbols and many more as a way of expressing their emotions. The following symbols, called *emoticons*, are used individually or at the end of a sentence when communicating online:

:)	smile
:(	unhappy
;)	sly wink
:-*	kissing
8-)	wearing shades
:-p	sticking out tongue
=:-o	shocked
:-/	skeptical
=):-)=	Abraham Lincoln

✔ Others might use acronyms to represent common phrases:

BTW	By the way
LOL	Laughing out loud
ROTFL	Rolling on the floor laughing
BRB	Be right back
BAK	Back at the keyboard
RTFM	Read the (you-know-what) manual
IMHO	In my humble opinion
GMTA	Great minds think alike
@*#*&!	Golly

An idea

While writing this chapter, I came up with a neat idea. As you begin to get your students familiar with Cyberworld and its etiquette, why not have them create some signs, symbols, and acronyms of their own — symbols that represent feelings and phrases associated with the trends and ideas of their generation. It might be interesting to see what ideas your cyberkids can come up with.

Scheduling

If you use an online service that charges by the minute rather than by fixed fees for unlimited use, read this section; I need to talk to you about scheduling. I'm going to take this time to inform you that exploring online can be very addictive, and once you all (you, your students, and other teachers) get a taste of what's out there, you won't be able to stop! In my school, we had a problem with prepaid online time running out before the quest for more knowledge and communication was fulfilled. Telling a group of students that they have to wait to see if someone wrote them back is tough. Kids don't like to wait, and neither do I. Here are few ideas for making the best use of your online time:

- ✔ Check into local Internet service providers (ISP's) in your area. Many offer low-cost Internet access accounts for around $20 to $35 a month for unlimited access to the Internet. You don't get the fancy interface of an online service, but you do get unlimited time online.

- ✔ Allow only supervised groups of students access to online time. It's too easy for children to get off task, waste time, or (worse yet) forget to sign off! (Most services automatically shut down when left idle for a period of time — but that's still wasted time, and online time is money!)

- ✔ Have students do as much work as possible offline. Ask the students to use ClarisWorks to create their letters, charts, databases, reports, slide shows, and artwork before they go online.

- ✔ Keep a log book beside the computer hooked up for telecommunication. Have teachers keep track of their online time.

✔ Use the voucher system. Vouchers work great. Create vouchers or coupons that are good for 15 minutes of time online (make sure that the total of the vouchers is the same as the amount of time you are given each month). Pass the vouchers out to the teachers and tell them that they can redeem them at any time that month. Our school allows the teachers to exchange vouchers with each other if they want more online time in a specific month. The use of vouchers is a fair way to give access to all, and those who don't want to use their time can feel good about giving it to a colleague who can put it to good use.

✔ Working with small groups (six or fewer people) is best because everyone in the group gets to view the screen and have easy access to the keyboard.

✔ Spend the first few visits online getting acquainted with what there is to offer. Don't jump into an activity before the students are familiar with the concept of telecommunications. Keeping things simple in the beginning and building an understanding of what's out there allows students to venture in exciting directions with confidence later on.

✔ Work with your faculty and your students' parents to come up with an Acceptable Use Policy. This policy needs to spell out the expectations that the school has for student online use. Acceptable Use Policies deal with (among other things) access to online areas, who is allowed to use the equipment, and how students are to be supervised.

Chapter 14

The World Wide Web

○ ○

In This Chapter

▷ What is the WWW?

▷ Web nuts and bolts

▷ How do I jump on the Web?

▷ Meet URL

▷ Internet 101: Netscape Navigator and Microsoft Internet Explorer

▷ Great places for a first visit

○ ○

*T*his chapter represents a small sampling of the cool Internet information you'll find packed within the pages of Bard Williams' book, *The Internet For Teachers,* 2nd Edition (IDG Books Worldwide, Inc. 1996). Bard is a good friend and an Internet guru. I thank him for the gracious donation of parts of this chapter. If, after reading this chapter, you become a "web junkie," you'll want to pick up all of Bard's wonderful titles:

> ✔ *Web Publishing For Teachers* (IDG Books Worldwide, Inc. 1997)
>   ISBN #0-7645-0111-9
>
> ✔ *The Internet For Teachers,* 2nd Edition (IDG Books Worldwide, Inc. 1996)
>   ISBN #0-7645-0058-9
>
> ✔ *The World Wide Web For Teachers* (IDG Books Worldwide, Inc. 1996)
>   ISBN #1-56884-604-5

"Ladies and gentlemen, please return your seat backs and tray tables to their upright positions. We're about to take off on a journey you won't forget." The World Wide Web (WWW) is somewhere between a visit to the library and a roller-coaster ride at Walt Disney World.

The WWW, most often referred to as simply the *Web,* has all the things your students (and you) will love — dazzling in-your-face graphics, access to sound files, a slick graphical interface, and thousands of places to visit, many of which are linked to databases, file libraries, and interactive online chats.

The Web is by far the neatest thing on the Internet, and more and more schools and businesses are jumping on the bandwagon. Public schools are creating Web pages that contain information about projects. Universities offer Web-tours of their campuses and information about everything from campus organizations to what's on the menu at the cafeteria. Government agencies and nonprofit organizations feature access to huge databases of information and thousands of retrievable files. Companies such as Apple, Microsoft, Levi Strauss, IDG, and Coca-Cola are all sporting fancy new Web pages. And there are plenty more examples of how this new medium is fueling the excitement about the Internet.

So . . . fasten your seat belt and get ready for the ride of your life!

What Is the WWW?

Welcome to the World Wide Web. The Web is the place where the emphasis shifts from *what* information is available to *how* it is available. The WWW is an Internet resource that is built on a computer language called *hypertext markup language (HTML)*, a HyperCard-like language that gives even the novice user the ability to create a graphical jumping-off point called a *Web page.* You access a Web page by using a computer program called a Web *browser* and click on *links* (pictures or words) on the screen to jump to other Web pages. Each page has a different theme, with graphics, sound, movies, documents, and more.

A good Web browser program, such as Netscape Navigator or Microsoft Internet Explorer, is the Swiss Army Knife of the Internet world. It slices, it dices, it does just about anything. In fact, the Web browser will probably be your primary tool in searching for information on the Internet.

Using the WWW and a good browser program gives you and your students easy access to

- ✔ Documents available on the Internet
- ✔ Files containing programs, pictures, movies, and sounds from an FTP site (host computers containing files you can copy)
- ✔ Usenet newsgroups (which are like a bulletin board where you can post and read messages on specific topics)
- ✔ WAIS searches (database searches)
- ✔ Computers accessible through telnet (logging into other people's computers)
- ✔ Hypertext (click-and-go) documents
- ✔ Much more

Web nuts and bolts

The WWW was developed and introduced to the world in 1992 at CERN, the European Laboratory for Particle Physics. The object was to build an easy-to-use, distributed, hypermedia system. CERN accomplished its task, and more.

The concepts used in designing the WWW have even earlier roots — all the way back to 1960 when a guy named Ted Nelson came up with the idea of *hypertext,* a way to link documents that are stored on different computers. The *hypertext* concept is familiar to people who use HyperCard and HyperStudio on the Macintosh. (See the sidebar titled "Getting hyper" for more information on hyper-stuff.)

Getting hyper

The Web offers users an adventure in hypermedia, fueled by hypertext and hyperlinks. It's a truly hyper place that's perfect for hyper students (and teachers).

Hypermedia is a term used to describe the union of hypertext and multimedia. The term hypertext, coined by Ted Nelson, describes text that, when selected with the click of a mouse, zips the user to another source of related information. For example, clicking the hyper-linked word "projects" in the sentence, "There are many on-line projects that NASA offers to students," might whisk you away to another site (residing on another computer halfway across the globe) that offers a list of specific projects and information about how to participate.

Multimedia refers to the union of different data types, such as text, graphics, sound, and sometimes movies. Hypermedia connects these data types together. With hypermedia, highlighted and linked text, called *hyperlinks*

(or just *links*), enables a user to move between data in a nonlinear manner. You're just as likely to hear a sound when clicking on a hyperlinked word while browsing a hypermedia file, for example, as you are to view a picture.

The language that Web programs use to create hyperlinks is called *HyperText Transfer Protocol* (HTTP). HTTP enables users to create their own Web pages and post them to the Internet and ensures that the file will be readable by Web browsers. When you enter a WWW address, you enter the following text before the Web address:

`http://`

The prefix tips off the Internet that the URL (Uniform Resource Locator — an Internet resource address) you're looking for is a WWW address, and not a Gopher or FTP site. So, in the address, `http:/www.aol.blue.com`, the `http://` tells you and the Net that the site you seek is on the Web.

How do I jump on the Web?

It's possible to access the Web through a text-only browser if your connection to the Net won't let you display graphics; or you can use one of the many browsers that offer slick, graphical interfaces that make browsing easy.

If you're connecting through an online service or through a commercial Internet provider, you've got it made. You can use a graphical browser such as Mosaic, MacWeb, Netscape Navigator, or Microsoft Internet Explorer. Browsers read documents, called *Web pages,* that provide information or are jumping-off points for other information resources. The browser finds the Web pages by using an address called a *URL.*

Meet URL

URL stands for *Uniform Resource Locator.* A URL lists the exact location (address) of virtually any Internet resource, such as a file, hypertext page, or newsgroup.

URLs look like this:

A WWW page	`http://www.apple.com/education/`
A newsgroup	`news://news.lists`
A Gopher site	`gopher://gopher.tc.umn.com`
A telnet session	`telnet://ibm.com`

The first part of the URL, the junk before the colon, tells the browser what method to use to access the file. The part of the URL that's after the colon indicates the address of a host computer.

Netscape Navigator and Microsoft Internet Explorer

Netscape is the grandchild of *Mosaic,* a freeware program that enables users to browse the World Wide Web. Microsoft soon followed with Internet Explorer, which is now Netscape Navigator's main rival. These browsers provide users of Macintosh with a fast, easy-to-use interface that makes zipping around the Web easy. It's feature-rich, provides access to the Web, Gopher, and FTP resources.

So, what are we waiting for? Let's go!

Getting your browser

In case you don't have an Internet connection, the CD includes sign-on software for AT&T WorldNet Service, an Internet service provider. All you need is a computer, a modem, a phone line, and the AT&T WorldNet Service software. When you sign up, you can also choose between Netscape Navigator and Microsoft Internet Explorer for your browser. You won't get the most recent version of either browser — but you'll probably not notice the difference.

If you already have an Internet service provider, please note that AT&T WorldNet Service software makes changes to your computer's current Internet configuration and may replace your current provider's settings.

Connecting to the World Wide Web

After you retrieve your copy of Netscape Navigator or Microsoft Internet Explorer, you're ready to fire up the program and get surfing! These are the leaders in browser interfaces for a very good reason — they're very easy to use and very powerful. Using Netscape Navigator or Microsoft Internet Explorer is as simple as starting the program and entering a URL (an Internet address). Here's how, using Netscape Navigator as an example:

1. **Double-click the Netscape icon, and your Mac will automatically access your PPP or SLIP control panel and make your Net connection as it launches Netscape.**

   Netscape automatically logs you onto the Netscape home page, shown in Figure 14-1.

   As you move your mouse over some of the words and pictures on the home page (they're blue or purple if you have a color monitor), the mouse pointer turns into a pointing hand. Clicking on these words or pictures takes you to another Web page.

2. **To browse the WWW, either click one of the hypertext items on the screen (often underlined in a different color) or click the Open button (⌘-L) at the top of the screen and enter an URL.**

   Want a cool place to start? Try WEB66. Click the Open button (⌘-L) at the top of the screen and type this URL (address):

   ```
   http://Web66.coled.umn.edu/
   ```

   When you click OK, you're whisked away to the University of Minnesota's College of Education site. Easy, huh?
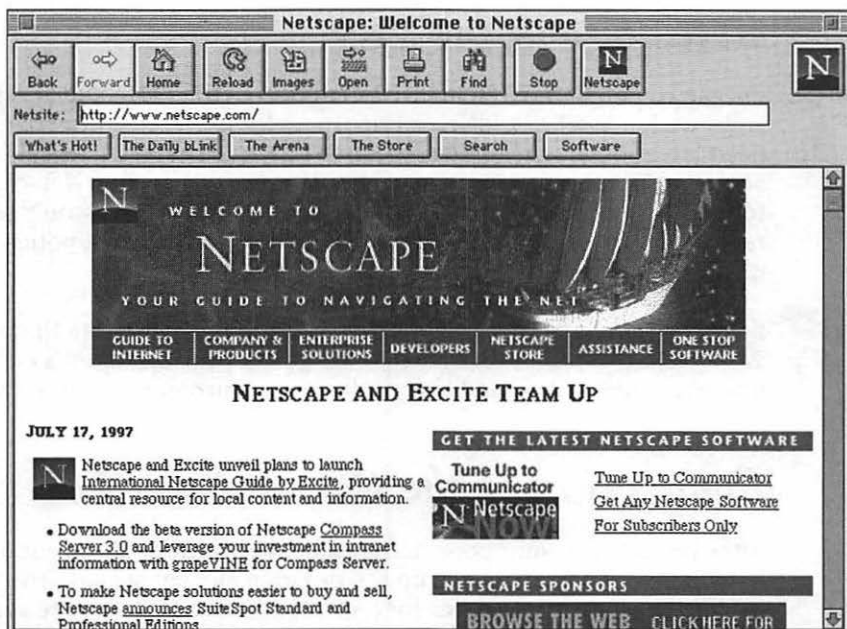
Figure 14-1:
The
Netscape
home page.

Figure 14-2 shows what you'll see when your browser reaches Web66.
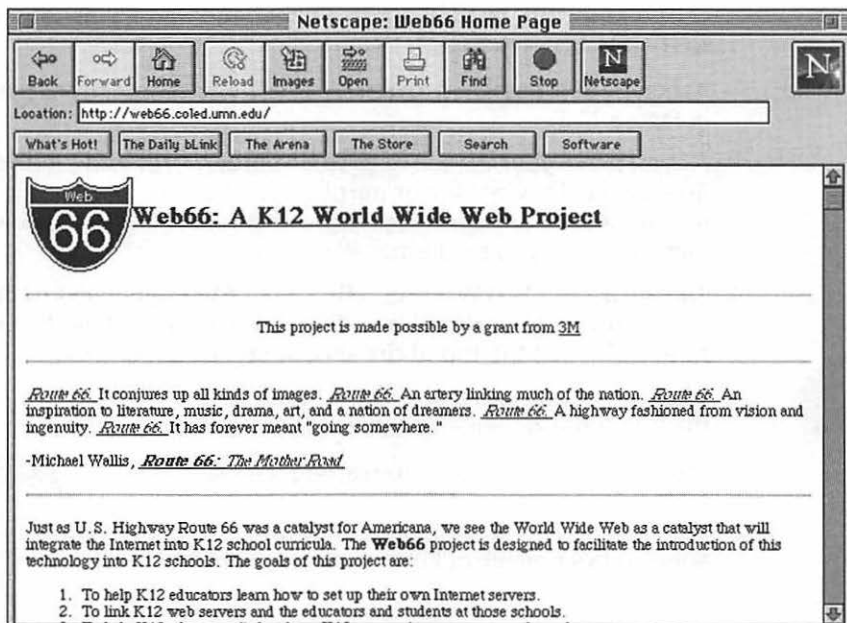
Figure 14-2:
The Web66
home page.

You'll want to spend the next few minutes clicking and browsing. Notice that the button bar at the top of the Netscape window has buttons for Back (⌘-[), which returns you to the last WWW site); Home, which returns you to Netscape's home page; and Stop (⌘-.), which cancels your request and tries another WWW site.

Don't get excited if you encounter a 404 not found error or a Connection refused by host error. It just means that the WWW site is busy, has moved, or that your URL wasn't typed correctly. Retype the URL or try again later.

Occasionally, your browser will fail to load pictures correctly, and then it displays a "broken icon" graphic. Click the Reload button at the top of the screen, and Netscape will refresh the graphics on your screen.

3. **When you finish surfing, exit Netscape by choosing Quit from the File menu.**

Remember that you've just quit the browser, *not* the Net itself. You can do other Internet tasks or return to your PPP or SLIP control panel to terminate your connection.

The Web provides several pages that are lists of other sites or that contain a searchable database of Web addresses. Here are a couple of jumping-off points on the Net. From these sites you can get virtually anywhere. Use the Open button and try each of these URLs:

```
http://www.yahoo.com
http://www.netsurf.com/nsd/index.html
http://www.well.com
```

Happy surfin'!

Saving the cool stuff

Your first time on the Web, you're likely to go bananas, surfing from page to page and marveling at all the great information and cool graphics you see. Forgetting where you've been is very easy. Luckily, Netscape has a simple way to remember where you've been. It's called a Bookmark.

Setting a Bookmark is easy. Simply get to the Web page that you want to save and choose Add Bookmark from the Bookmark pull-down menu. The items will be added to the list in the order that you enter them.

Your Bookmark list is now available, and you can "resurf" a Web page, Gopher address, or FTP site by choosing that location directly from the Netscape Bookmark menu. No more messy URLs!

You can add, delete, and reorganize your Bookmarks by choosing View Bookmarks from the Bookmark pull-down menu. Don't look now, but you'll have a hundred or so WWW sites in your Bookmark before you know it, so a bit of organization goes a long way.

Microsoft Internet Explorer also lets you add a bookmark — only they call bookmarks "Favorites." If you are using Internet Explorer, simply use the Favorites pull-down menu and choose Add to Favorites. Arrange your favorite sites by choosing Organize Favorites. It's almost too easy.

CyberFinder to the rescue

Imagine never having to leave your desktop to organize and access your favorite web sites. If you're constantly pulling up the same great teacher resource page, tracking the latest information from NASA, or getting software updates, CyberFinder from Aladdin Systems can make your life a lot easier. It's the only Internet bookmark manager that operates from your Finder (aka desktop) — you don't have to go online or open another program to access and manage your favorite bookmarks. Here are a few of CyberFinder's highlights:

✔ Create bookmarks right in your Finder and then automatically launch any site right from your Finder. Organizing your bookmarks with CyberFinder is also an easy task.

✔ CyberFinder allows you to navigate to any Internet site from any application.

✔ CyberFinder relies on your already installed Internet browser application (Netscape, Mosaic, and so on), so you won't have to learn how to navigate within a new program.

✔ Enables you to catalog your bookmarks in any way you want. You don't have to store your bookmarks within each individual application. Instead, CyberFinder allows you to keep all of your bookmarks handy on your Desktop.

Visit the Aladdin Systems web site to download a free trial version(www.aladdinsys.com).

Navigating the tangled Web

Finding things in the Web can be a bit tough. There are thousands of Web pages out there, with more being added every day, so it's tough for any one place to have a full listing of what's on the Net.

Luckily, after you're on the Web, you can do keyword searches by using one of the Web's many search engines. One of the best Web search engines is WebCrawler. The WebCrawler's URL is `http://www.webcrawler.com`

WebCrawler searches for documents whose titles _or content_ match your keyword. Using the WebCrawler is easy; simply enter the search term and click Search.

Other Web search engines that you'll probably want to check out are:

AltaVista	`http://www.altavista.digital.com`
Excite	`http://www.excite.com`
Infoseek	`http://www.infoseek.com`
Lycos	`http://www.lycos.com`

You or your students can easily create your own home page. If you're connected to the Internet via a SLIP or PPP account and your information provider has room on the server, you're well on your way. Your school's home page might include

✔ Links to other schools' home pages

✔ Links to favorite reference resources (including Gopher sites)

✔ Links to home pages created by your students

✔ A picture of your school

✔ Information about your school and the surrounding community

To learn how to create your own home page, visit Web66 at the following URL: `http://Web66.coled.umn.edu`

There you find complete instructions. With a standard word processor and a few special commands, you're in business.

Need another resource for information about creating a home page? Try `http://www.acu.edu/dev/makeasaver.edu`

It's easy to create your own home page

I once thought that you needed a computer programmer to create a home page for the WWW. Yes, I write books about computers, and I was intimidated by the idea of Web publishing. Then I heard about Claris Home Page — it gives you the ability to create dynamic web pages that look great. Claris Home Page has automatic programming features that do all the complicated HTML work behind the scenes — it looks and acts like a word processor. After you're ready to post your files, Claris Home Page makes it easy with a built-in publishing feature that automatically consolidates your files and uploads them to a designated server.

Check out the fully functional copy of Claris Home Page on the CD that's located in the back of this book. This trial version expires 90 days after installation on your computer.

How not to get caught in the Web

Here are some points to ponder that will save you loads of time and a few gray hairs:

- ✔ If images are coming in too slowly, deselect Auto Load Images from the Options menu. This will give you a text-only interface. When you've reached a page you'd like to examine more closely, clicking the Reload button will show the Web page's graphics.

- ✔ If at first you don't succeed . . . sometimes the third time's the charm. WWW pages can be very busy.

- ✔ Remember that you can copy, print, or save the text and graphics that are displayed on any WWW page.

- ✔ Want to write your own WWW page? ClarisWorks has a neat HTML (Hypertext Markup Language) translator available for download on most online services or from the Claris Web site at http://www.claris.com

Netscape also enables you to capture the HTML code from any other WWW page. It's a great way to learn, but no cheating, please!

Great places for a first visit

All dressed up and no place to go? Try these great educational Web links for your first surfing outing. Choose the Netscape Open button and type the following URLs exactly as you see them. Be sure to mind your capital letters.

The Web goes 3-D

What's the next level in Web exploration? The Web goes 3-D! A software program called WebSpace is the first commercially available three-dimensional viewer for the World Wide Web. The program, which runs on Power Macintosh, Windows, and UNIX platforms, works along with popular Web browsers. With the WebSpace viewer the possibilities are amazing. The programmers, Silicon Graphics, claim that users can

✔ Fly through 3-D worlds, exploring event venues, cities, libraries, museums, tourist resorts, and imaginary places.

✔ Inspect 3-D models of products in online catalogs.

✔ Visualize information such as stock market trends in 3-D.

The technology also creates a new standard called VRML (Virtual Reality Modeling Language), an open, platform-independent file format for 3-D graphics on the Internet. Similar in concept to the core Web text standard HyperText Markup Language (HTML), VRML encodes computer-generated graphics into a compact format for transportation over the network. As with HTML, a user can view the contents of a file — in this case, an interactive 3-D graphics file — as well as navigate to other VRML "worlds" or HTML pages. In addition, VRML is infinitely scalable so that as users navigate through virtual worlds and approach objects, greater levels of detail emerge.

This new technology has some very exciting possibilities for education. The days of electronic field trips in 3-D are not far away!

For more information on VRML and WebSpace, point your Web browser to http:// webspace.sgi.com

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✔ Visit the K–12 Outpost and explore a great collection of K–12 WWW links: http://k12.cnidr.org

✔ Check out Apple Computer's home page that's just for educators: http://www.education.apple.com

✔ View a great weather map: http://www.mit.edu:8001/usa.html

A Science Activity: Visit the Centers for Disease Control and Prevention's Internet sites and find out about the latest nasty diseases that are creeping into the human population. From Brazilian fever to cat-scratch disease, you can find pathogens everywhere. The CDC maintains a Web site at http://www.cdc.gov

Citing Internet resources

Now that teachers and students are becoming comfortable using the Internet as a research resource, the big question being asked is "How do I cite Internet information?" Yes, someone put that information out there — and you need to give that person, company, or organization credit.

World Wide Web

Structure:

Author. Title of Item. (Online) Available http://address/filename, date of document or download, if document is not available.

Example:

Robinette, Michelle. This is My Family. (Online) Available http:// robinette.edu/family, May 14,1997.

Online Sounds, Images, or Video Clips

Structure:

Description or title of sound, image, or video clip. (Online Sound Image or Video Clip) Available http://address/filename, date of document or download, if document is not available.

Example:

First Day of School. (Online Video Clip) Available http:// robinette.edu/norton, May 3, 1997.

These are just a few examples. Your students might be using other Internet sources like Gopher, FTP, usenet Newsgroups, online sounds, e-mail, telnet, or other online information. If you'd like a complete listing of online citations, check out the following:

MLA Citation Guide: http://www.cas.usf.edu/english/walker/mla.html

APA Style of Notation: http://www.uvm.edu/~xli/reference/apa.html

Whack it!

WebWhacker (The ForeFront Group Inc.) is one of the better Internet software investments you can possibly make. It's easy. Before you meet with a group of kids, you simply go online and whack off (download) the pages you'd like kids to access. Students can then "surf" the whacked pages from the computer desktop without an Internet connection. You can whack entire web sites or just the first few pages of a site. When you download a site, what you see when connected to the Internet is exactly the same in the whacked version you download — all the graphics, text, and HTML remain intact.

What's so great about whacking? You never have to wait for a site to load. You won't be bothered by annoying disconnections, and your kids won't be able to access sites that aren't age-appropriate. In addition to all that, you minimize the actual amount of online time and expense.

Using WebWhacker is also a great way to demonstrate the Internet to a group of students, parents, or fellow teachers without ever having to wait for a connection or hope that a particular site can be accessed. It's Web simulation without an actual connection!

Part V

Reality Bites!

The 5th Wave   **By Rich Tennant**

PROVING THAT BIGGER ISN'T ALWAYS BEST, A CONTRACT TO BUILD A COMPUTERIZED SONAR TRACKING SYSTEM FOR THE U.S. NAVY IS AWARDED TO TROOP 708 OF THE BAYONNE, NEW JERSEY EAGLE SCOUTS.

In this part . . .

*W*ell, I've teased you. I've told you all the options. I've given you extensive lists of great software. I've even taken you on a short trip down the information superhighway. Now I'm sending you back to your school — back to reality. And sometimes, reality bites!

Keep your chin up, make the most of what you've got, and be determined to strive for more.

In this part I give you some ideas on ways to get the most out of that single, lonely computer that may be sitting in the corner of your classroom. I also discuss the major components involved in creating and managing a Mac lab. And finally, I give you some great ideas on ways to keep your school and community aware of your technological accomplishments — and to convince these groups to spend more money.

Chapter 15

The One-Mac Classroom

○ ○

In This Chapter

▷ Why only one Mac?

▷ Mac wish list

▷ License to learn

▷ A time and place for everything

▷ Managing the one-Mac classroom

▷ One-Mac Activities

○ ○

*T*he *Lonely Guy.* It makes me so sad to see a poor, lonely guy sitting in the corner of the room, sometimes humming quietly, other times simply cold and inactive. No, I'm not talking about a child. I'm talking about the unused Mac. I know, you don't mean for it to happen — it just does. You don't have time to preview software, make sure everyone gets a turn, and monitor progress. So you just ignore the lonely guy.

That's not good. Nothing is worse than an unused computer. It just sits there making you feel guilty for not using something that was supposed to be a valuable addition to your classroom, and it makes your students angry and frustrated because they are rarely allowed to use it. Read on and find out some easy ways to incorporate your lonely Mac into your day-to-day classroom activities.

Why Only One?

I want to begin this discussion by questioning why you have only one Mac. If your school already has a lab (or two) and is now placing computers in classrooms as it can afford the purchases, I agree with the placement of your computer. However, if your school doesn't have a lab of any sort, you may need to discuss the possibility of creating one before you get too attached to your Mac.

The assumption that every teacher needs a computer just isn't true. Teachers need a computer if they are going to use it. Studies have shown that labs are the best way to get students and teachers comfortable with computer use. It makes sense; you have a room filled with computers, an eager group of students, and their teacher. In a lab, everyone can accomplish something without having to *fit* time on the computer in with other classroom obligations. The lab gets everyone psyched about computers and wanting one for the classroom. Then it's time for one (or two, or three . . .) per teacher.

On the other hand, placing a single computer in a classroom with a teacher who isn't familiar with it — along with a group of kids who (for the most part) have never used one — puts everyone at a disadvantage. The teacher has to find a way to work it into her schedule, and the students end up fighting over whose turn it is.

As I step down from my soapbox, I leave you with this: Get a lab first (even a small one — kids don't mind pairing up) and then work on the computers for each classroom. Doesn't it make sense for everyone involved to be comfortable with an expensive creature before placing it in their environment?

Placement

It's the week before school starts, you rearranged your room five or six times, and people keep dropping off more stuff for you to store: the overhead projector, the new reading series, the math manipulatives, and — oh yeah — the potting soil for your science kit. Everything is just peachy. And then in walks your media specialist with your new computer! Great, where does it fit into your interior decorating scheme?

Well, like the overhead, the tape player, the plant light, your coffee pot, and the TV, it needs a plug. You also need to make sure you put it away from the chalkboard and pencil sharpener — too much dust. And you may want to position it in a way that allows you to continue teaching while a few children are working. (You need to remain the *main* attraction.)

Take the next few days to work out your decorating problem and then come back to this chapter.

Basic Wants and Needs

Children have a hard time discerning between wants and needs. Especially when schools sell ice cream and chips as snacks. You tell me, are those *wants* or *needs?*

A computer has very few *needs* — keep it dust free, don't turn it on and off, keep food and drink away from it, and use it.

Catalogs are full of *wants* for your computer! Here's the basic list for the lonely computer in your classroom:

✔ **Set of speakers:** These are great for whole-group instruction. But be sure to use special shielded (and self-powered) computer speakers ($20 and up).

✔ **Headphones:** These are a must. They keep you from competing with the computer for attention. (I've gotten a pair for $1 at the drugstore.)

✔ **Disks:** It's best if you buy a disk for each student so that you can save space on your hard drive. You can get disks preformatted if you don't want to take the time to initialize one for each student, and the cost difference isn't that substantial (about $8 for a pack of ten).

✔ **Dust cover:** This one explains itself ($12-20). You can get these covers for your keyboard, too.

✔ **Printer:** A printer would be a wonderful convenience for you; however, it's not a necessity. If your kids save to disks, you can take the disks later to a computer with a printer. (See Chapter 4 for details.)

✔ **CD-ROM drive:** It sure would be nice because so much software now comes on CD.

✔ **Software and CDs:** You don't need much to be productive in the classroom. If you have too many choices, the students spend all the computer time fighting over what to use! ClarisWorks (Chapter 6) and some type of grading program (Chapter 8) are a must.

Hey, I Want My Desktop on TV!

An *LCD panel* (around $1,000) allows you to show what's on your monitor through the overhead projector, and a TV converter box (around $200) or a converter card (around $400) makes it happen on your TV screen. I think they're great when you want to show a new program to the entire class. The LCD panel is portable, yet fragile — and not always clear. The converter cards actually go inside your computer, and they aren't portable (unless you take your computer). TV converter boxes are portable, and some even come with cool remote controls. If you have an AV Mac, you're already set to display on a TV screen and don't need either of these additions.

A Possible Solution

It resembles a laptop, weighs less than four pounds, and was designed to handle the bumps and bruises of a child's backpack. With the eMate, Apple has finally come up with a solution for schools (like mine) that can't afford to purchase multiple computers for every classroom. Priced at around $750 ($700 if you order in quantities of eight), the eMate enables schools to quickly meet their goal of one computer for every student.

This affordable yet serious learning tool was designed specifically for schools based on input from educational researchers, teachers, and students. It has a built-in, full-featured word processor (yes, you can format your text), a drawing application, spreadsheet, graphing calculator, note-taking tools, address book, Web browser (you'll need the optional modem), and a calendar. Students can use the keyboard to enter information or the stylus (a pen without ink that you use to write directly onto the screen).

Schools are buying class sets of eMates and placing them on a cart with a computer or just a printer. With a simple cable connection, the information stored on an eMate can be printed to a Mac printer. Or, with another simple cable connection, students can download their information to a computer (Mac or IBM-compatible). With all this going for it, I'm sure the eMate has a bright future in classrooms around the world.

