More Than 650 Product Listings And Descriptions

The Apple IIGS Buyer's Guide

A Redgate Publication
Fall 1990 Vol. 4, No. 1
U.S. $4.00, Canada $5.00

Back-To-School Issue

Educational Software Roundup
Improve Your Grades
The Best in 'Edutainment'

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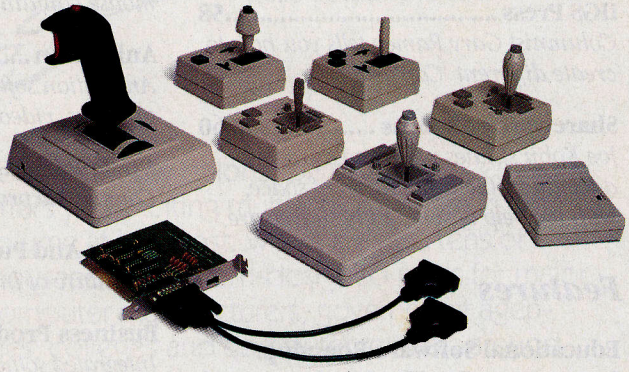

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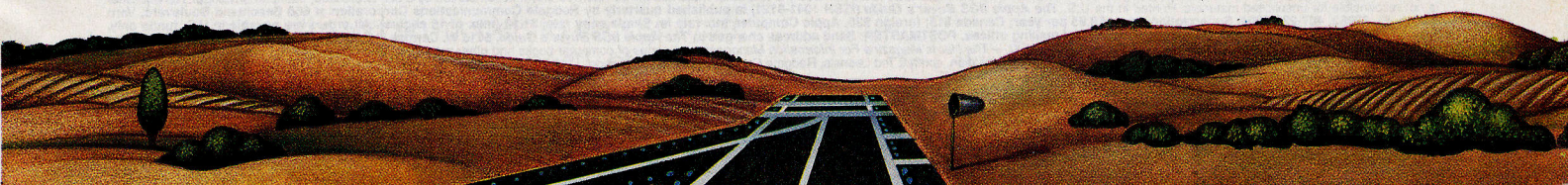

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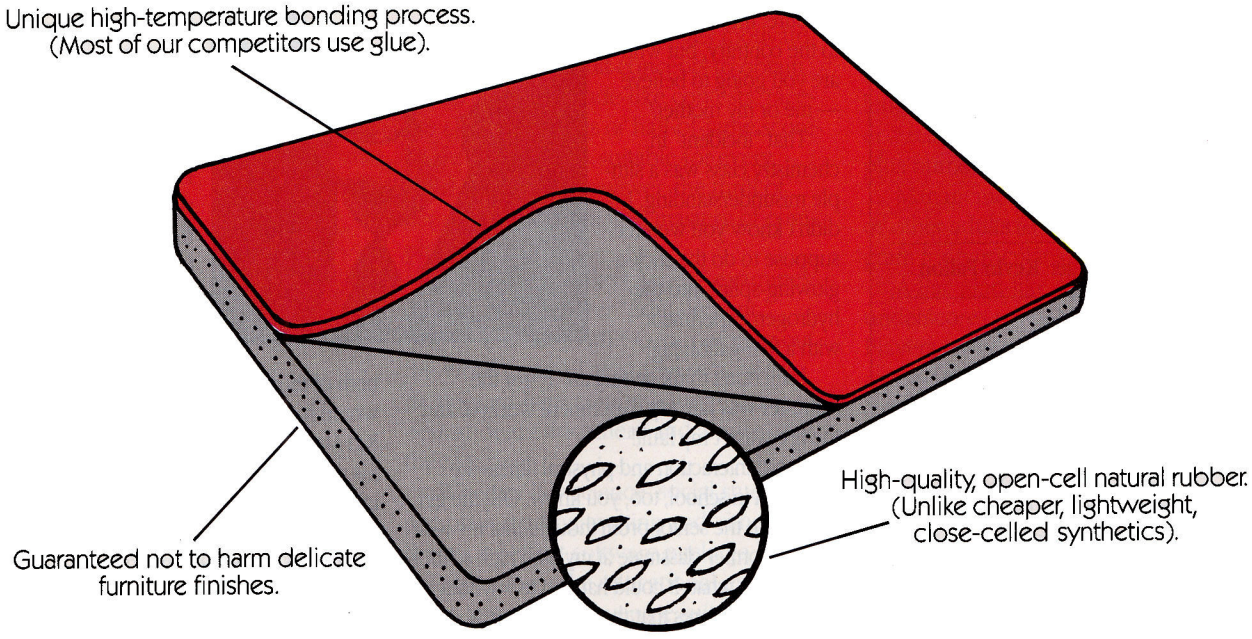
THE NAKED TRUTH ABOUT MOUSEPADS.



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BPA

Back To School: It's Not Like I Remember

I always liked school. I was popular with my peers and teachers, a terrific athlete, never caused trouble and always made good grades. That's how I remember it anyway.

Sure, there are rumors to the contrary, but who are you going to believe — me or my mother?

That "incident" in chemistry class was a simple misunderstanding. I didn't know you weren't suppose to do the stick-a-glowing-splint-into-the-hydrogen experiment with a five-gallon jug!

I still don't think getting an "F" for the semester was fair. My experiment worked, and the fire wasn't my fault!

Social interaction and physical fitness are important in school, too, you know. OK, the girl I invited to the senior prom thought that my wife was her former classmate at my 20th high school reunion. So what. It could happen to anybody!

And who cares that the football coach started telling "Aren't You The Guy Who" stories the moment he laid eyes on me at the reunion? The man's memory isn't what it used to be.

Once and for all, I did not punt the ball backwards in the 1968 homecoming game. It was the home opener. Get your facts straight, man! I didn't touch the ball in the homecoming game.

It's too bad we didn't have personal computers in those days. If we did, I'm sure I'd be remembered as an exemplary student/athlete. There's no telling what I could have done — or where I'd be today — if I would have had a IIGS in school.

Take February 20, 1962, for example, the day John Glenn became the first American to orbit the Earth. Instead of just watching the launch on a portable black-and-white TV with my fellow fifth-graders, I may have been able to simulate the launch on screen — including sound — using available NASA materials and public domain software.

Who knows? Maybe today I'd be an astronaut — or a rocket scientist. Well, that may be stretching reality a little bit.

Fortunately (for our children), there's a plethora of low-cost educational software available, including applications devoted to space exploration. See "Studying Mankind's Greatest Adventure" by Joe Kohn (page 60) to learn about shareware programs that are helping young minds explore the wonders of our solar system and the heavens beyond.

While reading Tyler and Leah Weisman's feature-length review of Homeworker: The Student Organizer and Studymate: The Grade Booster (page 24), I realized what a deprived childhood I actually had. If I would have had access to one or both of these programs in school, may dad would have probably had one of those "My Kid Made The Honor Roll" bumper stickers on his gas-guzzling Oldsmobile Rocket 88 — instead of "Visit Lookout Mountain!"

And I'm positive, after reading Dr. Carol Holzberg's "Class Action" column ("Let The Games Begin," page 5), that learning geography and history by chasing Carmen Sandiego and her notorious gang around the world and through time via computer would have been preferable to memorizing 100 facts about Europe and 100 facts about the U.S. — as my seventh-grade geography teacher made me do — and much more fun.

In our cover story, "Educational Software Roundup: Investments For The Mind" (page 10), teacher/author Cliff Feldman addresses parents and educators who are attempting to build software libraries for young children. Cliff recommends many high-quality titles and companies — such as Optimum Resource, Inc.'s Weekly Reader Software and Orange Cherry Software's Talking Schoolhouse Series.

Our mood may be light in this issue, but our objective is to present the best in available educational software for the Apple IIGS. Our writers sought out programs that entertain as well as educate, because they know how important it is for students to like school and the education process — including those students who are prone to setting fire to the chemistry lab!■

— Ron Errett
Managing Editor

Let The Games Begin

WHO SAYS EDUCATION HAS TO BE BORING?

WITH A COMPUTER AND THE RIGHT SOFTWARE YOU CAN PROVIDE YOUR STUDENTS WITH AN EXCITING MIXTURE OF PLAY AND LEARNING TO STRENGTHEN ANY BASIC SKILL.

Successful educational software offers children instructional opportunities not possible with the conventional printed page. Game-like challenges motivate kids to learn difficult concepts to obtain higher scores. Arcade-like contests, race-the-clock pressures or hall-of-fame scoreboards may not be suitable for every child. For many, however, the thrill of competition encourages mastery of complex topics.

In this issue, "Class Action" examines the best in computer "Edutainment." (We tip our hat to MECC for pointing out the word to us.) The software products mentioned here combine fun with educational enrichment and amuse as they teach.

Whether it is science, social studies or just plain reading, writing and 'rithmetic, there's a perfect software package available to enliven the educational experience. Several may even be suitable for remedial teaching.

All programs cited in this article are "best-sellers." They are popular because they blend education with entertainment in one neat package. Sound, colorful animated graphics and music support the concepts taught. Audiovisual stimulation adds an element of reinforcement usually lacking in two-dimensional textbook instruction.

Note: Several programs mentioned below are Apple II rather than IIGS-specific. Apple IIGS owners should purchase 3.5-inch disk versions whenever possible. The rugged 3.5-inch plastic disk case is better suited to the rigors of classroom use. Furthermore, the 3.5-inch format frequently minimizes disk swapping, which reduces the number of disks lying loose on a student's desktop.

Make Way For The Munchers

If kids enjoy playing games, they will delight in matching wits against MECC's mischievous Troggles in the fast-paced Muncher series. Word Munchers teaches vowel sounds. Number Munchers develops whole-number math skills with multiples, factors, primes, equalities and inequalities. Fraction Munchers challenges kids to master proper and improper fractions, mixed and whole numbers, plus numerators and denominators.

Management options enable teachers or other adults to customize each program for particular students.

A Pac Man-like game metaphor underscores every Muncher product. Players move a Muncher game piece around the screen, directing it to "eat" a target word, number or fractional expression.

Kids earn points for every correct answer and lose a Muncher game piece when they make a mistake. Game play ends once all Munchers are lost.

Troggles enter the scene and add to the action. These hungry creatures zero in on Munchers and try to catch them. Some even change the game board as they move through cells.

Kids must avoid all Troggles and clear the screen of target expressions to advance to the next level. Game play becomes more difficult at each successive level. High scorers will make it to the Muncher Hall of Fame.

MECC has just released Picture Chomper, a Pac Man look-alike for the younger set.

The program reinforces sorting and classification skills. Instead of playing with Munchers and Troggles, kids direct a large set of teeth to chomp down on a target category. Objects may be organized by color, size, shape, design, class or use.

Picture Chompers is lots of fun. The 10 highest scorers win a place in the Chompers Club. Games may be played with or without a timer and teachers can adjust the difficulty level.

Audubon Wildlife Adventure Series

Wildlife Adventures

In the Audubon Wildlife Adventure series, kids use a computer to learn about bears, whales and wildlife conservation. The programs consist of interactive simulations, online guide books, databases and game-like activities.

The computer makes it possible to experience real wildlife situations from the safety of an electronic desktop. Apple IIGS super-high-resolution graphics add an element of realism not possible with the 8-bit Apple II.

Youngsters explore natural habitats of grizzly bears and whales. In the process they learn facts about animal size, diet and range. They also pick up interesting information about other animals and ecological models.

Several activities in Audubon's Wildlife Adventures involve role-playing. Children assume the identity of people who must make decisions that affect the lives of bears and whales. They experience the dilemmas of wildlife protection firsthand and come to appreciate the factors that directly affect animal survival.

Kids actively participate in research expeditions and rescue missions. They try to resolve conflicts between humans and animals. They learn to read maps and how to use an online database.

Special data cards with pictures and descriptive information help them identify the animals they meet on their travels.

Grizzly Bears and Whales are powerful learning tools because they make science accessible. The programs succeed by presenting factual materials in an engaging way. Yet kids do more than just memorize facts. They conduct research and make critical decisions while having fun.

Playing With Cards An Blocks

Sometimes great educational software can be found in the game section of your local software store. Two Apple IIGS products come to mind. Both build critical thinking and problem-solving skills and challenge children to develop strategies for success.

If at first glance these programs only seem like amusing distractions, do not hesitate to take a second look.

Solitaire Royale is a potpourri of 11 computerized card games. Three activities are designed especially for younger children (ages 5 to 7). Aside from teaching basic solitaire techniques, the kids' games develop visual recognition and memory skills. All involve an element of matching.

Children may play the classic one- or two-person Concentration, where the object is to find 12 pairs of matching cards in as few moves as possible. Or they may play Pairs, which requires matching 16 pairs of cards.

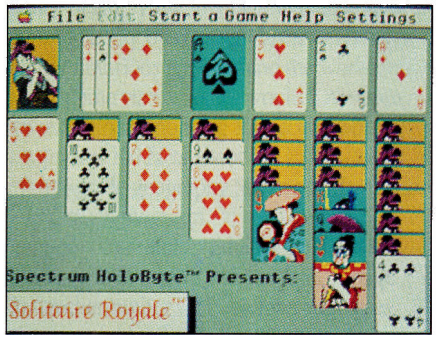
In the third game, The Wish, success at matching involves both skill and luck. Youngsters have to plan their moves so they don't run out of cards too soon.

Older children (ages 8 and up) will delight in playing Tetris, one of the neatest video games ever to grace the pixels of a IIGS computer screen. Tetris was created by a Soviet programmer and enhanced by Spectrum Holobyte (its U.S. distributor).

Tetris offers more than just arcade-style entertainment. It challenges children to think about geometric shapes and spatial relations in interactive ways not possible in a traditional math curriculum.

The object of Tetris is to rotate falling game pieces so that they completely fill a horizontal row at the bottom of the screen. Filled layers disappear, leaving room for other rows.

The faster shapes are aligned or dropped, the higher the score. Game play ends when incomplete rows pile up to the top of the screen. Difficulty and excitement increase at higher levels of play.



Solitaire Royale

There are six possible game-piece configurations, each composed of four linked squares. To be successful, kids must develop problem-solving strategies for the proper spatial alignment of game pieces. They must also make speedy decisions about abstract geometric principles.

Even adults will find Tetris challenging.

Go To Your Room!

Broderbund's Playroom is designed with the preschool set in mind. The program reinforces a young child's natural

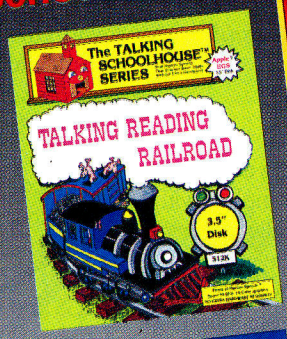
IT'S HERE NOW!

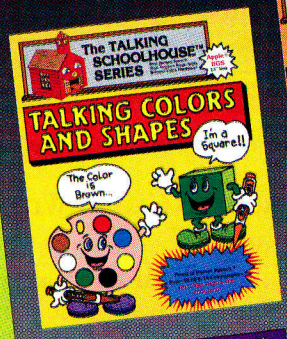
A New Generation of Talking Software that Captures the Full Power of the Apple® IIGS...