Using your classroom TV as a monitor

A number of companies produce converters that let your classroom television work as an additional monitor, which is great for whole-group instruction on a new program — much better than having 25 kids gathered around the computer station.

Many of the converters also include remote controls that allow you to zoom in on specific areas of the screen. And some come with the capability to let you make marks (electronic) on the screen when you move the mouse — kinda like the sports guys who draw those lines showing you the football plays. What will they think of next?

I suggest connecting one converter to a TV on a rolling cart and having it available on a checkout basis for individual classrooms. Please note that the audio portion of your program can be heard through your computer, so external speakers might be a nice addition as well.

These converters are manufactured by a number of different companies and have names like TelevEyes/Pro, TVAtor, AverKey, PresenterMac/PC3. They range in price from $150 to $500.

The AV Mac

If you have an AV Mac, you don't need a converter to use your TV as a monitor. Simply run a cable from your Mac's Video Out jack to your VCR's input jack. Do the same with the sound cable.

Now here's the tricky part: Open the Monitors control panel and click Options. You see a special box of options. Choose Display Video on Television and Flicker Free Format. Click OK. A warning dialog box appears. Click Switch. In a few seconds, your monitor goes dark — and the image appears on your TV screen!

Understand that the picture won't be all that clear. The Mac's monitor is of much higher quality than most TV screens.

A License to Use

I always start the year by giving the class an overview of the care and feeding of our Mac. I explain the basics and how I expect the students to treat the machine. Don't be afraid to discuss the cost and privilege of housing a computer in your classroom. Finally, I set up consequences for those who aren't capable of following the rules.

At the end of our training, I have each child show me that he or she can function independently on the Mac. Each student should be able to do the following:

- ✓ Open and close a program
- ✓ Save work to a disk
- ✓ Open work saved on a disk
- ✓ Print
- ✓ Shut down the computer at the end of the day

Then each child is given a *computer license* (which can be suspended, if needed).

Use screen shots as teaching tools

Don't worry, a screen shot doesn't require any fancy photo equipment. Your Mac has everything you need! Taking screen shots and then printing them is a great way to create software reference materials, center activities, and step-by-step instructions. A screen shot is just what it sounds like, a picture of what you see on your screen.

- ✓ If you have System 7.5 or earlier, press ⌘-Shift-3 and you'll hear a sound that really mimics the sound a camera makes as it takes a picture. After that, a new file — named Picture 1 — appears on your hard drive. I suggest that you name the pictures you take as soon as possible. Otherwise, you'll be opening and closing pictures just to see what they contain. The screen shots taken using this method capture the entire screen.

- ✓ If your computer has System 7.6 or higher, you have more-refined screen shot capabilities. Take a picture of your screen by pressing ⌘-Shift-4. When you do this, crosshairs appear that you click and drag to select the region of the screen you want to save as a screen shot. Or, if you press the Caps Lock key, a bull's-eye appears and you simply position it over the window you want to capture as a screen shot and click the mouse button, and the computer will only save that window as a screen shot.

- ✓ My favorite screen capture software is FlashIt (Nobu Toge), a little shareware program you can download from the World Wide Web or America Online. This program gives a variety of options for selecting what you want as a screen shot, makes it easy to save and name your shot, and offers a "capture cursor" or "no cursor" in your shot.

The Scheduling Dilemma

I know. How do you determine *who* gets to use the computer and *when?* There is no easy answer to this question. I've tried just about everything. Does everyone get an assigned time? Do they get to use the computer when they finish their work? Do they get to use it when they've gotten a piece of writing through final editing and are ready to publish? All these options are viable, but I believe this choice should be up to each teacher. Just don't let the computer sit unused. Develop a system that works for you while — at the same time — you allow maximum usage of the computer.

Assigned times

In theory, this idea sounds great. Every child gets an assigned time on the computer every day. However, in practice, this strategy is hardly feasible. The average school day is $6^{1}/_{2}$ hours long. Now take out 30 minutes for lunch, 30 minutes for recess, 30 minutes for art, music, or PE — along with the 30 minutes wasted getting into class and getting ready for buses — and you are left with only $4^{1}/_{2}$ hours of actual classroom time. You would have to pair the students up and assign each pair a 15-minute time slot in order to accommodate the entire class.

But what about the introduction to the language arts lesson that you want everyone to hear, or the crucial math lesson? And there's always the spelling test on Friday mornings. Each of these little side trips takes someone away from computer time. Believe me, you won't hear the end of the when-can-I-make-up-my-time-on-the-computer questions. And this is at the elementary level. More than likely, high school and junior high teachers see a new batch of students every 45 minutes!

An assigned time sounds great in theory, but it's difficult to make the notion work unless you have a small class.

When you finish your work

This strategy sounds feasible. However, gifted Anna, who finishes her work in ten minutes, is on the computer every day — and she has a Mac at home — whereas Susie, who is slower, never seems to get time on the computer and really could use the reinforcement. I just hate these dilemmas!

As a publishing center

I use the computer as an extension of the writing process — an incentive for the students to finish a written piece of work. I require that writing is ready to be published before the kids go to the computer, and then I have a variety of possibilities for publishing (Newspaper, The Writing Center, Book Version EasyBook, Slide Show, Kid Pix 2, Report, ClarisWorks, and Multimedia HyperStudio). Usually, students are at different levels of the writing process, and we don't get too backed up, but I have a sign-up sheet ready if needed.

Use a chart

A pocket chart sometimes works well to make sure that everyone gets a turn on the computer. Place cards with student names on them in pockets on the chart. After children have had a turn on the computer, they turn their cards over so that their names don't show. When all the names are turned over, you flip the cards and start the rotation again. You might try keeping an egg timer at the computer and designating a certain time limit for each visit. (Try not to make it less than 30 minutes.)

These kits are incredible!

Tom Snyder Productions has created a number of all-inclusive kits that work great in the one-computer classroom. Most of the kits include workbooks to go along with the theme, as well as very detailed teacher's guides. The computer serves as an information disseminator and receiver. As the students work through the lessons, the computer also serves as a guide and keeps track of progress based on the data students enter.

This concept shows the students that the computer can't do all the work — they have to find and enter the information themselves. The cooperative learning and classroom discussions created through the use of the programs are well worth the (very reasonable) price!

One of my favorite kits is Decisions, Decisions: The Environment. In this program, the students are given a real-world problem to solve. The students work in teams. By reading (yes, from paper!) the advice of experts, the students decide on a course of action. They then enter their decisions, and the computer in turn gives them feedback and guidance. The computer also gives the students consequences based on their goals and the actions they decide to take. In the end, the groups are given a score based on their decisions — and the impact of those decisions on the community.

Other topics in the Decisions, Decisions series include: Urbanization, Violence in the Media, Colonization, and Revolutionary War.

Call Tom Snyder Productions at 800-342-0236.

Numbered cups

Divide the school day into numbered blocks of time. Label plastic cups with corresponding numbers. Then, using a class list to keep track, place the cups on students' desks to show who will be using the computer that day and at what times. After completing their turn on the computer, the students place the cups on the teacher's desk to be used the next day.

Ask a friend

As you can see, there's no easy way to cure the one-Mac classroom dilemma. One solution is to get your Mac a friend. Find one or two friends who would be willing to give up their Macs for a week or two. Work out some type of rotation where each of you can have a "mini-lab" of computers in your room for a specified number of days. (It's best if you can keep the Macs on rolling carts.) By creating a rotating mini-lab, you could focus your classroom activities around the schedule and have a group of students ready to publish or create a project when the computers make their way back to your room. And by having a larger number of computers, more students have access at a given time.

Students as teachers

We've all heard that teaching others is one of the best ways to learn. I'll never forget the year I was required to teach third-graders all about ancient Egypt! What was first a scary proposition soon became fun. You see, as I taught the subject, I expanded my own knowledge and became a more curious and inquisitive learner.

Why not let students enjoy this same experience. Instead of trying to manage a whole classroom or lab full of technology questions, enlist your own teaching assistants. If one or two of your students are experts with a specific program or even the Internet, let them lend you a hand. This will not only help you but will also build their self confidence, enhance their communication skills, and expand their own knowledge. It also allows the others in your class to realize that students can be viewed as leaders — a nice message.

A Few of My Favorite Activities

I'm giving away a few of my tried-and-true activities with the hope that you take these ideas and use them to ignite that creative spark that I know resides within each and every teacher.

Classroom journal

I first started this project when I was teaching first grade. At the end of each week, I chose one child to create a journal page that highlighted the week's activities. In first grade, a journal page consisted of a detailed drawing and a couple of sentences. I then mounted the journal page on the wall as part of an ongoing timeline. It served as a great visual reference, and the kids fought over who would get to create each week's entry.

With a classroom computer, you can create daily entries and then print them either to hang on the wall or to add to a binder. Let the students add, draw or paint frames to their word-processing documents (or create the journal in one of these environments) and add text blocks.

Ongoing story center

Why not make creative writing entertaining? My kids fight over who gets to make the daily addition to our ongoing "novel."

Here's how I create an ongoing novel:

- ✔ The first day of school, I start a new word-processing document with a simple sentence like, "It was the first day of school, and all the students were a little nervous."

- ✔ Then, as a class, we add on to this story starter — I type as the students dictate. We discuss rules for tasteful entries and decide on an author rotation.

- ✔ The story evolves over the school year and (trust me!) proves to be quite entertaining. Your non-writers will soon be begging for time at the keyboard!

Skill-and-drill review station

This particular idea was custom-made for all the third-grade teachers out there who spend the majority of their math instruction time drilling the multiplication tables. I don't care how creative your teaching methods are, multiplication tables just have to be memorized!

Here's your simple solution (and don't forget that this solution can work with any information that you want students to memorize): Create a slide show of multiplication facts. Keep your slides simple — use a large font and have just the problems on one slide and the answers on the next. Set the slides to advance every five seconds (or sooner) and have the show running whenever you have down time (for example, before the last bell, during bus call, and while lining up for lunch). I know that this idea sounds simple, but just reading the screen and facing the time factor invoke a type of challenge that kids seem to thrive on. Before you know it, they're asking you to speed up the slides, and the multiplication facts are mastered!

Monthly class magazine/newspaper

This is the coolest use of technology that I've ever seen! Your class can create an electronic magazine that highlights individual student achievement. Requiring each student to submit his or her favorite piece of writing for the magazine is a great way to start. From there, create a cover that lists the titles and then add all the titles to a slide show that has a professional look and feel (add complementary colors, keep the backgrounds consistent, and the like). This project really wows parents and instills a great deal of pride in students.

Check out this book!

After your students are comfortable using the computer, why not teach them (and yourself) about the inner workings of the machine? One of my favorite non-techie resources is *How Computers Work* by Ron White. Ron gives simple descriptions that are easy to understand. However, the best part of this book is the illustrations. The breakaway style drawings show the guts of a mouse, a monitor, a disk drive, a CD-ROM drive, a printer, a modem, and much more.

Research base/project planner

Lay out an upcoming project on the computer and then, as information is gathered, check off your progress and start creating a class database to record information or a spreadsheet to check off class progress. I start out with a great outline. Then I add a spreadsheet that works great for creating a combination checklist and schedule in order to keep track of specific aspects of the project, along with their completion dates. Last, I set up a database where gathered information can be entered. When the time to get started on the end product arrives, my students have all the information that they need, right in the classroom. Even if the final product isn't going to be a report or slide show created with ClarisWorks, having the necessary information in the classroom is a great help when creating a poster, diorama, or display.

Tips for the one-computer classroom

✓ Always hold whole-class instruction on any new software you intend to have available. Your goal is for the students to work independently while at the computer.

✓ Include keyboarding instruction or drills for the first five or ten minutes of a student's visit to the computer.

✓ Never allow students to transport the computer to or from another classroom.

✓ Never allow the students to eat or drink while working at the computer.

✓ Display student work that's been done on the computer. This shows the rest of the school (including PTA members and principals) what a great thing the computer is — and it may convince someone to spend more money!

✓ Keep track of who has time on the computer. Make sure that everyone gets a chance. You don't want children or parents to complain about (lack of) time on the computer.

✓ Encourage the use of spell-check and thesaurus features found in most word-processing programs. This is a great way to incorporate language-arts instruction — and it helps perfect the students' writing.

✓ Above all, don't forget about yourself. Get on the computer and use it!

Chapter 16

The Mac Lab

○ ○

In This Chapter

▷ Networking

▷ Printing savvy

▷ Lab management

▷ Software solutions

○ ○

*I*deally, every school should have at least one Mac lab. Two or three would be even better! If your school has a lab, I hope this chapter gives you a few new ideas or insights — and if your school doesn't have a lab, maybe this chapter can help you develop a plan to create one in the future.

The Computers

Well, of course, if you're going to create a computer lab, you need computers. Don't wait until you have one computer for every child in a class to create your lab. I've worked in schools where students had to double up on computers, and they did just fine. As a matter of fact, their creative writing became *incredibly creative* when they worked together.

A miniMac lab works well for small groups of children. Many schools create these smaller labs in their media centers. As interest and funding grow, these labs can increase in size and eventually move to larger areas.

Networking

In simple terms, a *network* exists when you connect any two or more computers together. Businesses use networks to connect hundreds of Macs at a time. This setup allows computers to share files and send e-mail messages to one another. In the school setting, the major reason for creating a network is to be able to share printers. There are two types of networks: a Wide Area Network (WAN) and a Local Area Network (LAN).

  ✔ **Wide area networks** can exist within a single school or connect all the schools in a system or state.

  ✔ **Local area networks** are usually local to a building and are easy to create when you're working with a group of Macintosh machines. You see, all Macs come with a built-in networking system called LocalTalk. LocalTalk does have its limits: You can only have up to 30 devices (computers, printers, scanners, and so on).

Connecting a network is best left to professionals. If, however, you want to try a little networking on your own, check out *More Macs For Dummies,* 3rd Edition, by David Pogue.

Printers

The printers in your lab are a vital component. Consult Chapter 4 for info on the various types of printers available. What I give you now are a few tips on using printers in the lab setting.

  ✔ Don't allow students to always print in color. This practice becomes costly when the lab is being used daily by five or six classes. Save color for those special creations.

  ✔ When setting up your printer, be sure to check *background printing* — which simply means that, after you press Print, you can continue working on your computer while the printer prepares your document. If you're not sure whether or not background printing has been enabled on your printer, choose Chooser from the menu, click on your printer's icon, and then click the On button beside the Background Printing choice (as shown in Figure 16-1).

  ✔ If students print each time they visit the lab, using a laser printer in the lab setting can prove to be costly as well. Replacing the toner cartridge in a laser printer can cost more than $75.
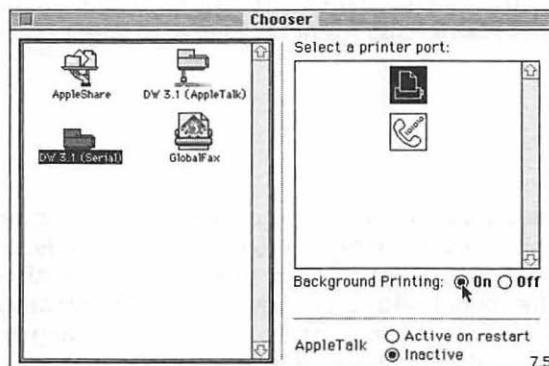
Figure 16-1:
Setting up
background
printing.

✔ When using paint programs like Kid Pix Studio, discourage the use of solid background colors if the pictures will be printed. The printer uses up loads of ink as it fills in that background. (Don't limit the use of anything if the pictures will be part of an on-screen slide show!)

✔ Purchase enough printers to have at least one for every four or five computers. Otherwise, you spend the last 15 minutes of lab time waiting for everyone to finish printing.

Lab Management

So you have the lab, the computers, and plenty of printers. What comes next? A good plan for use and management is a must.

Staffing your lab

I'd like to see every lab staffed by a certified teacher. In today's financial crunch, this may not be realistic, so a teacher's aide or parent volunteers with extensive computer training might have to suffice. Just make sure that whoever runs your lab is ready to answer basic computing questions and troubleshoot when problems arise (or at least know where to call for the answers).

Technology Coordinators

These positions are popping up at the local school level all across the country. In my opinion, the creation of these positions shows incredible foresight on the part of the administrators at each school. The responsibilities of the technology coordinator should not include working in the lab and seeing classes during the entire school day. Instead, the technology coordinator should be free to do the following:

✔ Train staff members on computer hardware and software

✔ Develop lessons that integrate classroom curriculum with technology

✔ Conduct small-group instruction with students

✔ Preview new software and hardware

✔ Attend technology conferences and workshops

✔ Troubleshoot problems with lab and classroom computers

✔ Keep administrators and the community informed on local technology activities

✔ Create long-range and short-term technology plans and goals for the school

✔ Oversee the technology budget

✔ Recruit, train, and schedule volunteers to help in school computer labs

Making the lab teacher's life easier

The lab teacher's life can be improved in a number of ways. Many of these adaptations are focused on maintaining student behavior so that the lab teacher can instruct without complications. To a student, a computer is as much fun as recess — and that level of excitement needs to be maintained while learning new facets of technology usage.

The following is a list of things that help the teacher maintain a little control while still feeding the enthusiasm of the students:

Invest in a desktop-protection program

Such programs include At Ease (Apple, $29 for single use) or FoolProof (SmartStuff Software, $39 for single use). Both programs allow you to protect items on your hard drive. At Ease is good for young children who don't need to see the desktop. (A file folder with buttons for each accessible program covers the entire desktop.)

I prefer FoolProof because it has easy ways to set up folders for students' saved work — which isn't quite as easy with At Ease. Both FoolProof and newer versions of At Ease allow you to see the Finder.

Consider a keyboard-locking program (if your lab is networked)

Purchase ScreenShare (White Knight Software, $249 for lab site), which allows you to lock the student keyboards as you broadcast a program to all the computers for instructional purposes. This setup encourages students to pay attention instead of working ahead or experimenting on their own. (See the sidebar "ANAT: Apple Network Administrator Toolkit" for a description of the most popular new management program in schools.)

Create open communication with teachers

Come up with a system that keeps the lab teacher informed about classroom curriculum at each grade level. Use this information to plan lab activities for the students. We all know that students take away more from an activity when the learning is relevant to — or an extension of — previous learning in the classroom.

Schedule your lab wisely

Lab scheduling is an important subject, and one that causes great conflicts in most schools. Some prefer to have an open sign-up system (first come, first served); others distribute vouchers that allow teachers lab time (when your vouchers for the month are gone, you can't go); still others use the lab as a special-area class (like art, music, or PE). My only advice is to meet as a school and come up with a plan that best suits the individual environment — just make sure that the computers are always being used!

Set aside time for lab maintenance

I shut down the labs within my school one or two days during each grading period. I then use this downtime to clean the computers (vacuum, dust, wipe down screens) and "clean up" the hard drives (make sure that strange files haven't found their way onto the hard drive and that saved work is located in the correct place).

I also use this time to run Norton Utilities, a diagnostic program that gives my computers a thorough "check up." If this program does find a problem, it can usually make any necessary repairs.

ANAT: Apple Network Administrator Toolkit

Little Johnny is having trouble with a computer program. He's on a computer across the room, or maybe even in another room. On your computer screen you're able to pull up what's happening on his screen, speak into your Mac's microphone to give him verbal directions (yep, he hears it on his computer's speakers), and even control his screen from your own screen to show him how to solve his problem. Sounds like something out of a science fiction movie, right? Well, if you have a networked Mac lab, this can be a reality.

The Apple Network Administrator Toolkit software is what makes all this magic happen. It has the applications you need to control and manage all the systems on your network from a single point. The Toolkit includes At Ease for Workgroups 4.0 software to protect your applications, documents, CDs, and system settings; Apple Network Assistant software to manage a group of networked Macintosh computers from a central location; and Apple User and Group Manager software to save you time and effort by letting you consolidate user lists from multiple sources. The features are too numerous to mention here, but let me tell you, it's worth looking into.

Software Selection

Personally, I'd go the productivity route. You can accommodate all grade levels and all subject areas — and you can meet those needs with a minimal amount of software. Yep, I'd say two programs (lab-pack or site-license versions) would do just fine.

Robinette's Recommendations:

- ✔ Elementary — ClarisWorks and Kid Pix Studio
- ✔ Middle — ClarisWorks and HyperStudio
- ✔ High — ClarisWorks and Persuasion

Of course, you could add to your collection as time and money become available. I suggest becoming a master of a few really good programs before you go out searching for more ways to spend school money. Turn to Appendix B for my software picks broken down by type, grade level, and subject.

Create a little stationery

Wouldn't it be nice if you didn't have to walk students through the setup or design of a particular project you have in mind and could, instead, get them started right away on an intended activity? You know, have the heading already created, the font style and size chosen, special margins set, and other formatting options already established. This can be a reality, if you create a stationery pad of a document. Here's what you need to do:

1. **Create the document you'd like each student to access and save the document. Close the program you used to create your document.**

2. **Select your saved document (click on it once to highlight).**

3. **From the File menu, choose Get Info.**

   When the Get Info window pops into view, you see a box in the bottom right-hand corner that's titled Stationery pad.

4. **Click inside that box and an X will appear.**

   You just turned your original template into a stationery document — you notice that the icon representing the document now looks like a pad of stationery.

   The first time a student opens your newly created stationery document, a window comes up asking him or her to give the document a name. You see, the original remains the same, and the student has a personal copy.

   Note: If you're using ClarisWorks, you can actually choose to save your work as a stationery pad from the ClarisWorks Save window (the window that appears when you choose Save from the File menu).

Chapter 17

So How Do I Pay for All This?

● ○ ●

In This Chapter

▷ Show off in front of the right people

▷ Create a circle of informed friends

▷ Beg like a child

● ○

*I*f you've gotten this far in the book, or just turned to this chapter because you're curious, I know that you are a believer! Now I want to share with you some ideas for getting others around you involved and excited — including your local administrative-types. After you've convinced some of those "significant others," it's easier to get them to open up the checkbook and fund your cause.

Show Off Your Computer Prowess

You know it's working, the kids know it's working, so now tell the rest of the world! Keeping your local community informed is one of the best ways to get the things you want for your school.

Parents and other taxpayers have ways to get what they want from a school system by simply flexing their my-taxes-pay-your-salary muscles. For example, Tommy (fictitious name, of course) fell on the playground one afternoon and ended up with a pretty bad scrape on his knee (no stitches or anything, just a little blood). Well, the next day his father was up at our school bright and early walking around on the playground. He then came inside and informed me and my principal that his son would never have been hurt if there weren't any rocks on the playground. He then left in an angry huff, and we all had our little silent giggle — let's see, the playground's outside, there are rocks outside. . . . Anyway, the next day the county had a crew of six — yes, six — men out on that playground picking up rocks. You

see, Daddy had flexed those my-taxes-pay-your-salary muscles and called the district office, which resulted in another waste of taxpayer money to pick up less than a wheelbarrow full of pebbles. For what the county had to pay those workers, I probably could've bought a printer or two for the lab.

So let's try and redirect some of that taxpayer muscle by participating in some of the following activities.

Put out a press release

If your class just communicated with students in Russia on the Internet, put out a press release.

If little Susie's slide show won an award at a technology conference, put out a press release.

If 95 percent of your faculty participated in a technology fund-raiser, put out a press release.

Get the picture? You may not always get coverage, but more than likely you'll at least get a little blurb and picture in the local paper. What may be ho-hum to you may amaze your fellow taxpayers. Amazement gains recognition . . . and recognition gains respect for your program. And remember, a little respect goes a long way when budget time rolls around.

Let Apple give you a hand

Stop what you're doing right now and dial this number: 1-800-365-7080 ext. 200. When you call this number, Apple hooks you up with an Apple operator who sets you up with everything you need to conduct an Apple Family Computing Workshop. The kit they send comes complete with a script, demo CDs, and workbooks! I used the kit as part of a PTA meeting where we had mini-workshops on a variety of topics . . . including technology. To say the least, my workshop was the most informative and most popular.

Workshops like this inform and entertain and let parents in on the mystery we call technology. When they're informed, parents are usually more than willing to back you and your school technology pursuits.

Teach afternoon classes

Yeah, I'm sure most of you are already either teaching or taking part in a computer-literacy class. But have you ever thought of making it available to parents in your school . . . free of charge? Lots of adults out there are eager to learn about computers, yet they're intimidated by the whole idea. Why not give them this opportunity? When they get excited (and, believe me, they will), they're going to be some of your biggest supporters. You won't have to convince the PTA to help pay for your online service or buy the laser printer you really want for the teachers. The parents will be so into computers, they'll be coming to you asking what you want them to buy next!

Use school newspapers

This one is easy. If your PTA puts out a monthly newsletter, ask for a small amount of space for a technology column. Use this space to brag about the students' accomplishments and tell about goals for the future of the technology program.

Another great newspaper idea is to have a school newspaper staff. Using the computer to create the newspaper is an education for the students. Within the paper you might have a section in which you highlight "technology stars of the month." In this section you could talk about teachers around the school who are doing great things with their computers. (We teachers love to see our name in print; recognition is so hard to get these days.)

Technology week

This week of recognition usually falls in February. It's actually perfect timing. Everyone's over Christmas, bored with winter, and anxiously awaiting spring break. Why not add some excitement by creating a week-long celebration of technology? Invite local merchants and professionals to give presentations on ways in which they use technology.

This strategy accomplishes two goals: It lets the kids see how technology is important for their futures, and it ushers those oh-so-important taxpayers into your building, thereby raising their awareness of what's going on at the local school level. Many companies end up volunteering services or supplies after they see how involved your program has become and how much you still need to make it complete.

Remember Your Friends

Don't become isolated from the rest of the world. Don't try and reinvent the wheel, as they say. I've learned more from my fellow technology coordinators than I could have ever learned on my own. Here are some great ideas for sharing with colleagues.

Throw a software party!

That's right, invite anyone who's interested to come and "play" with your new software. Only remind them of the importance of sharing when we play with our friends and require them to bring along some of their "toys." This activity is loads of fun, and it's a good way to get a look at some of the new programs you may be thinking about buying.

Have a document exchange

One of my good friends at another school came up with the idea of sharing our creative talents by putting these creations on a disk and sharing them with each other. Once a month he sends out a memo announcing a theme (forms you created, workshop ideas, Kid Pix lessons, and so on) and asks everyone to send him samples (on disk) along with one blank disk. He then compiles all these samples and sends you a disk with everyone's best work.

Remember: Only share *documents* you created, not software. It is illegal to copy software.

Create a software trailer or office

At my school district's main office we have a trailer full of software to be checked out for preview. It's a great deal! Most of the software was given to us by the various companies in hopes that — after previewing — we'd decide to make a purchase for our school. Most of the really big companies are eager to send you their stuff.

Develop a technology center

This project is one of my system's goals. Plans are underway to construct a center that will house the latest in technology. Much of this work is being done in conjunction with Apple and IBM. These companies will keep the center equipped with their current products and provide training to the

center's staff. This center will be open to the public and will be available for teachers to visit individually or as a group for training. Eventually, I'm sure that the software-preview trailer will be incorporated into this same facility.

Okay . . . You Want Cold, Hard Cash!

Yeah, yeah, yeah, everyone's informed now, and maybe a few dollars or supplies have come your way — but you want the big bucks, you say? There are ways to make money for your school without having to beg or show off.

Sell blank disks

At my school, a blank computer disk is part of each student's basic supply list. Most families don't want to go out and buy a box of ten disks just so their children can have one to bring in to school. So, before registration day, buy boxes of disks and have individual disks for sale when the kids come to meet their teachers. I sell the disks for $2 each (you can get a box of 30 for around $15). All the money I make from selling the disks goes towards ink and toner cartridges for the school printers, software I want to purchase, or time off for teachers to take technology staff development courses.

Hold summer computer camps

The week after school's out, we hold a half-day camp for students. We have a morning and afternoon session, and parents provide the transportation. I love this idea because, unlike the school day, I get to work with the kids for an extended period of time, and we can get into more-involved projects on the computer. We charge $50 a child and usually have a waiting list. Some schools turn the camp into an all-day camp and rotate the kids between computers and tennis or basketball instruction. This is a fun and easy way to make a couple thousand dollars for your technology program.

Schedule after-school clubs

This idea works something like summer camp, except that you meet with a group of kids once or twice a week. Parents like this one, too, because it gives them some time to regroup before picking up their kids — and the cost is minimal (we charge $8 a week for one two-hour session). That may not sound like much, but if you get 10–20 kids a week, that money helps buy paper, disks, and ink cartridges when you need them.

Seek parent donations

When we chose America Online for the school's access to the World Wide Web, we didn't have the funds to pay the account up front. So we devised a plan to offer access only to the fifth-grade students and ask their parents to give donations in order to get the service up and running for this first year. Believe it or not, it worked. We not only received enough to prepay for one year's service, but we also had a little left over to buy additional time if we needed it.

Do a fund-raiser

Sell something, sell anything! Any number of fund-raiser companies will come to your school and show you their wares. The percentage you make off each sale is usually pretty substantial and well worth the month-long headache of arranging the whole deal.

Use Your Word-Processing Skills

You're surely a master by now. So put those skills to work and round up a little dough!

Write a grant

Every year, millions of dollars in grant money goes unclaimed. I do know schools that have received huge grant awards. It's pretty incredible thinking that you could get thousands of dollars just for writing a big, thick document. Many books on grant writing are available, and I've seen a new flood of classes on the subject. If you have the time (ha, ha!), it's worth a try. America Online has a Grant Information Center in their Scholastic Network area. The grant information is updated on a regular basis (keyword: **SN GRANTS**).

Find a corporate sponsor

What is it they say? "It never hurts to ask." Write a big company and, once again, show off. Tell them about your incredible pursuits and how the company's sponsorship would enable you to reach new heights. One school in my district has a division of Apple as their sponsor. They get all the new "stuff" when it comes out, and in return, they act as a test audience. Another school has a local department store as a sponsor — and they've gotten all the video supplies for their multimedia pursuits *absolutely free*. I'm sure it's a big fat tax write-off for the companies, so give it a try!

Chapter 18

Other Cool Stuff You'll Want to Buy

● ●

In This Chapter

▶ All the extra "stuff" everyone wants to buy

● ●

*T*here's never enough time to include it all. You know what I mean — the bell's about to ring, and you realize (once again) that you didn't make it to that health lesson. Why is health so hard to work in? Anyway, all the "extras" mentioned in this chapter are just that — extras that aren't necessary but that would be really great to have. Now that you know the basics, adding these things to your technology inventory should be simple and fun.

Scanner

A *scanner* takes a picture of something and then puts it on your Mac's screen. After that, you can manipulate it any way you want (what control!). This means you can crop, erase, add to, copy, and paste.

Scanners look and act like the copy machine you probably have sitting in your work room — only they're a lot smaller, and paper never gets jammed inside. You can also find smaller handheld scanners (they're sometimes awkward to operate, though) and neat little photo scanners that accommodate a regular size photo.
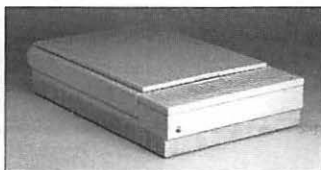
What's it good for?

The uses in the school setting are incredible. You can scan a copy of Johnny's first story and then copy it into Kid Pix, where he can add his own illustrations and print it for Mom. Or better yet, get involved in that portfolio

idea we (and the whole world) discussed earlier, and keep Johnny's work in an electronic portfolio that's easy to pull up when Mom or Dad comes for a conference; the electronic portfolio takes up a lot less space than that milk crate with hanging file folders.

Another neat thing to do is scan photos or newspaper clippings to incorporate into text files. Why not add that scanned photo of your principal kissing a pig at the fall festival to the school newspaper you create with The Writing Center? Or the graph from the newspaper clipping showing the incredible jump in test scores since your school devoted more time and money to technology pursuits?