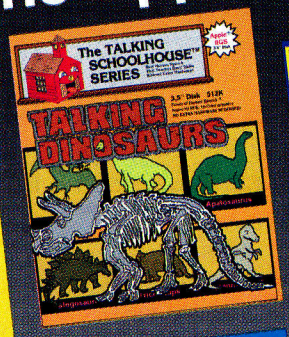
Imagine a "Talking Schoolhouse"

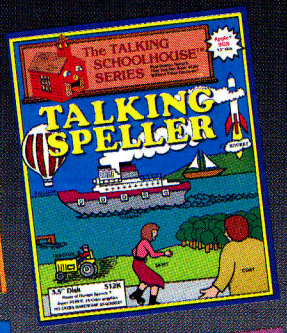
inside your GS computer — software that uses perfect human voice and the most stunning graphics imaginable to teach basic skills to youngsters. Why fantasize? . . It's here now and it's known as the TALKING SCHOOLHOUSE ™ SERIES from Orange Cherry Software. 14 software programs captivate children ages 3-9 as they explore basic concepts on their own:

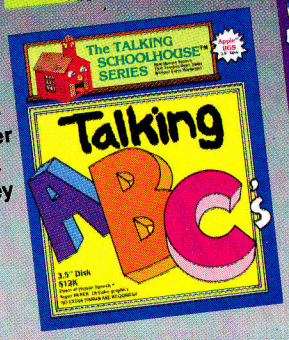
- Talking Animals
- Talking Dinosaurs
- Talking Numbers
- Talking First Writer
- Talking First Reader
- Talking School Bus
- Talking Alpha Chimp
- Talking Colors and Shapes
- Talking Reading Railroad
- Talking Addition and Subtraction
- Talking ABC's
- Talking Speller
- Talking Clock
- Talking Money

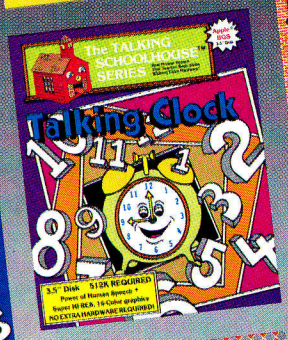


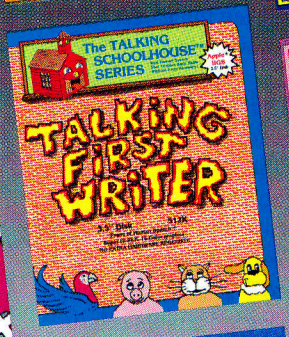


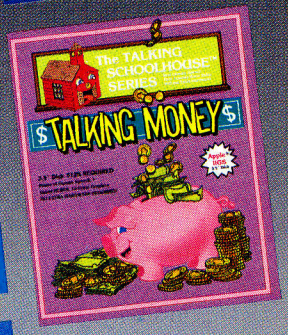


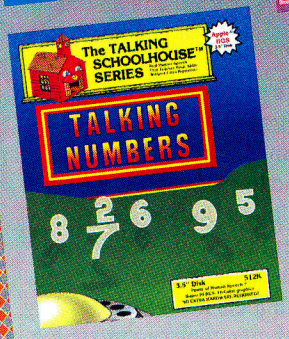


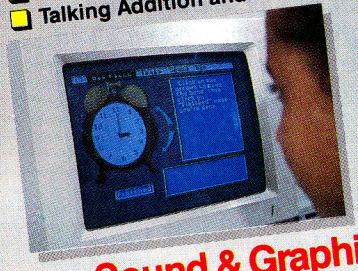








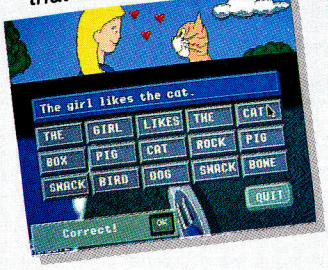




NO SPEECH BOARD OR ANY ADDITIONAL HARDWARE IS REQUIRED . . . ONLY THE STANDARD 512k APPLE IIGS COMPUTER.

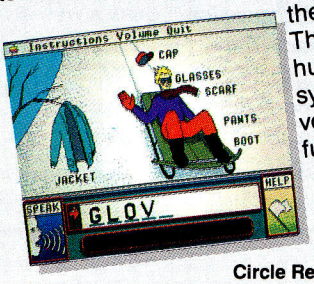
Super Sound & Graphics

See why children, teachers, and parents have been amazed & delighted by our super sound & graphics. One teacher writes: *"In Talking First Writer, we put in a sentence, the computer read it out loud, and then instantly produced a brilliant, colorful picture that described the sentence. We were astonished!"*



Perfect Human Voice

This software brings the friendly and reassuring voice of a real person into the computer learning environment. No speech board is required because we utilize the GS's built-in Ensoniq™ sound chip. Developers working with proven educational concepts have recorded actual human voice & electronically digitized the sound into the computer program. The result is perfect human speech - not a synthesized computer voice that only confuses youngsters.



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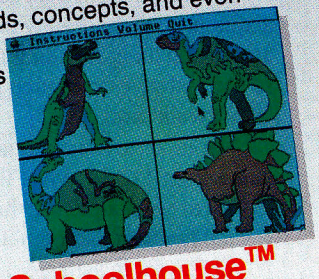
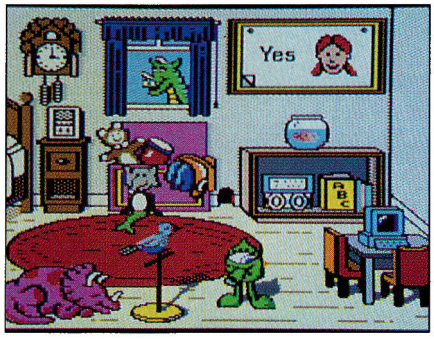


The Talking Schoolhouse™ Series

from Orange Cherry Software. All programs are currently available on 3.5" disks for the Apple IIGS. The suggested retail price is $49, $59 for the School Edition. To order, or for more information contact your dealer or call toll-free (800) 672-6002.



The Playroom

Where in Time is Carmen Sandiego?

curiosity by offering audiovisual rewards for exploration. Its graphical user interface is so intuitive, even three-year-olds can run the program with little adult supervision.

Youngsters investigate the Playroom by selecting objects on screen.

At first glance, the room resembles a typical child's bedroom. There are playthings and stuffed animals scattered on the floor. A toy box overflows with amusing objects and clothes. A goldfish swims in a bowl. A radio lies on a night stand. There's even a computer resting on top a kid-size table.

As youngsters take a closer peek, they soon realize that things are not quite what they seem. They can change the head, torso and legs of the "Mixed-Up Toy" by selecting its body parts.

If they enter the "Mousehole," they can play a one- or two-person counting game using numbers from 1 to 9. If they select the computer, they can try typing, learn about uppercase and lowercase letters, and get some reading practice.

The cuckoo clock on the wall acquaints the children with both analog and digital time. A talking picture teaches several safety words, such as "poison," "don't walk" and "exit."

A Spinner toy encourages kids to count from 1 to 12, while the ABC book lets them paint a picture that contains several familiar, named objects.

All Playroom activities are fun. Colorful animation, music and sound enhance game play. The program offers such an amazing variety of things to do, it may be difficult to pry the kids away from the computer.

Crooked Capers With Carmen

A roundup of entertaining educational software would not be complete without mention of Carmen Sandiego. This notorious villainess has done more to teach elementary-school-age children about geography than all other geography software combined.

Carmen Sandiego is so popular, unit sales of the first three programs in the series (World, Europe and USA) have topped the 1 million mark.

Carmen is probably the best-known computer character ever invented. There are Carmen Sandiego fan clubs all over the country. It's only a matter of time before Ms. Sandiego shows up as the star of her own Saturday-morning cartoon show or full-length feature film.

She's so famous, Broderbund even markets a line of Carmen Sandiego posters, stickers, sweatshirts, T-shirts and watches.

The newest title in the series is called Where in Time is Carmen Sandiego?. It follows Carmen and her villainous colleagues back in history (from the 1950s to 400 A.D.) as they heist the world's greatest treasures and landmarks.

Nothing is safe from these vile thieves. You'll find them swiping bicycles from China in 1930, the *Huckleberry Finn* manuscript from the United States in 1884, a Mayan calendar from Mexico in 400 A.D., and other priceless objects.

Children travel through 12 countries in four different time periods to question witnesses and track down clues. They must secure a warrant for a suspect's arrest before time runs out. Along the way they pick up information about significant historical events, scientific inventions and prominent people.

The package includes a copy of the *New American Desk Encyclopedia*, which proves invaluable as a reference.

Where in Time is a great way for teachers to supplement their students' knowledge of history and geography.

Technological Marvels

A computer can make even the most mundane subject matter seem fascinating. Once the machine enters the school curriculum, it creates an educational environment that allows kids to explore subjects on their own, at their own speed.

A computer also fosters cooperative learning, as youngsters team up to share limited classroom technology.

So harness the power of your Apple IIGS and motivate your kids to excel at higher skill levels. Let them discover that learning consists of subjects they can enjoy in new and exciting ways.

When a computer becomes so engaging that kids ask to use it again and again, it's an educational tool we cannot afford to ignore.■

— *Carol S. Holzberg, Ph.D.*

The author is an anthropologist and computer journalist from Shutesbury, Mass. She writes for several publications, works as a computer consultant and is the computer resource person at the Shutesbury Elementary School.

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ice cream
li

Educational Software Roundup: Investments For The Mind

Are you building an educational software library? If so, consider the "bright stars" mentioned below in your quest for truth and light.

Some of the most appealing software packages are created for children ages 2 to 6. These packages are mainly based on the concept of discovery learning and experimentation.

Lawrence Productions has developed a software package that provides colorful, fascinating places to explore. Children age 2 to 4 will be delighted by McGee, which is totally mouse-driven and requires no word-recognition skills.

Little McGee, a pint-size boy, awakens in a house that is free to roam and explore because his mom is still asleep. He crawls under carpets, dials the telephone and engages in other harmless activities.

Adults are advised to start the program and then allow their little ones to independently enjoy the vivid sights and sounds.

Setting The Standard

Weekly Reader Software from Optimum Resource, Inc. set the standard for graphic excellence with the Stickybear series in the mid-1980s. The release of talking super-high-resolution versions of Stickybear Alphabet, Opposites and Shapes reasserts the company's dominance in the area of preschool software.

The programs share a unified style, created by artist and children's author Richard Hefter. They consistently combine dazzling animations with upbeat, amusing sounds.

Although each title is different, all activities are presented by the avuncular Bedford Stickybear. His voice and reassuring style provide a warm, friendly atmosphere throughout the software series.

Each package contains a wall poster, stickers, user's guide and an educational picture book based on a related theme.

Reading and Me and its sister program, Math and Me, are Davidson & Associates' IIGS-specific packages for the early education market.

Davidson's usual attention to detail is evident in the software. Both programs look and sound sensational, are exceptionally responsive and offer activities that are educationally valid. Children may engage in 12 different games of increasing difficulty.

The math offering provides activities with shapes, numbers, patterns and basic addition. The program helps preschoolers prepare for the challenges of elementary arithmetic.

The readiness modules of Reading and Me provide an opportunity to discern between similar but different objects. They also include a few humorous and amusing "surprises."

Math and Me and Reading and Me are near-perfect examples of early learning software.

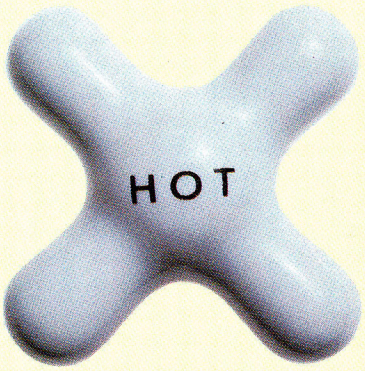
Students of psychology may remember an unusual, but interesting, intelligence test from the Gestalt school of thought. It's a completely non-verbal, non-text-oriented assessment that requires participants to select two matching graphics from a set of six. Baudville offers a variation of this theme entitled Mad Match.

Mad Match is a super-high-resolution stereo package that is so much fun to play, most users will never know it's a tool for sharpening perception skills.

As players graduate to higher game levels, graphic images become more difficult to differentiate, and a greater number of sets are presented within the same time frame. As a result, the activity becomes quite intense.

Stars and Planets from Advanced Ideas is a unique package designed to teach young children about the solar system and constellations. It includes activities to reinforce counting skills and shape recognition. The musical themes and outstanding animation contribute much to this joyful package.

Orange Cherry Software is a New York-based publisher that entered the Apple IIGS market with an ambitious array of educational titles. Talking School Bus is an attractive package offering an



Low flow showerheads and dripless faucets save hot water and the fossil fuels it takes to create it. They also save you money.

Carpooling, taking public transportation or even riding your bike to work can reduce the pollution that causes global warming. Try one of these alternatives at least one day a week. You'll save money and you'll also be in a better mood when you get there.

If you don't person can ma in the worl what you've

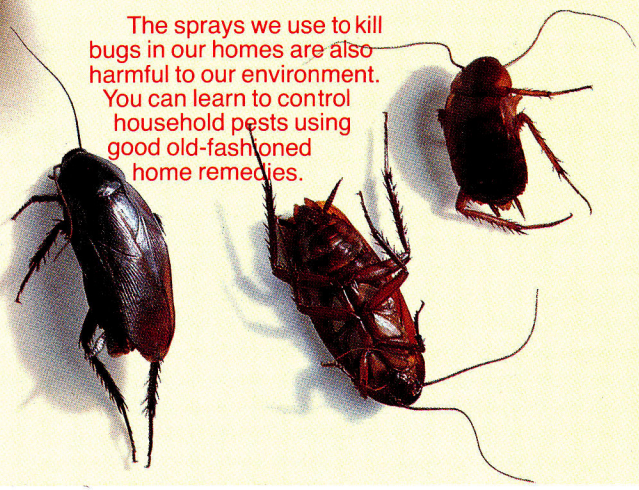
Our environmental problems are so big most of us assume the solutions are big, too. But the long-term solution to things like global warming, overpopulation, extinction and waste disposal is really quite small. The solution is one person at a time deciding he or she is going to help the world, not hurt it.

It's you, with all your other

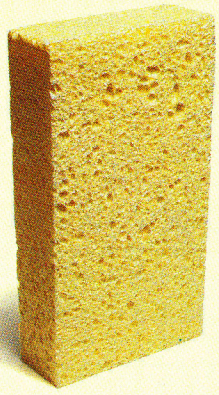
Paint thinners give off fumes that deplete the ozone layer. Vinegar is a safe alternative.

Your baby could be making a bigger mess than you think. Disposable diapers can take up to 500 years to decompose, and their contents can spread disease. Use a diaper service.

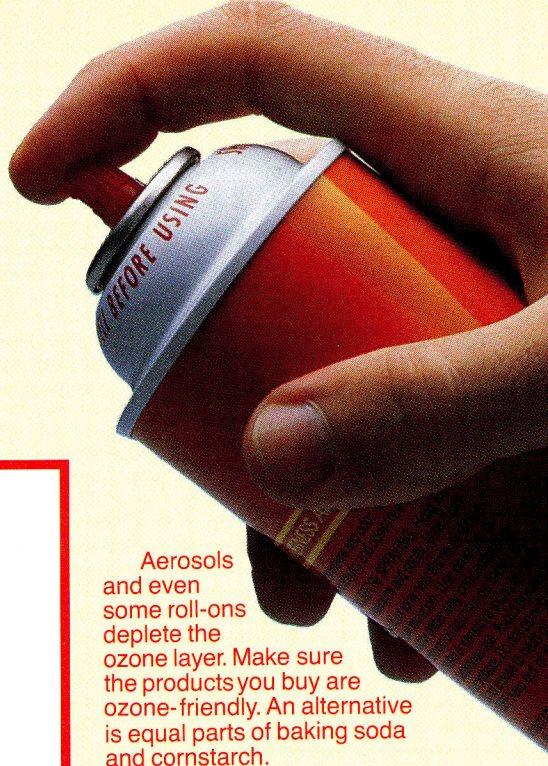
The sprays we use to kill bugs in our homes are also harmful to our environment. You can learn to control household pests using good old-fashioned home remedies.