Cost?

Flatbed scanners can be bought for as little as $400, or they can run as high as $5,000, depending on the quality of the image you desire. Handheld and photo scanners are a good bit less — usually under $300.

The higher the *dpi* (dots per inch), the better the scan appears on the printed page. That's because the image is digitized into bunches of little dots, and the closer the dots are together, the clearer your scan will be.

PaperPort to the rescue

If you have a fax/modem, you have the ability to fax anything from your computer screen. Simply hold down the Option key before you go to the File menu. When you do so, you see that the Print option is replaced with the Fax command. Then it's as simple as typing in your fax number and possibly adding a cover sheet.

What's difficult is trying to fax a hard copy that wasn't created on your computer. I don't own a scanner, so I can't just scan the image and then fax it, but I really don't need a full size fax machine. That's why PaperPort is such a neat invention. The PaperPort by Visioneer ($200) fits neatly between your keyboard and monitor (much smaller than a flatbed scanner)

and looks something like the paper roller part of an old typewriter. You simply slide your paper into the front of the PaperPort, and the image on the paper is scanned. After the image appears on your screen, you can fax it out to someone, file it with other papers, or edit it.

Digital Camera

All the schools in my area are buying digital cameras as fast as they can come up with the money. These neat machines fall into the "who'd have ever thought of it" category. These cameras work like any other (only no focusing) — but they don't use film! Most models allow you to take between 30 and 96 pictures (in color!). The pictures are saved in a digital format and then downloaded into your Mac by simply connecting the two with a serial cable. It's *très* easy and fun, fun, fun!

After you load the pictures into your computer, you can crop them, rotate them, scale them larger or smaller, and even zoom in on specific areas. And, of course, you can import these pictures into any of your other applications.

What's it good for?

Are you kidding? Take a digital camera on a field trip and then come back to create a presentation showing everything you did and learned. Or have the camera with you at the PTA performance and then use the pictures in the PTA newsletter. An electronic class scrapbook or diary can be enhanced with the addition of a few photos showing the highlights from the school year. We use a digital camera to take pictures of the kids who are having a birthday; we then import these into a slide show we run just before we broadcast the morning announcements on closed-circuit TV.

I'm sure that by this point, you've already thought of a few more ways you could use a digital camera to meet your own needs.

Cost?

Like scanners, the price of a digital camera depends largely upon the clarity of the image it creates and what bells and whistles are included. The most popular camera used in education is the Apple QuickTake 200, which currently lists for about $560. I know others who swear by the Casio QV30 and the Kodak DC40. Both cameras allow you to take more pictures than the QuickTake 200, and the Casio QV30 has a viewfinder that allows you to review images before downloading them into your Mac.

Too cool and too cheap to pass up

Connectix makes an affordable ($99 black-and-white; $200 color) alternative to the more-expensive digital cameras. It's called the QuickCam. This little device is a round ball (about the size of a billiard ball) that sits on a triangular base. The QuickCam can take both video and still shots.

I must mention a few limitations, however. You can't take this camera on the road (unless you have a laptop). Unlike the very portable QuickTake, the QuickCam must be connected to a Mac in order for you to operate it. Also, the pictures taken with the QuickCam aren't nearly as clear as the QuickTake — but the price is definitely right!
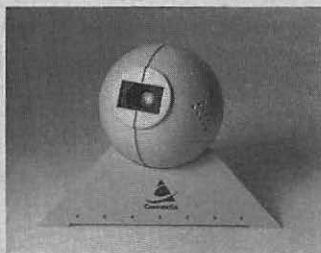
TouchWindow

This device allows children to do what we're constantly telling them not to do — touch the screen. A *touch window* is simply a screen that attaches to your computer monitor, and when you touch the screen, the computer picks up on the response as if the mouse had been clicked. By touching the screen, children can make selections, move objects, pull down menus, and even draw graphics.
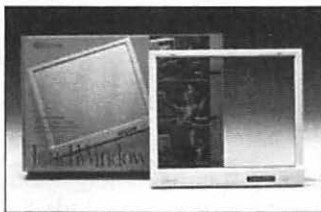
What's it good for?

The TouchWindow is ideal for special-needs children who may have limited fine motor skills or mobility. It's also great for preschool and kindergarten children who may not have had exposure to the computer and are not familiar with the mouse.

Before we purchased this device, our special-needs children weren't able to use the computer. Now, they love using the Brøderbund Living Books and other interactive titles.

Cost?

The TouchWindow is made by EdMark and costs $300.

PowerBook

I want one. I want one. I want one. I'm sure everyone has seen a laptop computer by now, and you probably think that they're mainly used by business types on airplanes. Well, that's the way these small wonders are portrayed in commercials and magazine ads. However, the laptop is making huge headway in the education business as well.

Apple makes many different models and sizes. They come with different configurations (speed, RAM, and hard-disk space), and you also have the choice of color or black-and-white screens. The price range varies considerably based on the features you desire.

A laptop doesn't have to be plugged in, thus making it portable. That's the whole deal. Once charged, most laptops run for about three hours before they need to be recharged.

What's it good for?

Well, if you had a laptop at home and purchased some of the same software you had at school, you could take things home to edit or create. You could even enter grades on your gradebook program while sipping Kool-Aid on the deck as you watch your kids play.

Some schools are buying laptops for teacher checkout. Isn't that kind? They know they don't pay us enough to be able to purchase one of our own, so they give us loaners — it's really a wonderful idea.

I've also heard of schools purchasing class sets of laptops and storing them on a rolling cart with a printer. This makes it easy for teachers to roll the cart to their classrooms and have their own labs for a period of time — an appropriate alternative these days when so many of our schools are overcrowded and space for computer labs can only be considered after regular classrooms have been created.

Cost?

You can get a black-and-white PowerBook with 8MB of RAM and a 500MB hard drive for under $1,000 through mail-order houses. Or you can go for it and get a PowerBook with a color screen, tons of memory, and lightning speed for around $2,000. (I'll probably have to settle for something somewhere between the two.)

So you want to buy a computer

Memorize this number and call it at least once a month to check prices: 1-800-959-2775. This number connects you with the Apple Educator Advantage program. It's a great deal. As long as you're a teacher, working at least 20 hours per week, you're eligible for great discounts on a select group of Apple computers. The inventory and the prices are always changing, so it's worth calling before you rush out to the local computer superstore. On the other hand, I admit that I *sometimes* see better prices in local stores.

PS: Apple even offers a reasonable financing plan!

Apple Presentation System

The Apple Presentation System allows you to use your television as a monitor. Imagine being able to teach students a new program as they view it on your classroom television.

What's it good for?

If you're in a one-computer classroom, you know how difficult it is to teach a new program to a group of students crowded around one small computer monitor. Being able to transfer that image to a television makes using the computer as an instructional tool an easy feat.

My favorite use for this technology requires that you have a VCR hooked up to the television you're using. Believe it or not, some families have yet to purchase their own computers, which means that parents aren't always able to view the cool slide shows and multimedia presentations their children

create. By recording what appears on the television screen, you can send home a VHS tape of a computer presentation. Isn't that cool? One teacher in my school combined different computer clips from the entire year, added some live video, and had multiple copies made as end-of-the-year gifts for her kindergarten students!

Cost?

Call your local Apple dealer to see whether adding an AV card is a possibility with your specific Mac model. If you choose to go the Apple Presentation System route, it'll cost about $250.

Trackball

A trackball is something like a mouse turned upside down and placed on a stationary base. You move the cursor by rolling the ball that sits on the top of the base. Clicking is accomplished by pressing a button that's located on either side of the rotating ball.

What's it good for?

Some folks just never get the hang of mouse manipulation — especially younger students. Microsoft even makes a trackball for the younger set that has a ball that's about the size of a grapefruit (currently for PC users only). It's all a matter of personal preference and getting something that works best for your students. I have a few friends who swear by trackballs and think a mouse is just a waste of time. I still prefer my mouse, thank you.

Cost?

Trackballs aren't an expensive add-on. The price can range anywhere from $25 for a very basic model on up to $80 for a trackball that enables you to program its buttons to automatically perform certain tasks (such as save, print, and close).

Digital Tablet

These tablets come in a variety of different shapes and sizes and look something like a thick sheet of heavy-duty plastic. The surface of the tablet is loaded with tiny sensors that track the movements of a special pen as it moves across the tablet. Most of the newer tablets enable you to adjust the amount of pressure required to register an image, which is a nice option when working with children. The pens can be cordless or attached, and some can be programmed to perform keyboard shortcuts. Many of the tablets also come with neat beginner's drawing programs.
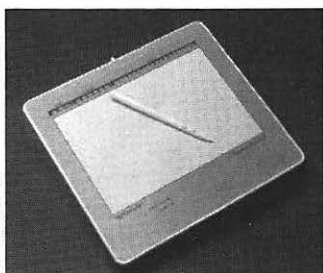
What's it good for?

Kids seem to like the tablets because they can really "draw" instead of trying to draw with a mouse or trackball. I think each school should have at least one tablet. Most of the tablets are sensitive enough to allow you to trace over a sheet of paper.

Cost?

The prices vary depending upon the size of the tablet. A 4-x-5-inch tablet can cost $450, and a 12-x-12-inch tablet can cost as much as $850. When you're shopping for a tablet, check out the features: Is the pen cordless? Does the pen have an eraser feature? Does any software come bundled with the tablet? What are the pressure levels of the tablet? Can you custom-set the pressure sensitivity to meet your students' needs? Can you program the pen with corresponding keyboard shortcuts?

Headphones

Whether you're in a Mac lab or in a one-Mac classroom, you need to buy headphones. My Mac lab instructor found some at one of those "dollar stores," and we bought out their entire stock! Don't spend tons of money on something that's bound to need replacing before the end of the school year.

What's it good for?

Sanity. It's pure and simple: What you can't hear won't drive you crazy. Well, I guess the fact that your students can concentrate on what they're doing, instead of listening and watching their neighbor's computer, is another plus.

Cost?

I said it before, and I say it again: If you're buying for your school, find the cheapest headphones you can! If you're buying for your own personal use, headphones range from $1 (my personal favorites) all the way up to $40.

Zip Drive or Jaz Drive

These cool little external hard drives are lifesavers. Let's face it, there's bound to come a time when you're going to want to share some of your computerized creations with friends. But guess what? Your cool slide show probably won't fit on your trusty old floppy disk. What's an educator to do?

Well, you could buy a standard external hard drive, but after its space is filled, you're shopping for another one. Or you can buy one of Iomega's cool cartridge drives. The drive doesn't store all your information inside like a standard external hard drive would. Instead, your information is stored on little cartridges that are about the size of a regular floppy, only thicker. The cartridges for the Zip drive hold 100MB of information, and the cartridges for the Jaz drive hold 1GB of information.
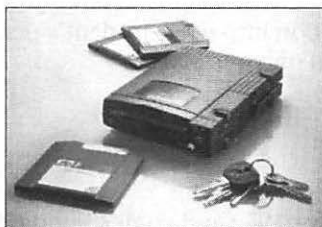
What's it good for?

Because you can keep buying new cartridges as you fill them up, you have constant access to high-capacity, portable storage. I take my Zip drive with me when I go to other schools or to conferences. Doing so allows me to share my kids' great creations as well as copy inspiring works offered up by my colleagues.

Cost?

The Zip Drive retails for $150 and comes with one cartridge (100MB). Extra Zip cartridges will run you about $13 each. The Jaz Drive retails for $399 and comes with one cartridge (1GB). Extra Jaz cartridges cost $90 each.

Newton MessagePad 2000

This little device enables you to easily download handwritten notes, data, and other information into your Mac at a time that's more convenient. The MessagePad is smaller than a standard steno pad and comes with a pen for entering information with "digital ink," or you can use the on-screen keyboard. The MessagePad can even recognize *my* handwriting, so I know its character recognition skills are top-notch.
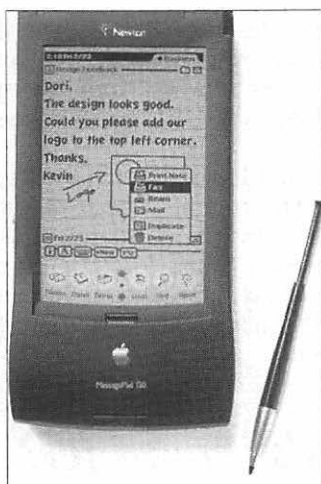
What's it good for?

Many teachers are already using the Newton to take anecdotal records on individual students, make personal notes about classroom performance, record grades, and much more. Aurbach and Associates, the company that created Grady Profile Portfolio Assessment, recently released Grady Profile Companion, a software package designed especially for the Newton MessagePad. Using the Grady Profile Companion with your MessagePad enables you to easily keep track of individual student performance and later download the information into each student's personal portfolio on your Mac.

Cost?

The Newton MessagePad 2000 retails for $950 and comes bundled with Pocket Quicken and Newton Back-up Utility.

eMate 300

I predict that these clam-shaped, kid-friendly computers are destined to be standard issue in classrooms across the country. The eMate 300 has a built-in full-featured word processor (yes, you can format your text), a drawing application, spreadsheet, graphing calculator, note-taking tools, address book, Web browser (you'll need the optional modem), and a calendar. And get this, it costs around $750 and weighs less than four pounds!

What's it good for?

If your school can't afford a computer for every student (what school system can?), the eMate is the perfect solution. Purchasing a class set of eMates and placing them on a cart with a high-quality printer (or two) is a great way to give the whole class computer access at a reasonable price.

The fact that the product was designed to withstand the bumps and bruises of a child's backpack means that you won't have the worries that come along with students carrying around traditional laptops. The full-day battery life is another bonus. The eMate allows students to enter information via a keyboard or stylus (an inkless pen), and the screen displays the width of a full page. Students can even draw images right on the screen, and these images can be integrated right into their text documents. You can also download your information to a Macinstosh or IBM-compatible computer.

Cost?

The base price for a single eMate is $749, or purchase an 8-pack for $5,599 (a savings of $50 per eMate). Early indications show that this product is being well received by schools, so look for lower prices in the near future.

Fonts for Teachers

I can't begin to count the number of hours I've spent in front of the television — creating handwriting practice pages. If you never taught kindergarten or first grade, you probably haven't dotted row after row of uppercase and lowercase letters or dotted a child's name over and over again. My husband was always questioning if that was really what I spent all that time in college to learn.

What's it good for?

Now, a number of software companies that have developed fonts especially for use as handwriting practice. The fonts come in dotted-line versions, dotted versions with arrows showing which direction the children need to move their pencils, and solid line versions. Most companies have cursive and manuscript versions — a few have even created D'Nealian versions.

The teachers at my school use the solid line versions in 72 point or higher to create name tags, desk tags, labels for items in the classroom, and instructions for centers. These fonts are also great for typing student stories in versions that are easy for fellow classmates to read.

Cost?

Prices vary ($35–$65) depending upon the vendor and the number of other fonts that come bundled with the school fonts.

Here's a list of the companies who make these cool fonts:

- ✔ Primary Fonts (Forest Technologies) 1-800-624-2926
- ✔ Primary Fonts II (Forest Technologies) 1-800-624-2926
- ✔ School House Fonts (Signature Software) 1-800-925-8840
- ✔ School Font Collection (Mountain Lake Software) 1-800-669-6574

EasyPhoto Reader

It's a pint-sized scanner that's just the right size for photographs. Using EasyPhoto takes much less time than a normal scanner — a big bonus. You simply pop the photo in place, push a button, and then watch the photo's image show up on your computer screen. Save the scanned image, and then you're free to use it in any number of applications.

What's it good for?

Your kids might not have access to a digital camera, but I bet that they have a few family snapshots. In addition, you probably take tons of pictures during the school year. Wouldn't it be cool to add your classroom photos to your weekly newsletter, create a slide show for Open House, or create classroom stationery that includes a class photo. Kids can add interesting photos to their reports, posters, newsletters, and other projects.

Note: As an added bonus, this cool tool also comes with software to help you use your scanned photos in calendars, cards, and screen savers.

Let Apple show you the ropes

After more than ten years of research on teaching and learning with computers (Apple's Classrooms of Tomorrow), Apple is now offering complete staff-development products. Apple took what they learned in their research and used that information to develop workshops that deliver information teachers need (no more wasting school money on staff development that was intended for the business world) and come packaged in workable time frames (no more all-day workshops). In addition, Apple can send in one of its Apple Certified Trainers (all certified teachers themselves) or provide your technology coordinator with a Leader's Kit to help him or her personally deliver the staff development.

Apple divides its staff-development workshops into tiers or levels. Within each tier, there are a number of different staff-development offerings:

Tier One: Getting Started With Technology

From this tier, you can choose workshops on the Internet, productivity software, Macintosh basics, or an introduction to multimedia.

Tier Two: Integrating Technology

Within this tier, there are workshops on multimedia and curriculum integration or technology and curriculum integration.

Tier Three: Leading With Technology

Tier three workshop titles are Leadership Workshop for Technology Program Development; Consulting Services; Teaching, Learning, & Technology — A Planning Guide; and Teaching, Learning, & Technology — Planning for Staff Development.

For more info, call 1-800-800-APPL (2775) or check out http://education.apple.com/

Cost?

At an outlay of $199, you could probably afford to purchase two or three to share within your school! I'd buy one for home, too. Just imagine the Christmas gifts you could create!

Lite Pro

I remember when an overhead projector with an LCD was a real treat. Now there's a new (yet a little more expensive) alternative — the LitePro projection system. It's a full-featured multimedia projector that enables you to connect your computer, VCR, laser disc player, and camcorder and view the projected images and accompanying sounds with unbelievable clarity.

What's it good for?

Whether you're conducting whole-class computer instruction or sharing classroom multimedia projects with your PTO or PTA, this projection system makes everything look as good as it does on your computer screen. Every school needs at least one. There's even a remote control that controls your mouse, allowing you to interact with your audience instead of hovering over your computer!

Cost?

These great machines don't come cheap, but they're worth every penny. The LitePro lists for $3,995; and a higher-end version lists for $5,529.

Part VI
Appendixes

The 5th Wave   By Rich Tennant

NERD MOMS

Okay young man, it's time to wash your hands, brush your teeth, and defrag your hard disk.

Awwww, Mom.
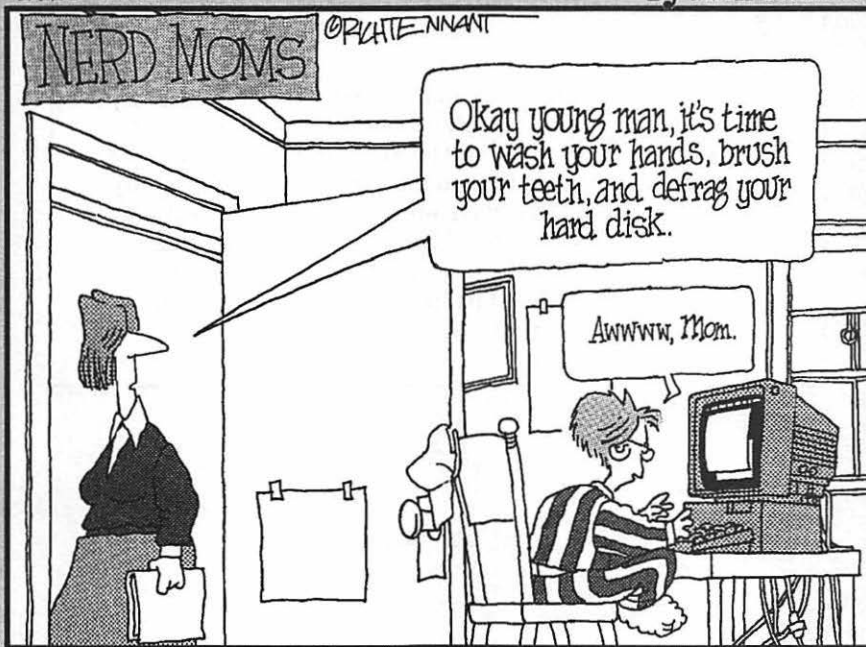
In this part . . .

1 saved the best for last!

In this part you find all the *stuff* we teachers love to get
our hands on. The lesson plans were designed to be easy
to customize to fit any grade level or subject area, and the
software lists are sure to be a welcomed guide. My buddy
David Pogue graciously gave me permission to reprint his
super glossary and troubleshooting pages that I'm sure
you will soon have well-worn. And the About the CD
appendix is where you start in order to take advantage of
the nifty CD included with this book.

Appendix A

Mac Activities to Enrich
Your Classroom

● ●

*W*ithin this appendix, you find ready-to-use activities based around two software titles: Kid Pix (including Kid Pix 2, Kid Pix Studio, and other versions) and ClarisWorks. That's right. With a small software investment, you can also participate in all the amazing activities found here.

Don't forget that I'm a teacher, and I know how your mind works. Take these ideas and branch out on your own. We teachers are notorious for taking someone else's inspired plans and adapting them to fit our own needs. Go for it!

The lessons are divided by curriculum area. I'm not including a grade level or age group with the activities, because — after you read through a lesson — you'll more than likely think of ways to adapt it to the grade you're teaching. If you need a quick review of the two programs used, turn to Chapter 10 for Kid Pix questions or Chapters 6 through 9 for ClarisWorks help.

The activities in this section were created by my new good friend Norma Jean Gottschalk — isn't that a great name! Yes, Norma Jean, teacher extraordinaire, came up with every idea you see in this appendix. I guess a book of her own is the next step!

And now an invitation: If you have a favorite ClarisWorks or Kid Pix activity or group of activities that you'd like to share with the world, please send them to me at mnette@aol.com and you may see your name and idea show up in the 4th edition of this book. Please check out the activities on the CD and the ones listed here — don't send an idea that's already been printed.

Note: The activities listed here are new to this 3rd edition of *Macs For Teachers*. The activities that appeared in the first two editions can be found on the *Macs For Teachers* CD.

Kid Pix

Language Arts

Slide shows, which are always entertaining, are even more fun when they are classroom-created! Use Kid Pix to create letter pictures. Add a large letter in a cool font and then suggest that the students draw pictures that begin or end with the given letter. When you're finished, save and import the master-pieces into the Slide Show part of Kid Pix. The students love watching their own moving alphabet. You can even hook up that LCD screen for Parent Night and play your slide show for parents to watch!

Digital puppets? Sounds like something out of some outer-space school? Create your own using the Digital Puppets option in the program. Let each student create a puppet and then encourage everyone to write and record a dialog to accompany his or her puppet. You may want to create a setting to help the students get started. (For example, the story takes place in the woods, the seaside, a city, and so on.)

Inspire students to create their own hidden pictures! Assign each student a letter and let him or her create a picture and then "hide" the letter in the picture as many times as possible (as shown in Figure A-1). Print the pictures and let a partner find the hidden letters.

Figure A-1: Kids can have fun "hiding" letters in their original artwork.
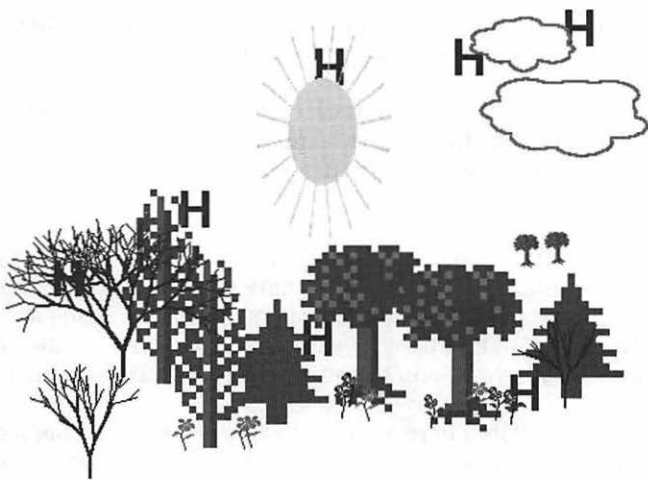
Kid Pix Studio has an endless supply of cool backgrounds and stamps. Create some interesting pictures and use the text tool to include story starters to go along with your pictures. Give the files intriguing titles and keep these in a folder on your desktop. Let the students choose the one they want and complete the story you started. Print the results and compare the endings.

Turn some words into works of art! Think up words that might display their own meanings (as shown in Figure A-2). Take the words to Kid Pix and have some fun!

Figure A-2:
Word pictures are possible with Kid Pix.

Assign each student a letter and ask him or her to draw it on the screen. Kids can then create a picture around the letter including several items in the picture that begin with the letter which was assigned to them. For instance, the letter "b" could be turned into a boat on blue water with billowy clouds in the sky.

Kid Pix

Math

Experiment with geometric shapes to create 3-D designs (shown in Figure A-3). Turn flat circles into cakes! Flat squares into cubes. Print the results and design other objects!

Figure A-3:
The addition of a few lines can take 2-D images to 3-D.
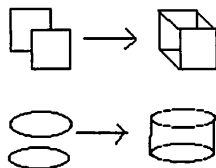
Pair your students, asking one student to design a whole sheet of various-sized lines of different images (as shown in Figure A-4). Encourage the use of color and unusual pictures, symbols, or letters. Use the tools to make the rows look great! Print and have the second partner measure the lines and record the results.

Figure A-4: A measuring exercise can be created with different line lengths.

Use the stamps to illustrate word problems that the students write for each other (as shown in Figure A-5). Print the problems and let partners work them out.

Create a graph showing the hair color and eye color of the students in your class or your school. Use the line tool to create a bar graph and the stamps to show hair color and eye color. Encourage the students to be creative and find stamps to represent eye color!

Figure A-5: Stamps can be used to make an illustration of a potential word problem.
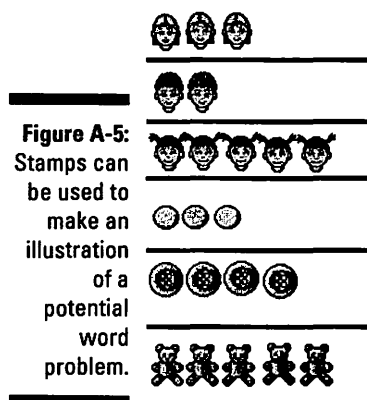
Kid Pix

Science

Use the stamps in the Kid Pix program and sort them into the correct animal categories (as shown in Figure A-6) There are a ton of stamps, and this is a great sorting activity!

Figure A-6:
Stamps can
form
categories.

Mammals   Birds   Fish
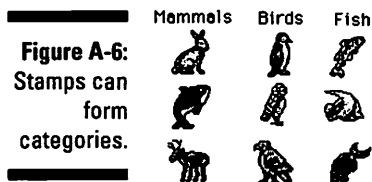
Outer space is always a popular unit of study. Using their knowledge of the planets and the vast unknown, students can design their own planets. They can even name it whatever they choose; encourage them to make names representative of their particular planets. The finished products are fun to print out on iron-on transfer paper and put on white T-shirts. Because there isn't any text used, there's no need to reverse before printing. Plan an "end of unit" celebration day when everyone wears their outer-space T-shirts!

When studying the animal families, enlist the help of the students to make a sorting game. Divide the class into groups such as mammals, fish, birds, and so on. Let each student draw and add color to an animal representative of the group to which he or she is assigned. Print all the animals and mount on foam board. Trim and add a self-adhesive magnet on the back of each animal. Use a metal filing cabinet to sort all the animals into the correct groups. When the school year is over, each student has a refrigerator magnet to take home!

Classifying is an important skill. Use the stamps in Kid Pix to classify items according to their observable properties. Set up categories such as "metal," "glass," "plant," and so on (see Figure A-7).

Figure A-7:
Stamps can
provide
classifying
practice.

metal   glass   plant
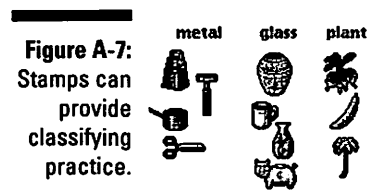
Kid Pix

Social Studies

Most of the younger students have lessons on cooperation. Let them pair up and try this cooperation activity:

1. No voices! (This is a quiet activity — what a bonus!) The first student uses one tool and makes one line or shape.

2. The second student gets to add one line, shape, or stroke.

   Now remember: No one is talking, so there is no exchanging of ideas as to what this creation will be in the end!

3. Students continue taking turns and developing a picture. Allow them to work together until both students feel the creation is finished. Talk about cooperation!

Studying about the rain forest? the ocean? Use the coloring pictures to set the stage and let your students add the details to the drawing (as shown in Figure A-8)!

Figure A-8:
Students
can add
details to
coloring
pictures.

Everyone seems to enjoy a unit on Native Americans. The younger students all love making bead necklaces to go along with this type of unit. Let each student design his or her own beads! Draw designs on the screen and paint in with bright colors. Print the colorful sheets, cut into long, skinny triangles, and roll around a straw to form into beads. Glue the tip down, let dry, and string. "I made my own necklace!" will take on a new meaning!

Animals are the subject of many units and always a popular research topic. Allow each student to choose an animal and do research on it. Use the Slide Show option to create a presentation on the animals. This would be a great project for a PTA presentation or perhaps, a presentation to a senior citizens' home! Many different subjects could be used to tailor the show to your needs.

Figure A-9: Graphics become "personalized" with added stamps and name labels.
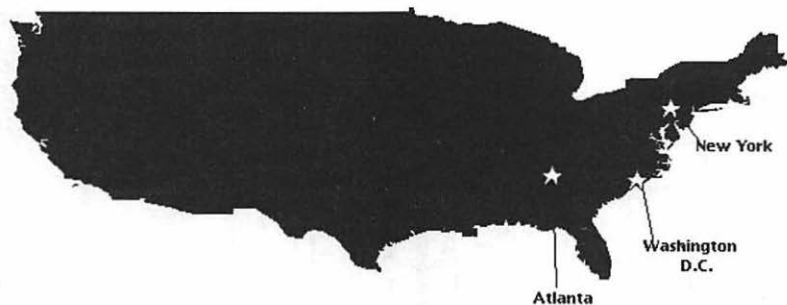
Kid Pix

Health

A full-body picture is the starting point for this activity. Ask each student to draw himself or herself with all the details (or at least almost all!). Then, using the pencil and text tools, identify the main parts of the body that each of the senses uses (such as mouth for taste, nose for hearing, and so on). The pictures would be fun to publish as a classroom book.

Give each student a health goal to use in this activity (as shown in Figure A-10). Let the students find all the stamps in the program that could be used to accomplish the goal. Encourage the students to use all the stamp options.

Figure A-10:
Goals can be illustrated with a stamp collection.

I will show you stamps which are things I use to keep clean and healthy.

Create a safe house. Use the stamp libraries to furnish the home and put all the details where they belong (as shown in Figure A-11). There are coloring pictures of all the rooms in a house in Kid Pix. Use all of them to create an entire house. Encourage your students to choose items that reflect their personalities and that follow all the health and safety rules they've studied.
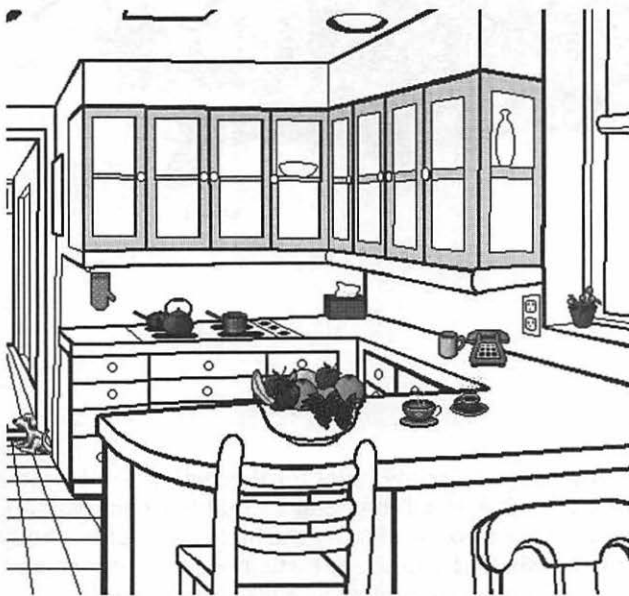
Figure A-11:
What kid could resist cooking up a model kitchen?

Invite your students to use the stamps in Kid Pix to classify foods into plant or animal origin (as shown in Figure A-12).

Figure A-12: Stamps are useful in portraying members of categories.

plant   animal
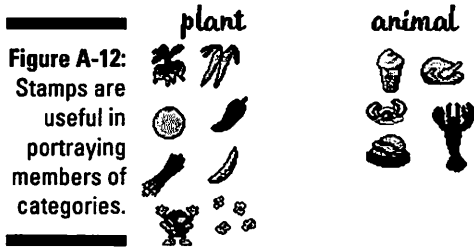
Encourage your students to create timelines to represent their lives. They can use stamps or draw their own pictures to mark important events — another great idea for a classroom book!

ClarisWorks

Language Arts

During the first week of school, coach your students to experiment with different fonts and different sizes of fonts to create their own name tags. Depending on the level of expertise, the students can also add clip art to "spruce up" their tags (as shown in Figure A-13). Print and laminate for their desk tops, lockers, or cubbies.

Figure A-13: Name tags with clip art reflect personal tastes.

Jake Smith

Help your students write several paragraphs describing themselves. Encourage the students to include unique qualities such as "is sorta a clown" or "known to my family as a computer geek." (Both are what my family would

agree I could include in my paragraphs!) This would be a great time to include a lesson on the Check Document Spelling command in the Edit menu. Print the student's self-description and bind the pages into a book for parents to read during your Open House or Curriculum Night. This is also a great method for you to learn a bit more about your students!

Most of us write weekly or monthly newsletters for the parents. Why not enlist the help of your students? Use the stationery that ClarisWorks already has set up for a newsletter or design your own template. You may want to establish the topics and let the students write the stories. Use a digital camera to include pictures in the newsletter. The students learn, the parents love it, and you have a well-written, interesting newsletter!

Prepare templates for a class dictionary. Use cute fonts and perhaps a bit of clip art to brighten the pages. Keep the templates in a folder on your desktop. Let the students add their own words to the dictionary pages. Encourage them to include detailed descriptions of their words (as shown in Figure A-14). This will be a great resource for the students as the year goes by and the lists on the pages grow. Depending on how often your students contribute to the lists, you may even want to print the pages each semester and bind them into a personalized classroom dictionary to put on your bookshelf. But don't delete the originals! Keep those on your desktop and continue adding to the dictionary until the end of school. Time and budget permitting, you might want to print the "end of the year" edition for each student to take home.

Figure A-14:
Words and
meanings
bring a
letter to life.

apple   *a red fruit*

alligator   *a long reptile which lives*
         in the swamps of Florida

Create a database of books that the students have read. After each student completes a book, enter the information such as title and author into a record on a database. Encourage the students to record their comments about the book. As the database grows and the year goes by, the students will need to perform a search on the title of the book they want to enter. If the entry already exists, they simply add their comments to the ones already recorded. Allow the students to access the database whenever they are stumped as to what book to choose for a report or project. Or encourage students to find an entry about a book that interests them, read it, and then discuss it with the student who posted the first entry.

Using the spreadsheet option, set up a word-family worksheet template (as shown in Figure A-15). Allow each student to write the new words in the cells and then print the spreadsheet so that he or she can sound out the words to a partner.

	s	t	b
at	sat	tat	
ad	sad		bad
an			ban

Write some funny, interesting, and/or informative stories of your own. But wait, throw out all the rules and fill up the stories with grammar and punctuation mistakes! Make them into templates and store on your desktop in a folder. Let the students trade places with you, correct your work, and print out the perfect stories.

Suggest that your students record their adventures from the weekend. Add lots of details. Now print and circle all the adverbs and adjectives. Go back to the original story and use the Thesaurus command in the Edit menu to change all the original adverbs and adjectives to brand new ones!

Set up a template for a book report (as shown in Figure A-16). Keep a copy of it on your desktop for students to fill in on the computer or print and fill in as they read their books.

Figure A-16:
A book
report
template
makes fill-in
easy and
orderly.

Title
Author
    Character 1
        Name
        Notes on character.
        What the character does.
    Character 2
        Name
        Notes on character.
        What the character does.

ClarisWorks

Math

Many of the lower-grade classrooms in elementary school keep a running tally of the number of sunny days, cloudy days, rainy days, and foggy days. At the end of each month, turn this information into several different types of graphs (pie, bar, line). Let the students compare and contrast the different types. Using the pie and bar graphs, allow them to color the sections to better represent the different types of weather. Keep a classroom book of the graphs so that students have a log of the past months' weather activity.

After a lesson on word problems, allow students to create their own problems on the computer. Encourage them to include pictures (clip art) as well as words to communicate their problems.

Make a classroom cookbook using favorite recipes from each student. Before typing up the recipes, ask the contributing students to convert the recipes to metric measurements if you're studying the metric system. Double or halve the recipe if you're working on fractions. Type up the recipes and import an original drawing of the food featured in the recipe. Print and let the students present the cookbooks to someone special!

ClarisWorks

Science

An important part of any science curriculum is observation. Provide objects for the students to observe and then describe using words (as shown in Figure A-17). Begin with basic shapes such as a cube or a cylinder. Encourage students to print their descriptions and then read them to partners. Let the partners guess which objects are being described.

Figure A-17: Descriptive clues lead to object definition.

1. My object has no sides.
2. My object has a top and a bottom.
3. My object can be any color.
4. My object can be made of many materials.

After completing a classroom experiment, allow the students to record their experience. For clarity and emphasis, encourage them to add clip art and use different fonts and styles. Keep a running log of all the experiments by printing the written work and storing in a binder. During your Open House or Curriculum Night, let parents browse the notebook — they love to see just what their children are doing in the classroom!

In addition to the usual weekly/monthly newsletter you write to the parents, involve your students in writing a monthly science newsletter. This would be a great time to experiment with fonts and styles. Include summaries of science experiments, photos of the results, and plans for future experiments and units of study. (What a wonderful opportunity to include a wish list for science materials!) Encourage the students to break out of the templates provided and design their own layouts. Parents love the additional information about the classroom happenings, and the students are reinforcing their science experiences.

Set up a spreadsheet with "Animal," "Plant," and "Mineral" as headings (shown in Figure A-18). Give the students lists of all sorts of things in the world. Ask the students to sort the items into the correct categories. Print the results and exchange papers to compare answers.

Figure A-18:
Students see the "big picture" when they sort entries under headings.

Animal	Plant	Mineral
bat	carrot	salt
horse	rose	glass
worm	wood	
people		

ClarisWorks

Social Studies

The differences between needs and wants is sometimes a difficult concept (occasionally, for us teachers, too!) Let your students record their own needs and wants on a template you set up using the column function in the Format choice of your menu (shown in Figure A-19). Print the resulting lists and let the students work in pairs to edit the lists. Amazing to see what students put in these categories!

NEEDS		WANTS
shelter		new computer game
food		ice cream for dinner
clothing		new Beanie Baby
love		another pet

Figure A-19:
Students learn through listmaking.

When studying about long-ago, work in a mention of Samuel Morse, the inventor of the Morse Code. Give students copies of the code and turn them loose with the computer! Let them dash and dot up a storm and then have partners attempt to read their messages (as shown in Figure A-20)!

Everyone has a Web page these days so why not let your students create a Web page for their favorite people in history? You don't need Internet access to view the pages, just a copy of your favorite browser to display the finished products. ClarisWorks comes with an HTML primer, which is great help, and there's even a stationery style already prepared for you! Let your students do the research and then turn them loose to create a Web page! Encourage them to include pictures and graphics.

Figure A-20:
Morse code permits a personal touch.

(This is great fun)
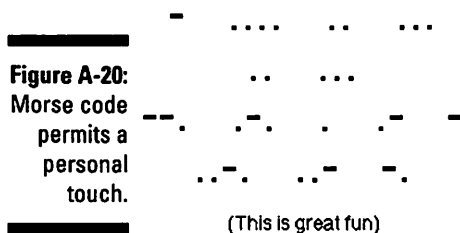
If Internet access *is* an option for you, encourage your students to use it to communicate with the outside world. Write an e-mail message to the President! The President's e-mail address is `president@whitehouse.gov`. You'll want your message to be letter perfect, so compose the message in ClarisWorks and cut and paste it into your e-mail program. Expect a response within a few days! If this idea appeals to you, there are tons of people to write to in our government. To get your students started, check out the following Web page for e-mail addresses of congressional representatives: `http://www.vote-smart.org/congress/index.html`

When studying families, your students might want to trace their lineage and chart it on a family tree (as shown in Figure A-21). Use the painting program to create the tree; add some color to make it easier to read and a bit prettier, too!
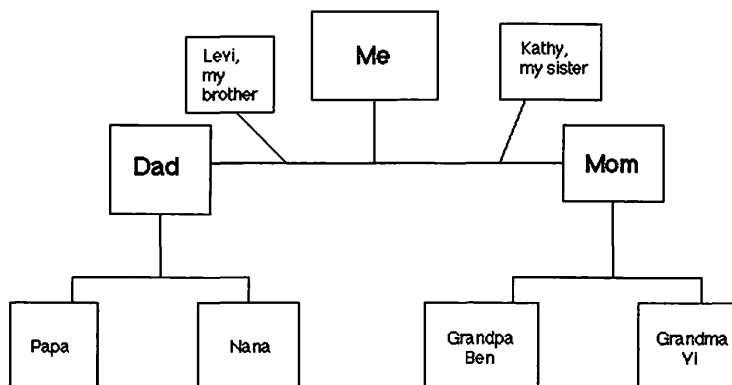
ClarisWorks

Health

Create a personalized health habits checklist (shown in Figure A-22). Use the checklist option on the Style Sheet to place the check off box at the beginning of each habit listed. Start the students off by suggesting the obvious, such as brushing teeth in the morning, flossing teeth, washing face, and so on. Print the lists in column form and laminate. The students can take the lists home and mark on them with a water-based marker each day.

Figure A-22:
Healthy
habits
start with
each box
checked.

☐ Brush my teeth in the morning.

☐ Floss my teeth in the morning.

☐ Wash my face.

☐ Brush my hair.

☐ Eat a good breakfast.

Losing teeth is a major big deal in the lower grades. Make this a learning experience by scanning in a picture of a complete set of teeth. Make a file for each student with the picture of the teeth and keep the files in a folder on your desktop. When students lose one of their teeth, let them open their files and mark off the teeth on the graphics (as shown in Figure A-23).

Figure A-23:
Records
like the
"lost tooth"
update
teach
computer
skills and
health
awareness.

Ben's Teeth
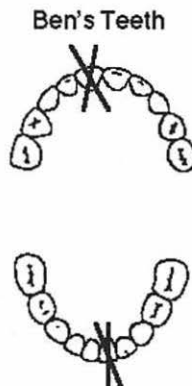
I lost my first top tooth on September 2.
I lost my first bottom tooth on October 3.

ClarisWorks contains some great templates just waiting for you to use! Select "In Case of Emergency," which is located in the Stationery group. Instruct your students to fill it out with the information they already know (as shown in Figure A-24). Provide phone books for them to look up numbers if they need to do so. Print, laminate, add a bit of magnetic tape to the back, and they have a great resource to keep on the refrigerator at home. (Parents can fill in the missing information after the magnet arrives home.)

IN CASE OF EMERGENCY +

The Phone here is #	(XXX) XXX-XXXX
The Address here is	1234 Main St., Anytown
The nearest hospital is located at	5676 Broadway, Anytown
The phone number of the hospital is	(XXX) XXX-XXXX

Figure A-24:
You can't
have too
many of
some
refrigerator
reminders!

General Emergency	911
Fire	(XXX) XXX-XXXX
Ambulance/Paramedic	(XXX) XXX-XXXX
Police	(XXX) XXX-XXXX
Dr. Smith (Pediatrician)	(XXX) XXX-XXXX
Dr. Folsom (Internal Medicine)	(XXX) XXX-XXXX

Appendix B

The Lists!

● ●

In This Chapter

▶ My opinions aren't gospel

▶ Comprehensive lists of my favorite software for students

▶ The best teacher-productivity software

● ●

*T*he educational software market changes on an almost daily basis, and it's my job (my never-ending job) to stay informed. So the lists contained in this 3rd edition of *Macs For Teachers* have undergone some major renovations and additions. Take a look and see what you think!

A Disclaimer

Let me just say this up front. This list is by no means gospel — but then again, what list is? It seems to me that every review or list I read has a slant of some sort; many of the folks doing educational software reviews don't even hold degrees in education and probably haven't set foot in a classroom since they were students themselves. My most valuable advice seems to come from computing friends and colleagues who actually use the stuff. In that respect, my list probably comes closer to being accurate than any others I've seen — I'm not employed by any of the software companies, and I make *zilch* when I mention their names!

These are *my* favorite picks, based on what I've used or seen used in the school environment, what colleagues here and across the country have successfully used, and what I've used on a preview basis. Most of the software titles are available in school versions. A school version usually costs a little more than the home version but includes some printed material intended to help you use the software in the classroom.

The titles on the lists are in no specific order. Most of the titles come in CD-ROM versions only; however, many manufacturers of less-interactive programs will provide you with floppy disk versions for a small fee. All programs in each category are of supreme quality.

Note: I include a copy of the software list portion of this chapter on the CD-ROM that comes with this book. Feel free to print the list and share it with your administrators or fellow teachers.

So How Much Does It Cost?

You will notice that I didn't include prices in my very lengthy lists of great software titles. I have a number of reasons for this omission. The first reason is the incredible price variations I found when compiling this list.

A few definitions

home version: This version is sometimes referred to as a consumer version and is what you can buy if you go to a store in your local mall or computer superstore.

school version: A school version can contain any number of additions to or variations from the home version. Software companies often add special "school-type" clip art, fonts, templates, or examples that have an educational slant. In addition, school versions usually come with a binder full of lesson plans, posters, teaching aids, curriculum integration ideas, and blackline masters.

academic version: This term is sometimes interchangeable with school version. However, in most cases, an academic version refers to a reduced rate on a single copy of a software product at a price that's only available to educators. In order to get the price, you usually have to fax proof of employment, pay with a school purchase order, or show a student ID. Always ask mail-order companies whether they offer this pricing structure when making personal purchases. I saved over $50 on Microsoft Word by receiving an academic version price!

lab pack: Lab packs usually have five copies of a single title and usually (but not always)

give you a break on the per-copy price. These lab packs usually come with the same binders as the school versions.

network version: A network version costs substantially more than a single-user version and is specially formatted to function in a network where multiple computers can access a single file server. Software companies sometimes limit the number of machines that may be connected to the network, so a site license is sometimes a better deal.

site license: A site license agreement allows the legal copying of a software product within a specific district or building. The prices are always greatly reduced from the single version price. Depending on the agreement, there may be stipulations on exactly how many copies may be made and the time period for which the agreement is good. A site license is the way to go if you need the same title on every computer in your school.

Note: Many school systems are starting to purchase site licenses for software titles that are commonly used throughout the system. Buying in bulk usually brings a lower price. Make sure that your school systems haven't already purchased a title you're planning to buy with those hard-earned local school funds!

Mail-order vendors' prices were different from mall or computer outlet store prices, and then I found out about the book fairs that come to schools and sell software alongside the books! In addition, the prices quoted for educational software vary based on what type of "packaging" you choose — lab pack, home version, school version, network version, site license. . . . The options are limitless!

Where Can I Buy These Titles?

Your school more than likely has a supplier it likes to use. However, I find that it's sometimes cheaper and usually easier to go through one of the following companies:

- ✔ Educational Resources (800-624-2926)
- ✔ Learning Services (800-877-3278)

Both of these companies have great plans for school system purchases and are more than willing to send you a catalog containing all their products . . . including the ones in these lists!

You can also find most of these titles in the big computer store chains. However, you pay a premium price and rarely get an educational version of the software.

Language Arts (Writing)

It's a simple fact: Good writers are usually good readers and good readers, in turn, are usually good writers. Yeah, you've heard it before, but getting kids to write is like pulling teeth. . . . Believe me, I've been there! These titles tend to stimulate kids into writing because they make writing an adventure, and they turn out a printed product that looks great!

The Amazing Writing Machine (Brøderbund, early elementary–middle school). Combine the art smarts of Kid Pix with a great word processor, toss in a few good story starters, cool backgrounds to write upon, and you still haven't covered all the components of The Amazing Writing Machine. A great journal and address book round out the features. Students can write or *spin* (change a story Brøderbund saved for you) an essay, letter, story, poem, or journal entry.

The Student Writing Center (The Learning Company, elementary–middle school). Great introductory word-processing program. I use this program before introducing students to ClarisWorks. Very easy to understand. If you

have an older Mac, ask the salesperson about getting The Writing Center. It's an earlier version of the same program that has a few less frills and runs better on older machines.

EasyBook (Sunburst, early elementary–middle school). Too-cool program that eliminates all the cutting and pasting involved with creating "real books" for students. After a child types in a story, the program prints the book (fronts and backs of pages), so all you have to do is fold and staple!

ClarisWorks 4.0 (Claris, all ages). Give the demo on the CD a try! Best piece of software ever created. Buy it now. Read Chapters 6 through 9 if you need to be convinced!

ClarisWorks for Kids (Claris, early elementary). It's a scaled down version of my all-time favorite software package. An icon-based interface that's easy to manipulate is only the beginning. This program has an Art Pad (Drawing), Writing Pad (Word Processing), List Pad (Database), and Graphing Pad (spreadsheet). In addition, there are hundreds of great clip art images, "kid fonts," lined paper, an easy-to-understand filing system, an Internet link, and tons of great templates.

PageMaker (Adobe, middle school–college level). A page layout program that's got all the bells and whistles. Not for those new to the computer. I suggest that all high schools buy this program and use it to create their school newspapers.

Language Arts (Reading Development/ Comprehension)

The titles on this list not only help your kids learn to read, but also (hopefully) give them a little help in remembering and understanding what they read. And yes, you will find that I do believe that phonics still has a place in early reading instruction.

Accelerated Reader (Advantage Learning Systems). My school houses this program in the media center, and every grade level participates. In a nutshell, you get software covering a large variety of trade-book titles. Students read the book and then show they understood what it's about by taking a test on the computer (the questions aren't easy to answer unless you actually read the book). The students are then given feedback on their test results. The computer keeps track of each child's progress and can compile a variety of reports for teachers and parents. This program is taking off like crazy and is a great success: The kids in my school are reading more and remembering what they read just so that they can come and take a test!

Reader Rabbit's Interactive Reading Journey (The Learning Company, early elementary). I love this program because it teaches reading through phonics, simple sight words, and repetition. The CD comes with 40 storybooks that are used as part of the interactive multimedia experience.

Alien Tales (Brøderbund, early elementary–middle school). In an effort to prove that an alien is not the author of some of the best-loved works of children's fiction, contestants read passages from great Newberry Award winners and then solve puzzles and answer questions.

Little Planet (Little Planet Software, early elementary). A great combination of early reading comprehension and writing (you can find a demo on the CD). This program was developed in cooperation with the Learning Technology Center at Vanderbilt University. It features a great multimedia storybook, story starters, sentence builders, and much more!

Beginning Reading (Sierra, early elementary). This program presents a fun way for early readers to learn rhyming words, two-letter sounds, alphabetizing skills, vocabulary, and story-reading skills. All Sierra's programs feature a "talking tutor" to enable students to work alone or get the help they need easily.

Word Munchers (MECC, early elementary). This game has been around forever and is still great. Just think of PacMan gobbling up words with a certain vowel sound, and you have a good picture of Word Munchers. I like the phonics link; personally, I still feel we need to teach those letter and vowel sounds.

Grammar Games (Davidson & Associates, Inc., middle school–high school). Students not only learn basic grammar and punctuation skills, but also have loads of fun doing it on this jungle-adventure game.

Midnight Rescue (The Learning Company, upper elementary). This program requires students to read short passages and then recall facts, make inferences, and draw conclusions on their reading. In addition to all this school-type stuff, the game is entertaining.

Word Attack 3 (Davidson & Associates, Inc., upper elementary–middle school). This exciting game teaches students the definition and spelling of over 3,200 words and includes crossword puzzles and mazes.

Reading Maze (Great Wave, early elementary). This program keeps records for you! Okay, it teaches early readers basic vocabulary and has lots of different skill levels. But, as I said before, it also keeps records for you! That's right. This program keeps up with each student's progress and leaves you free to worry about whose turn is next on the computer. With the large number of skill levels, you could use this game for the entire school year, and the students would still find it challenging.

SuperSolvers Spellbound (The Learning Company, upper elementary). This interactive program includes over 1,000 words for sharpening spelling skills. It allows teachers or students to add up to 3,000 words to the lists.

Romeo & Juliet Center Stage (Sunburst, middle school–high school). This new package combines two videotapes and a CD to bring you everything you ever wanted to know about this famous work. On the CD, you can visit the Verona Courtyard where all the action takes place. From this courtyard, you can view the entire performance (you can even select specific scenes or acts from a control panel), meet the cast members, read the script, or use a notepad to write down your own notes. The videos contain behind-the-scenes footage and a full performance video of the play.

Read, Write, and Type (The Learning Company, early elementary). My daughter can't get enough of this interactive program. I love it when I walk by the computer and hear her sounding out words and see her using the proper fingers to hit the correct keys. After she's written the requested text, reading is a natural extension. No, it doesn't exactly teach youngsters how to type, it just helps them become aware of the keyboard location. True keyboarding skills are usually introduced around third grade.

E-Books (Electronic Storybooks)

Electronic books turn reading into an interactive adventure. The best e-books are based on titles that were already successful before becoming electronic versions. I highly recommend every title on this list.

Living Books (Brøderbund, early elementary). I highly recommend every title in this series. Brøderbund starts with quality children's trade books and then enhances them with interactive hilarity. You can not only enjoy the benefits of having narrators read the books but also appreciate each illustration's variety of characters and items that can be clicked to "perform." Each story is also read in another language. In that aspect, I can see these stories being used to enhance many of the foreign-language classes that are now being taught at the elementary level.

Just Grandma and Me	*Dr. Seuss's ABC*
Little Monster at School	*Berenstein Bears Get in a Fight*
Sheila Rae the Brave	*Arthur's Teacher Trouble*
Arthur's Birthday	*Harry and the Haunted House*
The New Kid on the Block	*The Tortoise and the Hare*
Green Eggs and Ham	*Stellaluna*
Arthur's Reading Race	

Chicka Chicka Boom Boom (Simon & Schuster Interactive, early elementary). I love the book, and the CD just takes the great text one step further. This CD has a great interactive version of the book, along with tons of neat games and sing-alongs.

Scholastic's Smart Books Series (Scholastic, upper elementary–middle school). Finally — some great electronic books for older readers. Scholastic has done a super job, adding neat information to enhance already great titles. Many of these titles are probably already part of a reading list in your existing social studies curriculum.

> *Exploring the Titanic*
> *Favorite Greek Myths*
> *Malcom X*
> *If Your Name Was Changed at Ellis Island*

Math

I hated math as a student, and as an adult I'm still a little nervous when it comes to anything that has to do with geometry or algebra. I just can't remember all those formulas. Maybe if I'd had a few of these titles to play with, I'd be a little better off today!

Number Maze (Great Wave, elementary–middle school). As students solve math problems, they work their way through the maze. This program is very easy to customize for the difficulty level needed for your students — it ranges from picture addition to difficult division and word problems.

Schoolhouse Rock: Math Rock (Creative Wonders, elementary). If like me, you grew up singing all those cool Schoolhouse Rock songs, you're going to love this program. In addition to the 11 original animated videos that are sure to help children remember their math facts, there are fun and challenging learning activities.

Tabletop and **Tabletop Jr.** (Brøderbund, elementary–high school). Tabletop and Tabletop Jr. are two programs designed to teach beginning and advanced data and information skills. By working with attributes, place value, and plotting, students learn mathematical theory.

Math Keys (MECC, early elementary–middle school). This program was created by MECC with the help of Houghton Mifflin and brings the world of manipulatives to the computer screen. We have this program on every computer in my school. I love the fact that students are expected to write down what they did when working a problem. The probability exercises are also very stimulating — kids work well in small groups and don't want to stop!

Counting on Frank (Creative Wonders, upper elementary–middle school). This software practices what all those math folks have been preaching: real-life problem-solving and hands-on learning. Frank is presented with a variety of problems throughout the day and needs your help to solve them. The online help feature is great for the more visual learner.

Math Heads (Theatrix, upper elementary–middle school). Wow! This non-intimidating look at pre-algebra doesn't make the puberty-set run for cover. Instead, the artsy graphics, great characters, and innovative approaches put a fresh slant on a usually boring subject. The focus on mental calculation skills, logical reasoning, and data interpretations will also be appreciated by teachers.

Math Workshop (Brøderbund, elementary). You get a lot of bang for your buck with this title. Seven rooms are in the math lab of sorts, and each room is filled with activities that make learning the basics a little less painful. I love the spatial orientation, estimation, and problem-solving aspects of this program — all of which are rare in most math software. The wide variety of difficulty levels and the capability to store information on up to 40 students are also big pluses.

Bit Bot's Math Voyage (Sanctuary Woods, early elementary). Cool graphics and a great sound track add to the learning experience that takes place in Bit Bot's submarine. Playing the nine games teaches students 15 math concepts. You can choose from four levels of difficulty (a nice plus in the classroom setting). The prize for a correct answer is an exotic fish for your own personal aquarium.

Snootz Math Trek (Theatrix Interactive, early elementary). Flarn and Foozle (two Snootz) take you through five different activities that teach map reading, sequencing, cause and effect, codes, symbols, and geometric shapes. Your students will think that they are playing, but they're really taking in some important math concepts.

Number Munchers (MECC, all grades). The granddaddy of all skill-and-drill programs. And it's still fun! *Number Munchers* is just like PacMan — only the little guy eats up numbers, factors, or multiples of numbers instead of little dots.

The Cruncher (Davidson & Associates, Inc., upper elementary–middle school). This is a really great spreadsheet program for the junior set. Using this program makes it easy to enter data and create easy-to-read charts and graphs without having to understand a ton of formulas and functions.

Geometric Golfer (MECC, middle school–high school). Through flipping, rotating, or reflecting polygons, students try to get the shapes in the hole with the least number of strokes.

MicroWorlds Math Links (LCSI, middle school). This program provides open-ended practice with math concepts that are important, yet tend to get slighted in most traditional math books. No drill and practice here — instead, students spend time developing a deeper understanding of math concepts.

Alge-Blaster 3 (Davidson & Associates, Inc., middle school–high school). This program covers a full year of algebra instruction in a fun, non-threatening way. Where was this program when I was in high school?

Math for the Real World (Davidson & Associates, Inc., upper elementary–middle school). Students apply math skills to real-life situations. There are over 4,000 word problems, super graphics, and music that help answer the consummate student question, "When will I ever use this in the 'real world'?"

Social Studies/History/Geography

These areas of study used to rely on old black-and-white photos and out-of-date maps and globes as supplementary materials. Now teachers have exciting products, some of them almost custom-made for specific subject areas, to enhance the learning process.

Travelrama USA Deluxe (Sanctuary Woods, upper elementary–middle school). Using a road map as their guide, students embark on a cross-country trip to learn about the geography of the United States. This CD may be played individually or in groups of up to four students.

TimeLiner (Tom Snyder Productions, all grades). Many schools say they couldn't do without this software. You can create timelines of various sizes and include small illustrations to accompany labels that you attach to identify time periods.

Vital Links (Davidson & Associates, Inc., upper elementary–middle school). We bought this program (all six modules) to replace our social studies text books in fourth and fifth grade. Yep, this incredible package does a much better job covering the time periods: Up to 1775, 1776–1840s, 1830s–1880s, 1870s–1920s, 1920s–1950s, and 1960s–present. Each of the time periods is packaged as a unit complete with laser disc, VHS tape, CD-ROM, teacher's guide, and cassette of music from the time period. The information is very comprehensive.

GeoSafari Multimedia (Educational Insights Interactive, upper elementary–middle school). When I taught third grade, I had a freestanding *GeoSafari* game in my classroom and I couldn't keep students away from it! This new CD is just as engaging, with 45 different multiple-choice games containing over 3,000 facts. Students can play alone or in groups of up to four players.

World Discovery Deluxe (Great Wave, upper elementary–high school). This is a fun, interactive global history and geography game. Twelve interactive and challenging games test students' knowledge in the areas of politics, places, people, and events. Students can also create their own games, add questions, and create tournaments for multiple players.

His Name Was Lincoln (Sunburst, middle school–high school). This two-CD set is based on the book of the same name by Pulitzer Prize-winning author James M. McPherson. This in-depth look at Lincoln's life is incredible! The narration is done by Michael Moriarty, and Chris Sarandon is featured as the voice of Lincoln.

Museum Madness (MECC, upper elementary–middle school). A science and history museum is closed for repairs, and all the displays are mixed up. It's your students' job to make things right again. Using their knowledge of history, students must restore the exhibits to their original display.

My First Amazing World Explorer (DK Multimedia, elementary). A multi-level first exposure to maps takes children on trips to exotic as well as familiar places. Along the way, they earn stamps in their passports, send postcards, and collect snapshots to add to their sticker books. There's also a treasure hunt, a matching game, and a stamp-creating activity. This program keeps track of student play, and a certificate is awarded when a student's passport is filled.

Science

This area of software development has grown in leaps and bounds over the past year. You'll notice titles with lots of vivid photographs and video footage that actually put a student into a situation, instead of simply presenting standard text to read. Today's students are able to get very clear-cut, easy-to-grasp answers to their scientific queries.

One Small Square: Backyard (Virgin Sound and Vision, early elementary–middle school). A too cool way to look at earth science. This CD is based on the critically acclaimed *Scientific American* book series by the same name. It reminds me a little of some of the cool backyard scenes from *Honey, I Shrunk the Kids*. Students are given up-close 3-D views of one small square of a backyard. There's a backyard laboratory with 12 experiments, great cut-away views, and a personal field journal. You must see this one!

Buptz Science Carnival (Theatrix, early elementary–upper elementary). This CD teaches kids to think like scientists. You know, the whole hypothesis and conclusion route. Magnetism, Water, and Light are just a few of the topics covered. The freedom of choice, high manipulation factor, puzzles (over 200), and carnival atmosphere make this title a winner.

CyberCrafts: Hands-On-Learning Fun With Electronics (Phillips Media Home and Family Entertainment, upper elementary–high school). This CD and hands-on activity kit teach the basics of electricity and how it's used in radios, metal detectors, red lights, sirens, burglar alarms, intercoms, and more. After they achieve a sound knowledge base, participants are then sent to build these items on their own with the components provided. The projects have three levels for the 25 projects: No Sweat, Mind Bender, and Brain Fryers.

What's the Secret? (Volumes 1 and 2) (3M Learning Software, upper elementary–middle school). Are you tired of answering all those "why?" and "what if?" questions? These titles start out by posing a question and then leading students through scientific evidence and examples to answer the question. I love the "Science Try Its" — ideas for experiments you can do away from the computer.

How Your Body Works (Mindscape, upper elementary–middle school). This CD amazes everyone who sees it. The user-friendly aspect is apparent from the start, and the CD's appeal just grows from there. I love the video segments that are a part of the Body Tours, and the Disorders file was eye-opening as well.