Our landfills are full and highly toxic wastes are leaking into our groundwater, rivers and lakes. Recycle everything you possibly can.



Many household cleaning products can be replaced with homemade non-polluting alternatives.



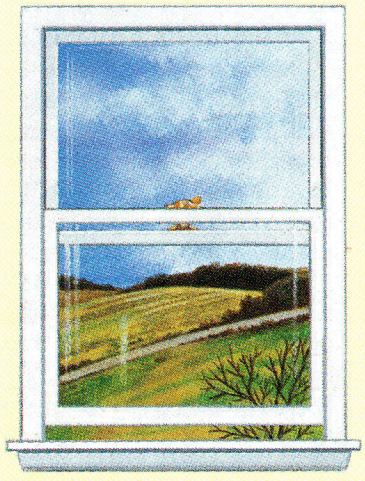
Aerosols and even some roll-ons deplete the ozone layer. Make sure the products you buy are ozone-friendly. An alternative is equal parts of baking soda and cornstarch.

t think one ake a difference ld, consider done already.

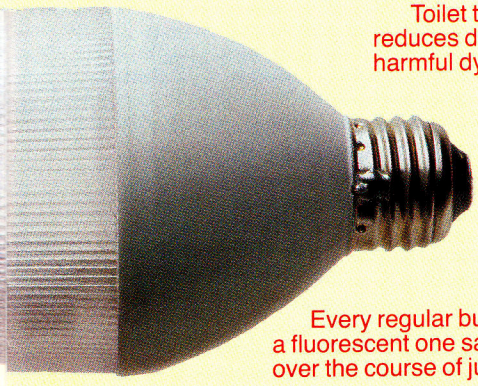
obligations in life, realizing that saving our environment isn't just up to people who like whales.

Government and corporations aren't going to provide the real answers. Commitments on the part of ordinary people will.

To find out how you can get involved in a cause you care about, call 1-800-433-0880.



Each year the amount of energy wasted in the United States is equivalent to the energy produced from all the oil that flows through the Alaska pipeline.



Every regular bulb you replace with a fluorescent one saves a ton of coal over the course of just five years.

Toilet tissue made from recycled paper reduces deforestation, and it doesn't leak harmful dyes into the water supply.

SAVE THE WORLD

If we're not all helping, we're all hurting.

eclectic group of elementary activities for young learners.

The program features counting, animal- and vegetable-recognition activities, and a simple maze. In addition, Talking School Bus is capable of producing an appealing certificate as a reward.

Orange Cherry Software has recommended this product for the 5 to 8 age range. However, these preschool activities may be more appropriate for children 3 to 6.

All Orange Cherry titles — including those in the excellent Talking Schoolhouse Series (see directory listing) — are marketed without copy protection. Purchasers should repay companies like Orange Cherry by spreading the word, not the software.

Drill-And-Practice Blues

As much as educators like to work with exotic aspects of learning, some skills are best learned and reinforced by repetition. But the latter doesn't have to be boring. Try the following "prescriptions" to relieve the drill-and-practice blues.

Math Blaster Plus for the IIGS is an institution among arithmetic skill-development programs, and its menu-driven interface is simple and efficient.

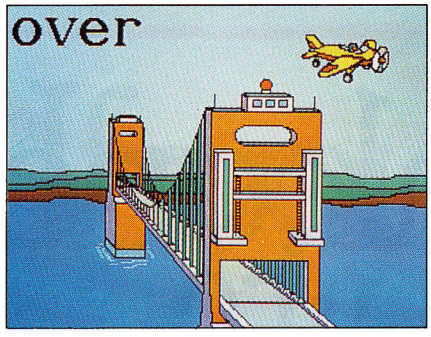
The program's modules are based on space-related themes, such as Countdown, Ignition, Liftoff and Orbit. Although the modules are enjoyable, the program's centerpiece is a game known as Blasternaut.

First Byte, the maker of Math-Talk Fractions, is well known for its programs' synthetic speech capabilities. Math-Talk Fractions is presented on screen by Professor Matt A. Matics, whose synthetic voice is somewhat stilted, yet appealing.

Team Challenge is a Math-Talk activity that simulates an academic quiz show. The game provides the interesting opportunity to adjust the degree of difficulty by selecting the members of the opposing team.

Math-Talk Fractions is a slightly offbeat, but effective offering to the electronic flash-card genre.

Math Wizard from Unicorn Educational Software is another highly imaginative, IIGS-specific educational package. Math Wizard features images of dragons and mystics. Its stylish graphics provide a specially appealing look and feel.



Weekly Reader software sets a high standard for graphic excellence.

The program's modules are well timed and responsive. However, activities are preceded by notably long periods of disk loading. The same delays are also encountered when repeating an activity. This criticism aside, Math Wizard is an enjoyable, valuable offering.

Drill-and-practice software is not limited to math applications. There are also some nifty packages for language and writing skills. One of the best is Writer Rabbit from The Learning Company.

The New Talking Stickybear Alphabet

Writer Rabbit is not IIGS specific and will operate on all Apple II computers. It does not support the mouse or provide flashy digitized sound. It is noteworthy for its capability to effectively present the high-level skill of sentence construction.

Writer Rabbit introduces students to the elements of how, why, when, who and where. It requires users to first identify the elements and ultimately create sentences using this conceptual approach.

Orange Cherry Software's Talking First Writer uses a different approach to teach and reinforce English skills. Where Writer Rabbit assembles phrases to construct complete sentences, Talking First Writer uses individual words as the sentence building blocks.

Talking First Writer's culminating activity allows a user to build short sentences from a provided word group. When a sentence is completed, the program reads it aloud and displays a related, whimsical graphic.

Talking First Writer uses a clever and colorful interface that motivates kids to do their best work.

Window To The World

The right software puts the world at your fingertips and provides hours of fun, as well as factual information. For example, Broderbund's Carmen Sandiego titles, which are discussed by Dr. Carol Holzberg elsewhere in this issue (see "Class Action"), are so enjoyable, it's easy to forget their educational value.

Geographic Jigsaw from Eclat Microproducts offers a graphically stunning approach to learning U.S. geography. The software features a jigsaw puzzle that requires students to position the 50 states in their appropriate locations.

A word of caution: The program's highest level of difficulty can humble the heartiest of map mavens!

Geographic Jigsaw also includes map facts, a map quiz and a series of statistical maps representing an assortment of topics, including the location of America's hazardous waste dumps.

Revolution '76 from Britannica Software is a game that opens a window to the past. The historic simulation teaches the events and subtleties of the Revolutionary War through a unique approach: to live it! Students soon learn that there

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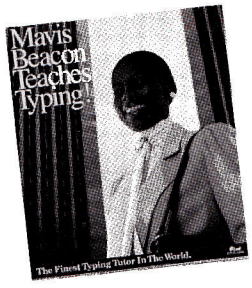

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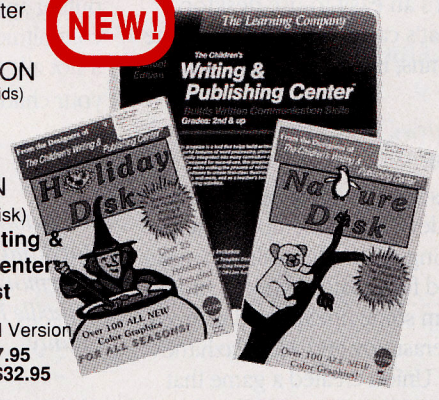

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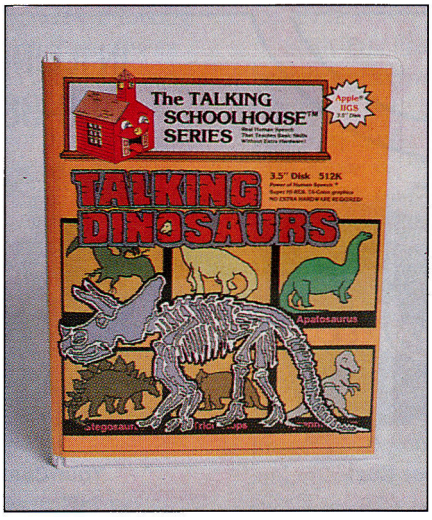
Circle Reader Service Number 7

was much more to this era than the midnight ride of Paul Revere.

This ambitious package is presented on three 3.5-inch disks; disk swapping is required for everyone but hard drive users. The game's outstanding features outweigh any inconveniences, however.

MECC publishes a large number of educationally sound and well-developed titles. World Geograph and its domestic counterpart, USA Geograph, are unique IIGS-specific products.



The Talking Schoolhouse Series

Both programs are reference tools for research and report generation. World and USA Geograph integrate a database of information with a series of living maps. This medium encourages students to combine facts to reach higher levels of understanding.

Both titles are capable of printing reports that include maps, bar graphs and comparative data tables in color or black and white. The supplementary materials can be used to enhance reports or term papers.

Both editions contain superb manuals and offer an optional curriculum guide for the classroom teacher.

CREATE

Content-oriented software is worthless if youngsters fail to develop the ability to think creatively. The packages mentioned below are designed to "liberate" the artists and storytellers of tomorrow.

Cartooners from Electronic Arts enables children to create their own movies. Kids of all ages can choose from a variety of animated characters, backgrounds, objects, sound effects and musical scores to tell their tales.

Most children are capable of producing impressive results within a short time. In addition, Cartooners fully implements the mouse and menu interface.

Compu-Teach publishes Once Upon a Time, which enables elementary schoolers to produce their own illustrated storybooks.

Once Upon a Time is available in two variations for the IIGS. The first variation contains graphic libraries dedicated to main street, safari and the farm. The other version includes dinosaurs, the undersea world and the forest.

Both IIGS editions use digitized speech to help students identify graphic objects used to create illustrations. To use an object, however, it is necessary to correctly type the name, which provides a better learning experience than simply pointing and clicking.

Each storybook page can contain as many as four lines of text. This is primarily a graphic medium.

When in need of a page-layout medium for children, check out The Children's Writing and Publishing Center by The Learning Company. It's an easy-to-use desktop publisher that's capable of arranging one or two columns, including headers and graphics.

Reading and Me

CHALLENGE

Educators spend a great deal of time and energy developing methods to teach critical thinking skills. The ability to make decisions and formulate strategies can be acquired from some unexpected sources.

Vadim Gerasimov and Alex Pazhitnov of the Soviet Union created a game that involves manipulating sets of odd combinations of descending squares. The objective is to pack the objects tightly, filling as many rows as possible.

Thanks to Spectrum Holobyte, this game is available to the entire world as Tetris.

The intensity level of Tetris is often so frantic that many players fail to notice its digital sound and vivid images of Soviet society.

The Black Caldron from Sierra On-Line is an adventure game based on a Walt Disney movie. Children must find and destroy the cauldron to defeat the evil Horned King.

The game, which involves formulating and revising strategies as events unfold, contains superb music from the original film and more than 1,000 super-high-resolution graphic cells.

Shanghai by Activision/Mediagenic is one of the first and best entertainment titles for the IIGS. It's based on the Oriental game of Mah Jong.

The object of the game is to pair matching titles and remove them from the game board. All titles must be removed to win the game. Sound simple? It isn't! Shanghai is won by those who can plan ahead and take advantage of existing conditions.

Today's educational software embodies all of the humor, intensity and panache of contemporary computing and adds a final ingredient — commitment. Many of the titles here, if not all, would be perfect additions to your children's software library.■

— Cliff Feldman

The author is the IIGS coordinator of the Maryland Apple Corps user group and chairman of technology education at Parkville High School in Baltimore County.

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Significant Developments In The Apple IIGS World

TDM Is Back

Do you remember the Apple III computer and a company called On Three, which produced some excellent software for the short-lived machine? Before a couple of the company's programmers went to work for Apple, they ported one of the programs, The Desktop Manager (TDM), over to the IIGS.

Those who purchased the program originally were quite enthusiastic about its capabilities, but there were few purchasers. When Apple introduced GS/OS, the market for TDM disappeared, especially considering its high price.

Well, the program has been updated and re-released. At $29.95, it's now one of the best software values around.

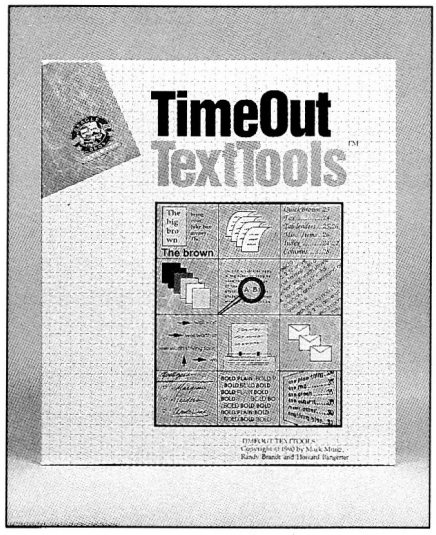
TDM works like a Classic Desk Accessory, but you can also "pop it up" from almost any software, whether 8 or 16 bit.

Available accessories include a NotePad, a Printer Manager with a one-line-at-a-time typewriter, an Appointment Calendar with an alarm feature, a Calculator with an on-screen and printable "tape," an Envelope Labeler, a Screen Saver (saved screens can be loaded into another program later and modified), a text Screen Printer, an ASCII chart, Find File, an Area Code/Time Zone accessory, a Communications Manager and a Disk Manager.

If you want to load a file into a desktop program and you don't know the size of the file or the date it was created, you can pop up the Disk Manager and find out what you need to know. Or you can format a disk and not lose the work you just created.

The Communications Manager will allow you to make a call without having to exit your current program.

If you prefer text-based programs, the best feature is the capability to pick up a block of text and paste it back elsewhere. You can store information in the NotePad and pick it up again whenever you need it, even in a ProDOS 8 program (unlike a New Desk Accessory).



TimeOut TextTools

You can have four of the accessories on the "hot keys" so they are available with only one keystroke. There is also a set of Super Accessories, which adds some additional utilities, and a Toolkit that lets you write your own accessories.

For more information, contact On Three at 206-334-8001.

A Faster SCSI Hard Drive Controller

In the last issue you read about the new Apple DMA SCSI controller, but there is another card you may want to consider if speed interests you.

The RamFast card from C.V. Technologies has the disadvantage that it now only works with hard drives and not with other SCSI devices, such as tape or CD-ROM drives. The company is working on this limitation, however, and also has plans to support non-SCSI internal drives.

If the limitation does not concern you — and you primarily run ProDOS 8 or disk-intensive programs — then this card may be right for you. It also works with the older SASI Sider drives.

As with the Apple card, to take full advantage of its speed, your other cards must have DMA (direct memory access) compatibility.

The RamFast card has a memory cache that holds the information being transferred. Combined with direct memory access, which bypasses the CPU, this cache capability makes the card live up to its name.

The configuration software is built into the card so it can't be lost, although there are dipswitches that may need to be set, depending on your system. The setup program allows you to choose which partitions you want active, lets you lock a hard drive volume and even tells you the interleave of the formatted drive.

The card also allows you to map volumes to phantom slots, as long as they do not contain other disk devices. This means you can access a third partition — even from ProDOS 8 — and still use a modem, even if a drive is "using" slot 2.

The RamFast card costs more than the Apple card, but the extra expense is worthwhile if you are impatient or want to take advantage of its other features.