Microsoft Dinosaurs (Microsoft, upper elementary–high school). This dinosaur exploration is incredibly easy to use and full of fun facts. The ability to cut and paste the images has allowed me to create some pretty amazing presentations. The personal dinosaur dig is a favorite with kids. (My husband liked the PBS *QuickTime* movie.)

RedShift2 (Maris, middle school–high school). Imagine having your own planetarium right in your classroom. What's really neat is this CD's capability to show you the stars and planets that are visible from your particular location. You can even print out star charts for students to use when observing on their own. Another neat feature is the capability to zoom in up to a factor of 9,999 to get detailed views of the plants and other elements of the solar system.

Science Sleuths — Volumes 1 and 2 (VideoDiscovery, middle school). These programs allow students to use a virtual lab to unravel tons (over 600 per title) of scientific mysteries. The mysteries have six different levels of difficulty, a nice adaptation for classrooms with students on different levels of understanding. I love the notebook feature where students are required to keep records of their findings. The labs also contain maps, databases of scientific information, charts, and videos.

A.D.A.M. The Inside Story (A.D.A.M. Software, upper elementary–high school). This one is just like those overlays that appeared in our biology books back in high school . . . only 100 times more interesting. You peel back layer after layer of Adam in this interactive anatomy lesson.

The Ultimate Einstein (Simon & Schuster Interactive, middle school–high school). An interactive look at the work and life of this incredible scientist. Simulated experiments, video clips, and audio clips make this CD an informative resource. I especially like the virtual encounter where Einstein responds to your scientific queries.

Operation Frog (Scholastic, middle school–high school). Simulated frog dissection . . . need I say more? Okay, maybe a little more. Students must select the proper instruments and then probe and examine just as they would in a normal hands-on dissection.

A Field Trip to the Sky (Sunburst, upper elementary–middle school). This is a very complete study of the solar system and all its elements. There's a great lab where you can explore the sun and its effect on the world, photo albums of still shots, movies, and sounds; and a Field Guide full of information.

The Nine-Month Miracle (A.D.A.M. Software, middle school–high school). If you are responsible for teaching those awkward "birds and the bees" classes, you may want to give this CD a try. The CD takes you on a journey from conception through delivery in a tasteful manner. You see actual in-body photography and video footage of different stages of a baby's development.

Critical Mass: America's Race to Build the Atomic Bomb: (Orbis Software, middle school–high school). This documentary is anything but boring! Newsreel-type clips provide the historical content, and a virtual office exposes you to the decision-making process and the people involved. Clicking on a person in the office links you to detailed biographies of the person, or you can view a slide show that gives current information on the atomic bomb. Best of all, you can take virtual tours of some of the key sites, such as Los Alamos.

Reference

Our kids probably will never have to lug piles of encyclopedias and other reference materials through a library or spend tons of time at the copy machine making copies of information — remember, encyclopedias can't be checked out overnight!

American Heritage Children's Dictionary (Houghton Mifflin Interactive, early elementary–upper elementary). This electronic version of the picture dictionary has 13,000 words. It's easy to click and find out more about each word: syllables, parts of speech, and word forms. In addition, it has great sound effects, animation, and over 2,700 illustrations.

3D Atlas (Creative Wonders, upper elementary–high school). This one is a must-buy (as the demo on the CD should convince you)! It takes the standard atlas to the mat. This program lets you rotate a 3D version of the globe; zoom in on areas you wish to explore; and access political, geographical, and environmental data. Add to that satellite images and *QuickTime* movies that take you to the action — and you get the idea of how incredible this CD really is. The *3D Atlas 97* demo is on the *Macs For Teachers* CD.

First Connections: The Golden Book Encyclopedia (Hartley, early elementary). A totally interactive learning experience (with more than 1,500 articles and 2,700 graphics) makes this encyclopedia a top-seller for the younger set. My favorite aspect is the constantly available notebook that enables students to jot down information and then print it or copy it into another application at a later time. A great bookmark feature allows students to mark an article before moving on to another area.

Time Magazine Reference Collection (Softkey, upper elementary–college). I was surprised at the amount of information this one CD held! Time Almanac features information from weekly *Time* issues for the years 1989–1994 and then condenses information decade by decade for the years 1920–1988. The Top Stories section of each decade's screen quickly shows the students what written information, QuickTime movies, or photos are available for that time period.

PC Globe Maps 'N' Facts (Brøderbund, upper elementary–high school). This program is very straightforward and easy to use. The maps are clear and concise. Students can get detailed information quickly and can customize a map to meet their needs.

Cartopedia (DK Multimedia, early elementary–middle school). I love this program! It contains over 600 maps covering over 25,000 place names, physical properties, and political information. The navigation panel has 18 easy-to-understand symbols. Click on the symbols to find out climate, GNP statistics, crime rates, historical data, and much more.

Grolier's Multimedia Encyclopedia (Grolier, all ages). This CD has all the bells (and whistles, too). Its main attraction for me is its cross-referencing capabilities and the Knowledge-Tree feature (information webs) that allows children to take a subject from the general to the specific in no time.

Encarta (Microsoft, all ages). This one is my favorite for many reasons: It's visually appealing, it's easy to use, and it incorporates text with graphics, sound, animation, and maps. I love the timeline feature (which alone is a wonderful teaching tool).

Microsoft Bookshelf (Microsoft, upper elementary–college). I'm amazed by this CD! It contains *The American Heritage Dictionary, Roget's Electronic Thesaurus, The Concise Columbia Encyclopedia, The Hammond Atlas, The World Almanac and Book of Facts, Bartlett's Familiar Quotations,* and *The Concise Columbia Dictionary of Quotations.* Can you believe all that is on one CD? And not only that, but this CD is easy to use. I probably would have gotten straight A's in high school if I'd had access to this marvel of marvels.

Our Times: Multimedia Encyclopedia of the 20th Century (Vicarious, upper elementary–middle school). James Earl Jones narrates this new reference source that covers history. The CD is very easy to maneuver through and features over 52,000 articles, great video footage, and historical photographs. It's a combination of the book *Our Times* and the *Columbia Encyclopedia* (5th Edition).

What is a Bellybutton? (Time/Life IVI Publishing, early elementary). This one is too cute! If you teach preschoolers or the early elementary grades, this CD would be a wonderful part of your health curriculum. It answers questions in "kidspeak" with the help of a sweet little girl and her cuddly bear. Why doesn't it hurt when I get my hair cut?, Why do I squint when I go outside?, and "Where does the food go when I swallow? are just a few of the precious questions answered by this program.

Foreign Language

Foreign language software is fun . . . tons of fun compared to my experiences learning a new language. French 101 gave me the shakes. The titles in this list are superb, and all come in a variety of languages.

> **Who is Oscar Lake?** (Language Publications Interactive)
> **Transparent Language Series 4.0** (Transparent Language)
> **Rosetta Stone PowerPac** (Fairfield Language Technologies)
> **Berlitz Live!** (Sierra Online)

Simulation

Simulation titles fool students into learning. Yep, they think it's all a game, but in reality, simulation titles are masters of integrating all types of subject matter into one really exciting game.

SimTown (Maxis, upper elementary–middle school). Students build a city from the ground up and then are challenged to make the city thrive and prosper, based on the decisions they make. This version is much more "kid friendly" than *SimCity 2000.*

SimCity 2000 (Maxis, middle school–high school). This program has the same premise as *SimTown,* but it's more intense. The player has more control over the environment, and the graphics are more realistic, less cartoonish.

Be sure to check out all the other Sim titles by Maxis: *SimAnt, SimEarth, SimFarm, SimTower,* and *SimLife.* They're all super; it just wouldn't be fair to fill up my list with Sim titles.

DinoPark Tycoon (MECC, elementary–middle school). This program incorporates math, economics, business, and science to help children set up and run a theme park. This program develops problem-solving skills by requiring students to experience profit and loss, buying and selling, estimating, predicting, and analyzing.

Crosscountry USA (Didatech, upper elementary–middle school). In this program, students take on the role of a truck driver assigned to deliver a load of merchandise across the country. By using maps and problem-solving skills (when to rest or eat), students try to move their cargo to its destination.

The Oregon Trail (MECC, upper elementary–middle school). I like the original version better than *The Oregon Trail II.* It's hard to believe, but this program has been around for over 15 years! This software simulates a westward trip across the United States in the 1800s.

Nile: Passage to Egypt (The Discovery Channel, upper elementary–high school). Students navigate their own boats down the Nile. The bow of the boat is equipped with a media player that gives more information on sites along the way. There are also artifacts, games, movies, and tours. Over 300 topics are covered during the journey . . . quite an informative trip.

MayaQuest (MECC, upper elementary–high school). Check out the demo on the CD. Probably the hottest new software title in the world. Students are involved in an interactive bicycle journey through the Mayan ruins. Along the way, they investigate archeological sites, explore their surroundings, and keep journal entries. An Internet connection allows students to download new information to change their adventures. The MayaQuest 96 Internet Home Page (`http://www.mecc.com/mayaquest.html`) also allows kids around the world to follow and participate in the yearly two-month interactive expeditions led by bicyclist and explorer Dan Buettner.

The Amazon Trail (MECC, middle school). Students learn navigation and map-reading skills (along with practicing decision-making) while traveling through South America. The goal is to find a cure that will save the Incas from a mysterious disease.

Eagle Eye Mysteries (Creative Wonders, elementary–middle school). A total of 50 mysteries that get harder and harder. Students keep track of clues, interview witnesses, and read maps to solve each case.

Where in the World is Carmen Sandiego? (Brøderbund, upper elementary–middle school). By now, I'm sure you've all heard of this title or seen the TV show on PBS. It's been a top-seller forever. The USA version is also just as wonderful.

Nigel's Adventures in World Geography (Lawrence Productions, elementary–middle school). A Carmen competitor. It's actually a great choice for students who aren't old enough to enjoy Carmen. Travel with Nigel, a photographer who's searching for that perfect photo. On the way, students learn all about countries and continents.

Freddi the Fish and the Case of the Missing Kelp Seeds (Humongous Entertainment, early elementary). This company has created a string of great simulation titles aimed at the younger set. You'll be amazed at how adept early elementary students are at problem-solving. Check out these other great simulation titles by Humongous: Putt Putt Saves the Zoo, Pajama Sam, Putt Putt Joins the Parade, and Fatty Bear's Birthday Surprise.

Gregory and the Hot Air Balloon (Brøderbund, early elementary). This is Myst (a totally interactive mystery) for the early set. No, it's not as mysterious, but it does teach young learners to problem solve on their own. The main character, Gregory, enlists your child's help to get back home. Along the way there are tons of great diversions to keep a child entertained.

Early Learning

I'm the mother of two preschoolers, so trust me when I say the titles on this list are great. I've played them all and probably heard each of their theme songs one time too many!

A to Zap (Sunburst, preschool–early elementary). An alphabet-learning tool that features great voices from "real kids." Each letter in the alphabet has an activity highlighting a word that begins with that specific letter.

How Things Work in Busytown (Computer Curriculum, preschool–early elementary). This CD highlights following directions, sorting, matching, and the roles of community helpers, with the assistance of Richard Scary's wonderful world. The seven activities each have two levels of play. My favorite activity is collecting the trash (a community helper) and then sorting the trash! The songs are pretty cute, too!

How Many Bugs in a Box? (Simon & Schuster Interactive, preschool–early elementary). Uses cute little creepy-crawly bugs to teach sorting, counting, memory, matching, and eye-hand coordination skills. I like the fact that the activity levels can be individually set for each of the games on the CD.

Fisher Price Sing Alongs: Barnyard Rhythm and Moos (Davidson & Associates, preschool). This CD is just plain fun! It's full of great songs and animated music videos. My favorite song is "I am a Horse." If you teach kindergarten or preschool, you need this CD for your music time.

Alphabet Express (School Zone, preschool–early elementary). School Zone has done a great job with this CD. It incorporates letter recognition, beginning phonics, and handwriting skills into one great package. It even allows you to print handwriting practice sheets for your students!

The Playroom, The Treehouse and **The Backyard** (Brøderbund, preschool–early elementary). These programs are old favorites for the preschool set. My daughter's preschool has each of these titles on every computer it owns. The activities keep little ones fascinated for hours.

JumpStart Kindergarten, JumpStart Preschool, and **JumpStart Toddlers** (Knowledge Adventure, preschool–early elementary). The entire JumpStart series delivers a lot of bang for the buck. The titles are full of neat activities, all accessible from a classroom setting that's full of neat "clickables" that initiate animation and activities that teach essential early learning skills.

My First Incredible Amazing Dictionary (DK Multimedia, preschool–early elementary). Over 3,000 sound effects are in this baby, so you know that kids are gonna love it! This CD introduces kids to 1,000 words and their meanings through a very-easy-to-manipulate interface.

Nick Jr. Math Play (Viacom New Media, preschool–early elementary). This program features the Nick Jr. (daytime programming on Nickelodeon) characters and contains over 25 activities designed to build early math skills. I love the parent/teacher features that give details of student progress, as well as activity ideas to increase your child's math skills.

Millie's Math House (Edmark, early elementary). Millie the cow is the delightful guide through six games that teach early math skills. My daughter loves this one!

Bailey's Book House (Edmark, early elementary). Everyone with a young learner needs this program. The five activities make early reading a fun activity, not a chore. I would highly recommend any of the Edmark titles.

KidsTime Deluxe (Great Wave Software, preschool–early elementary). This is a solid title that should be a part of every preschooler's collection. Five activities allow children to explore early learning concepts in a user-friendly environment. My son loves the sorting activities and the dot-to-dots. Try the demo on the CD.

Countdown (Voyager, preschool–early elementary). Cool games and realistic graphics make this simplistic, yet engaging, program great for very early learners. I love the fact that this program is multilingual: Students can learn to count in French, German, English, Italian, and Spanish.

Multimedia Composition/Authoring

This is probably my forte. I spend most of my time at my school working with small groups developing multimedia reports and projects. Using these products is a great way to reinforce subject matter and expose students to multimedia production at the same time.

HyperStudio (Roger Wagner Publishing, upper elementary–adult) This probably ranks in the top three on my list of favorite software programs (and I've included a demo on the CD). HyperStudio is the ultimate multimedia program! You don't have to learn a difficult scripting language in order to create interactive multimedia presentations. The latest version even includes Internet capabilities. Buy this program!

Kid Pix Studio (Brøderbund, all ages). I won't bore you with expanded coverage. Check out the demo on the CD and read Chapter 10 for the specifics on this superstar!

Hollywood (Theatrix, upper elementary–middle school). This cool little program allows students to create their own animated short films. Not only do students choose their characters and backgrounds, but they're also given the artistic freedom to choose character moods, voices, and hobbies. Writing the script is the educational part, but the real fun begins when the characters act out the script the student has written.

Imagination Express (EdMark, early elementary–upper elementary). *Imagination Express* is a series of titles based around the following themes: Castle, Neighborhood, Rain Forest, Ocean, Pyramids, and Time Trip USA. Each title allows the student to create an interactive story. The background choices are great, and the stickers (characters, props, and so on) can be animated or have sound added to them. My favorite in the series is Time Trip USA.

The Multimedia Workshop (Davidson & Associates, Inc., middle school–high school) This is a really all-inclusive program. You get a writing workshop with an easy-to-use word processor, a video workshop, a paint/draw

workshop, and a library full of photos, clip art, sound clips, and QuickTime movies. By combining all these areas, students can produce some very impressive reports or presentations.

Opening Night (MECC, upper-elementary–middle school). Students select the actors; write the scripts; choose the settings, costumes, and lighting; and ultimately direct their own lifelike, on-screen plays. A very cool product.

Critical Thinking

When you watch children using the software in this list, you may think that they are just playing. However, the type of playing that takes place involves critical thinking — an important learning skill.

Playskool Puzzles (Playskool Children's Educational Software, preschool– early elementary). Five activities that will keep your youngster involved and thinking! You'll have to pull your child away from this one!

Logical Journey of the Zoombinis (Brøderbund, upper elementary–middle school). Help the Zoombinis escape to a new land by solving 12 puzzles that become more challenging as the adventure progresses. I know a few adults who can't stop playing this game!

Thinkin' Things Collections 1, 2, and 3 (Edmark, early elementary–middle school). All three of the Thinkin' Things collections are wonderful! Logical thinking, memory skills, and problem-solving are highlighted in each of these programs. Collection 1 is probably better suited for elementary students. Collections 2 and 3 are best for upper elementary and middle school students.

The Lost Mind of Dr. Brain and The Time Warp of Dr. Brain (Sierra Online, upper elementary–adult). In order to restore Dr. Brain's mind, one must solve ten different puzzles. This CD keeps your students on their toes! The ability-level setting feature makes this title great for a wide range of ages — my husband loves it!

Incredible Machine (Sierra Online, elementary–adult). This software has earned all kinds of awards! It's great because it's open-ended . . . the possibilities are endless. You get 150 puzzles to solve (by creating your own machine), or you create your own puzzle with the vast array of unusual parts.

TesselMania! Deluxe (MECC, middle school–high school). Inspired by the works of M.C. Escher, students create *tessellations,* which look like cool interlocking shapes but are actually the basis of some pretty sophisticated mathematical concepts. The outcome is a really cool visual.

Strategy Games of the World Vols I and II (Edmark, upper elementary–middle school). My own kids aren't old enough to play these CDs, but my husband and I love them! Each CD contains three classic strategy games which students can adapt to three different levels of difficulty. Be careful — the games are addictive.

Trivia Munchers Deluxe (MECC, upper elementary–middle). A fast-paced arcade-style game that questions students in seven categories: animals, sports, astronomy, health and diet, music, famous people, and geography.

Fine Arts

This area of computer software was left out in the cold for a while. Now, quite a few really good titles that address a variety of age levels are on the market.

With Open Eyes (Voyager, preschool–middle school). Photographs of over 200 pieces of art from the Art Institute of Chicago are featured on this CD. Each work of art has activities and games that relate to the work and help students better understand the artist's intentions.

Art Gallery (Microsoft, upper elementary–college). This CD takes you through the National Gallery in London and enables you to view over 2,000 masterpieces. Along the way, you also pick up some interesting facts about the artists and the time periods in which they lived.

A Passion for Art (Orbis Software, middle–high school). True art lovers will love this virtual museum visit. Walking through the art gallery room by room with the capability to zoom in (close enough to see brushstrokes) on any of the over 300 paintings is a thrill. There's also a cool slide show feature and the capability to sort the works by artist or title.

Masterpiece Mansion (Philips, upper elementary–middle school). You're trapped in an art museum, and the only way you can get out is to solve a series of puzzles and games on artists, time periods, and culture. Great artwork (150 pieces) and interesting artist biographies make this CD a great resource.

Julliard Music Adventure (Theatrix, preschool–early elementary). This CD was created with the help of the highly acclaimed Julliard School. The action takes place in a castle where students are introduced to rhythm, instruments, melody, musical styles, and orchestration.

Making Music (Forest Technologies/Voyager, elementary). This CD is described as Kid Pix for the ears. It allows students to see and hear the music they create. It's an intuitive and fun program that turns even the youngest student into a composer.

Leonardo (Softkey, upper elementary–high school). It's like sneaking into Leonardo's studio and flipping through his notebooks, peeking at his sketches, and drinking in his original artwork. This CD allows you to take a look at his inventions and learn about his life. There's also a database of articles and artwork.

Creativity

The cool thing about creativity titles is the fact that they can be used to teach just about any curriculum area — draw a cutaway of the earth's layers, illustrate this math problem, write a rebus story. . . .

Kid Pix Studio (Brøderbund, preschool–upper elementary). See Chapter 10 for the details on this incredible product. Don't forget about the demo on the CD.

Flying Colors (Davidson & Associates, Inc., upper elementary–adult). Flying Colors doesn't get the glory it's due. I describe this program as Kid Pix on steroids. The color choices are unbelievable, the background choices are more than interesting, and the stamps number close to 1,000.

The Print Shop Deluxe (Brøderbund, upper elementary–adult). A demo of this great program is on the CD. I started using The Print Shop back in the days of the Apple IIe. I was a pro at creating banners for every birthday and baby shower in the school. This newest version is full of neat clip art and great text manipulation features, and all these bonuses can be used in your cards, signs, calendars, business cards, letterhead, and (of course) banners.

Adobe PhotoDeluxe (Adobe, upper elementary–adult). The easiest way to customize your photos. Get rid of red-eye, combine photos, or add tons of different special effects. There are also some cool templates that make it simple for students to create classroom calendars, greeting cards, newsletters, flyers, and much more.

Orly's Draw-A-Story (Brøderbund, elementary). Let a sweet little character named Orly tell your students a story. As she tells the story, Orly invites her audience to draw characters, props, and backgrounds to accompany the story. After they create all of the additional "props," the entire story can be viewed in the "junkyard" theater. The manual is filled with tons of extension activities.

Adobe Primere (Adobe, middle school–high school). This is an award-winning digital movie-making and production tool. I could easily spend a whole semester working with students on creating digital movies that enhance curriculum experiences. Create QuickTime movies that contain titles, credits, transitions, special effects, sound tracks, and much more.

Keyboarding

I start keyboarding instruction in third grade. When it comes to keyboarding, I believe in the "no-frills" approach. If a program is too cute, the kids tend to be more enchanted with what's happening on the screen and don't concentrate on proper finger placement or accuracy. The programs listed here are my favorites:

> **UltraKey** (Bytes of Learning)
> **Mavis Beacon Teaches Typing** (Mindscape)
> **Typing Tutor 7** (Simon & Schuster Interactive)

Test Review

I can personally attest to the benefits of test review programs. The immediate feedback and the test-taking hints are invaluable. When I decided to go for my doctorate, I used Your Personal Trainer for the GRE in hopes of achieving stellar test scores — and it worked. I went into the testing situation confident, familiar with the testing procedure, and armed with tips to help me perform my best.

All three of the programs listed here could do the same for your students who are about to take the SAT or PSAT.

> **Your Personal Trainer for the SAT** (Davidson & Associates, Inc.)
> **Inside the SAT** (Princeton Review)
> **Score Builder for the SAT** (The Learning Company)

Internet

WebWhacker (Forefront, upper elementary–adult). This program enables you to save Internet sites and browse them offline. That's right, you choose and save only the sites you want your students to have access to. No more wasted online time. It's a natural for education because it cuts down on the time involved in web searching and those awful disconnections. It's so realistic that kids actually think they're connected to the Internet.

Claris Home Page (Claris, upper elementary–adult). This is by far the easiest way to create your own Web page. If you're not up to learning complicated HTML code, this is the software for you!

Teacher Productivity

Every month I hear about new teacher titles that are on the market. This list highlights a few of my favorites. Be sure to check out the demos and "free stuff" many of these companies have provided on the CD that's in the back of this book.

EasyGrade Pro (Orbis Software). This is my favorite gradebook program. It is the most user-friendly of all the programs out there, and Orbis offers a really reasonable site-license rate that allows teachers to make copies of the program for home use. A demo is on the CD.

Lesson Plan Designer Plus (SuperSchool Software). If you're tired of writing lesson plans over and over again, this program is for you. Lesson Plan Designer Plus enables you to enter goals and objectives. (Lesson Plan Designer Plus even provides you with a comprehensive list of objectives.) It gives you an Internet scrapbook where you can enter your favorite Web pages and notes, a scanning organizer, and an area to keep running records on your math or reading groups.

Test Designer Supreme (SuperSchool Software). Allows teachers to create essay, multiple-choice, and true-or-false test questions. Strengths of this program are the layout choices, the ease of use, the database for storing questions, the option to take the test on the computer, and the program's support of five languages.

MakeTest (Mountain Lake Software). Store frequently used questions and answers, assign difficulty levels and topics to your questions, and print tests and answer keys. You can even import graphics and equations to enhance your tests. Examine the demo on the CD!

IEP Writer Supreme (SuperSchool Software). Special education teachers have been waiting for a program like this one! Yes, a software program that makes writing those IEPs a breeze. Tons of stored goals and objectives are ready to be slipped into your plan. You can even contact SuperSchool and have them create electronic versions of the forms your school system requires you to use!

Teacher's Tool Kit (Hi-Tech of Santa Cruz). Four programs that help you create customized word searches, word scrambles, fill-in-the-blank quizzes or study sheets, and multiple-choice tests.

The Print Shop Deluxe CD Ensemble (Brøderbund). I've already discussed this program in the Productivity section (and the demo is on the CD). As a teacher, I like this software for creating thank-you notes, certificates, business cards, and stationery. It also creates some great banners for birthdays and other classroom celebrations.

SchoolWorks Teacher (Micromedia Publishing). A great collection of ClarisWorks templates for the classroom teacher. Really cool!

Norton Utilities (Symantec). This software helps to keep your hard drive trouble-free. It can help you recover something you threw away or fix a floppy disk that may be unreadable. Another plus is its capability to maximize your hard drive by defragmenting spaces left when you continually take software on and off the hard drive.

FoolProof (SmartStuff Software). This desktop security system lets your class use the computer and see the desktop while enabling you to lock certain files (like your gradebook or the midterm exam) and prevent the trash can from being used. Many schools are now switching to this program instead of using At Ease. Examine the demo on the CD.

ClickArt Images (T/Maker). These clip-art images are funny, inexpensive, and easy to access. Need I say more?

School Font Collection (Mountain Lake Software). This font collection has all the basics, even a great D'Nealian-style font. It even has a font that prints those neat arrows alongside the letters that show beginning writers how to make their letters correctly.

Spelling ToolKit Plus (MECC). This program builds your spelling lists and then creates puzzles and tests using your word list. Spelling ToolKit Plus comes with a huge supply of words (including all the words from four of the major spelling textbook publishers), or you can customize the already existing list. After you've created your list, you can use the words to create standardized tests, coded word puzzles, configured word puzzles, embedded word puzzles, word scrambles, word searches, study sheets, and crossword puzzles.

Schoolhouse Fonts (Signature Software). Signature Software has created two sets of great looking font collections, including true cursive fonts that completely connect the letters.

PenFont (Signature Software). This font is created after you send them a sample of your handwriting. Isn't that the coolest?! Yep, your own handwriting can be turned into a font that appears in your font menu!

Crossword Creator (Centron). All you do is enter a list of words and let crossword creator do the work. You can enter the clues yourself or get help from the on-board thesaurus. I've created crossword puzzles to correlate with each of my social studies units, author studies, and science themes.

Teacher's Fonts I and Teacher's Fonts II (Forest Technologies). Forest Technologies has come up with a great collection of school fonts. The collections contain handwriting fonts, historical fonts, holiday fonts, and seasonal fonts.

S.T.A.R. (Advantage Learning Systems, Inc.). S.T.A.R. stands for Standardized Test for Assessment of Reading. It's a computerized version of the IRI's (Individual Reading Inventory), but it takes less than 15 minutes to administer! The student scores correlate with standardized norm-referenced tests.

Inspiration (Inspiration Software, upper-elementary–adult). Originally designed for use in the wonderful world of business, this concept mapping software has become even more popular in the world of education. After all, we teachers have also been known to do some pretty intensive planning . . . like everyday! With simple mouse clicks, Inspiration makes it easy for teachers to create great story webs, lesson plans, concept maps, flow charts, outlines, semantic maps, and more. Students can use Inspiration to map out reports, presentations, multimedia projects, and study guides. Another bonus is the integrated outline view that allows students to see how the visual representations interpret themselves into an outline form. It's rare when a student actually understands and appreciates the power of a good outline, and this software helps to make the connection between the visual organization of ideas and the actual outline.

I personally like Inspiration because it's easy to use and it allows me to quickly move my ideas to a visual format and then later move, add, or rearrange until I make things the way I want. I wish I'd had this software when I first had the idea for this book series. I had so many ideas for things I wanted to include and ended up with reams of unorganized handwritten notes. This software will take your brainstorming sessions to a new level!

No, I didn't forget how to spell!

After reading this list of software titles (ClarisWorks, PageMaker, ClickBook, EasyBook), you probably think that I've forgotten how to spell, or that I'm fascinated with compound words. It's not me, it's those programmers and software executives. Today, having a space in your program's name just isn't cool, and it's very rarely done. Yes, it bugs me, just like those stores that use R instead of the word ARE and the beauty salons that spell "cuts" with a *k*. And then parents complain to us that we just don't put enough emphasis on spelling these days!

Appendix C

Troubleshooting by David Pogue

● ●

*T*his appendix was taken from *Macs For Dummies*, 4th and 5th Editions.

It turns out that about 90 percent of the things that go wrong with your Mac can be solved using the same handful of troubleshooting steps. To save you reading and me writing, I consolidated them all at the end of this appendix under the heading "The Problem-Solving Cookbook." As you read through the symptom-by-symptom listings, I refer you to one or another of those steps.

The Mac Freezes or Crashes

There are two scary conditions that are enough to make even semipro Mac jockeys swallow hard. The first of these conditions, a system *crash,* occurs when the following message appears on the screen:


```
  ⊛꙼  Sorry, a system error occurred.
      "Finder"
         unimplemented trap

                              [ Restart ]
```
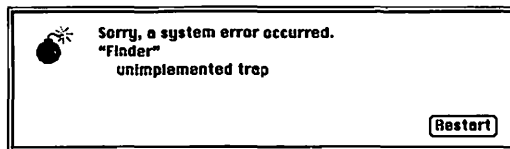
Your current work session is over, amigo; you have to restart the computer. (Safest way to restart is to press the Restart switch, as described in "The Restart switch" at the end of the chapter.) Anything that you've typed or drawn since the last time you saved your work is gone.

A system *freeze* is different — and, as horrific computer nightmares go, it's preferable. You get no message on the screen; instead, the mouse cursor freezes in place. You can't move the cursor, and nothing that you type changes anything. The Mac, as far as you can tell, has silicon lockjaw.

The most common cause of troubles that need shooting

Get used to the computeristic-sounding word extension.

An extension is a little file in your Extensions folder (which is inside your System Folder). Each extension adds a specific new feature to the Macintosh: a screensaver, fax capability, and so on. You know those little icons that march across your screen when you turn on the Macintosh? Those are your extensions.

An extension runs all the time; it's like a program that you can't quit. It gets launched when the Mac turns on, and it's running in the background during your entire workday.

But the people who wrote the After Dark screensaver program, for example, have never even met the programmers who wrote the FaxPlus faxing extension, let alone figured out how to make their two little programs coexist. Suppose you have both After Dark and FaxPlus in your Extensions folder. Also suppose that each little extension program, in the background, simultaneously reaches for the same morsel of electronic memory.

"Sorry, a system error occurred."

In other words, extension conflicts (the technical term) are among the more common causes of problems on the Mac. You can find the solution in this chapter.

Escaping a system freeze right now

First resort: Try the amazing "Force Quit" keystroke, ⌘+Option+Esc (see "The amazing 'Force Quit' keystroke" at the end of this chapter). That should get you out of the locked program, at least.

Last resort: If the Magical Force-Quit Keystroke doesn't work — and sometimes it doesn't — you have to restart the Mac. This time, see "The Restart switch" at the end of this chapter.

Escaping repeated system freezes and crashes

Ninety percent of the time, freezes and crashes are related either to memory or to *extension conflicts*.

First resort: Increase the amount of memory allotted to the program that you are using, as described in "Giving more memory to a program" at the end of this chapter. Give the program 150K more, for example.

Second resort: Something, or *several* somethings, are clashing in your System Folder. (See "Solving an extension conflict" at the end of this chapter.) If you're in a hurry to get your work done and can't take the time, just restart your Mac while pressing the Shift key. That turns *all* extensions off.