For more information, contact C.V. Technologies at 513-435-5743.

Classic AppleWorks Keeps Getting Better

Although there are more modules in AppleWorks GS, many IIGS owners still prefer the speed, power and familiarity of Classic AppleWorks. There is even more to like about this popular program as Beagle Bros, Inc. continues to enhance it with add-ons.

In addition to bug fixes in some of the older TimeOut programs (see your local "Beagle Buddy" for low-cost updates), there are two new programs that increase the productivity of this program immeasurably.

If you have coveted those powerful MS-DOS word processors, you need look no further than TimeOut TextTools. It

requires AppleWorks 3.0 and includes: Analyst, CopyBlock, Glossary, QuickStyles, SuperFind (to search for and replace printer codes), QuickTabs, MarkMerge, MultiPrint, Indexer and a Table of Contents Generator. All for just $49.95.

MacroEase, the second generation of the popular MacroTools packages, is the other new TimeOut program. And any serious AppleWorks user ought to have UltraMacros. Besides the large collection of sample macros, it includes Debug, File Status, Primer Reference, UltraReference, UltraLock, UltraPlus, DBLinks, EasyBudget, Question Writer and UltraPublish.

Upgrading from either MacroTools program is a real bargain at $20, plus $3.50 shipping, or you can buy them new for $39.95 each and still get an excellent value.

In addition, the *SuperFonts Activity Guide* will interest anyone who uses the program (SuperFonts) often, especially teachers. It retails for $49.95 alone or $99.95, including SuperFonts.

The DecisionPak, StylePak and PerformancePak are sets of three TimeOut programs bundled into one package. These sets are much less expensive than buying the programs individually.

Call 800-345-1750 for more product information.

Ingenuity Is Innovative

All the power-hungry cards have made it necessary for some computer users to upgrade their power supplies. So far, the only way to do this with a IIGS is with an internal hard drive.

Ingenuity, Inc., formerly Applied Ingenuity, has been very successful with its drives. In fact, the company has even expanded its line.

Besides its memory cards and reasonably priced 20 MB and 40 MB internal and external drives, and its 100 MB SCSI drive, Ingenuity now produces a 40 MB internal SCSI drive, which you can purchase, with or without an Apple or a RamFast DMA controller, and can upgrade from an older drive.

Ingenuity also offers a 40 MB Innercard, which is a hard drive on a card. For $699, you get a small, powerful drive. Apple IIc owners can now have an internal hard drive that replaces their floppy drive, making their machines much more

P.D.E. Your IIGS Guide to

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☐ **GS27** Bounce-It!: IIGS adaptation of the Little BrickOut™ game (SHAREWARE†) $9
☐ **GS58** MasterMind, war game, arcade-style car race (SHAREWARE †), ***Editor's Choice*** . . $9
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† The author requests a specified donation if you decide to use the program.

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portable. The CDrive is $499 for 20 MB.

Because backing up information can be time consuming, many people don't bother — until all their hard work has disappeared once, that is.

Rather than learn the hard way, there is a reasonably priced option. For $199 you can buy a VCR backup card, which lets you record about 100 MB on an inexpensive videotape. The backup software is flexible, and you do not have to dedicate your VCR to this use.

There are no longer any excuses for lost files. Sorry kids, you can't say the computer ate your homework!

Contact Ingenuity at 800-346-0811 for more information.

DB Master 'R' Us

Stone Edge Technologies, Inc. has released DB Master Version Five (a database management system) as a shareware program. When you pay the $45 fee you get a full manual and the latest version of the program on disk. There is a discount if you later decide to upgrade to the more powerful relational version.

For the programmer who has other ideas about how to manipulate data, there are two additional possibilities. The Developer's Pak allows the enterprising individual to create a run-time version that lets the developer decide what the user can do with the data.

All the power of DB Master Professional is available, but you can have customized menu screens, functions, commands and automated operations.

If the word gets out to the MS-DOS world that the Apple II is a "real" computer, who knows what could happen?

The Basic Programmer's Pak is another programming tool that allows Applesoft to interact with DB Master data files — for times when information must be manipulated in such a way that DB Master itself can't do it. It works with files from either the Professional version or Version Five.

To know more or to see "II at Work," the Apple II productivity newsletter, call 216-641-1825.

Genesys

Genesys is a resource editing and developing tool that operates in the desktop environment to allow you to work with the nuts and bolts of a GS/OS application; one that already exists or one you would like to see. It is primarily of interest to programmers, but anyone who would like to "play" with the windows, menus, cursors and so forth in a program will find the tool useful.

Genesys generates fully commented source code for any language that supports System 5.0, so it is a powerful tool for anyone who wants to modify a program. Or you could have fun changing an error code to include your name and tell you what a dummy you are.

If this program is of interest to you, contact Simple Software Systems International, Inc. at 404-928-4388.

Other Updates

Although the changes are minor, potential ImageWriter II purchasers will be pleased that a 24K buffer is now built into the printer. You can also add AppleTalk without deciding which of the two features is more important to you, as with the previous model.

Chinook Technology has added an Apple IIGS memory card to its product line. Prices are: 1 MB, $159; 2 MB, $245; 4 MB, $417.

EuroWorks has released an AppleWorks 3.0-compatible version of its software that is available in French, German, Italian, Portuguese and Spanish.

Greg Schaefer and Jerry Cline have announced the formation of InSync(c) Software, a new software publishing company dedicated to offering Apple computer users quality products and support, while providing publishing assistance to both new and experienced software artists.

The company's first program will be version 2.2 of ProTerm, formerly published by Checkmate Technology, Inc.

Schaefer is the author of this excellent telecommunications software for Apple II computers, as well as GBBS (Greg's Bulletin Board Service). Cline is, among other things, president of the Arizona Apple/Mac User Group and user group forum leader for America Online.

We look forward to seeing their efforts and wish them luck in this venture.■

— Merry Perry

The author works part-time selling computers in Baltimore. She can be reached on CompuServe (71101,1276) and on GEnie and America Online (MerryP).

IT'S 12 NOON. TIME FOR ANOTHER LIFE OR DEATH DECISION.

Choosing between the blue plate special and the pot luck surprise could be the most important decision you make all day. Because if you make a habit of picking high-cholesterol foods, you could be building up the level of cholesterol in your blood and increasing your risk of heart attack. And your risk of death. Remember that the next time you browse through a menu. And place your order as though your life depended on it.

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This space provided as a public service.

AN INTERVIEW WITH JIM CARSON, PRESIDENT AND CEO OF VITESSE, INC., LA PUENTE, CALIFORNIA

Jim Carson is president and CEO of Vitesse, Inc., a relatively new company that incorporated in California in November 1989. The other member of the Vitesse management team is the founder of the company, Kevin Johnson, vice president.

The company's name, logo and motto are integrated. The name, Vitesse, is the French word for "quickness" or "speed." The French are known for their passion for bicycle racing. Company officials feel that a racing bicycle, the Vitesse logo, exemplifies the standard they set for all Vitesse products: "Fast, smooth, uncomplicated."

Supporting only the Apple II line, Vitesse currently produces high-quality utility hardware and software. Product design and manufacture are conducted both in-house and overseas.

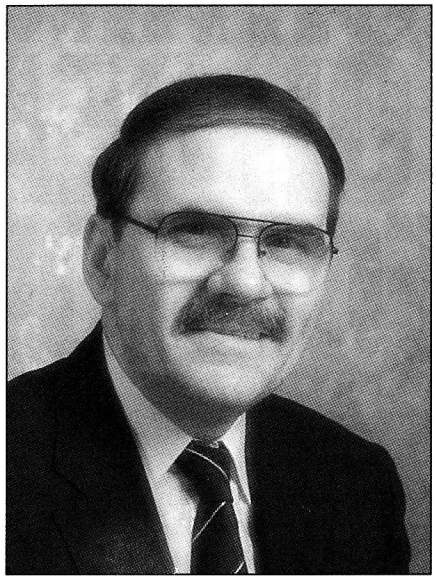
The Vitesse research and development team, which boasts more than 47 years combined experience, is developing at least one entertainment-oriented software product and hopes to release at least 11 software and hardware products by the end of 1990, which is an ambitious undertaking for a relative newcomer to the Apple II market.

Vitesse's products consistently display a high level of attention to detail. Documentation is exceptionally well written, complete and graphically impeccable.

All titles include a dazzling group of finder icons and a text file of relevant, timely information that supplements the printed manuals. In fact, a text display program is provided to reveal the contents of the Read Me file at the click of the mouse.

In short, Vitesse is currently setting a new standard for products in the Apple II domain. For its positive contributions to the Apple II market, Vitesse, Inc. is this issue's company to watch.

We asked Mr. Carson the following questions:



Jim Carson

At a time when many developers are reassessing their support of the Apple II, why are you pursuing the market?

We think the Apple IIGS is a tremendously capable, all-round personal computer, one whose full potential has yet to be tapped. We do not believe that Apple Computer, Inc. could abandon the market, either financially or morally.

The steadfast loyalty that Apple II owners have demonstrated during the years, the re-emphasis that we feel Apple will provide for the IIGS and the performance potential of the IIGS all combine to give us confidence in the market.

We also believe that our own innovation and leadership contribute to the resurgence of the Apple II market.

Where do you see the IIGS market heading?

We see the market expanding as Apple renews its endorsement and as other aggressive developers show the same enthusiasm as Vitesse does for developing new products.

Are there any evolutionary changes you would like to see in the IIGS?

Yes. In the near term, we'd like to see the IIGS provided with a video-card slot so that independent developers could enhance screen resolution and color. We'd also like to see the IIGS' capability to address RAM extended to the 65816's full 16 MB capacity.

For the long term, we'd like to see the IIGS blend more closely with the Macintosh II to diminish the barrier between Apple's two computer systems.

How would you describe your relationship with Apple?

To date, we have no special relationship with Apple. We certainly aspire to become a "seeded developer" because we feel we are at the forefront of product development for the IIGS.

Today's programming is truly an art form. Who are the members of your programming team?

Our current programming team includes Christopher Warren (Salvation: Guardian and Quickie), Joe Jaworski (Salvation: Renaissance and The Exorciser) and Robert Morgan (Quickie and Quickie for the IIe).

The Quickie scanner is a promising new product. Are any enhancements or other new products currently in the works?

By the time this interview is published, we will have released our "second-generation" software for the Quickie hand scanner and two additional titles to the GS/OS-based Salvation series. We are on the verge of releasing a superb program launcher called Wings and a directory-repair and file-recovery utility named Deliverance.

In May we demonstrated our preprototype full-page scanner, which has a removable scanner head for special use. We also have a couple of other new scanner devices being tested in our research department.

Other companies currently market products similar to your Quickie and the Salvation utilities. What prompted you to develop these packages, and what particular characteristics should attract users to purchase them?

We develop products for which there is a demand. For instance, while hand scanners are quite common in the Macintosh and MS-DOS worlds, there was nothing comparable in the Apple II world until we developed Quickie.

Quickie remains the leader, not only in the features it has for the IIGS, but also because the same device brings hand scanning to II+, IIe and Laser 128 users.

Our Salvation utility series is another example of satisfying a market need. The vast majority of IIGS users want utilities with power, speed and flexibility, but they demand the familiar, intuitive, easy-to-use human interface for which the IIGS is so well known.

Our utilities fill that need, and user response has overwhelmingly stated that their (the utilities) "look and feel" is exactly what most of our customers have been waiting for.

What is the minimum hardware configuration that you recommend to new purchasers of IIGS systems?

Based on the hardware and software products commonly in use now, we'd say that the current IIGS "ROM 03" shows the minimum RAM, 1.25 MB. However, owners would be well advised to get a 4 MB board at first chance.

Of course, at least one 3.5-inch drive is necessary, and we feel that a 20 MB hard drive is an essential part of a "base" system.

Utility software generally requires a higher level of technical assistance. What is Vitesse's policy regarding user support?

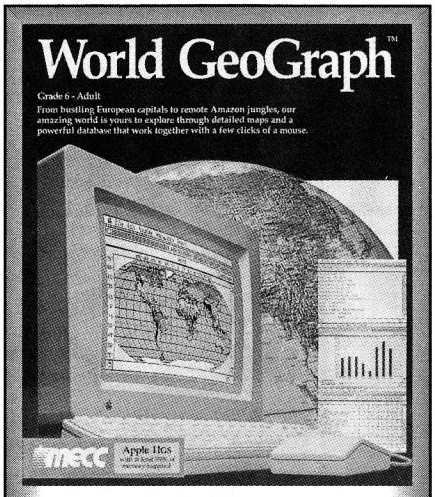
The customer is Vitesse's most important asset. Customers tell us what they want. Vitesse's customer support is second to none in the industry. We provide telephone and written responses to customer inquiries, even when the problems aren't necessarily related to our products.

We advise owners of Vitesse products of new versions, necessary "fixes" and techniques for optimizing their purchases. We also maintain a high profile on both the GEnie and America Online services.

We are totally committed to supporting our customers.■

— *Cliff Feldman*

The author is the IIGS coordinator of the Maryland Apple Corps user group and chairman of technology education at Parkville High School in Baltimore County.



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MECC's *World GeoGraph* and *USA GeoGraph*—hailed as two of the most powerful, important geography tools around—have received an enthusiastic response from teachers and students alike.

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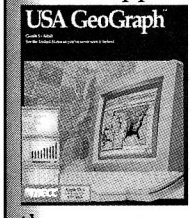

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Circle Reader Service Number 10

Homeworker And Studymate:

Two One-Of-A-Kind Educational Programs

THE MAJORITY OF APPLE II EDUCATIONAL SOFTWARE IS AIMED AT THE KINDERGARTEN THROUGH 12TH-GRADE LEVELS. SOFTWARE THAT EXTENDS BEYOND THESE LEVELS DESERVES OUR ATTENTION.

Homeworker: The Student Organizer (by Davidson and Associates) and Studymate: The Grade Booster (by Compu-Teach) can be used at the college/university and high school levels. Homeworker is also useful in junior high and middle school, and Studymate can be adapted to an industrial educational setting.

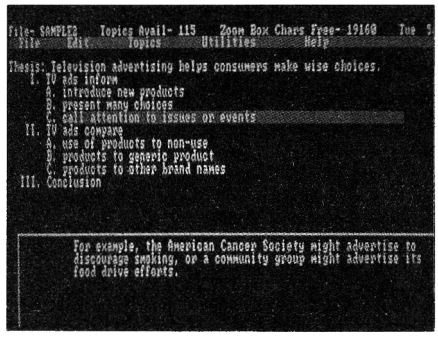
Because these products do not duplicate functions, students should consider owning both.

HOMEWORKER: THE STUDENT ORGANIZER

Homeworker, a five-module program with a pop-up calculator, is designed to increase a student's studying efficiency. The modules include Textwriter, Outliner, Flash Card Maker, Calendar and Grade Keeper.

The program uses the standard Apple File Card Interface, and the up and down arrows are used for menu scrolling. File selection is accomplished with the space bar. The keyboard is used for all entries; there is no provision for using a mouse.

Anyone familiar with AppleWorks will find Homeworker easy to use. The program incorporates many of the same commands, including Open Apple-S for save, Open Apple-P for print and Open Apple-? for accessing help screens. The Escape key is used to exit from menus.



Homeworker

The Other Activities menu, available from the Main menu, includes such familiar items as *change* current disk, *list* all files on current disk, *delete* files from current disk, *select* standard location for data disk and *format* a blank disk.