Third resort: Maybe one of your programs is either (a) buggy or (b) out of date. The first problem is likely if you're using Microsoft programs; the second problem is likely if you have recently upgraded something — your Mac or your System Folder version, for example. You can't do anything but contact the software company and hope for the best.

Fourth resort: You may have a SCSI conflict on your hands, especially if more than one external gizmo is plugged into your Mac. (See "Solving SCSI nightmares" at the end of this chapter.)

Fifth resort: If nothing so far has stopped the crashes, some weird memory-related thing may be going on under the hood. Some programs are allergic to virtual memory, for example; so your second step should be to turn off Virtual Memory (open your Memory control panel and click the Off button). Or, if you have a Power Mac, try turning virtual memory *on*. And if you're advanced enough to know what 32-bit addressing is, go to the Memory control panel and turn *it* off, if your Mac lets you. A lot of older programs break out in puffy hives when *that* is on. (But a lot of *newer* programs shriek if it's *off*.)

Last resort: If the crashes still haven't stopped, something in your System Folder may be gummed up. You're in for a 20-minute, but *very* effective, ritual known as a *clean reinstall* of your System Folder. (For instructions, see "CAUTION: Change the ⌘ and symbols to you-know-what" at the end of this chapter.)

Error Messages

Let's start the troubleshooting session in earnest with a few good old American error messages. Yes, kids, these are the '90s equivalent of "DOES NOT COMPUTE." These are messages, appearing in an *alert box,* like the fictional one shown here, that indicate that something's wrong.
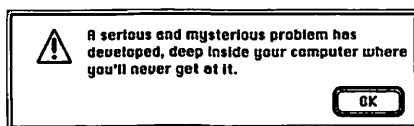
"Application not found"

First resort: Not everything in the Mac world is meant to be a plaything for you; the Mac reserves a few files for its own use. If a thing came with your Mac — the Scrapbook file, the Clipboard file, and so on — you at least get *something* when you double-click its icon. The Clipboard file opens into a window where you can see the most recent stuff that you copied; the Note Pad file automatically launches the Note Pad desk accessory; and extensions or control panels at least identify themselves (by means of a message on the screen, such as "System Extension: This file adds functionality to your Macintosh").

But if you double-click an icon that belongs to *non-*Apple software — any icon in the Preferences folder, for example, or various other support-file icons for non-Apple stuff — you just get a beep and an unhelpful error message.

That's what's going on *most* of the time.

Second resort: Every now and then, you'll double-click a file that *you* created and *still* get the "Application not found" message.

So if you double-click a ClarisWorks document, but the ClarisWorks program itself isn't on your hard disk, the Mac shrugs and asks, in effect, "Yo — how am I s'posed to open this?" To remedy the situation, reinstall the missing program on the hard disk.

Third resort: Sometimes, you get the "Application not found" message even if you're sure that the document's parent program *is* on the disk. (You double-click a ClarisWorks document, for example, and you're told that the application — ClarisWorks — can't be found, even though it's *sitting right there* on the disk in plain sight!)

In a situation like this, the Mac's genealogical gnomes have become confused: The computer has lost track of which program is associated with which kinds of documents. Don't ask me how such confusions happen; just rejoice that the problem is easy to fix. In the words of Mac gurus everywhere, "You gotta rebuild the Desktop." (For instructions, see "Rebuilding the Desktop file" at the end of this appendix.)

Last resort: There's one more circumstance under which you'll get this message: if you try to open a generic text or graphics file that's not associated with *any* particular program.

(Sigh!) Yes, I know, this contradicts everything you've learned about programs and documents being like parents and children. But suppose that someone who isn't sure which brand of word processor you own wants to

give you a memo that she wrote. The smart thing would be for her to give you the memo in *text-only* format: a generic, no-frills, raw-typing format. Text-only format is a text file or, as the weenies say, an *ASCII* (pronounced ASKie) text file. No matter which program was used to create this file, *any* word processor (even on non-Mac computers, for that matter) can open it.

A text file, however, isn't double-clickable. (Actually, the Mac generally offers to open a text file with SimpleText, but just pretend that I have a point here.) To read the file, launch your word processor *first* and then choose the Open command from the File menu (as in the left-hand illustration).
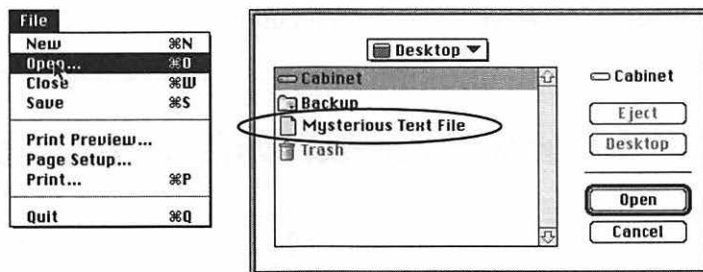
The usual list box appears, and you see the text file listed there (now, take a look at the right-hand illustration). Double-click to open it.

The same applies to generic *graphics* documents. These files, in technical-sounding formats like PICT, JPEG, and GIF, can be opened by almost any program (America Online, for example, can open all three). Yet if you try to double-click a generic graphics file, you are told, "Application not found." Once again, the solution is to launch your graphics program *first* (America Online or ClarisWorks, for example) and then open the file via the Open command.

"Can't empty trash"

First resort: A locked file is probably in the Trash can. Press Option while choosing Empty Trash from the Special menu.

Second resort: You may be trying to throw away a document that you're still working on. Or maybe the Mac just *thinks* that you're still working on it. Be sure that the file isn't open on the screen. Sometimes, you even have to *quit the program* you were using before that document is considered trashable.

Third resort: Maybe the Mac has become confused about the trashability of some file in the Trash. Restart the Mac and try again.

Last resort: About once in every Mac user's life, the Mac gets *so* confused that it simply will not empty the Trash, even if you tried all the logical things.

In this case, it's your System Folder that's having the psychotic break. The trick is to start up from *some other* System Folder — the handiest of which comes on your all-important Disk Tools (or Utilities) disk. (Or, if your Mac came with a system-startup CD-ROM disc, use that.) This special startup disk comes with every Mac ever made, so you can't claim helplessness on this point.

Turn off the computer. Put Disk Tools (or Utilities) into the disk drive. Then turn the Mac on. When the computer is running, you should at last be able to empty the Trash.

"An error occurred while writing to the disk"

Something went wrong while you were trying to save a document — probably your disk was full, or it's a flaky floppy disk. (See "Floppy-Disk Flukes," later in this appendix, for more information on flaky floppies.)

"Microsoft Word prefers 2048K of memory. 2000K is available"

Once again, you're out of memory. The Mac will give you the chance to launch the program anyway — but it'll run slowly and may crash if you get too ambitious with your work. (See "Giving more memory to a program," at the end of the appendix, for a more lucid explanation.)

Numbered error messages

This may strike you as hard to believe, but the numbers in some error messages (Type 11, Type 3, Error 49, and so on) are *no help at all.* They're valuable only to programmers, and even then not very. For example, a Type 1 error means "bus error," a Type 3 is "illegal instruction," and Type 20 is "stack ran into heap." Reallllllllly helpful.

Of the 200 Mac error messages, only one lets you remedy the situation: -39, which means that something's wrong with the disk (or the file you're trying to work with is corrupted somehow). All the others are caused by the usual problems: Some program didn't have enough memory, or you had an extension conflict, or your System Folder needs re-installing.

Out of Memory

Your Mac has a fixed amount of memory. Think of the Mac as a station wagon. You can pack it with camping gear, or you can pack it with your kid's birthday-party friends, but probably not with both. Even if you manage to cram in the kids and the gear, if you *then* try to cram in the dog, somebody in the family is going to say, "There is not enough room to take Bowser."

That's what the Mac is trying to tell you.

Each program that you open consumes a chunk of the Mac's limited memory. You're entitled to run as many programs as you want simultaneously — the Note Pad, the Calculator, your word processor, and so on — *provided* that they all fit into the amount of memory your Mac has. If you try to open one too many programs, you'll get that message about the dog. (*You* know what I mean.)

First resort: Quit programs

If you're told that you're out of memory, the easiest way out of the situation is to *quit* one of the programs you're already running. (You quit a program by choosing Quit from the File menu.) So if you're running Word and you try to open ClarisWorks, and you're told that there's not enough unused (free) memory, you just have to quit Word first.

Often, you may have programs running and not even know it. Remember that just because a program has no *windows* open doesn't mean it isn't *running.* When you're done working on something, did you just *close the window,* or did you actually *choose Quit* from the File menu? If you didn't actually Quit, then the program is still running, and still using up memory.

To get rid of that program, choose its name from the Application menu (in the upper-right corner of the screen — to the right of the question-mark menu). Then choose Quit from the File menu.

Second resort: Make the Mac give back

Quitting programs, of course, isn't a very convenient solution — especially if having multiple programs open is part of what you're *trying* to do, such as copying numbers *from* the Calculator *to* Word. Therefore, your next attempt to solve the problem should be to make the Mac itself use less memory.

Yes, indeed, the Mac's own behind-the-scenes operations use memory like a silicon hog — at minimum, System 7.5 grabs 2.5MB of your memory. If your Mac has only 4MB to begin with, you can see why running out of memory can happen easily.

Here are some tricks to make the Mac use less memory:

✔ **Use fewer extensions.** The little auto-loading programs whose icons appear across the bottom of the screen when you start the Mac. Each extension that didn't come with your Mac (screensaver, fax software, virus checkers, and so on) eats up another nibble of your memory.

A few particularly memory-hungry extensions: QuickTime (200K); After Dark (300K); Adobe Type Manager/ATM (500K or more); QuickDraw GX (1500K or more).

And how do you turn off extensions? (See "Solving an extension conflict" at the end of the appendix.)

✔ **Check your Disk Cache.** This little gimmick is something that you can blissfully ignore for most of your computing days . . . until you start running out of memory.

Suppose that you're innocently word processing, and you make some text boldface. Because the word-processing program resides on your hard disk, the Mac consults the disk to find out how it's supposed to create bold type. This disk-reading business takes, say, one second. If you use boldface a lot, those one-second disk searches are going to cumulatively slow both you and your Mac.

Therefore, the Mac reserves a piece of memory, called the Disk Cache, just for such frequent pieces of information. *Now* when you make text boldface, the Mac consults the disk (taking one second), but it stores the "how-to-make-bold" information in the Disk Cache. The *second* time that you need to create bold text, the Mac already knows how to do it; your text becomes bold in $1/100$ second (because memory delivers information to the Mac's brain 100 times faster than the disk does). Cumulatively, all the little tidbits of information that the Mac stores in the Disk Cache give you quite a speed boost.

The larger this piece of memory is, the faster your Mac will go. But there's the rub: If you make this Disk Cache memory *too* big, you use memory that you could be using to run programs.

Even if I've totally lost you, here's what to do when you're strapped for memory. From the menu, choose Control Panels, and double-click Memory. Clicking the arrow, as shown here, makes the Disk Cache smaller.
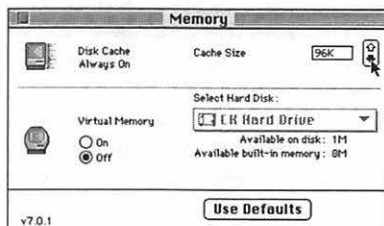
This has been a long explanation for a small reclamation of memory, I know, but it feels good to know what's going on behind the scenes, doesn't it?

Third resort: Defragment your RAM

Sometimes, the Mac will appall you. Here it is, the equivalent of a whole *roomful* of 1950s-style computers, yet it can't even add.

Here's the scenario. Your Mac has 5MB of memory, let's say. You know your System uses 1.5MB. And you're running Excel, which, in this fantasy, takes 2MB.

Then you try to launch ClarisWorks, which we'll suppose needs 1.5MB of memory. You get the out-of-memory message. How can this be? After all, the System (1.5) and Excel (2) together use only 3.5 of your 5MB. There ought to be 1.5MB left over, right? What's going on?

Memory fragmentation is going on, if you must know. It works like this. At noon, you start the Mac. Your memory usage looks like this:

Total Memory: 5 megs

System (1.5)	free memory
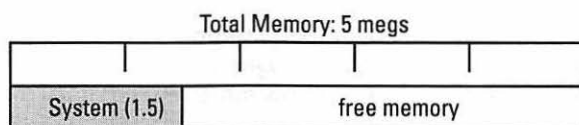
Then, at 12:05, you open the Calculator. For this example, let's say that its memory requirement is half a megabyte.

When you then launch Excel, your Mac's memory map looks like this:

Total Memory: 5 megs

System (1.5)		Excel (2)	(free)
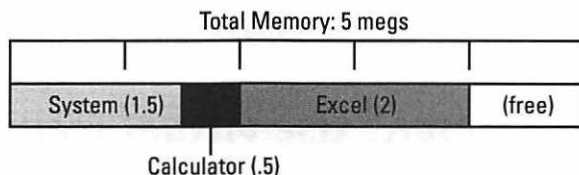
Calculator (.5)

At 12:15, you close the Calculator. Your memory map looks like this:

Total Memory: 5 megs

System (1.5)		Excel (2)	(free)

free (.5)
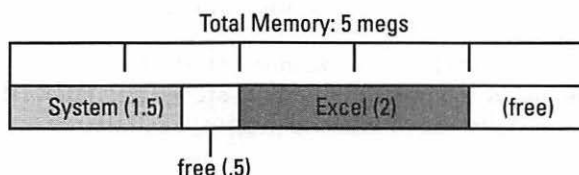
If you look at this last illustration, you see that you can't launch ClarisWorks (which needs 1.5MB) now because there isn't 1.5MB of *contiguous* memory left! Because of the sequence, you inadvertently chopped your remaining memory into two smaller chunks, neither of which alone can accommodate ClarisWorks.

The solution to the I-*know*-I-have-enough-memory-to-launch-this problem is to *quit* all your programs so that only the Finder is running and *then* launch all the programs that are supposed to fit in your Mac's memory. This time, it will work.

Fourth resort: Get RAM Doubler

Here's a fascinating possibility for the RAM-shy Mac fan: Buy a $50 program called RAM Doubler.

RAM Doubler uses several potent, deeply technical tricks to make your Mac *behave* as though it has twice as much memory as it really does. Most people who try it love it. The rest get their money back!

The only fundamental understanding of RAM Doubler that you need is this: It lets you run *more small programs at the same time*. It *doesn't* let you run one *big* program that requires more real memory than you have.

So Billy Bob, who has a 4-meg PowerBook and wants to run ClarisWorks and Kid Pix at the same time, has it made in the shade. He no longer has to quit Kid Pix just to free enough memory to launch ClarisWorks. RAM Doubler lets him keep both programs going.

Jenny Sue, however, wants very much to run Photoshop or Myst on her 4-meg LC. She's out of luck. Those programs require about 5 megs of memory apiece. RAM Doubler's double-memory tactics don't let you run any *big* programs that you couldn't run before.

Fifth resort: Use virtual memory

Here's another rather technical, but interesting, possibility for avoiding out-of-memory problems. Fortunately, this solution lets you run programs whose combined memory requirements add up to much more than your Mac should be able to handle. Unfortunately, it requires you to learn a new term. Ponder this trade-off for a moment; then read on, if you dare.

The new term is *virtual memory.* (*Virtual* means *fake,* as in "virtual reality.") Under this scheme (unique to System 7 and later), the Mac attempts to use the hard disk as emergency memory.

TECHNO TERMS

Suppose your Mac has 4MB of memory, but you want to run both Limerick-Writer (which requires 2MB) and BrailleMeister (which also requires 2MB). Because your System requires 1.5MB by itself, you can see that 2 + 2 + 1.5 is going to equal more than your 4MB.

If you were using virtual memory, though, the Mac would allow you to run both programs simultaneously. Where would it get the extra 1.5MB of memory that it needs to fit everything in? It would use an empty hunk of *hard-disk space.*

HEADS UP

Read this slowly: When you're in LimerickWriter, the Mac stashes the excess 1.5MB worth of BrailleMeister information on the hard disk. Then, when you bring the BrailleMeister window to the front, the Mac quickly feeds that 1.5MB worth of information back into actual memory, displacing the same amount of LimerickWriter instructions (which, needless to say, it writes back onto the hard disk). Each time you switch programs, the Mac juggles the overflow.

This switch doesn't take place instantaneously; that's a lot of information for the Mac to shuttle back and forth between memory and the hard disk. In fact, you may have quite a lag when you switch from one program to another. A little waiting sure beats not being *able* to run those two important programs at the same time.

For some mysterious technical reason, the amount of hard-disk space that the Mac needs to perform this stunt isn't *just* the amount of pretend memory you want to *add* to your real memory. That is, if your Mac has 5MB of memory, and you'd like your Mac to think that it has 8MB, you can't just set aside the difference (3MB) in hard-disk space. Golly, no. You have to allow a chunk of disk space that's the size of *all* the memory, real and imagined — in this case, 8MB.

Okay. All that having been said (and read), let's get to the actual process of using virtual memory. Follow these steps:

1. **From the ⌘ menu, choose Control Panels and then double-click Memory.**

   The control panel appears, like this:
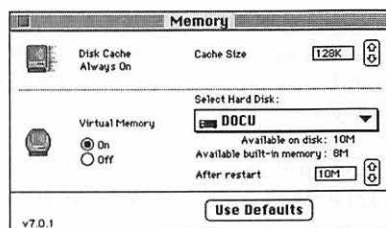
See the Virtual Memory area? If not, your Mac isn't equipped for this feature. (Some of the older ones aren't, including the original Classic and the original LC.)

2. **From the pop-up menu, specify the hard disk that you want the Mac to use as its temporary fake-memory dumping ground.**

   If you have only one drive — the one inside your Mac — skip this step.

3. **Using the little up- and down-arrows, specify how big you want that virtual-memory file (on your hard disk) to be.**

   Remember: There has to be a chunk of empty hard-disk space that's big enough to hold the *total* of your real memory and the extra, phony memory that you'd like to have.

   Don't create total memory more than double your *real* memory. If you have 4MB of RAM, your total memory (including virtual) shouldn't exceed 8MB; things will get so slow as to be unworkable.

   Oh, yeah: If you're going to set virtual memory *higher* than 8MB, you also need to turn on the 32-bit addressing switch (if your Mac displays one in the Memory control panel).

   The Mac may tell you that your disk does not have enough room. Maybe it's time to go on a cleaning binge.

4. **When you're done with your virtual-memory setup, restart the Mac.**

Last resort: Buy more

After a certain point, knocking yourself out to solve out-of-memory problems reaches a point of diminishing returns. You get so worn out from workarounds that they're not worth doing.

At that point (or much sooner), just *buy more memory.* You can get it from any mail-order company (such as Mac Connection). You can install memory yourself, fairly easily, in some models. Installing memory in other models — like PowerBooks — is trickier and requires some funky tools. Anyway, when you call a mail-order company to buy memory, tell them what Mac you have and find out what you need. Sometimes, the company will send you a how-to video, which is very handy — and when you're done with it, you can use it to record *Seinfeld.*

Installing memory yourself can be easy as pie or hard as nails, depending on your Mac model. For the fewest headaches, get someone (like your favorite computer store) to install it for you.

Having lots of memory to kick around in is a joy. Your Mac runs faster, has fewer crashes and glitches, and acts like a new machine. It's a situation that I heartily recommend.

Startup Problems

Problems that you encounter when you turn on the Mac are especially disheartening when you're a new Mac user. It does wonders for your self-esteem to think that you can't even turn the thing *on* without problems.

No ding, no picture

First resort: Chances are very, very, very good that your Mac simply isn't getting electricity. It's probably not plugged in. Or it's plugged into a power strip that has an On/Off switch that's currently set to Off. Or (if it's a PowerBook) the battery is completely dead; plug in the adapter for ten minutes before trying again.

Second resort: If you have a two-piece Mac, you normally turn the machine on by pressing the triangle key on the keyboard. Maybe the keyboard isn't plugged in. Check that.

Third resort: Here's another PowerBook possibility. It may be that the internal circuitry known as the *power manager* has gotten drunk again. Unplug the PowerBook *and* take its battery out. Let it sit like that for ten minutes. Then put it together and try again.

Last resort: If none of those steps solved the problem, your Mac is as dead as Elvis. Get it in for repair. But that's virtually never the actual problem.

Ding, no picture

If you hear the startup chime (or ding) but the monitor doesn't light up, something's wrong with the monitor.

First resort: Is the screen brightness turned up? On most Macs, a brightness dial is on the edge of the monitor. On a Classic, you have to use the Brightness control panel.

Second resort: I don't mean to insult your intelligence — but is it possible that you have a screensaver program installed? (You know, like After Dark . . . flying toasters, all that?) Some Macs, like the 7200 and 7500, have a *built-in* screensaver that kicks in after a few minutes.

To find out if a screensaver program is the cause of the current blackness, press a key or click the mouse button. If the screen picture doesn't appear, read on.

Third resort: If you have a two-piece Mac, the monitor has to be (1) plugged into the Mac, (2) plugged into a power source, *and* (3) turned on. (Not everybody realizes that the monitor has an On/Off switch.) Often, the monitor is plugged into the AC outlet on the Mac itself; that's okay.

Last resort: Does your monitor require a graphics card? Some old models do. (Of course, if your Mac needs a graphics card, you would have discovered this problem the day you got your system.)

Picture, no ding

Every Mac makes a sound when it's turned on. In fact, even if you've set the volume level of your Mac's speaker to zero (by using the Sound control panel), you still get a sound when you start the Mac.

First resort: Look at the little speaker jack in the back of the Mac. If some kind of plug is in it — some kid's Walkman headphones, a cord connected to a stereo, or a pretzel stick — no sound can come out of the Mac speaker.

Last resort: There's a remote possibility that somebody, mucking around inside your two-piece Mac, unplugged the speaker-wire cable. Find that person, yell firmly into his or her nearer ear, and insist that the cable (inside the Mac) be reconnected.

Four musical notes (or crash sound)

If you hear an arpeggio, a lick of the *Twilight Zone* theme, a drum or flute solo, or a car-crash sound, something's seriously wrong inside the Mac (Apple's sense of humor at work).

Fortunately, 50 percent of the time, you hear this sound just after installing new memory. It means that one of the memory chips is loose or defective — something that you (or whoever installed the memory for you) can fix relatively easily. And 40 percent of the time, it's a SCSI problem. Read on.

First resort: If you just installed or otherwise messed around with the memory chips in your computer, that's certainly the problem. Reopen the Mac. Carefully remove each memory chip and reinstall it, checking the little centipede legs to make sure that they're not bent. (Come to think of it, get someone who knows what he or she's doing to accomplish this.)

Second resort: The other common source of funny startup notes is a SCSI problem of some kind. (Yes, I know that we haven't defined this in a while; for instructions, see "Solving SCSI nightmares," later in this chapter.) For a quick fix, just unplug any external hard drive or scanner from the SCSI jack (the very wide one) in the back of the Mac and try starting up again.

Last resort: If it's truly not a memory-chip or SCSI problem, call your Apple dealer. This baby's sick.

A question mark blinks on the screen

The blinking question mark is the Mac's international symbol for "I've looked everywhere, and I can't find a System Folder anywhere."

The blinking question mark means that your hard drive's not working right — or that it's working fine, but your System Folder got screwed up somehow. In either case, here's what to do.

First resort: After ten seconds of panic, turn the Mac off and try starting again, or just press the Restart switch. (See "The Restart switch," at the end of the appendix.)

Second resort: Find a floppy disk with a System Folder on it. The best bet is the white System disks (or the startup CD) that came with your Mac. The floppy called Disk Tools or Utilities usually does the trick. Put it into the disk drive and turn the Mac on.

After you're running, find the program called Disk First Aid. Run it and use the Repair button. About 40 percent of the time, Disk First Aid can repair your hard drive.

Third resort: If the hard-drive icon still doesn't appear, read "Solving SCSI nightmares," later in this appendix.

Fourth resort: Try *zapping the PRAM* (pronounced PEA-ram). See "Zapping the PRAM," at the end of the appendix.

Last resort: If nothing works, and you still can't make your hard-drive icon appear on the screen, your hard drive is sick. Call your local dealer or Mac guru, and do *not* freak out — chances are very good that all of your files are still intact. (Just because the platters aren't spinning doesn't mean that they've been wiped out, just as your Walkman tapes don't get erased when the Walkman runs out of batteries.)

In fact, you can probably rescue the data from your disk yourself. Buy a disk-recovery program, such as Norton Utilities or MacTools Deluxe. That'll let you grab anything useful off the disk and may even help heal what's wrong with it.

Some crazy program launches itself every time you start up

In the words of Mac programmers everywhere, "It's a feature, not a bug."

Inside the System Folder, there's a folder called Startup Items. Look inside it. Somebody put a program or document in there.

Anything in the Startup Items folder automatically opens when you turn on the Mac. This feature is supposed to be a time-saver for people who work on the same documents every day.

Floppy-Disk Flukes

Floppy disks are cheap and handy and make excellent coasters. But when they start giving you attitude, read on.

Mac keeps asking for a disk you've ejected

First resort: You probably ejected the disk by using the Eject Disk command in the Special menu. In general, that's a no-no, precisely because (in systems before Mac OS 8), the Mac will continually ask for it.

You can get out of this scrape by pressing ⌘-period several times. Next time, eject a disk by choosing the Put Away command from the File menu (or by dragging the disk icon to the Trash can).

Last resort: Sometimes, even if you use Put Away, a ghost of the disk's icon remains on the screen; the Mac keeps asking for it, and pressing ⌘-period doesn't solve anything. In this case, you probably opened a file on that disk, and it's still open. As long as something on that disk is open, the Mac won't forget about the disk; it would be like canceling the space program while some astronauts were in the middle of a mission.

Choose the program in question from the Application menu, and make sure that you close all documents. Now you should be able to drag the disk icon to the Trash can.

You can't get a floppy disk out

First resort: Press ⌘+Shift+1. That should pop out the disk, even if you can't see its icon.

Last resort: Use the paper-clip trick: Straighten a paper clip and push it slowly but firmly into the tiny pinhole to the right of your disk drive slot. That'll shove the disk out.

Everything's Slow

Of course, if your Mac has seemed too slow since the day it arrived, maybe you just bought a model that's too slow for your demanding tastes. There's nothing for it except to upgrade to a faster model — or, if it's a Power Mac, to make sure you're using Power Mac-specific programs.

But if the Mac has begun acting slower since you've owned it, something may indeed be wrong.

First resort: After several months of using a Mac, it actually *does* slow down. The problem is a bloated desktop file; the solution is described in "Rebuilding the desktop file," later in this appendix.

Second resort: Choose Control Panels from your menu. Open the one called Memory. Is *virtual memory* turned on? If so, you've accounted for at least some of the sluggishness.

Third resort: While still in your Control Panels window, open the one called Views. Is "Calculate folder sizes" turned on? If so, turn it off; it's slowing down the works.

Fourth resort: Just to be secure, read "Solving SCSI nightmares" at the end of this appendix. A SCSI problem can also make your Mac act like it's on Sominex.

Last resort: If your hard drive is rather full, perhaps it needs to be defragmented. (See "Defragmenting your hard drive" at the end of the appendix.)

The Problem-Solving Cookbook

Okay — now you've read about everything that can possibly go wrong. This section contains everything you can possibly do to *fix* the problem. Remember, you'll almost never find out what *caused* the problem to begin with; just be happy that the following techniques are magical in their ability to *cure* things.

Rebuilding the Desktop file

The Desktop is a very important file on your disk. How come you've never seen it? Because the Desktop file is *invisible*. (Yes, Mac icons can be invisible. Remember that fact if you ever get involved in antiterrorist espionage activity.) The file is something that the Mac maintains for its own use.

The Mac stores two kinds of information in the Desktop file: the actual *pictures* used as icons for all your files and information about the parent-child (program-document) *relationships* that you're having trouble with.

If the Desktop file becomes confused, two disturbing symptoms will let you know: the "generic icon" problem, where all your icons show up blank white and the "Application not found" message that appears when you try to double-click something.

Another Desktop-related problem: Over time, this invisible file gets bigger and bigger; remember, it's having to store the pictures of every little icon that crosses your Mac's path. And just because you throw some icon away after using it doesn't mean that its image gets cleared from the Desktop file — it doesn't. And the bigger your Desktop file gets, the slower your Mac becomes in its efforts to open windows, display icons, and start up in the morning.

Resetting your Desktop file, therefore, has two delightful benefits. First, it cures the generic-icon syndrome and the "application not found" problem (because it re-learns the relationships between files and their pictures). Second, it makes your Mac faster (because it purges all the unnecessary leftover icon images from its invisible database).

Rebuilding the Desktop file involves forcing it to unlearn the misconceptions that are giving you trouble and then to relearn the correct relationships between documents and the programs that gave birth to them. Here's how you do it. Turn the computer on. As it starts gearing up, press and *hold* the Option and ⌘ keys. Don't let go. Keep them down until the Mac explicitly asks you whether you want to "rebuild the Desktop." (Obviously, you should click OK.)

After that's done, your document double-clicking will work, your icons will return, and your Mac, having been cleansed of all obsolete icons, will run faster and more smoothly.

Zapping the PRAM

The PRAM is a tiny piece of battery-sustained memory. In this little area of memory, the Mac stores several pieces of information even when the computer is turned off: the clock time, your various control panel settings, choice of desktop pattern, and so on. When the PRAM memory itself gets corrupted, a whole category of goofy problems can result.

First, turn off (or restart) your Mac. Then turn it on again, but hold down four keys at the same time — ⌘, Option, P, and R — and don't let go until you hear the startup chime. (Afterward, you may have to reset your Mac's clock, desktop pattern, and mouse settings by choosing Control Panels from your ⌘ menu and opening the control panels called Date & Time, General, Desktop Patterns, and Mouse.)

The amazing "Force Quit" keystroke

Here's this amazing keystroke for escaping a frozen program: ⌘-Option-Esc. (This is about the only time that you ever use the Esc key.)

If it works, you get a dialog box that says, "Force [this program] to quit?" Click Force Quit, and you exit the program that you were working in.

So what's the big whoop? Well, if you had several programs running, this technique dumps only the *one* that you were working in — the one that crashed. You now have a chance to enter each of the *other* programs that are still running and save your work (if you haven't done so). Then, to be on the safe side, restart the Mac.

The Restart switch

Every Mac has a Restart switch. Sometimes, you'll find two buttons side by side somewhere on the Mac's casing — and the one with a left-pointing triangle is the Restart switch. Sometimes, as on older PowerBooks, there are two little back-panel *holes* that you're supposed to stick a pin into.

All the other models — especially recent ones — have a *secret* Restart switch; you press Control, the ⌘ key, and the On button (or power key) at the same time.

In every case, pressing Restart is the same as turning your Mac off and then on again, except that it doesn't suddenly send a wall of electricity thudding into the machine's delicate electronics. Therefore, Restart is gentler to your Mac. Keep the Restart switch in mind when you have a system freeze or crash.

Solving an extension conflict

Okay, here it is — the long-awaited extension-conflict discussion.

See, each *extension* (a self-loading background program, such as a screensaver, that you install in your System Folder) was written by a programmer who had no clue what *other* extensions you'd be using. As a result, two extensions may fight, resulting in that polite disclaimer "Sorry, a system error has occurred."

These things are easy to fix, once you know the secret. Shut off your Mac, and then turn it on again. But as the Mac is starting up, *hold down the Shift key* and keep it down until (1) you see the message "Extensions off" or (2) you arrive at the Desktop, whichever you notice first.

Your Mac probably won't give you trouble anymore — but now, of course, you're running without *any* of your cute little extension programs. No screensaver, no fax software, and so on.

If the point of this exercise is to pinpoint *which* extensions aren't getting along, you have three choices. One is free, but takes a lot of time. Another is easier, but only works if you have System 7.5-something. The third way costs $50 or so, but works automatically.