Selecting disk locations is limited, because access is not provided to the ProDOS subdirectories (folders), only to slots and drives. Thus, the capability for proper hard disk installation is eliminated.

Homeworker can have as many as 12 files on the desktop at one time, which is similar to AppleWorks. To access the Clipboard for cutting, copying and pasting, there can be only 11 files on the desktop. The Clipboard is counted as a separate file.

Homeworker does not provide any protection for saving changed files upon quitting. Users must remember to save frequently and to save all files that have changes before exiting the program.

TEXTWRITER

Textwriter lacks many of the bells and whistles found in either the AppleWorks or Apple Writer word processors. Each Textwriter file has the capacity of holding five single-spaced pages.

Some of the module's rudimentary features include the availability of single and double spacing for an entire document, the capability to set horizontal and vertical margins and tab stops, and the capability to set the screen to inverse.

Textwriter uses the standard underline and box cursors for insert and overstrike. Deletion is accomplished with the Delete key for a single character or with the Open Apple-D command.

Pasting text from the Clipboard can be done either within a document or between two files. Find and Replace functions are available. Replacing text can either be done on a one-by-one basis or globally (every occurrence replaced).

For a text-based word processor, Textwriter's output capability is more than adequate. A printer can be accessed in any active slot or port. Also, output can be sent to an ASCII text file, which allows importation into a more powerful word processor.

Other than single or double spacing, no text-formatting commands (underline, boldface, etc.) are available. Therefore, the capability to import a Textwriter file into another word processor is useful.

OUTLINER

The Outliner module allows up to four different levels (Roman numerals, uppercase letters, Arabic numerals and lowercase letters) and a thesis statement. Except for the latter, Outliner only allows single-line entries. However, a Zoom Box function allows more detail to be added to each entry.

Outliner provides automatic renumbering of insertions and deletions and automatic renumbering when topics are moved to a new location in an outline. This includes moving topics to a new level within an outline.

Outliner lacks the capability to scroll up or down a single page at a time, which would be useful for large outlines. The capability to switch between insert and overstrike cursers is also missing, which would help when editing outline entries.

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❑ **GS63 HyperStudio Sound Effects -** This collection of sound effects is just right for use with HyperStudio. Doorbells, barking dogs, and laser guns.
❑ **GS62 Desk Accessories -** A full-featured word processor NDA, a file management CDA and other desk accessories.
❑ **GS21 Cheap Paint -** A shareware paint program with all the features you need.

We've Got the Latest Releases!

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❑ **GS72 Cartus Primus & Sheepshead -** Play cribbage, pinochle, hearts, pitch, gin rummy, euchre, and sheepshead with these fantastic shareware programs.
❑ **GS65 Entertainment -** IIGS Super Hi Res entertainment with Wheel of Fortune, Yahtzee, Senseless Violence 2, Mathemusic, and more.
❑ **GS30 Card Games -** Five great shareware card games: Casino Solitaire, Slot Poker, Monte Carlo, Pyramid and Poker Solitaire.
❑ **GS79 Plunder GS -** Escape from the treasure room with the most cash to win this exciting game with fantastic sound effects. Watch out for the bombs!
AppleWorks Files
❑ **R302 AW Patch Kit -** Over 25 different patches for use with classic AppleWorks 3.0. Plus Ultramacros ideas, accounting templates and much more.
❑ **GS36 AppleWorks GS Files -** A collection of database files, templates and word processing documents for use with AppleWorks GS.
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❑ **GS77 Print Shop Graphics, Fonts & Borders -** A fantastic collection of all new Print Shop GS multi-color graphics. Plus borders and fonts.
❑ **GS78 Print Shop Graphics -** More new graphics for Print Shop GS..
❑ **GS67 Joe's Clip Art Disk #1 -** Clip art for use with HyperStudio or AppleWorks GS and other GS applications. Stored in Apple preferred format.
❑ **GF04 Billboard Fonts-** A collection of large-sized GS-type fonts including Black Shadow, Las Vegas, LED, Blockbuster, Giants, Leavenworth and 20 others.
❑ **GF08 Serif Fonts -** Hundreds of GS-type fonts including Columbia & Elite.
Space & NASA Programs
❑ **C302 Official NASA Press Packets -** This disk contains text versions of the latest NASA press packets plus a Hubble Telescope program with great graphics.
❑ **GS46 Tonight's Sky -** Programs for the sky gazer and NASA enthusiast: a simulated planetarium; a Lunar Lander game; and info on the US space program.
❑ **HS08 HyperSpace -** HyperShuttle & HyperSpace are two great stacks that teach about the solar system and man's attempts to explore it. Requires HyperStudio.

❑ **HS12 HyperNasa: 3/90 -** A detailed look at the inner workings of NASA.
❑ **GS42 Sights & Sounds from Outer Space -** Digitized sounds and graphics.
❑ **GS73 Space Graphics -** A super collection of 320-mode SHR graphics with photos from the surface of Mars, the Space Shuttle, and the earth from outer space.
❑ **GS49 Star Trek Disk -** Everything a Trekkie could want: graphics, trivia & more.

All the disks listed in this ad (plus hundreds more) are available from Big Red for only $3.50 a piece. Why pay more for public domain and shareware disks? Other companies charge $9 or more for disks but Big Red's price is only $3.50 per disk. And if you order ten or more disks the price drops even lower to only $3.10 per disk. All disks listed in this ad are 3.5" disks and the price includes all shipping and handling fees (U.S. addresses only). Big Red has been in business for over nine years and is one of the largest distributors of Apple IIGS public domain software in the world. We will be happy to provide technical support for any disk we offer. To order, write or call today. We'll ship your order within 48 hours. We accept MasterCard, Visa, school purchase orders, money orders and personal checks as payment. Please note: Some of the programs listed here are shareware. If you use these programs you're asked to make additional payment to the program's author. *Help Support Shareware!*

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Circle Reader Service Number 11

Outliner's strongest feature is its printing capabilities. Three formats are available: Output can be in the form of topics only, text only (Zoom Box material) or both together. Output can be directed to a printer in any active slot or port or to an ASCII text file on disk, which can then be imported into Textwriter, AppleWorks or any word processor.

Flash Card Maker

Flash Card Maker allows a user to enter a file of study material that needs to be memorized. Information for both sides of a flash card can be entered. Horizontal margins, tab stops and inverse screens are available on either side of a card.

Individual cards can be deleted from a file, and additional cards may be added at the end of a file. Cards already entered can be easily edited.

Flash cards can be reviewed in sequential or random order on screen, as well as from the front or back. Card data can be printed out, folded, pasted and individually cut, making flash cards accessible when a computer is not available.

Calendar

The Calendar module is a perpetual date calendar. One month at a time is viewed on screen, and events can be entered for each date. Important events can be marked with an explanation point. Standard events are designated by a period.

The module can print out a monthly event report or a yearly calendar, with standard events and important events marked for the year. A marked event list, which runs from the current date till any selected date, can be displayed on screen. The list indicates the number of days left until an event takes place.

After the first screen of events is displayed, additional events can be scrolled one at a time. Unfortunately, this feature lacks page scroll or scroll-back capabilities.

However, the module is sufficient to keep track of course events and plan a study schedule.

Grade Keeper

Capable of tracking grades for seven different subjects and weighing these courses based on the number of credits, Grade Keeper is the most comprehensive module in the package. It can compute grades in each course via weighted average or total points.

The weighted-average system is used with courses that have tests or assignments worth a certain percentage of the total grade. The total-point system is used with courses where total points earned are compared with the total points possible.

All letter grades must be converted to a numerical grade to be used with either of these scoring systems. And there appears to be no limit to the number of entries that can be made for each course.

When course percentages are calculated, estimated total grades can be entered for each course. The program then calculates an overall grade-point average for all courses.

Gradesheets can be printed out in two different ways: all the gradesheets for all subjects and the total course load *or* a single gradesheet of what is currently displayed on screen.

Pop-up Calculator

The pop-up Calculator is available from any of the other modules. It handles arithmetic functions, negative numbers and contains nine memory locations for storing numbers. The module can also print out calculations in register-tape style on a printer.

Although the module lacks the functionality of the Calculator program in the TimeOut Desktools (from Beagle Bros), it *can* handle simple algebra and is useful in grade computations.

However, the Clear key on the IIGS numeric keypad does not function with the Calculator.

A measurement conversion utility is built into the Calculator, allowing the module to convert different units of measurement (feet to inches, English to metric and vice versa). Length, weight, area, volume and time measurements can also be converted; temperature scales cannot.

Product Summary

Homeworker: The Student Organizer comes with either a 5.25- or 3.5-inch diskette, a comprehensive 40-page manual and a 96-page book, titled *How to Study for Success*, by Dr. Jan Davidson. The book provides helpful hints that pertain to goal setting and attainment and adjusting study habits to improve individual and course grades.

The package also contains a card to allow for swapping to a different-size media (3.5 to 5.25 or vice versa).

Homeworker, a ProDOS 8-based program that will operate on an Apple IIGS, IIc+, IIc or IIe with an extended 80-column card, has received many awards, including Best Secondary School Education Product (in 1986) by the Software Publishers Association. It provides students with an excellent means of organizing their studies to improve their grades.

Homeworker is an easy program to learn and use and would be a welcome addition to the software library of any student in the ninth grade or higher.

Even so, Homeworker is due for a major upgrade. It is a one-of-a-kind program that fills an important void. Because the program is totally text based, its development should continue on an 8-bit level.

Studymate: The Grade Booster

Studymate is a test-authoring program that is being marketed to the student community. It is designed to create, edit, review and print exams in True/False, Multiple Choice, Question-Response, Fill in the Blanks and Spell Scramble formats.

The program operates from a single-screen Main menu, and menu items are selected by number. As with Homeworker, there is no provision for using a mouse.

Studymate will install and operate from a subdirectory on a hard drive and access subdirectories on various disks.

The Main menu contains eight items: Take a Test, Create a New Test, Edit a Test, Review a Test, Print a Test, Delete a Test, Change Directory and Exit. The Take a Test selection, for example, allows a user to be tested based on a file that has been previously entered. Questions are randomly generated from the file.

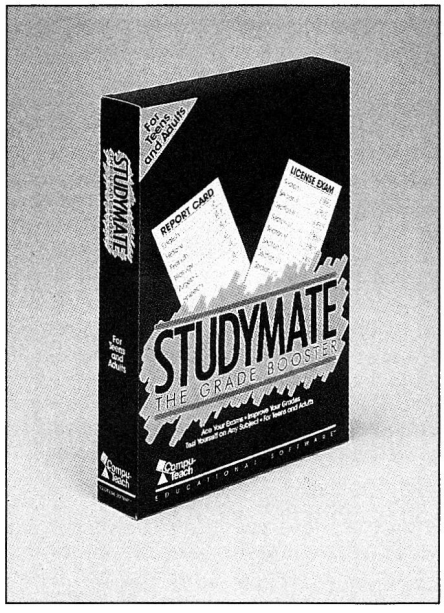
Except for True/False questions, the program allows up to two chances for a question to be answered correctly. When finished taking a test, the results can be printed out.

To design a new test, choose Create a New Test from the Main menu. The program then asks for a valid ProDOS filename for the test file. Once this is provided, it will prompt for a short description of the exam. Then it provides a menu of the type of test.

The choices are *either* the previously mentioned True/False, Multiple Choice, Question-Response, Fill in the Blanks and Spell Scramble *or* Multiple Formats.

If Multiple Formats is chosen, the program will prompt for the type of question for each new question entered.

One shortcoming in the question-entering process is that the program does not allow for backing up to correct part of a previous question. It allows for deletion at this point, but not editing.



Studymate: The Grade Booster

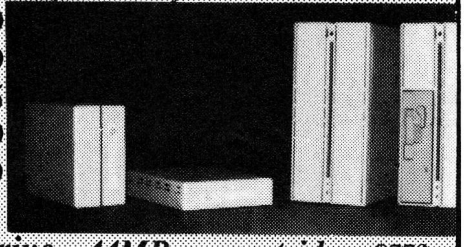
If corrections need to be made to a test entered earlier, choose Edit a Test from the Main menu.

The Review a Test selection allows a student/user to review exam material on screen. This is the major intent of the program, *to be able to repeatedly review study material.*

Two different print capabilities are available: The first option is to print Study Sheets, which are a printout of each test question and the corresponding correct answer.

Printing a Blank Test is the second capability. This option provides a printed test that contains randomly generated questions (similar to the Take a Test selection) and an answer key. Unfortunately,

Hard Disk Subsystem (plug & play)
• ***Half Shell-compact 1.4"x5.5"x7.5"***
same drive as the Mac portable
20MB $509 40MB $609
• ***A-Hive-hard disk-expandable***
Completew/Apple High Speed SCSI Card
and latest GS/OS 5.02 system software
32MB--$539
48MB--$589
65MB--$635
85MB--$679
100MB--$899



• ***Cartridge Drive --44MB per cartridge*** $779
• ***Hermit Crab--portable*** 20MB$509 40MB$609

Tape Subsystem w/ backup software
155MB--$629 60MB--$549
A-Hive •• a disk enclosure
40watts -- $119 65watts -- $169
Subsystems are Mac & PC compatible
TULIN CORPORATION
2156H O'Toole Avenue Tel: 408-432-9025
San Jose, CA 95131 Fax: 408-943-0782
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Circle Reader Service Number 12

Where Tourist Dollars Meet

Francs and Pounds and Lira and Marks and Yen turned into $24.5 Billion* U.S. Tourist Dollars last year. That's how much foreign visitors spent while traveling around the United States. This $24.5 Billion is new money which improves our balance of trade with other nations, creates jobs, supports an array of businesses, and increases tax revenues. That's why "Tourism Works For America"... and *you.*

TOURISM WORKS FOR AMERICA

National Travel and Tourism Awareness Council

*Preliminary 1988 Estimates, Source: U.S. Travel and Tourism Administration.
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the printing capabilities of the program leave something to be desired.

Perforations between sheets of paper are not skipped while printing, and the answer key is not labeled with the exam filename. These problems hinder using the printouts for formal examinations.

Delete a Test is used to remove a test file from a disk. This should only be done if a test is no longer needed or a backup copy has been made.

The Change Directory selection should be called "Change Disk Drive." This function allows a user to select the slot and drive of a data disk. Access to ProDOS subdirectories on a disk is not accessible from this selection.

Exit leaves the program and exits to the Basic System. It does not issue a ProDOS Quit command. To return to a program selector, such as the Finder, from the Basic System, the user must type BYE at the] prompt!

Product Summary

Studymate also comes with either a 5.25- or 3.5-inch program disk, two 5.25- or one 3.5-inch Studymate Vocabulary disks, an eight-page manual and a 148-page book, *How to Study*, by David Griswold. The book provides comprehensive information on time management, homework, concentration exercises, test-taking skills, library usage and more.

With the amount of work involved in formulating questions, it appears that the product will only be used by highly motivated students. If specific question disks can be generated and marketed, similar to the Vocabulary disks that come with the package, student usage would increase dramatically.

Also, the documentation needs to be expanded to include screen shots and specific examples.

The program also has the potential of becoming a major teaching tool. Like Homeworker, a revision would be necessary to bring it to this level.

Studymate has an impressive list of users, including Tulane University, the University of Nevada at Las Vegas and General Foods. Perhaps input can be obtained from these users as to how the program can best be expanded.

From viewing a first release of this product, our conclusion is that Studymate has the potential to become a top-notch educational tool — for both students and educators.