✔ **The hard way:** Burrow into your System Folder to find the Extensions folder, where these little guys live. Drag a few of their icons out of that folder onto the Desktop; that's how you prevent *selected* extensions from loading. You don't have to throw the extensions away; just take them out of the System Folder and then restart the computer. (Use the Restart command in the Special menu.)

If the Mac doesn't crash this time, you can pretty much bet that one of the extensions you removed was the guilty party. If the Mac *does* crash again, repeat the whole process, but this time take some more extension icons out of the System Folder.

Through trial and error, you eventually should be able to figure out which pair of extensions don't get along. Sometimes, just renaming one so that it alphabetically precedes its enemy is enough to solve the problem.

✔ **The System 7.5 way:** Use the same method given under "The hard way." But instead of burrowing into your System Folder to turn off extensions, try this. While the Mac is starting up, press and hold the spacebar down. Eventually, if you have System 7.5 or later, you'll be shown a complete list of your extensions.

You can turn off selected extensions just by clicking their names. Figuring out which specific extensions are causing your headaches is still trial and error, but at least it's easier to switch them on and off.

✔ **The easy way:** Buy a program called Conflict Catcher. This program does many useful things for managing your extensions, but its main virtue is catching conflicts. It can figure out, all by itself, which extension (or extensions) caused your Mac's problems. All you have to do is

sit there, restarting the Mac over and over, each time telling Conflict Catcher whether or not the problem has been solved yet. By the time the process is over, the program will emblazon the name of the errant extensions on your screen; you then can dismember, disembowel, or trash them as you see fit.

Conflict Catcher also lets you rearrange the *order* in which your extensions load simply by dragging their names around in a list. Oddly enough, switching the order of your extensions often solves extension conflicts, too.

(Tip: A free three-day demo version is available on America Online. It lasts just long enough for you to figure out which extensions were driving you crazy.)

Solving SCSI nightmares

I've tried to shield you as much as possible from the term *SCSI* and all that it entails. But because SCSI's a common source of trouble, it's time to put on the overalls and get dirty.

If there's nothing attached to your SCSI jack in the back of the Mac (for example, a scanner or a Zip drive), you *have* no SCSI problems, and you should skip this entire section. You don't know how lucky you are.

What's SCSI?

They pronounce it "scuzzy," for some reason. Here on the East Coast, we used to pronounce it "sexy," which I prefer, but the Valley girls and boys held sway.

Anyway, SCSI stands for Small Computer System Interface (or *Serial* Interface, or *Standard* Interface, depending on where you look it up; it's such a messed-up technology that nobody can even get the *name* right). SCSI describes the widest connector on the back of your Mac: the *SCSI port.* It also describes the fattest cable of any Mac appliance: the *SCSI cable.* It describes the kind of hard drives, scanners, Zip drives, CD players, and other gadgets that you attach to this jack: *SCSI devices.* It also describes the type of information that flows from those devices through those cables to that jack along the SCSI chain.

But frankly, the term that you hear most often is *SCSI problems*.

Examples: some SCSI appliance (a scanner, a CD-ROM, a Zip drive, whatever) doesn't work right. Or your whole Mac is acting slow and weird. Or your Mac won't start up at all.

What's especially frustrating to people who write computer books is that you can't pin SCSI down. Even if you obey the "rules" (which I'll give you anyway), things still go wrong.

The only good thing to say about SCSI problems is that once you figure out the problem with your setup, that problem is gone for good.

The rules of SCSI

Rule #1: When the Mac attempts to talk to various devices along a SCSI daisy-chain, it must be careful not to say "start scanning!" to the hard drive or "start spinning!" to the scanner. In other words, it has to address its messages carefully.

For that reason, every SCSI device in the world has a *SCSI address* between 0 and 7. Usually, a little number wheel that looks like a one-digit odometer is on the back or the bottom of your SCSI device. Each SCSI device connected to your Mac must have a *different* SCSI number (address) so that the Mac can speak to each appliance individually.

The Mac, which is part of the chain, has a SCSI number, which is always 7. If you have an internal hard drive, it has a SCSI number, too — and that number is always 0. (If your Mac has a built-in CD-ROM player, its address is always 3.) So for your external drives, scanners, and so on, you can choose numbers from 1 to 6; just make sure that no two devices have the *same* number, or you're cruisin' for a bruisin'.

Rule #2: I wish I didn't have to mention SCSI Rule #2: The last device on the chain has to be terminated.

When I say *terminated,* I mean taken out and shot.

The second meaning for *terminated* is a little bit more complicated.

As the Mac sends its little instructions to the various SCSI devices attached to it, it shoves those instructions out the door with such force that they sometimes go all the way to the end of the cable and *bounce back* toward the Mac. Sometimes, the instructions make it all the way back, in which case you get nutty problems like a hard-drive icon showing up *twice* on the screen.

To soak up any messages that were pushed with too much oomph, you're supposed to put an electronic shock absorber at the beginning and the end of the line of devices. This absorber is called a *terminator,* Arnold Schwarzenegger notwithstanding.

If your Mac has an internal hard drive, as most Macs do, you don't have to worry about the beginning terminator: Your SCSI chain is already terminated inside. And if you also have only one SCSI device outside your Mac, you

don't need a terminator on the outside end. (I'm perfectly aware that this contradicts Rule #2, but it doesn't contradict **Rule #3,** which is that these rules don't always apply. Including Rule #3.)

After you have two or more SCSI things attached to the back of your Mac, though, it's time to start thinking about termination. You add termination by attaching a three-inch stopper plug (called, obviously, a *terminator*) to the empty SCSI jack of the last device on the chain. Some devices, however — such as Zip drives — have a terminator *switch* on the back or bottom. You can just flip this switch between the terminated and unterminated positions.

Worst of all, some devices may or may not be *internally* terminated, meaning that you can't *tell* whether or not they're already terminated. **Rule #4** is that you don't want a device in the *middle* of the chain to be terminated! The only way to find out whether a device is internally terminated (if that information is not in the owner's manual) is to call the cheap, lazy company that made it. If it *is* internally terminated, that device *must* go at the end of the SCSI chain. (Is this the most pathetic technology ever, or what?)

Rule #5: If your SCSI setup isn't working, try rearranging the physical order of the devices in your SCSI chain. It makes no sense, but sometimes rearranging makes things work when nothing else does. Anyway, at this point, you're entitled to be a little irrational.

Rule #6: Your SCSI *cables* can make or break the entire operation. If everything else seems hunky-dory, it's conceivable that the trouble is their *combined lengths.* They're not supposed to add up to more than 20 feet or so, and (like speeches and Willie Nelson songs) the shorter the better.

Oh, and while we're talking about SCSI cables, you should know this: They go bad. It's true. One rich guy I know threw out an 800MB hard drive because he thought that it had died permanently. Upon rescuing it from the dumpster, an enterprising Mac buddy discovered that the drive was fine; the *cable* had been crimped by a piece of furniture. After he spent $30 on a new SCSI cable, the drive was as good as new. It's probably worth replacing, or at least switching, the cables if you're still having SCSI problems.

Another guy I know solved his SCSI woes by switching his cable from one SCSI jack on his CD-ROM player to the other (of the two identical SCSI jacks). It makes *absolutely* no sense, but that's what happened.

Rule #7: Okay, you've made sure that every device has its own address. If you have more than one external SCSI device, you've terminated the last one. But things *still* aren't working right.

In this case, try taking *off* the terminator. I'm perfectly serious. SCSI **Rule #8** is: If a rule isn't working, try breaking it.

Someday, we'll laugh and tell our grandchildren, "Why, when I was your age, we used to have to *add terminator plugs to our external devices!*" Until that golden day, though, we have to put up with this cranky and unpredictable technology. Good luck to you.

Giving more memory to a program

When you turn on your Mac, about 2 or 3 megabytes of its available RAM (memory) gets used up by your System Folder's contents — your operating system. Then, every time you launch a program, a little bit of the leftover free RAM gets used up.

Here's how to find out where your memory is going at any particular moment: go to the Finder. From the menu, choose About This Macintosh. This helpful dialog box appears, showing several important numbers about your use of memory:

This is how much memory your Mac has. (If you want to convert this number to megs, mentally replace the comma with a decimal point.)
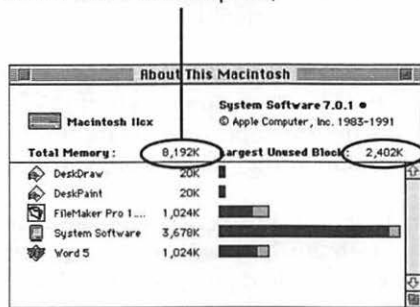
This is the largest chunk of memory you have left, into which you can open more programs. (There may be smaller chunks available, too.)

```
┌────────── About This Macintosh ──────────┐
│                    System Software 7.0.1 ● │
│   ▨ Macintosh IIcx   © Apple Computer, Inc. 1983-1991 │
│                                            │
│  Total Memory:  8,192K   Largest Unused Block:  2,402K │
│  ◇ DeskDraw        20K  ▮                  │
│  ◇ DeskPaint       20K  ▮                  │
│  ▨ FileMaker Pro 1...  1,024K  ▮▮          │
│  ▣ System Software  3,678K  ▮▮▮▮▮▮▮▮▮▮     │
│  ✦ Word 5         1,024K  ▮▮               │
└────────────────────────────────────────────┘
```

In the bottom part of the box, you can see what's already taking up memory and how *much* memory each program is taking up (see those bars?).

You may find it useful, however, to *change* the amount of memory that each of your programs uses. If you're experiencing a lot of system crashes, for example, the program may need a bigger memory allotment. If memory is at a premium, you may be able to give a program *less* memory, freeing some for other purposes.

Here's how:

1. *Quit* the program whose memory appetite you want to change, and then click its icon.

2. From the File menu, choose Get Info.

3. **Change the number in the Preferred size box (in older systems, it's called the Current size).**

   This number is the amount of memory that the program will actually consume when you run it. Unless system crashes make your life more interesting, don't set the Preferred (Current) size much below the Suggested size, though.

CAUTION: Change the ⌘ and symbols to you-know-what!

This procedure is just a wee bit technical. But it's *amazing* how many problems it solves. font problems, crash problems, freeze problems, glitch problems, weird things you can't even describe very well — all of them go away when you do a *clean install*.

As the gears of your System Folder grind away day after day, little corruptions and rough edges can develop. The following procedure replaces your old, possibly corroded System Folder with a brand-spanking-new one. It's nearly *guaranteed* to wipe out any erratic, bizarre crashes, or freezes that you've been having; after all, it restores the Mac to the exact condition it was in the day it left the factory.

This process requires the System Software Installer that came with your Mac. You find it in one of three forms: as a system CD that came with your Mac; as a pile of white Apple floppy disks that came with your Mac; or, if you have a Performa that doesn't have a CD-ROM drive, you were supposed to have made your own set of Apple Backup disks. (If you're really stuck, you can always buy the latest version of the Mac's system software from Mac Connection or a similar outfit.)

Step one: Install the fresh software
This first step depends on which system version you have.

If you have Mac OS 8 or later: Insert system CD. Double-click the Installer icon. On the welcome screen, click Continue; on the next screen, select the Perform Clean Installation option. Then continue with the usual installation process.

If you have System 7.6-something: Insert system CD. Double-click the Installer icon. After you click the Start button on the Software Installations screen, click the Options button on the regular Installer screen. You're offered "Create additional System Folder (clean install)" — that's the one you want.

If you have System 7.5-something: Insert system CD (or the first Installer disk). Double-click the Installer icon. Click continue. At the main installation screen — where you'd normally click the Install button — press ⌘-Shift-K, of all things. You're asked which you want: a *brand-new System Folder,* or just an updated *existing* System Folder. You want the whole new one. Click your choice, click OK, click Install, and then follow the directions.

If you have earlier System versions: Open your System Folder. See the Finder icon? The purpose here is to *separate* it, folder-wise, from the System *suitcase* icon. Drag the Finder out onto the desktop, for example.

You're doing beautifully. Now close the System Folder window, press Return, and *rename* the System Folder. (Call it "Old System," or something like that.)

Finally, take the Install Me First disk (or your Performa Apple Backup disk or startup CD-ROM) and insert it. Double-click the icon called Installer; then follow the directions on the screen, feeding floppy disks into the drive as requested.

Finally, take the Install Me First disk (or the Apple Backup disk, or startup CD), and insert it. Double-click the icon called Installer, and then follow the directions on the screen, feeding floppy disks into the drive as requested.

Step two: Restore your personal belongings

The results of all these shenanigans is a virgin, clean System Folder, free of any corruptions. Your Mac will run smooth, fast, and trouble-free — I guarantee it.

Unfortunately, all your customized fonts, control panels, preferences, and ⬛ menu items are stranded back in your *old* System Folder!Ideally, you should install each of these items from their original, store-bought disks. If that's too much hassle, set up your old System Folder and your new System Folder side-by-side in tall, skinny, list-view windows. Now copy anything that's not in your new System Folder, item by item, from your old System Folder to your new System Folder. (Key folders to compare with their newer counterparts: the Preferences, Extensions, Control Panels, Apple Menu Items, and Fonts folders.) Do so with care, however, so that you don't simply reinstate whatever problems you were having.

Defragmenting your hard drive

Over time, you create and throw away a lot of files.

Your hard drive, if you'll indulge me, is like a closet maintained by a guy who's always in a hurry. When guests are coming over, he cleans up the living room and throws everything into the closet, although not particularly neatly. Every now and then, when he gets time, he unpacks the closet and repacks it neatly, putting everything in a tidy, organized place.

The hard drive, too, is in a hurry. When you ask it to save a file, it doesn't wait around: It shoves that file wherever it can find space. Sometimes, that even means sticking the file in *two* places, splitting it as necessary. Over time, more and more files are stored on your hard disk in pieces. It's no big deal: When you need that file again, the hard drive remembers where all the pieces are and is perfectly able to bring the file back to the screen.

But all this hunting for pieces slows the drive down. And like our busy closet keeper, you'll find it very satisfying, every six months or so, to reorganize the files on your disk so that they're each in one piece, neatly placed end to end on the hard-drive surface.

You can *defragment* your drive (which is the term for it) in two ways. First, you can copy everything onto other disks, erase the hard drive, and copy the files back onto it. Second, you can buy a program just for defragmenting your drive. These programs are called things like Norton Utilities and *DiskExpress*.

Appendix D
The Technobabble Translation Guide

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access privileges — Permission to do something on the Mac. Appears only in the context of "You can't do that because you don't have access privileges." Pertains either to File Sharing (you haven't been allowed access to a certain networked folder) or Macintosh System 7.5 (somebody turned on "System Folder protection" in your Macintosh or General control panel).

active window — The window in front. Usually, only one window can be active; you can recognize it by the stripes across the title bar, like this:
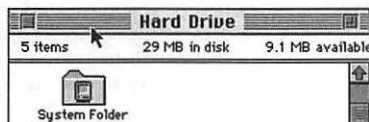
alert box — A message that appears on the screen. Unfortunately, as in most relationships, the Mac tends to communicate only when something is wrong.
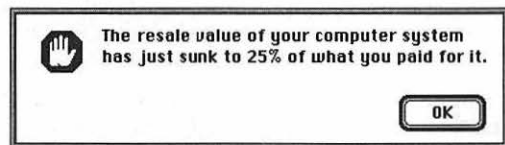
alias — A duplicate of a file's icon (not of the file itself). Serves as a double-clickable pointer, or reference, to the original file, folder, or disk. A feature of System 7 or later. Indicated by an italicized icon name.

Apple menu — The menu at the far left-end of your menu bar, marked by the symbol — a piece of black or multicolor fruit. In the menu, you find a list of your desk accessories (mini-programs, such as the Calculator), as well as any files, folders, documents, control panels, and even disks (or their aliases) that you care to see there. To add something to the menu, drop its icon into the Apple Menu Items folder within your System Folder.

AppleShare — Some kind of trademarked name for the way that interconnected Macs communicate with one another.

AppleTalk — Another trademarked name, also having to do with Macs talking to one another. You may need to know this term if you have a laser printer, because AppleTalk is the language that it speaks to your Mac. To print, you must make sure that AppleTalk is active. Choose the Chooser from the menu, and you see where you turn AppleTalk on or off.

application — Nerd word for program.

Application menu — The rightmost menu in the menu bar (if you have System 7), marked by an icon. This menu lists whichever programs you have open and displays a check mark next to the frontmost program. You can switch from one program to another by choosing names from the Application menu.

background printing — A feature that returns control of the Mac to you immediately after you use the Print command; the Mac will print your document, taking its own sweet time, always giving priority to what you're doing on the screen. The alternative, known as *background printing is*

off, takes less time to print but takes over the Mac, preventing you from working and displaying a "now printing" message until the printing is over.

backup — To make a copy of a file for use in case some horrible freak accident befalls your original copy (such as your throwing it out).

Balloon Help — A feature of System 7 and later. See the little question mark in the upper-right corner of your screen? It's a menu. Choose Show Balloons from it; then point to various elements of your little Mac-screen world. Cartoon balloons pop out to identify what you're pointing at.

baud rate — The speed of a modem (see *modem*). Directly related to the price.

BBS — An electronic bulletin-board system. That's where a Mac in somebody's house is connected to a phone line or two so that you can dial in with a modem (see *modem*) and post messages for other people to see. You can also read other people's messages. A BBS is a good place to advertise that you're selling your used Mac stuff and to get dates.

beta test — Means *test,* but adding a Greek word makes it sound more important. Used when applied to software or hardware: When a program is still so buggy and new that a company doesn't dare sell it, the company gives it away (to people who are called beta testers) in hopes of being told what the bugs are.

binary — How a computer thinks. Or anything that can only be in one of two conditions, such as a Morse-code signal, a light switch, or a public restroom.

bit — You'd think that it's the past tense of *byte* (see that entry). Actually, it's a tiny piece of computer information that's not even big enough to bother with.

bitmap — A particular arrangement of black dots on your white screen. To your eye, a particular bitmap may look like the letter *A* (bitmapped text) or a coffee mug (a bitmapped graphic); to the computer, it's just a bunch of dots whose exact positions it has to memorize.

boot — (1) (v.) To start the computer. (2) (n.) Western footwear.

bps — Bits per second. The technically proper way to measure the speed of a modem (instead of baud, which everybody still says out of force of habit).

bug — A programming error in a piece of software, caused by a programmer too wired on Jolt and pizza, that makes the program do odd or tragic things when you're working to beat a deadline.

button — You have to deal with two kinds of buttons: the big square one on the mouse, and the many oval or round ones on the screen that offer you options.

byte — A piece of computer information made up of bits.

cache — A trick, involving a special piece of memory, that makes a Mac faster. You can adjust the everyday cache in the Memory control panel; if you're willing to pay for speed, you may be able to buy for your model a cache card, which uses high-speed memory to pull off the same speed enhancement.

Caps Lock — A key on your keyboard that makes every letter that you type come out as a capital; it doesn't affect numbers. Press it to get the capitals; press it again to return to normal.

CD-ROM — A computer compact disc that requires a special $200 player. CD-ROMs can show pictures, play music or voices, display short animations and movies, and display reams and reams of text.

character — (1) A single typed letter, number, space, or symbol. (2) The scoundrel who got you into this Macintosh habit.

Chooser — A desk accessory, therefore listed in the menu, that lets you specify what kind of printer you have. Failure to use this thing when you set up your Mac is the #1 reason why beginners can't print.

click — The cornerstone of the Macintosh religion: to point the cursor at an on-screen object and then press and release the mouse button.

clip art — Ready-made graphics — cutesy little snowmen, city skylines, Santa Clauses, whatever — to dress up newsletters, party invitations, and threatening legal notices.

Clipboard — The invisible holding area where the Mac stashes any text or graphics that you copy by using the Copy command. The contents of the Clipboard get vaporized when you turn off the Mac (or copy something new).

clock speed — The speed of your computer, measured in megahertz (MHz), and determined by the studliness of the main processor chip inside.

close box — The little square in the upper-left corner of a window (as opposed to the little square who sold you the Macintosh), which, when clicked, closes the window.

Close box
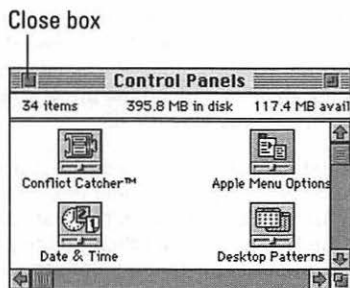
command — Something that you'd like the Mac to do, such as Print or Save or Make Me Rich. See also *menu*.

Command key — The one on your keyboard, right next to the spacebar, that has a ⌘ (Command) symbol on it. When you press this key, the letter keys on your keyboard perform commands instead of typing letters — for example, ⌘-P = Print, ⌘-S = Save, ⌘-Q = Quit, and ⌘-Z = Undo.

Control key — A keyboard key that generally does absolutely nothing.

control panel — A window full of settings that pertain to some aspect of the Mac's operation. There's a control panel for the mouse, another for the keyboard, another for the monitor, and so on. To view the selection of control panels, choose (what else?) Control Panels from the ⌘ menu.

copy — The command that places a copy of something (whatever text or graphics are first selected) in the invisible Macintosh Clipboard. Accomplishes nothing unless you then click somewhere and paste.

CPU — What it stands for is *central processing unit*. What it means is the actual computer — in the case of two-piece Macs, the box that contains the real brains. As distinguished from things like the monitor, the printer, and the keyboard.

crash — A very ugly moment in every Mac user's life when the Mac abruptly malfunctions, usually with scary-looking sounds and visuals. Requires restarting.

CRT — The CRT is the screen. If you must know, it stands for *cathode ray tube*. This term is not really used anymore.

cursor — The pointer on the screen whose position you control by moving the mouse across the desk.

database — An electronic list of information — for example, a mailing list — that can be sorted very quickly or searched for a specific name.

default — (1) The factory settings. For example, the default setting for your typing in a word processor is single-spaced, one-inch margins. (2) De blame for hooking you on de Mac hobby.

defragment — To restore, in one contiguous chunk, something that's all broken up and scrambled. Usually refers to the information in memory or on a hard disk, but can also be applied to hamburger meat.

Delete key — In the typewriter days, this key was named Backspace. In my opinion, it still should be called that.

deselect — To *un*highlight some selected text or graphic. (You usually do it by clicking someplace else.)

desktop — (1) The top of your desk, where the Mac sits, as in "I don't want a laptop; I want a desktop computer." (2) *(Capitalized)* The home-base environment, where you see the Trash can, icons, and all that stuff. Also known as the Finder. (3) The actual (usually gray) background of that home-base view. You can drag an icon out of its window and onto that gray tablecloth, and announce to your coworker that you just placed an icon on the Desktop.

desktop file — A file the Mac maintains for its own use, in which it stores information such as what your icons should look like and which kinds

of documents can be opened by which programs. This file is invisible, but when it becomes damaged or bloated and starts causing problems, it's not quite invisible enough for most people.

desktop publishing — The act of cranking out nice-looking printouts from your Mac instead of paying to have the work typeset. Despite the fact that the PowerBook is equally adept at creating beautiful printouts, the term *laptop publishing* still hasn't quite caught on.

dialog box — The message box that the Mac puts on the screen when it needs more information from you (for example, the one that appears when you print, asking how many copies you want).

digitize — Computerese for *digest*. To convert sound, pictures, video, or any other kind of real-world sensory experience into the Mac's own numerical digestive tract.

digitizing board — A circuit board that converts video or TV pictures into files on your Mac.

DIMMs — The memory chips for certain Power Macs made in 1995 or later (see *SIMMs*).

disk — Oh, come on; you know this word.

disk cache — A secret feature for making your Mac faster at the expense of memory. The Mac memorizes a few things that you do a lot and keeps them in a wad of memory called the disk cache, where they're immediately accessible. You set the size of the disk cache (the amount of memory reserved) in the Memory control panel.

disk drive — The machinery that actually reads what's on a disk. If we're talking hard disk, the disk and the drive are built into a single unit. If we're talking floppy, the disk drive is the slot in the face of the Mac into which you insert a floppy disk.

document — A file that you create with a program. Examples: a memo (using a word processing program), a logo (using a graphics program), or a spreadsheet (using a spreadsheet program).

documentation — A five-syllable way of saying *user's guide*.

DOS — Synonym for *IBM-style computers*, meaning the computers of the world that aren't lucky enough to be Macs. Stands for Disk Operating System.

dot-matrix — A kind of low-quality printer, such as the ImageWriter, and the printouts that it makes.

dots per inch — A gauge of visual clarity, both on printouts and on the screen. The Mac's crystal-clear screen became famous for having a very high resolution — 72 dots per inch, or 72 *dpi*. A laser printer is much sharper, though, capable of printing at 300 or 600 dpi.

download — To transfer a file from one computer to another over phone lines. If you're on the receiving end, you download the file. If you're on the sending end, you upload the file. If you're the phone company, you love the file.

downloadable font — Every laser printer comes with a basic set of typefaces built into it. You're welcome to use fonts that aren't in that built-in set, but the Mac has to send them to the printer (the printer downloads them) before the printer can start spitting out pages.

dpi — Dots per inch.

drag — (1) To position the cursor on something, hold down the mouse button, and move the mouse while the button is still down. (2) What it is when your disk drive breaks the day after the warranty expires.

drawing program — A graphics program (such as MacDraw or ClarisDraw) that creates circles, squares, and lines. The Mac stores each object that you draw as an object unto itself, rather than storing the status of each screen dot. See also *painting program* and *bitmap*.

driver — A smallish file on your disk that tells the Mac how it's supposed to relate to a specific piece of equipment (such as a printer or a scanner) that it's never heard of before. A translator.

e-mail — Electronic mail; messages that you read and write on the Mac screen without ever printing them. May also be short for *Earth-mail*, because no paper (and no rain-forest acreage) is involved.

Enter key — A key (obviously) with the word *Enter* on it. It almost always does the same thing as the Return key.

EPS file — A type of graphics file. Characterized by extremely sharp, smooth printing on a laser printer; a large file size on the disk; and, often, difficulty in printing.

Ethernet — A system (wiring, connectors, software) of connecting Macs together in an office network. Faster than the free, built-in system (LocalTalk) that comes with every Mac.

expansion slot — The connector socket for an add-on circuit board inside most Mac models. Used to add circuit boards for fancy new features like networking, pro graphics, and so on.

extended keyboard — A slightly more expensive keyboard than the "standard" one. The extended keyboard has a row of function keys (F1, F2, and so on) across the top, which don't do anything, and a little bank of keys that say Page Up, Page Down, and other stuff.

extension — Miniprogram that you install by dropping it in your System Folder (whereupon the Mac puts it in the Extensions folder). From that moment on, the extension will run itself when you turn on the Mac and will be on all the time. Examples: virus protectors and screen savers.

fax/modem — Like a modem (see *modem*), but also lets you send or receive faxes from your Mac screen.

File Sharing — A built-in feature of System 7, wherein you can make any file, folder, or disk available for other people to go rooting through (as long as they're connected to your Mac by network wiring).

Finder — The "home-base" view when you're working on your Mac. It's the environment where you see the Trash, your icons, and how little space is left on your disk. Also known as the Desktop or "that place with all the little pictures."

FKEY — One of those cool techno-sounding words that nobody's ever pinned down to one meaning. Can refer to (1) the row of keys across the top of some keyboards: the function keys, labeled F1, F2, and so on. Or (2) a special built-in

keyboard shortcut involving the ⌘ and Shift keys plus a number. The ⌘-Shift-3 combination key, for example, takes a snapshot of the screen, and ⌘-Shift-1 ejects a floppy disk.

flat-file database — A shopping list, Rolodex, or phone book; a simple collection of information. On a Mac, you can do things to your database like search or sort; *flat-file* means that the database doesn't have fancy interconnections to other lists, as a "relational" database does.

floppy disk — The hard 3^1/$_2$-inch-square thing that you put into your disk-drive slot. Comes in three capacities: 400K (single-sided), 800K (double-sided), and 1,400K (high-density).

folder — In the Mac world, a little filing-folder icon into which you can drop other icons (such as your work) for organizational purposes. When you double-click a folder, it opens into a window. Also the name of the high-speed machine that creases and envelope-stuffs the junk mail that you're going to start getting from computer companies.

font — (1) Apple's usage: a single typeface. (2) Everyone else's usage: a typeface family or package.

FPU — See *math coprocessor.*

fragmentation — When something gets broken up into little pieces. Usually refers to the files on your hard disk (which, over time, get stored in little pieces all over the disk, making it slower) or to the memory in your computer (see *defragment*). Also can apply to your window after you throw the computer through it in frustration.

freeze — When your cursor becomes immovable on your screen, you can't type anything, your Mac locks up, and you get furious because you lose everything you've typed in the past ten minutes.

function key — See *FKEY.*

GIF — A kind of graphics file, most often used on America Online and the Internet. Requires a special program, such as the America Online program, to open and view it.

gig — Short for *gigabyte (GB),* which is 1024 megabytes, or a very big hard drive.

grayscale — A form of color image or color monitor on which all the colors are different shades of gray, like all the images in this book.

hard copy — A synonym for printout. A term used primarily by the kind of people who have car phones and say, "Let's interface on this."

hard disk — A hard drive.

hard drive — A hard disk. That is, the spinning platters, usually inside your Mac but also available in an external form, that serve as a giant floppy disk where your computer files get stored.

hardware — The parts of your computer experience that you can feel, touch, and pay for. Contrast with *software*.

highlight — To select, usually by clicking or dragging with the mouse. In the Mac world, text and icons usually indicate that they're selected, or highlighted, by turning black.

icon — A teensy picture used as a symbol for a file, a folder, or a disk.

ink-jet printer — A printer that sprays little jets of ink onto your paper to create an image.

insertion point — In word processing, the short, blinking vertical line that's always somewhere in your text. It indicates where your next typing (or backspacing) will begin.

$$\downarrow$$

The insertion point is right before this word.

Internet — The worldwide network of computers joined by phone lines. Incorporates the World Wide Web, e-mail, and other features (see Chapter 13).

JPEG — Another graphics-file format found most often on America Online and the Internet (see *GIF*). This one has higher quality.

K — Short for *kilobyte*, a unit of size measurement for computer information. A floppy disk usually holds 800K or 1400K of data. All the typing in this book fills about 1500K. A full-screen color picture can be around 1000K of information depending on the format it's stored in. When your hard disk gets erased accidentally, it's got 0K (that's not Okay).

kerning — In type-intensive Mac work, such as creating a newspaper headline, the act of squishing two letters slightly closer together to make better use of space so that you can fit the phrase AN ALIEN FATHERED MY TWO-HEADED BABY on one line.

label — A System 7 text tag or color tag, used to identify icons by category.

landscape — Used to describe the sideways orientation of a piece of paper. Also the natural environment outdoors that you gradually forget about as you become addicted to the Mac.

laser printer — An expensive printer that creates awesome-looking printouts.

LCD — The technology that creates the flat screen on the PowerBook laptop computer, marked by the tendency for the pointer to fade out if it's moved too quickly. Stands for either *Liquid Crystal Display* or *Lost the Cursor, Dammit*.

logic board — The main circuit board inside your Mac. Often at fault when your Mac refuses to turn on.