Homeworker and Studymate are the first products of their kind. It should be interesting to see what develops down the road.■

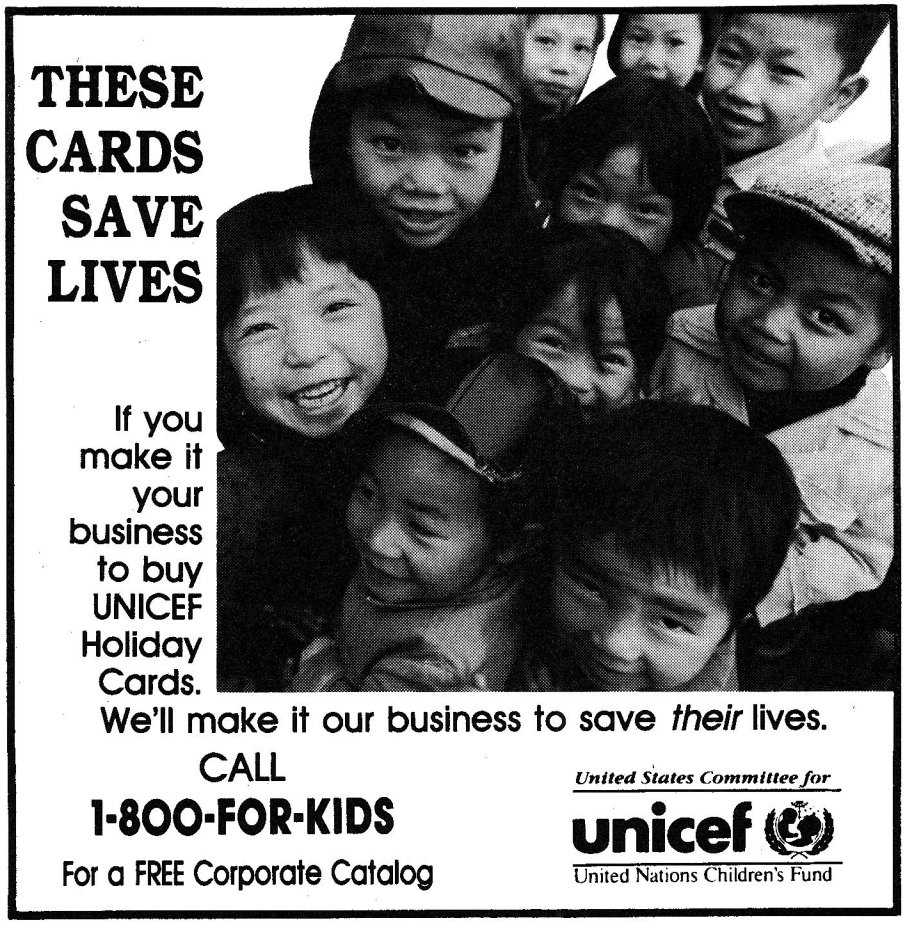
— *Tyler and Leah Weisman*

Tyler and Leah Weisman live in Gainesville, Fla. Tyler is a free-lance writer and an Apple II library SYSOP on GEnie. He can be reached via electronic mail (A2.TYLER). Leah, Tyler's wife, is a special educator at the Lake City Middle School in Columbia County, Fla. An invited speaker at the 1989 A2-Central Developers Conference in Kansas City and at the 1990 spring AppleFest in New Jersey, she can be reached at the same electronic mail address.

Products Mentioned

Product: Homeworker: The Student Organizer
Company: Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 800-556-6141 or 213-534-2250
Price: $49.95 retail; home edition $179.95 retail; school lab pack
System Requirements: Apple IIGS, IIc+, IIc or IIe with an extended 80-column card; 5.25- or 3.5-inch disk drive; printer is recommended
Circle Reader Service Number 36

Product: Studymate: The Grade Booster
Company: Compu-Teach Corp.; 78 Olive St.; New Haven, CT 06511; 800-448-3224 or 203-777-7738
Price: $49.95 retail; home edition $99.95 retail; classroom edition
System Requirements: Apple IIGS, IIc+, IIc or IIe with an extended 80-column card; 5.25- or 3.5-inch disk drive; printer is recommended
Circle Reader Service Number 37



About This Directory

The Apple IIGS Hardware And Software Directory includes every Apple IIGS product for which we received a response from our most recent mailing to all Apple IIGS product developers. The products are listed alphabetically by category and within categories, primarily by product. The product directory also includes many products identified with a box (■). These are Apple IIGS products that are either new or listed for the first time in *The Apple IIGS Buyer's Guide*. These descriptions are longer than the others because they are appearing for the first time. The product directory also includes products identified by a diamond (◆). These are paid editorial listings.

For a vendor's program to be listed in this directory, the product must either be Apple IIGS-specific or at least available on a 3.5-inch disk. This is because many Apple IIGS owners do not own 5.25-inch drives or they may opt for two 3.5-inch drives, rather than one 3.5-inch drive and one 5.25-inch drive. In addition, the program must be based on the ProDOS 8, ProDOS 16 or GS/OS operating system, or take advantage of IIGS-specific features, such as super-high-resolution graphics and sound.

Every effort has been made to verify this information for readers. However, neither Redgate Communications Corporation nor *The Apple IIGS Buyer's Guide* assume responsibility for the accuracy of the product descriptions nor the suitability of any product for specific tasks.

Accessories

A Better Mouse Trap • Mouse-holding device • *Apple IIGS mouse.* • $8.95 retail • Peri-Peripheral Co.; 1201 204th Pl. SE; Bothell, WA 98012; 206-486-3003

A-B Box • Lets users connect two peripherals to one serial port or share one peripheral between two computers • *Apple IIGS.* • $99.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Add-Visor • Anti-glare and privacy hood • $14.95 retail; state monitor size when ordering • Gered Corp.; 2401 NE Cornell Rd., Ste. 125; Hillsboro, OR 97124; 503-591-8658 or 800-852-8727

Analog Edge; Analog Plus • Joysticks using Injected Resistor Technology • *Apple IIGS; other Apple II models.* • $29.99 retail; Analog Edge • $39.99 retail; Analog Plus • Suncom Technologies; 6400 W. Gross Point Rd.; Niles, IL 60648; 708-647-4040

Apple 2GS Armor • Security system • *Apple IIGS.* • $229.95 retail • Omni Tech Corp.; 21950 Watertown Rd.; Waukesha, WI 53186; 414-784-4112

Apple IIGS Dust Cover • Cover for Apple IIGS computer, monitor and keyboard • *Apple IIGS.* • $13.75 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Apple IIGS Dust Cover • Custom-sewn rip-stop nylon covers for IIGS, IIGS with system savers and printers • *Apple IIGS.* • $15.95 to $27.95 retail • Computer Covers Unlimited; 7969 Engineer Rd., Ste. 104; San Diego, CA 92111; 619-277-0622 or 800-722-6837

Apple IIGS Soft Keyboard Protector • Clear, precision-molded keyboard protector that stays in place while a user works • *Apple IIGS.* • $26.97 retail • Computer Covers Unlimited; 7969 Engineer Rd., Ste. 104; San Diego, CA 92111; 619-277-0622 or 800-722-6837

Apple Security System • Complete security kit that uses Apple's built-in security slots • *Apple IIGS.* • $49.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

AppleCenter Plus • Physical security system • *Apple IIGS.* • $69.95 retail • Doss Industries; 1224 Mariposa St.; San Francisco, CA 94107; 415-861-2223

AppleWorks Command Cards • AppleWorks commands • $5.95 retail; pack of 20 • National AppleWorks Users Group; PO Box 87453; Canton, MI 48187; 313-454-1115

Bose RoomMate Powered Speaker System (Special Platinum Edition) • Digital sound speakers with full-range drivers, a dual-channel amplifier, an equalization network and distortion-limiting circuitry • *Apple IIGS (plugs into headphone jack).* • $229 retail; per system • Bose Corp.; The Mountain; Framingham, MA 01701; 508-879-7330

Cable Assemblies • Cable connections for the IIGS and peripherals • *Apple IIGS.* • $9.95 to $28.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

CCK 100 Universal Computer Care Kit • Helps keep computers free of dust, dirt and static • $29.95 retail • Scooter Products; a Div. of OHM Electronics, Inc.; 746 Vermont St.; Palatine, IL 60067; 312-359-6040 or 800-323-2727 (dealers)

Comp-U-Desk • Desk and keyboard extender • $59.95 retail • Gered Corp.; 2401 NE Cornell Rd., Ste. 125; Hillsboro, OR 97124; 503-591-8658 or 800-852-8727

Computer Accessories Cables • Cables • *Apple IIGS.* • $19.95 retail; C252-2 (Mini-DIN 8 to DB25 adapter) • $24.95 retail; C250-9 (IIGS to ImageWriter II; Apple modem) • $29.95 retail; C255-2 (IIGS to SCSI disk drive) • Computer Accessories Corp.; 6610 Nancy Ridge Dr.; San Diego, CA 92121; 619-457-5500

Computer Cleaning Products • Anti-static cleaners • Call for pricing • Tech-Sa-Port; PO Box 5295; Pittsburgh, PA 15206; 800-543-2233

Computer Specialty Products • Dust covers, keyboard skins, anti-static pads, mouse pads • $9.95 retail; Apple IIGS Dust Cover (three-piece set) • $9 retail; Soft Keyboard Skin/Cover • $12.95 retail; Anti-Static Pad • $2 to $4 retail; Mousepads • $8.50 (12 pieces) to $3.70 (144 pieces) each retail; Imprinted Mousepads (quantity discounts available) • Computer Specialty Products; 9803 Redd Rambler Rd.; Philadelphia, PA 19115; 215-969-4489

Consumer Laserdisc Player Cable Interface • Laserdisc interface • *Apple IIGS; other Apple II models.* • $25 retail • Teaching Technologies; PO Box 3808; San Luis Obispo, CA 93403; 805-541-3100

■ **Cord Organizer** • Eliminates the unsightly appearance of messy cords and cables

Cord Organizers eliminate the unsightly appearance of messy cords and cables, and secure against accidental disconnections and information loss. Easy to install, users simply insert cords into the organizer at any point. Organizers are available in tan and black and are 4-feet in length.

$9.95 retail • Computer Covers Unlimited; 7969 Engineer Rd., Ste. 104; San Diego, CA 92111; 619-277-0622 or 800-722-6837

The Cordless Mouse • Cordless input device • *Apple IIGS.* • $149.95 retail • Practical Solutions; 1135 N. Jones Blvd.; Tucson, AZ 85716; 602-322-6100

Dilly Dolly Computer Cart • Two-wheel portable cart • *Apple IIGS; other Apple II models.* • $195 retail (dealer program available) • The Dilly Dolly Co.; 2957 Mariposa Dr.; Burlingame, CA 94010; 415-697-9272

The DisKeeper • Organizes, stores and transports 3.5-inch disks • $6.95 retail; three pages • $19.95 retail; binder with five pages • Cobar, Inc.; 301 Highland Rd.; Cheltenham, PA 19012; 215-379-2440

DSM802 And DSM804 Data Switches • Two- and four-way compact data switches with 8-pin mini DIN connectors • *Apple IIGS; peripherals.* • $49.95 retail; DSM802 • $59.95 retail; DSM804 • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

Dust Covers • Protect your computer • *Apple IIGS.* • $29.95 retail • Co-Du-Co; 4802 W. Wisconsin Ave.; Milwaukee, WI 53208; 414-476-1584

E-ZEE Inker II • Ribbon inker • $39.50 to $189 retail • Borg Industries, Ltd.; 525 Main St.; Janesville, IA 50647; 319-987-2976 or 800-553-2404

Extra Long ADB Keyboard Cable • Eight-foot replacement keyboard cable • *Apple IIGS.* • $39.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Flightstick • Aircraft joystick with pistol grip • *Apple IIGS.* • $74.95 retail • CH Products; 970 Park Center Dr.; Vista, CA 92083; 619-598-2518

The G.A.P. • Gered accessory package • $64.80 retail • Gered Corp.; 2401 NE Cornell Rd., Ste. 125; Hillsboro, OR 97124; 503-591-8658 or 800-852-8727

Graflex • Printer interface • *Apple IIGS; parallel dot matrix printer.* • $119.95 retail • ICD, Incorporated; 1220 Rock St.; Rockford, IL 61101; 815-968-2228

IIGS Anti-Glare Filter • Reduces glare reflected from a IIGS color monitor screen by 91 percent; easily attaches with included adhesive fasteners • *Apple IIGS.* • $49.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Incliner Ergonomic Computer Furniture • Adjustable, portable computer carts • Call for pricing • Jenston Mfg.; 104 Pizarro Ave.; Brownsville, TX 78520; 800-872-4570

Interflex • Printer interface; provides transparent serial to parallel conversion • *Apple IIGS; parallel dot matrix printer and printer driver.* • $69.95 retail • ICD, Incorporated; 1220 Rock St.; Rockford, IL 61101; 815-968-2228

Kablit • Computer and peripheral tie-downs • *Apple IIGS; monitor; other peripherals.* • $39.95 retail • Secure-It, Inc.; 18 Maple Ct.; E. Longmeadow, MA 01095; 413-525-7039 or 800-451-7592

Kensington Printer Accessories • Noise reduction by 75 to 85 percent; stands that raise printer and Printer Muffler 4 inches for paper storage underneath; and stand that raises printer 2.5 inches at the front and 4.5 inches at the back • *Apple IIGS; printer.* • $69.95 retail; Printer Muffler 80 • $29.95 retail; Printer Muffler 80 Stand • $89.95 retail; Printer Muffler 132 • $29.95 retail; Printer Muffler 132 Stand • $24.95 retail; Universal Printer Stand • $29.95 retail; Space Saving Printer Stand • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Keyboard/Computer Vacuum Model MV5 • Portable vacuum featuring a high-power motor and including brush/nozzle attachments • *Apple IIGS.* • $18.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

Kraft Joysticks • Three-button joysticks • *Apple IIGS.* • $44.95 retail; Kraft Premium III • $29.95 retail; Kraft KC3 • Kraft Systems, Inc.; 450 W. California Ave.; Vista, CA 92083; 619-724-7146

Accessories

Kraft Premium II • Two-button joysticks with "center-lok" mode selector • *Apple IIGS.* • $32.95 retail; model 008-10 • $39.95 retail; model 308 • Kraft Systems, Inc.; 450 W. California Ave.; Vista, CA 92083; 619-724-7146

Kurta IS/GS • Cordless graphic input system; graphics tablet • *Apple IIGS.* • $395 retail • Kurta Corp.; 3007 E. Chambers St.; Phoenix, AZ 85040; 602-276-5533

LaserKleen • Laser printer cleaning and maintenance system • $39.95 retail • PerfectData Corp.; 1825 Surveyor Ave.; Simi Valley, CA 93063; 805-581-4000

Lynx Trackball • High-technology input device • *Apple IIGS; other computers.* • $99.95 retail • Lynx Computer Products, Inc.; 15115 Ramona Blvd.; Baldwin Park, CA 91706; 818-960-4839 or 800-824-3522

Mac-Kit 3A • Security kit • *Apple IIGS; Macintosh II.* • $39.95 retail • Qualtec Data Products, Inc.; 47767 Warm Springs Blvd.; Fremont, CA 94539; 415-490-8911

Mach I And Mach I Plus • Analog joysticks • *Apple IIGS.* • $28.95 retail; Mach I • $34.95 retail; Mach I Plus • CH Products; 970 Park Center Dr.; Vista, CA 92083; 619-598-2518

Mach II and Mach III • Two- and three-button joysticks • *Apple IIGS.* • $39.95 retail; Mach II Joystick • $49.95 retail; Mach III Joystick • CH Products; 970 Park Center Dr.; Vista, CA 92083; 619-598-2518