Mac OS — The System software (the behind-the-scenes operating software) that makes a computer act like a Mac. As distinguished from DOS or Windows.

macro — A predefined series of actions that the Mac performs automatically when you press a single key — such as launching your word processor, typing **Help! I'm being inhabited by a Mac poltergeist!**, and printing it — all by itself. Requires a special macro program such as QuicKeys or Tempo.

mail merge — Creating personalized form letters with a word processing program. Considered to be perfectly polite unless somebody catches you.

math coprocessor — The kid whose algebra homework you used to copy. (Just kidding.) Actually, a specialized chip inside certain high-level Macs that kicks in to handle certain very intense number-crunching tasks — data analysis and stuff. Does nothing for word processing and other normal tasks. Also called an *FPU* (floating-point unit). On newer chips, the math coprocessor is no longer a separate chip; instead, it's built into the CPU.

MB — Short for *megabyte.*

megabyte — A unit of disk-storage space or memory measurement (see *K*). Used to measure hard disks, memory, and other large storage devices. There are 1024K in a megabyte.

memory — The electronic holding area that exists only when the Mac is turned on; where your document lives while you're working on it.

menu — A list of commands, neatly organized by topic, that drops down from the top of the Mac screen when you click the menu's title.

menu bar — The white strip, containing menu titles, that's always at the top of the Mac screen. Not to be confused with bar menu, which is a wine list.

modem — A phone attachment for your Mac that enables you to send files and messages to other computer users all over the world, and prevent anyone else in the house from using the phone.

modifier keys — Keys that mess up what the letter keys do. Famous example: the Shift key. Other examples: ⌘ (Command), Option, Control, and Caps Lock.

monitor — What you should do to your blood pressure when you find out how much computer screens (monitors) cost and weigh.

motherboard — See *logic board.*

mouse button — The square or rounded plastic button at the far end of the top of the mouse.

multimedia — Something involving more than one medium, I guess. On the Mac, anything that gives you something to look at and listen to, such as a CD-ROM game.

network — What you create when you connect Macs to each other. A network lets you send messages or transfer files from one Mac to another without getting up and running down the hall with a floppy disk in your hand (a networking system fondly called SneakerNet).

NuBus — The special kind of expansion slot (see *expansion slot*) found in any Mac II-style computer and most Quadra-style computers. Contrast with

PDS, the slot in a Macintosh LC, or *PCI,* the slot in the most-recent Power Macs. (And no, there was never an OldBus.)

NumLock — A goofy key, named by numskulls, on the keyboard. Pretty much does nothing except in Microsoft Word, where it switches the functions of the keys in the number pad.

OCR — Short for *optical character recognition.* You run an article that you tore out of *Entertainment Weekly* through a scanner, and the Mac translates it into a word processing document on your screen, so you can edit it and remove all references to Cher.

online — Hooked up, as in "Let's get this relationship online." In Mac lore, it means hooked up to another computer, such as America Online.

painting program — (1) A program with the word *Paint* in the title (for example, MacPaint or UltraPaint) that creates artwork by turning individual white dots black on the screen. (2) An adult-education course for would-be watercolorists.

paste — To place some text or graphics (that you previously copied or cut) in a document.

PC — Stands for *personal computer,* but really means any non-Macintosh (i.e., inferior) computer; an IBM clone.

PDS — Stands for *processor direct slot* and is the kind of *expansion slot* (see that entry) in a Mac LC. Incompatible with *NuBus* (see that entry, too).

peripheral — (1) Any add-on: a printer, scanner, CD-ROM drive, dust cover, and so on. (2) The kind of vision by which you see your spouse leaving you forever because you're too consumed by the Mac.

PICT — A confusing-sounding acronym for the most common kind of picture file, as in "Just paste that image of Sculley's head into your word processor, Frank; it's only a PICT file, for heaven's sake."

pixel — One single dot out of the thousands that make up the screen image. Supposedly derived from *pic*ture *el*ement, which still doesn't explain how the *x* got there.

pop-up menu — Any menu that doesn't appear at the top of the screen. Usually marked by a down-pointing black triangle. Doesn't actually pop *up;* usually drops down.

Paper: US Letter ▼
Layout: 1 Up ▼
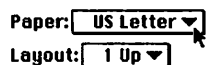
port — A jack or connection socket in the back of your Mac.

portrait — A right-side-up piece of paper; the opposite of *landscape* (see that entry). Also a right-side-up monitor that can display a full page (as in "a portrait display monitor").

PostScript — A technology, a printer, a trademark, a kind of font, a computer code language for displaying or printing text or graphics, a way of life. All of it means high-quality type and graphics, and all of it means heaping revenue for Adobe, the company that invented it.

PowerBook — A Mac laptop and the first of many Apple trademarks to contain the word *Power.*

Power Macintosh — A Mac whose primary brain is the PowerPC chip.

PowerPC chip — The very fast main processor chip inside a Power Macintosh.

PowerTalk — A special feature of System 7.5, designed for very sophisticated network setups in offices. Provides a desktop mailbox icon for electronic messages sent to you by your officemates (and may someday also be able to receive your messages from services such as America Online). Absolutely impossible to figure out.

PRAM — *P*arameter *RAM*: the little piece of memory maintained by your Mac's battery. Helps explain why the Mac always knows the date and time even when it's been turned off.

printer font — The printer half of a PostScript font (the other half is the screen font). Must be in your System Folder, and you must have one printer font for each style (bold, italic, and so on). An eternal nuisance.

PrintMonitor — A program that launches itself, unbidden, whenever you try to print something when background printing is turned on (see

background printing). PrintMonitor is also the program that tries to notify you when something goes wrong with the printer, such as when a piece of paper gets horribly mangled inside.

program — A piece of software, created by a programmer, that you buy to make your Mac do something specific: graphics, music, word processing, number crunching, or whatever.

Publish and Subscribe — A fancy new version of copy-and-paste that's part of System 7. Lets you paste information (such as a graphic) from one document into another (such as a memo) in such a way that when you make a change in the original (the graphic), the copy (the memo) is changed automatically.

QuickTime — The technology (and the little software extension) that permits you to make and view digital movies on your Mac screen. Does nothing by itself; requires QuickTime recording, playing, and editing programs.

QuickTime VR — A special kind of QuickTime movie that enables you to change the camera angle of a still photo by dragging your cursor around inside the picture. Increasingly common on the World Wide Web.

quit — To exit or close a program, removing it from memory. Or to exit or close your job, having gotten sick of working in front of a computer all day.

radio button — What you see in groups of two or more when the Mac is forcing you to choose among mutually exclusive options, such as these:

A System error has occurred. What result would you like?
○ Loud, static buzzing
◉ Quietly blink to black
○ A two-minute fireworks display

RAM — Term for memory (see *memory*) designed to intimidate non-computer users.

RAM disk — A way to trick the Mac into thinking that it has an extra floppy disk inserted. The RAM disk is actually a chunk of memory set aside to resemble a disk (complete with an icon on the screen). A built-in option on most Macs and PowerBooks.

reboot — Restart.

rebuilding the Desktop — One of several desperate methods that you can use in the event that something screwy goes wrong with the Mac. Involves holding down the ⌘ and Option keys while the Mac is starting up.

resize box — The small square in the lower-right corner of a window that, when dragged, changes the size and shape of your window.
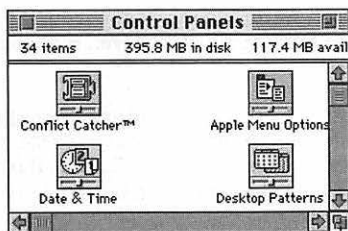
Resize box

RISC — Stands for *reduced instruction-set computing* and means a very fast processor chip, such as the PowerPC chip inside a Power Macintosh.

ROM — A mediation mantra that you can use when contemplating the ROM chips, where the Mac's instructions to itself are permanently etched.

sans serif — A font, such as Helvetica or Geneva, with no little "hats" and "feet" at the tip of each letter.

scanner — A machine that takes a picture of a piece of paper (like a photocopier) and then displays the image on your Mac screen for editing.

Scrapbook — A desk accessory, found in your ⌘ menu, used for permanent storage of graphics, text, and sounds. (Not the same as the Clipboard, which isn't permanent and holds only one thing at a time.) To get something into the Scrapbook, copy it from a document, open the Scrapbook, and paste it. To get something out of the Scrapbook, use the scroll bar until you see what you want, and then copy it (or cut it).

screensaver — A program (such as After Dark) that darkens your screen after you haven't worked for several minutes. Designed to protect an unchanging image from burning into the screen, but more often used as a status symbol.

scroll bar — The strips along the right and bottom sides of a Mac window. When a scroll bar's arrows, gray portion, or little white (or gray) square are clicked or dragged, a different part of the window's contents heaves into view (scrolls).
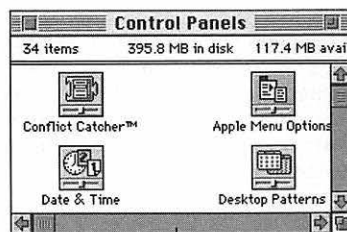
Scroll bar

serif (n., adj.) — A term used to describe a font that has little ledges, like little "hats" and "feet," at the tip of each letter, such as Times or this font.

shareware — Programs that are distributed for free, via an electronic bulletin board or on a floppy disk, from user groups. The programmer requests that you send $10 or $20 to him or her, but only if you really like the program.

SimpleText — An extremely basic word processor that comes free with every Mac.

slot — An *expansion slot* (see that entry).

software — The real reason you got a computer. Software is computer code, the stuff on disks: programs (that let you create documents) and documents themselves. Software tells the hardware what to do.

startup disk — *A* startup disk is a floppy or hard disk that contains a System Folder. *The* startup disk is the one that you designated to be in control (in the event that you have more than one to choose among). The Startup Disk control panel is what you use to specify *the* startup disk.

System 6 — An older version of the Mac's controlling software. Faster, but harder to use, than System 7. Requires 1MB of memory or less.

System 7 — The more recent version of the Mac's controlling software. More attractive, easier to use, more powerful, and slower than System 6. Requires at least 2MB of memory and, because it's

a lot of software, a hard disk (it doesn't fit on a floppy). Generically, refers to any flavor of System 7: Version 7.0, 7.1, 7.5, or whatever.

System 7.1 — The first version of the Mac System software that's not free; you have to buy it. Adds two features to System 7: a Fonts folder, which contains all manner of font files (TrueType, screen fonts, and printer fonts); and WorldScript, which enables you to convert all Mac screen elements to a different language, such as Japanese. (WorldScript requires special drop-in language modules.)

System 7.5 — Another version of the System Folder, which, again, you must purchase unless your Mac came with it. Under the hood, System 7.5 is much the same as System 7.1. But it comes with about 50 new control panels and extensions that perform stunts such as giving submenus to your menu to providing a floating "control strip" for your PowerBook.

System 7.6 — Yet another version of the System folder, but referred to as Mac OS 7.6.

System 8.0 — (Mac OS 8) The latest (as of this printing) version of the System folder. Yes, you'll have to purchase this if your computer didn't come with the software; nothing's free these days! It comes with tons of new enhancements. Check out Chapter 1 for all the details.

System crash — When something goes so wrong inside your Mac that a bomb appears on the screen with the message "Sorry, a System error has occurred" — or not. Sometimes, the whole screen just freaks, fills with static, and makes buzzing noises, like a TV station that's going off the air.

System disk — A *startup disk* (see that entry).

System file — The most important individual file inside a System Folder. Contains the Mac's instructions to itself, and stores your fonts, sounds, and other important customization information. A Mac without a System file is like a broke politician: It can't run.

System folder — The all-important folder that the Mac requires to run. Contains all kinds of other stuff that's also defined in this glossary: the System file, the Finder, fonts, desk accessories, printer fonts, and so on.

TIFF — Stands for *tagged image file format* and is the kind of graphics-file format created by a scanner.

title bar — The strip at the top of a window where the window's name appears. Shows thin horizontal stripes if the window is active (in front of all the others).

toner — The powder that serves as the "ink" for a laser printer. Runs out at critical moments.

trackball — An alternative to the mouse. Looks like an 8-ball set in a pedestal; you roll it to move the pointer.

TrueType — A special font format from Apple that ensures high-quality type at any size, both on the screen and on any printer. Rival to PostScript, but costs much less (nothing, in fact; it comes with System 7).

upload — To send a file to another computer via modem. See also *download*.

user group — A local computer club; usually meets once a month. Serves as a local source of information and as a place to unload your obsolete equipment to unsuspecting newcomers.

video card — A circuit board that most Mac II-series Macs need to display anything at all on the monitor. On some Macs, it's just for Video In.

VRAM — Stands for *video RAM*. Memory chips inside your Mac that are dedicated to storing the screen picture from moment to moment. The more VRAM you have, the more colorful your picture (and the more you paid for your Mac).

window — A square view of Mac information. In the Finder, a window is a table of contents for a folder or a disk. In a program, a window displays your document.

WYSIWYG — Short for *what you see is what you get* — one supposed reason for the Mac's superiority over other computers. Theoretically means that your printout will precisely match what you see on the screen (but isn't always true).

zoom box — The tiny square in the upper-right corner of a window (in the title bar) that, when clicked, makes the window jump to full size.

Appendix E

About the CD

*I*n the first edition of this book, a measly 1.4MB floppy disk greeted readers from its pocket inside the back cover. The 2nd edition featured a shiny CD-ROM packed with tons of neat stuff! And now in this 3rd edition, the CD graduates to new greatness with all kinds of fresh ideas. The *Macs for Teachers* CD is filled with an assortment of demonstration versions of commercial software, ClarisWorks templates, fonts, clip art, and an ample supply of quick reference documents for application in the classroom and lab.

To access the software on this CD, you can use the wonderfully simple CD interface called the Activity Board. On the Activity Board you find books stacked against a chalkboard. Each book represents a category of software that you can access with a simple mouse click on the note. You can read more about the Activity Board in the section "Using the Activity Board," later in this appendix.

System Requirements

Before using the CD, make sure your Mac meets the following system requirements:

- ✔ You need a CD-ROM drive — double-speed or faster.
- ✔ Your Mac needs a 68030, 68040, or PowerPC processor.
- ✔ You need to be running your computer with System 7.1 or higher (System 7.5 is recommended).
- ✔ You need at least 4MB of free RAM for most programs. (*Free RAM* is the amount of memory available to the Mac when no other programs are running. You can check your available memory by clicking on the Apple menu in the Finder and choosing About This Macintosh.) In some cases, turning on virtual memory can help if you're a little short of memory, but some demos may run erratically.
- ✔ Make sure you have a monitor that's capable of displaying at least 256 colors or grayscale.
- ✔ If you want to sign on to AT&T WorldNet Service (using the software available on the CD), you need a modem connected to your computer. A modem speed of at least 14,400 bps is recommended.

✔ You also need about 4MB of hard disk space available (so you can install Adobe Acrobat Reader 3.0). You need this software if you want to open, read, or print the electronic documents found in the *Macs For Teachers* PDF Files folder, located in the Resources folder on the CD. These documents include the software lists found in Appendix B, an Acceptable Use Policy for Internet activity, quick reference printouts of all the ClarisWorks clip art, Student Writing Center clip art, and Kid Pix graphics (a big help when it comes to planning student projects before the kids actually sit down at the computer).

✔ You need up to 65MB of additional hard disk space to install most of the demos and free software on the CD. I say "most" because there are some demos which are primarily for your information only. That is, you won't gain anything from copying these movie-like demos

✔ You also need QuickTime 2.0 or later installed on your computer to run some of the demos. QuickTime, basically, is software that helps your computer play tiny movies. This software is available on our CD as part of the World Discovery Demo software. Please see the "Installing Support Software," later in this appendix, to install the QuickTime software. You can also download the latest version of QuickTime (as of this writing, Version 2.5) from Apple's QuickTime World Wide Web home page at `http://quicktime.apple.com`.

Installation Instructions

To install the items from the CD to your hard drive, follow these steps:

1. **Insert the CD into your computer's CD-ROM drive.**

2. **Double-click the CD icon when it appears on your desktop.**

3. **Double-click the Activity Board icon.**

   The Activity Board opens up, showing you the license agreement.

4. **Since you surely want to use the CD, read through the license agreement, nod your head, and then click on the Accept button.**

   From here, the CD interface appears. The CD interface enables you to run or install the programs on the CD without wading through layer after layer of folders.

   The software on the interface is divided into categories whose names you see on the screen.

5. **To view the items within a category, just click the category name.**

   A list of programs in the category appears.

6. **For more information about a program, click on the program name.**

Be sure to read the information that's displayed. Sometimes a program requires you to do a few tricks on your computer first, and this screen tells you where to go for that information, if necessary.

7. **To install a program or run a demo, click the Continue button. If you don't want to install the program, click on the Cancel button to return to the previous category screen.**

Once you click on a Continue button, the CD interface drops to the background while the CD begins installing the program or running the demo.

When installation is done, the interface usually reappears in front of other open windows. Sometimes the installation confuses the Mac and leaves the interface in the background. To bring the interface forward, just click once anywhere in the interface's window.

8. **To move back to the category screen from a program list, click the Go Back button.**

9. **When you're done installing programs, click on the Quit button to close the interface.**

You can eject the CD now. Carefully place it back in the plastic jacket of the book for safekeeping.

To run some of the programs, you may need to keep the CD inside your CD-ROM drive. This is a Good Thing. Otherwise, the installed program requires you to install a very large chunk of the program to your hard drive, which prevents you from installing other software.

Installation Steps for Support Software

To use some of the demos, you need to install QuickTime software.

If you aren't sure whether you have QuickTime on your computer, you can check by looking in the Extensions folder. If you have QuickTime already installed, you find several files with names such as QuickTime or QuickTime Musical. If QuickTime's nowhere to be found, you need to install it before you try to run demos from the CD.

To install QuickTime 2.0, follow these steps:

1. **Insert the CD into your Mac's CD-ROM drive and double-click the CD icon when it appears on your desktop.**

2. **Double-click the Classroom folder.**

3. **Double-click the Great Wave Software folder.**

4. **Double-click the World Discovery Deluxe Demo folder. (The icon looks more like a globe than a folder, by the way.)**

5. **Double-click the QuickTime Installer icon.**

   Follow the installer's brief instructions. You need to restart your Mac after installation is complete.

To begin exploring the CD, just double-click the Activity Board icon from the *Macs For Teachers* CD window.

The Software

Here's a brief description of the demos and free software available on the *Macs For Teachers* CD. Be sure to pay attention to any special requirements for the demos: Some demos work better if you copy them from the CD first. And you may need to think carefully before installing some software.

Acrobat PDF Resources: When I needed more room for the 3rd edition "stuff," I just couldn't part with any of the chapters that were original to the 1st and 2nd editions of this book — so I simply moved them to the CD! Yep, the following PDFs were actual chapters in *Macs for Teachers,* 1st and 2nd editions: More Cool ClarisWorks Stuff, Hot Topics in Education, Top 10 Sources for Mac Info, Mac Activities, and The Lists. When you open these files, they look just like pages from the book — very easy to read!

I also include PDFs that are useful resources for clip art found in ClarisWorks, HyperStudio, Kid Pix, and The Student Writing Center. And finally, I provide an Acceptable Use Policy for Internet access that you can use as a model for handling the legalities of students accessing the Internet. To read the files, you need to install Adobe Acrobat Reader, which is on the CD.

Adobe Acrobat Reader 3.0, from Adobe Systems Inc.: Adobe Acrobat Reader 3.0 enables you to view documents with the same graphics and formatting that the documents contained when they were created — without having the original application. Miraculous! Acrobat Reader 3.0 also includes a plug-in for Netscape Navigator, which enables you to view Acrobat Reader documents within a Web page.

AT&T WorldNet Service: If you don't have access to the Internet and the World Wide Web, you can sign up for an Internet account with AT&T WorldNet Service, which includes two popular and prevalent Web browsers: Netscape Navigator and Microsoft Internet Explorer. AT&T WorldNet Service is a pay-per-use Internet service provider. To sign on, you need a modem connected to your computer, a phone line, and a credit card to register. *Note:* If you currently use another Internet service provider, be aware that installing AT&T WorldNet Service software may change your computer's Internet software configurations. You may not be able to access the Internet through your original provider after you install AT&T WorldNet Service.

3D Atlas Demo, from Creative Wonders: This demo describes and demonstrates 3D Atlas, a cool geographic and scientific reference with full motion video and animation. If you can't run this demo from within the Activity Board, exit the Activity Board, open the Classrooms folder, open the Creative Wonders folder, and double-click the AtlasDemo icon.

Claris Home Page 2.0, from Claris Corporation: Claris Home Page is a new program that makes it easy for you to design and create pages for the World Wide Web without knowing much about HTML, the webmaster's programming language. This trial version expires 30 days from installation to your computer.

ClarisWorks 4.0 Trial, from Claris Corporation: ClarisWorks is a program that integrates a word processor, a spreadsheet program, drawing and painting programs, a database, and communications program into a single, easy-to-use package. This trial version cannot save files, and some key utilities are unavailable.

ClarisWorks for Kids: ClarisWorks for Kids is a scaled-down version of my all-time favorite software package, ClarisWorks. An icon-based interface that's easy to manipulate is just the beginning of the wonder. This program has an Art Pad (drawing), Writing Pad (word processing), List Pad (database), and Graphing Pad (spreadsheet). In addition, there are hundreds of great clip art images, "kid fonts," lined paper, an easy-to-understand filing system, an Internet link, and tons of great templates.

ClarisWorks Templates and clip art: I gathered up several ClarisWorks template documents you may find useful. In addition, the ClarisWorks Users Group and K–12 MicroMedia Publishing have generously provided additional templates and clip art for your work. **Special Requirements:** If you don't have a full working version of ClarisWorks on your computer, you can use the ClarisWorks 4.0 Trial software to view the templates. To get any real use out of the templates, however, you may need to purchase the full version of ClarisWorks.

Easy Grade Pro Demo, from Orbis Software: This versatile grade-book program demo tracks up to 12 students before limiting some of its features. Easy Grade Pro can also record attendance, book numbers, behavior, seating, parent contacts, and more.

Fonts: Dracula Font, from Mountain Lake Software, and SigSchoolLines, from Signature Software: If you like spooky-looking fonts, Dracula Font is for you. And, remember how you learned to draw your alphabet in school? SigSchoolLines shows each character surrounded by those horizontal-line guides that sprawl across chalkboards. **Special Requirements:** Before you can install any fonts on your Mac, quit all programs running in the background.

FoolProof Security Demo, from SmartStuff Software: FoolProof Security is designed for the school environment. It protects the configuration of computers in a multi-user setting by preventing users from dragging, renaming, or deleting files. FoolProof Security also disables file-altering items on the hard disk, directs file saves to specific locations, and more. This demo has disabled the hard disk locking feature, but all other features are accessible. **Special Requirements:** You need a password to install both the FoolProof documentation and software. Please call SmartStuff at 800-671-3999 to get your password before you try to install FoolProof. Don't install this software until you understand exactly how to operate it, or you may accidentally lock out features on your computer. *Note:* This demo is not compatible with the Desktop Printing software available on some computers. See the FoolProof Read Me document for more information on disabling this software.

Grady Profile Demo, from Aurbach & Associates: This demo shows how you can keep portfolios of your students' work. Grady Profile saves students' text, graphics, sounds, pictures, and movies. You can also annotate any part of the portfolio and add evaluations. This demo allows you to use the portfolio included with the demo, but won't let you make other portfolios.

HyperStudio Journal Sampler, from Simtech Publications: HyperStudio Journal is a valuable resource for techniques, artwork, sounds, buttons, clip art, and more for your HyperStudio work. This sample issue provides you with some goodies from past editions.

HyperStudio Mini-Preview, from Roger Wagner Publishing: HyperStudio is a full-featured multimedia authoring program. This mini-preview demo enables you to save any new projects (maximum of four cards). Because this mini-preview version of HyperStudio allows you to import and export screens without any limitations, the software can also be used as a painting program. And, if you have a video digitizer handy, you can use HyperStudio to capture and edit your work. **Special Requirements:** The Activity Board will install a "working copy" of the HyperStudio program. The working copy requires only 14MB for the entire program! You need to have the CD in the CD-ROM drive to use the working copy.

Inspiration: Originally designed for use in the wonderful world of business, this concept- mapping software is now even more popular among educators. With simple mouse clicks, Inspiration makes it easy for teachers to create great story webs, lesson plans, concept maps, flowcharts, outlines, semantic maps, and more. Students can use Inspiration to map out reports, presentations, multimedia projects, and study guides. There's also an integrated outline view that enables students to make the connection between the visual organization of ideas and the actual outline.

Kid Pix Studio Interactive, from Broderbund Software: This presentation tells you about the Kid Pix series of authoring programs for children. If you can't run this demo from within the Activity Board, exit the Activity Board, open the Classroom folder, open the Broderbund folder, open the Kid Pix Studio folder, and double-click the Kid Pix Studio Interactive icon.

KidsTime Deluxe Sample Demo, from Great Wave Software: This demo contains five entertaining programs that introduce young children to computers and early learning skills. The demo enables you to try out any of the programs for up to 3 minutes at a time before returning you to its launcher.

Little Planet Demo, from Anchored Instruction: Part of the Literacy series from Anchored Instruction, this interactive demo shows how children can author their own "books" — complete with music and voice annotation. If you can't run this demo from within the Activity Board, exit the Activity Board, open the Classroom folder, open the Anchored Instruction folder, and double-click the Little Planet Demo icon.

MakeTest Demo, from Mountain Lake Software: This is a demo of Mountain Lake Software's test-generation program. This demo has disabled its preview function, and the word "DEMO" will appear at the top of your printouts.

MayaQuest Demo, from MECC: MayaQuest is a world exploration project that directly contacts students in the classroom to discuss archeological, historical, and geographical finds in Central America. This non-interactive demo tells you more about the commercial educational software that enables a player to tour Central America by bicycle and uncover the mysteries of the Mayan culture. If you can't run this demo from within the Activity Board, exit the Activity Board, open the Classroom folder, open the MECC folder, and double-click the MayaQuest icon. Virtual memory might conflict with this software. If you experience system freezes when attempting to run this software, try turning virtual memory off from the Memory control panel.

My Secret Mac Diary, from Super School Software: In addition to what its name implies, My Secret Mac Diary can also let kids record addresses, school assignments, and more. **Special Requirements:** To change the password or enter into the Diary, type in TEACHER.

Plan To Teach Demo, from Mountain Lake Software: This is a demo of Mountain Lake Software's versatile lesson-planning program. In addition to lesson plans, Plan To Teach can also store special information for substitute teachers, seating chart tools, and more. This demo does not support printing, templates, or document creation.

The Print Shop Deluxe Demo, from Broderbund Software: This is demo of the venerable greeting card and poster-making software program. You can make just about anything you want, but the demo cannot save your work. This demo program might show some problems running on Power Macintosh or compatible systems.

Science Sleuths Demo, from Videodiscovery: The Science Sleuths series of products is introduced in this interactive demo. Children can examine and make scientific tests to solve various mysteries. This demo allows you to participate a little bit in such a quest. If you can't run this demo from within the Activity Board, exit the Activity Board, open the Classrooms folder, open the Videodiscovery folder, open the Resources folder, and double-click the Science Sleuths Demo icon.

World Discovery Deluxe Demo, from Great Wave Software: Learn about geography, national anthems, and landmarks; view satellite imagery and detailed maps, and more. This demo includes 3 of the 69 maps included with the full version. If you can't run this demo from within the Activity Board, exit the Activity Board, open the Classroom folder, open the Great Wave Software folder, open the World Discovery Deluxe Demo folder (it looks more like a globe than a folder), and double-click the World Discovery Demo icon.

If You've Got Problems (of the CD Kind)

We tried our best to compile demo programs that will work on most Macs with about 8MB of RAM. Alas, some programs may not work for some reason. The likeliest problem is that you have only 8MB of real RAM, but don't have certain settings turned on. If you get "low of memory" messages, try these tips.

✔ Open the Memory control panel, and make sure that 32-bit addressing is switched **on** (especially if you have more than 8MB of real RAM on your computer), and that virtual memory (VM) is switched **on**. Demos that show QuickTime movies may run in a jerky fashion with VM running, however. You need to restart the computer after changing these settings.

✔ Disable unneeded system extensions that eat up memory. System 7.5.x users can use the Extensions Manager to do this; users of System 7.1 or earlier need to open their System Folder, open the Extensions folder, then move the unneeded extensions out of the folder. Restart your computer afterward.

If you have a problem using the Activity Board, or if you have difficulty running the programs from the CD that we don't resolve here, please call the IDG Books Worldwide Customer Service phone number: 1-800-762-2974.

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Installation Instructions

To install the items from the CD to your hard drive, follow these steps:

1. **Insert the CD into your computer's CD-ROM drive.**

2. **Double-click the CD icon when it appears on your desktop.**

3. **Double-click the Activity Board icon.**

   The Activity Board opens up, showing you the license agreement.

4. **Since you surely want to use the CD, read through the license agreement, nod your head, and then click on the Accept button.**

   From here, the CD interface appears. The CD interface enables you to run or install the programs on the CD without wading through layer after layer of folders. The software on the interface is divided into categories whose names you see on the screen.

5. **To view the items within a category, just click the category name.**

6. **For more information about a program, click on the program name.**

   Be sure to read the information that's displayed. Sometimes a program requires you to do a few tricks on your computer first, and this screen tells you where to go for that information, if necessary.

7. **To install a program or run a demo, click the Continue button. If you don't want to install the program, click on the Cancel button to return to the previous category screen.**

   After you click on a Continue button, the CD interface drops to the background while the CD begins installing the program or running the demo. When installation is done, the interface usually reappears in front of other open windows. Sometimes the installation confuses the Mac and leaves the interface in the background. To bring the interface forward, just click once anywhere in the interface's window.

8. **To move back to the category screen from a program list, click the Go Back button.**

9. **When you're done installing programs, click on the Quit button to close the interface.**

To run some of the programs, you may need to keep the CD inside your CD-ROM drive. See Appendix E (About the CD) for more details on using this CD.

> "A great resource guide . . . I wish I'd had it two years ago when I first got my Mac."
>
> — Susan Narduzzi, Teacher, Carmel, NY

After writing lesson plans, grading papers, and attending parent-teacher conferences, who has time for computer classes? *Macs® For Teachers*™, 3rd Edition, provides just the information educators need to harness the power of the Mac for themselves and their students.

Inside, Find Guidance on Becoming a "Techno-Teacher" in No Time:

- Find ideas for making the "One-Mac Classroom" a success
- Run a successful Mac lab
- Discover an appendix full of all new computer activities that integrate technology into your curriculum
- Uncover extensive lists of recommended software, broken down by subject and grade level
- Read about the Internet and find out how to use the World Wide Web in education
- Operate a successful school technology program on a limited budget
- Work your way through ClarisWorks, Kid Pix Studio, The Student Writing Center, and The Print Shop Deluxe

Technical Review by:

Tommy Hann
Senior Systems Engineer, Apple Computer, Inc.

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Valuable Bonus CD Includes:

- **AT&T WorldNet℠ Service*** with Netscape Navigator and Internet Explorer Web browsers
- **ClarisWorks 4.0:** A trial version of this popular integrated suite
- Gradebook and curriculum planning software demos
- Plus, learning software demos for your students, including: Science Sleuths, My Secret Mac Diary, MayaQuest, and more!

SYSTEM REQUIREMENTS: Macintosh System 7.1 or higher (7.5 recommended); 8MB RAM; and a CD-ROM drive double speed (2X) or faster

Let These Icons Guide You!

LEARNING LINK — Highlights ways to put your students to work using the computer

HEADS UP — Warns you of important stuff to look out for

TECHNO TERMS — Alerts you to technical terms you need to know

About the Author

Michelle Robinette spent eight years as a classroom teacher before becoming a technology coordinator for a public school district. She serves as a consultant for Apple Computer, Inc. writing curriculum and staff development material and is a member of ISTE (International Society for Technology in Education), C*WUG (ClarisWorks Users Group), and AMUG (Atlanta Macintosh Users Group).

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