Mach IV Plus • Professional mouse/joystick that includes an absolute mode, which tracks and acts like a mouse • *Apple IIGS.* • $89.95 retail • CH Products; 970 Park Center Dr.; Vista, CA 92083; 619-598-2518

MacPack • Micro maintenance kit for computers using 3.5-inch disk drives • $34.95 retail • PerfectData Corp.; 1825 Surveyor Ave.; Simi Valley, CA 93063; 805-581-4000

MicroClene And FloppiClene • Computer cleaning kits; floppy disk drive head cleaning kits • $24.95 retail; MicroClene CRT/Workstation Cleaning Kit • $24.95 retail; MicroClene Mouse/Printer/Keyboard Cleaning Kit • $34.95 retail; FloppiClene Floppy Disk Drive Head Cleaning Kits • Tech-Sa-Port; PO Box 5295; Pittsburgh, PA 15206; 800-543-2233

Mirage • Joystick/mouse interface • *Apple IIGS; joystick.* • $54.95 retail • CH Products; 970 Park Center Dr.; Vista, CA 92083; 619-598-2518

Mouse Pad • Mouse pads • $8.95 retail • Computer Covers Unlimited; 7969 Engineer Rd., Ste. 104; San Diego, CA 92111; 619-277-0622 or 800-722-6837

Mouse Pads Imprinted By Computer Expressions • Customized with school seals and business logos • *Apple IIGS; mouse.* • $8.50 each; 12 pieces • $5.90 each; 72 pieces • $3.96 each; 144 pieces • Quantity discounts available • Computer Expressions; 3833 Chestnut St.; Philadelphia, PA 19104; 800-443-8278

Mouse Pocket ADB • Mouse holder that keeps a user's mouse out of the way when not in use • *Apple IIGS mouse.* • $9.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

MouseCat • Mouse holder • $6.95 retail • H&H Enterprises; 4070 Vanessa Dr.; Las Vegas, NV 89103; 702-876-6292 or 800-242-6292

MousePouch • Mouse container that carries eight 3.5-inch disks • $5.95 retail • H&H Enterprises; 4070 Vanessa Dr.; Las Vegas, NV 89103; 702-876-6292 or 800-242-6292

Mousetrap • Copy stand; storage space • $39.95 retail • Gered Corp.; 2401 NE Cornell Rd., Ste. 125; Hillsboro, OR 97124; 503-591-8658 or 800-852-8727

Mousetrap II • Keeps the mouse in an enclosed, yet accessible area; copy stand • $21.95 retail • Gered Corp.; 2401 NE Cornell Rd., Ste. 125; Hillsboro, OR 97124; 503-591-8658 or 800-852-8727

Mouseway • Mouse pad • $9.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Mouspad • Mouse pads • $7.95 to $9.95 retail • Moustrak, Inc.; 930 Dowdell Ln.; St. Helena, CA 94574; 800-221-6687 or 800-621-6687 in CA

Nada-Chair • Legless chair that offers low back support • $35 retail • Nada-Chair; 842 22nd Ave. SE; Minneapolis, MN 55414; 612-623-4436 or 612-623-0711

Radiation Monitor Filter For IIGS • Eliminates harmful effects of continued computer use • $109 retail • Computer Covers Unlimited; 7969 Engineer Rd., Ste. 104; San Diego, CA 92111; 619-277-0622 or 800-722-6837

Ricks RamStar's Disk Valets And Body Shields • Disk holders and body shields • $17.50 retail; Meeting Folder • $13.50 retail; 12 Pak • $8.50 retail; 6 Pak • $5 retail; 3 Pak • $7.50 retail; 12 Sofpak • $3 retail; Promo Sofpak • $18 retail; Dual Pak • $10 retail; Note Pak • $10 retail; Binder Pak • $39.50 retail; Body Shield Apron • Ricks RamStar, Inc.; PO Box 759; Sardis, GA 30456; 912-569-9000 or 800-327-2303

RollerMouse • High-performance trackball • *Apple IIGS.* • $169.95 retail • CH Products; 970 Park Center Dr.; Vista, CA 92083; 619-598-2518

Sta-Blk Ribbon Cartridge For ImageWriter I And II • Re-inking ribbon cartridge • *ImageWriter I or II.* • $59.95 retail • Chronos Computers; 4186 Sorrento Valley Blvd., Ste. H; San Diego, CA 92121; 619-455-8200

Star Fighter For Apple • Analog joystick • *Apple IIGS; other Apple II models.* • $24.99 retail • Suncom Technologies; 6400 W. Gross Point Rd.; Niles, IL 60648; 708-647-4040

Static Controlling Cleaning Products • Static control products • Call for pricing • Tech-Sa-Port; PO Box 5295; Pittsburgh, PA 15206; 800-543-2233

System Saver IIGS • Power control center offering four outlets, surge suppression, noise filtering and a whisper-quiet cooling fan • *Apple IIGS.* • $99.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Tac1+ • Joystick used with games and graphics • *Apple IIGS; other Apple II models.* • $29.99 retail • Suncom Technologies; 6400 W. Gross Point Rd.; Niles, IL 60648; 708-647-4040

Tilt Swivel Base Model W30 • 12-inch tilt swivel base • $24.95 retail • Computer Accessories Corp.; 6610 Nancy Ridge Dr.; San Diego, CA 92121; 619-457-5500

Turbo Mouse ADB • Trackball offering auto-acceleration feature, 200 CPI pin-point precision and two mouse buttons, click lock and chording button features • *Apple IIGS.* • $169.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Universal Copy Stand And SideClip • Paper holders that attach to the side of any monitor to place working copy next to the screen, directly in a user's line of vision • $29.95 retail; Universal Copy Stand • $6.95 retail; SideClip • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Universal Security Kit • Physical security system • *Apple IIGS.* • $49.95 retail • Grimes Co.; 115 S. Arovista Cir.; Brea, CA 92621; 714-671-3931

Whimsical Computer Stationery • Computer stationery featuring boats, bears, butterflies, dinosaurs, holidays, sea gulls and banner paper • $12.95 retail; Stationery • $14.95 retail; Banner Paper • $7.95 retail; Designer Envelopes • Computer Sensations, Inc.; PO Box 3744; Long Beach, CA 90803; 213-434-2655

Animation

Art And Film Director • Full-featured paint and animation package • *Apple IIGS; 1.25 MB; GS/OS 4.0; copy protected.* • $79.95 retail • Epyx; 600 Allerton St.; Redwood City, CA 94063

Fantavision IIGS • Animation and special effects program; supports Apple IIGS sound capabilities • *Apple IIGS; color monitor; 256K; ProDOS 8; copy protected.* • $59.95 retail • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

The Graphics Studio • Easy-to-use paint program with animation • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Iconix IIGS • Super-high-resolution graphics and animation interface for Applesoft Basic and the Apple IIGS • *Apple IIGS; two 3.5-inch drives; RGB monitor; 512K; ProDOS 8; not copy protected.* • $50 retail • So What Software; 10221 Slater Ave., Ste. 103; Fountain Valley, CA 92708; 714-964-4298 or 714-963-3392

Supergraphix II & Music • Super-high-resolution and animation interface for Applesoft Basic; adds 50 graphics and music commands • *Apple IIGS; 768K; ProDOS 8; not copy protected.* • $89 retail • El Kassir Software; 232 Thorne St., Ste. C; Los Angeles, CA 90042; 213-257-6882

VCR Companion • Creates colorful titles, credits, introductions, intermissions and endings for videotapes • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail • $59.95 retail; school edition • $119.95 retail; lab pack • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

Video Link • Provides access to video laser players while inside another software program • *Apple IIGS; laser disc player; 512K; GS/OS; not copy protected.* • $79 retail • Knowledgeware; PO Box 2292; Paso Robles, CA 93447; 805-238-5233

Viva • Interactive video authoring system • *Apple IIGS; videodisc player; 1 MB; GS/OS; not copy protected.* • $200 retail • Knowledgeware; PO Box 2292; Paso Robles, CA 93447; 805-238-5233

AppleWorks

1040Works-X • Integrated templates for preparing individual tax returns • *Apple IIGS; other Apple II models; AppleWorks; 256K; ProDOS 8; not copy protected.* • $27.95 retail; $3 for 3.5-inch disk • Personal Financial Services; PO Box 1401; Melville, NY 11747; 516-757-3201

1980 To 1990 Collectors Guide — Topps, Donruss And Fleer Baseball Cards • Hobby software • *Apple IIGS; other Apple II models; AppleWorks; 128K; ProDOS 8;*

AppleWorks

not copy protected. • $24.95 each retail • $45 retail; any two • $60 retail; complete set • $6 retail; updates • Pop-Fly Software; Div. of Product Control, Inc.; 345-B N. McLean Blvd.; S. Elgin, IL 60177; 312-741-5915

Agent Organizer Program • Insurance templates for P&C agents • *Apple IIGS; other Apple II models; AppleWorks V1 to 2.0; 128K; ProDOS 8; not copy protected.* • $69.95 retail • Info-Med; PO Box 24412; Jacksonville, FL 32241; 904-723-2771

■ **Alpha Check** • Check writing and reporting program • *Apple IIGS; AppleWorks; 128K; ProDOS 8; not copy protected.*

Alpha Check is a check writing and reporting program that runs within AppleWorks using two interfaces to enter data. The "Journal" interface allows the entry of data from hand written checks, cash and credit card purchases. A check-like interface permits entry of data plus financial and tax reporting. It prints any type of personal, business or Quicken checks. Alpha Check will: pre-number the check; pre-date the check; fill out the "longhand" amount automatically; pre-print the payee's name for addressing; update the check register with the proper balance; print the check and address it for a window envelope with one keystroke; create a business or personal tax report automatically; create a General Ledger automatically; and more.
$49.95 retail • Actasoft; 19700 Wells Dr.; Woodland Hills, CA 91364; 818-996-6731

AppleWorks Forum • 36-page monthly newsletter • $4 retail; each monthly issue • $29 retail; one-year subscription • National AppleWorks Users Group; PO Box 87453; Canton, MI 48187; 313-454-1115

AppleWorks GS 1.1 • Integrated software package that provides word processing, database, spreadsheet, page layout, graphics and communications applications • *Apple IIGS; 1.125 MB; GS/OS; not copy protected.* • $299 retail • (For AppleWorks GS upgrade information, call 800-544-8554) • Claris Corp.; 5201 Patrick Henry Dr.; PO Box 58168; Santa Clara, CA 95052; 408-987-7000

AppleWorks; AppleWorks/Network • Provides word processing, database management, mail merge and spreadsheet analysis; extends to the AppleTalk Network System • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $249 retail; AppleWorks 3.0 • $1,414 retail; AppleWorks 10-pack • $1,616 retail; AppleWorks/Network • (For AppleWorks 3.0 upgrade information, call 800-544-8554) • Claris Corp.; 5201 Patrick Henry Dr.; PO Box 58168; Santa Clara, CA 95052; 408-987-7000

FactWorks Volumes I - IV • More than 120 AppleWorks databases designed for student research • *Apple IIGS; other Apple II models; AppleWorks; 128K; ProDOS 8; not copy protected.* • $32.95 retail; per volume • ImagiMedia Software; 16640 Roscoe Pl.; Sepulveda, CA 91343; 818-894-1131 or 800-544-3228

Famous Birthdays • Database containing 7,000 famous people and their birthdays; make nice additions to birthday presents • *Apple IIGS; AppleWorks; 128K; not copy protected.* • $12.95 retail • Benz Computing Enterprises; 38 Belton St.; Stanhope, NJ 07874; 201-347-6476

How To Use The Features Of AppleWorks 3.0 • Training tape • $9.95 retail • National AppleWorks Users Group; PO Box 87453; Canton, MI 48187; 313-454-1115

ImageWorks • Videodisc utility for AppleWorks • *Apple IIGS; other Apple II models; 64K; ProDOS 8.* • $19.95 retail • Teaching Technologies; PO Box 3808; San Luis Obispo, CA 93403; 805-541-3100

The Kula Index • An annual series of AppleWorks database files that enables users to locate articles and reviews that appeared in various computer publications • *Apple IIGS; other Apple II models; AppleWorks; 128K; ProDOS 8; not copy protected.* • $8 retail • Kula Software; 2118 Kula St.; Honolulu, HI 96817; 808-595-8131

Loan Qualifier • Spreadsheet template designed for mortgage brokers, loan officers and real estate agents • *Apple IIGS; other Apple II models; AppleWorks; 128K; ProDOS 8; not copy protected.* • $99 retail • Financial Microware; PO Box 40; Cupertino, CA 95015; 408-446-5639

■ **SportsWorks Fantasy Baseball** • Integrated template for learning and running a fantasy or rotisserie baseball league • *Apple IIGS; other Apple II models; 128K; ProDOS 8; AppleWorks; not copy protected.*

SportsWorks Fantasy Baseball is an integrated template for learning and running a fantasy or rotisserie baseball league. It contains approximately a dozen files that will instruct users on running these files, as well as help beginners learn the basic functions of the AppleWorks program. Within the particular files, there are many samples that will help explain the setting up of a fantasy baseball league, drafting of players, trading of players from owner to owner and how to keep the daily stats on all players.
$39.99 retail • T+M Enterprises; PO Box 195; 228 Main St.; Staten Island, NY 10307

The TimeOut Series • AppleWorks enhancements • *Apple IIGS; other Apple II models; AppleWorks; 128K; ProDOS 8; not copy protected.* • $49.95 retail; GS Font Editor • $49.95 retail; Program Writer • $49.95 retail; TimeOut DeskTools • $49.95 retail; TimeOut DeskTools II • $49.95 retail; TimeOut FileMaster • $89.95 retail; TimeOut Graph • $25 retail; TimeOut MacroTools • $25 retail; TimeOut MacroTools II • $49.95 retail; TimeOut PowerPack • $69.95 retail; TimeOut QuickSpell • $49.95 retail; TimeOut SideSpread • $59.95 retail; TimeOut SpreadTools • $69.95 retail; TimeOut SuperFonts • $49.95 retail; TimeOut Thesaurus • $59.95 retail; TimeOut UltraMacros • $79.95 retail; TimeOut ReportWriter • $69.95 retail; TimeOut TeleComm • Beagle Bros, Inc.; 6215 Ferris Sq., Ste. 100; San Diego, CA 92121; 619-452-5500, 800-345-1750 (orders) or 800-992-4022 in CA (orders)

Vacation Orlando • Travel software series featuring hotel and resort listings, area attractions and shopping and dining guides for Orlando and Disney World (includes new Universal Studios and Disney/MGM Studios) • *Apple IIGS; other Apple II models; AppleWorks; 128K; ProDOS 8; not copy protected.* • $19.95 retail • Pop-Fly Software; Div. of Product Control, Inc.; 345-B N. McLean Blvd.; S. Elgin, IL 60177; 312-741-5915

WriteWorks • Turns the AppleWorks word processor into a more powerful and flexible word processing system • *Apple IIGS; other Apple II models; 256K; ProDOS 8; not copy protected.* • $29.95 retail • Mike Crane; 1110 W. Alamos; Fresno, CA 93705; 209-225-1394

Books And Publications

1001 Things To Do With Your Apple IIGS • Useful activities for an Apple IIGS user • $12.95 retail; paperback • $18.95 retail; hardbound (book no. 2886) • Tab Books, Inc.; Blue Ridge Summit, PA 17294; 800-822-8138

Advanced AppleWorks — 2nd Edition • Insight into AppleWorks • $17.95 retail (book no. 3048) • Tab Books, Inc.; Blue Ridge Summit, PA 17294; 800-822-8138

Apple 16, A Comprehensive Guide To IIGS Computing • A non-technical book that discusses the IIGS' use of color, paint and draw programs, desktop publishing, laser printing, telecommunications, music and more • $22 retail; includes newsletter update • The Archives Press; 140 University Ave., #38; Palo Alto, CA 94301; 800-338-4454

Apple Care Manual: Diagnosing And Maintaining Your Apple IIe, IIc And IIGS Computers • Teaches Apple II owners how to perform preventive maintenance, troubleshoot malfunctions and make simple repairs • $17.95 retail; paperback (book no. 3121) • Tab Books, Inc.; Blue Ridge Summit, PA 17294; 800-822-8138

Apple IIGS Assembler Toolbox Quick Reference; C Toolbox Quick Reference • Summaries of the toolbox calls • $20 each retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

Apple IIGS Assembly Language Programming • Assembly language tutorial • $24.95 retail • Bantam Books, Inc.; 666 Fifth Ave.; New York, NY 10103; 212-765-6500

The Apple IIGS Book • Chronicles the Apple IIGS computer from conception to development • $19.95 retail • Bantam Books, Inc.; 666 Fifth Ave.; New York, NY 10103; 212-765-6500

Apple IIGS Firmware Reference • Technical guide for programmers and hardware designers • $24.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

Apple IIGS Hardware Reference, Second Edition • Provides an extensive description of the mechanisms and internal operations of an Apple IIGS • $26.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

Apple IIGS Machine Language For Beginners • Assembly language tutorial for use with the Merlin 8/16 assembler • *Apple IIGS; 512K for disk portion; ProDOS 16; not copy protected.* • $19.95 retail; book • $15.95 retail; disk • Roger Wagner Publishing, Inc.; 1050 Pioneer Way, Ste. P; El Cajon, CA 92020; 619-442-0522

Apple IIGS Technical Reference • Apple IIGS architecture overview • $19.95 retail • Free catalog is available • Osborne/McGraw-Hill; 2600 Tenth St.; Berkeley, CA 94710; 800-227-0900

Apple IIGS Toolbox Reference, Vol. III • New tools for Apple IIGS programmers • $39.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

Apple IIGS Toolbox Reference, Vols. I And II • Toolbox description book in two volumes • $26.95 each retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

The Apple IIGS Toolbox Revealed • Introduces a reader to the toolbox and other IIGS circuits • $21.95 retail • Bantam Books, Inc.; 666 Fifth Ave.; New York, NY 10103; 212-765-6500

The AppleWorks Handbook: Vol. II • "How to" ideas to get more from AppleWorks • $27.95 retail • National AppleWorks Users Group; PO Box 87453; Canton, MI 48187; 313-454-1115

AppleWorks Made Easy, Third Edition • Tutorial that covers AppleWorks Version 3 • $19.95 retail • Osborne/McGraw-Hill; 2600 Tenth St.; Berkeley, CA 94710; 800-227-0900

Discovering Science On Your Apple II, II+, IIc and IIGS • Guidebook designed for individual student use or as a supplemental text for use in middle or junior high school science classes • $14.95 retail; paperback (book no. 2680) • Tab Books, Inc.; Blue Ridge Summit, PA 17294; 800-822-8138

Books And Publications

Exploring Apple GS/OS and ProDOS 8 • Provides programming techniques for the GS/OS and ProDOS 8 operating systems • $21.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

Exploring The Apple IIGS • Graphics and sound programming guide • $22.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

GS/OS Reference, Volume I And II • Technical references to GS/OS • $35 each retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

Human Interface Guidelines • Defines the desktop interface used in Apple IIGS-specific programs • $14.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

ImageWriter LQ Reference • Technical reference source for printer • $22.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

Inside ProDOS 16 • Examines the latest version of ProDOS 16 • $24.95 retail; paperback (book no. 3129) • Tab Books, Inc.; Blue Ridge Summit, PA 17294; 800-822-8138

LaserWriter Reference • Technical resource for laser printers • $19.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

Programmer's Introduction To The Apple IIGS • Essential concepts for programming the Apple IIGS • $32.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

Programming The 65816 • Teaching manual and reference guide for the 65816 • $24.95 retail • Brady Books/Simon & Schuster; 1 Gulf + Western Plaza, 14th Fl.; New York, NY 10023; 212-373-8500

Programming The Apple IIGS In Assembly Language • Shows how to program the Apple IIGS in a step-by-step manner • $29.95 retail; book • $20 retail; disk (available from: Ron Lichty, author; PO Box 27262; San Francisco, CA 94127; 415-564-2697) • Brady Books/Simon & Schuster; 1 Gulf + Western Plaza, 14th Fl.; New York, NY 10023; 212-373-8500

Technical Introduction To The Apple IIGS • Overview of the IIGS for programmers • $9.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

The UltraMacros Primer • How to use TimeOut UltraMacros • $19.95 retail • National AppleWorks Users Group; PO Box 87453; Canton, MI 48187; 313-454-1115

Using AppleWorks GS • Comprehensive guide to using the six integrated applications of AppleWorks GS • $19.95 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

X-Ref (Cross-Reference) For Apple II Books And Notes • Contains indexes to all of the programming books for the Apple II family of computers • $20 retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

Business Productivity

◆ **BusinessWorks** • General Ledger, Accounts Payable, Accounts Receivable, Inventory Control, Payroll and the System Manager • *Apple IIGS; two 3.5-inch disks or hard disk; 80-column printer; 128K; ProDOS 8; not copy protected.*

BusinessWorks is a full-featured accounting program comprised of the following modules: General Ledger, Accounts Payable, Accounts Receivable, Inventory Control, Payroll and the System Manager. The modules may be purchased separately or as a bundle.

Features of the program include online help, which is available at almost every prompt; pop-up windows that list needed account numbers and other information; password security; an interface that looks and acts like AppleWorks; ability to send information to AppleWorks database and spreadsheet files; and more.

$195 retail; each module • $95 retail; System Manager • $495 retail; complete system bundle (includes all except Payroll) • Manzanita Software Systems; 2130 Professional Dr., Ste. 230; Roseville, CA 95661; 800-531-3552 or 800-447-5700 in CA

Circle No. 40

CADApple 3.5 • Contains sophisticated precision drafting tools for educational and professional use • *Apple IIGS; Apple IIc and IIe; 128K; Pascal 1.3; not copy protected.* • $395 retail • Versacad Corp.; 2124 Main St.; Huntington Beach, CA 92648; 714-960-7720

Calendar Crafter • Creates customized calendars; IIGS specific • *Apple IIGS; printer; 512K; ProDOS 16; copy protected.* • $89 retail • $49 retail; home version • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Darad IIe • Database and report generator that features Search, Edit and Print modes • *Apple IIGS; 256K; ProDOS 8; not copy protected.* • $49.95 retail; Darad IIe • $89.95 retail; Darad IIe with Self Teaching Manual and Report Generator • $29.95 retail; Darad IIe Report Generator (for custom reports) • DAR Systems International; PO Box 16-4933; Miami, FL 33116; 305-529-3572

DB Master Version 5; DB Master Professional • Versatile database management systems; DB Master Professional brings multifile, relational capability to the Apple II user • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $45 (shareware) retail; DB Master Version 5 • $295 retail; DB Master Professional • $500 retail; DB Master Professional/Classroom • Stone Edge Technologies, Inc.; PO Box 3200; Maple Glen, PA 19002; 215-641-1825

Dental Office Management IIP • Integrated application for patient billing, claim-form preparation, appointment scheduling and more • *Apple IIGS; SCSI hard drive; 3.5-inch disk drive; 130-column printer; 512K; ProDOS 16; not copy protected.* • $1,995.95 retail • CMA Micro Computer; 55888 Yucca Trail; PO Box 2080; Yucca Valley, CA 92286; 619-365-9718

GeoCalc • Spreadsheet analysis and charting • *Apple IIGS; other Apple II models; 128K (256K RAM expansion recommended); GEOS; not copy protected.* • $69.95 retail • Berkeley Softworks; 2150 Shattuck Ave.; Berkeley, CA 94704; 415-644-0883

GeoFile • Database and forms manager • *Apple IIGS; other Apple II models; 128K (256K RAM expansion recommended); GEOS; not copy protected.* • $69.95 retail • Berkeley Softworks; 2150 Shattuck Ave.; Berkeley, CA 94704; 415-644-0883

The Invoicer With Accounts Receivable And Sales Tracking/Inventory • Small business accounting • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $223.50 retail • MiccaSoft, Inc.; 406 Windsor Ln.; New Braunfels, TX 78132; 512-629-4341 or 800-950-7943

List Plus • Database and report generator for business or personal records, mailing lists, labels and more • *Apple IIGS; 768K; GS/OS; not copy protected.* • $69.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

Medical Office Management IIP • Medical office system for patient billing, claim-form preparation, appointment scheduling and more • *Apple IIGS; SCSI card; SCSI hard disk; 130-column printer; 512K; ProDOS 16; not copy protected.* • $1,995.95 retail • CMA Micro Computer; 55888 Yucca Trail; PO Box 2080; Yucca Valley, CA 92286; 619-365-9718

Notes 'N Files • Database filing system with a word processor-like editor and powerful mail merge • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $95 retail • DataPak Software, Inc.; 14011 Ventura Blvd., Ste. 507; Sherman Oaks, CA 91423; 818-905-6419 or 800-327-6703

Salary Magic • Spreadsheet/database program for the management of negotiation process/salary schedules • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $495 retail • Magic Software, Inc.; 2206 Franklin St.; Bellevue, NE 68005; 402-291-0670 or 800-342-6243

Tax Preparer • Fully automated tax preparation software designed to simplify tax calculations for professional tax preparers and individuals with involved returns • *Apple IIGS; other Apple II models; 128K minimum; ProDOS 8; not copy protected.* • $250 retail • $79; annual updates • HowardSoft; 1224 Prospect St., Ste. 150; La Jolla, CA 92037; 619-454-0121

Trio Plus • Integrated word processor, database, spreadsheet, desk accessories • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $29.95 retail • Softsync, Inc.; 162 Madison Ave.; New York, NY 10016; 212-685-2080

VIP Professional • Lotus 1-2-3-compatible spreadsheet with database and graphics features • *Apple IIGS; extended memory card recommended; 512K; ProDOS 8; not copy protected.* • $149.95 U.S. retail • ISD Marketing, Inc.; 2651 John St., Unit 3; Markham, Ontario, Canada L3R 2W5; 416-479-1880

Creative

816/Paint • Color graphics program that supports all Apple color graphics modes • *Apple IIGS; other Apple II models; color monitor; 128K, 512K; ProDOS 8, ProDOS 16; not copy protected.* • $75 retail • $125 retail; Education Version • Baudville, Inc.; 5380 52nd St. SE; Grand Rapids, MI 49512; 616-698-0888

Award Maker Plus • Graphics software for creating awards, certificates, licenses, coupons and more • *Apple IIGS; printer; 128K; ProDOS 8; not copy protected.* • $49.95 retail; Award Maker Plus • $29.95 retail; Sports Award Library • $29.95 retail; Education Award Library • Baudville, Inc.; 5380 52nd St. SE; Grand Rapids, MI 49512; 616-698-0888

Beagle Bros Clip Art/Volume I • Clip art • *Apple IIGS.* • $49.95 retail • Beagle Bros, Inc.; 6215 Ferris Sq., Ste. 100; San Diego, CA 92121; 619-452-5500, 800-345-1750 (orders) or 800-992-4022 in CA (orders)

BeagleDraw • Object-oriented drawing program • *Apple IIGS; color monitor; 512K; ProDOS 16; not copy protected.* • $89.95 retail • Beagle Bros, Inc.; 6215 Ferris Sq., Ste. 100; San Diego, CA 92121; 619-452-5500, 800-345-1750 (orders) or 800-992-4022 in CA (orders)

Car Builder • Scientific simulation program for designing, constructing, modifying and testing cars; ages 8 to adult • *Apple IIGS; other Apple II models; 64K; ProDOS 8;*

Creative

copy protected. • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Cartooners • Cartoon studio that allows children to create lively, animated productions; ages 6 to 12 • *Apple IIGS; ImageWriter optional; 1 MB; ProDOS 16; not copy protected.* • $29.95 retail • $14.95 retail; Cartooners in Space (add-on data disk) • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Cheap Paint • Paint program • *Apple IIGS; 768K; GS/OS; not copy protected.* • $9 retail • P.D.E.; 2078C Walsh Ave.; Santa Clara, CA 95050; 408-496-0624 or 800-331-8125

■ **ChristmasTime** • Clip art • *Apple IIGS; 768K (1.25 MB recommended); Deluxe Paint II, Paintworks Gold or any program that uses Apple Preferred format; ImageWriter II or compatible.*

ChristmasTime is a clip art collection featuring ornaments, Christmas cards and a Christmas village.
$17 retail • Cannoli Computer Graphics; 12354 Custer St.; Yucaipa, CA 92399; 714-792-5102

■ **Color+** • Color paint program • *Apple IIGS; 768K; ProDOS 8; color monitor; not copy protected.*

Color+ allows users to paint with 256 colors at once and mix 320 and 640 modes. It comes with a set of utility programs, including ColorMix, pattern editor, palette editor, shape and font editor, shape grabber, slide show, demo program and examples. Main features include: change the RGB of any color life on the screen; standard paint tool set; create and animate shapes at fast speed on screen; save any portion of the screen as shapes and animate them, with the capability to use and display these shapes from Basic; and edit any super-high-resolution 16-color picture to have up to 256 colors at once.
$69.95 retail • El Kassir Software; 232 Thorne St., Ste. C; Los Angeles, CA 90042; 213-257-6882

Craftmaster II • Color needle arts chart design program • *Apple IIGS; 1 MB; dot matrix printer.* • $99.95 retail • Raptor, Inc.; PO Box 20756; Louisville, KY 40250; 502-491-6828

DeluxePaint II • Paint software containing more than 90 painting tools and effects; optional 30-minute videotape of tips and techniques for using DeluxePaint II • *Apple IIGS; color monitor; 768K; ProDOS 16; not copy protected.* • $49.95 retail; DeluxePaint II • $19.95 retail; Video Guide to DeluxePaint II • $129.95 retail; DeluxeWrite/DeluxePaint II • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Design Your Own Home: Architecture • Allows users to draw floor plans, elevations and structural details • *Apple IIGS; 1 MB; GS/OS; not copy protected.* • $89.95 retail • Abracadata; PO Box 2440; Eugene, OR 97402; 503-342-3030

Design Your Own Home: Interiors • Allows users to design room interiors with color, patterns, shapes and furnishings • *Apple IIGS; 1 MB; GS/OS; not copy protected.* • $89.95 retail • Abracadata; PO Box 2440; Eugene, OR 97402; 503-342-3030

Design Your Own Home: Landscape • Allows users to plan the grounds around home or office • *Apple IIGS; 1 MB; GS/OS; not copy protected.* • $89.95 retail • Abracadata; PO Box 2440; Eugene, OR 97402; 503-342-3030

Design Your Own Home: Landscape Regional Image Libraries • Provides landscape images for five U.S. regions • *Apple IIGS; Design Your Own Home: Landscape; 1 MB; GS/OS; not copy protected.* • $29.95 each retail • Abracadata; PO Box 2440; Eugene, OR 97402; 503-342-3030

Design Your Own Home: Libraries • Seven disk libraries containing four dozen house plans, interior or landscape designs • *Apple IIGS; appropriate Design Your Own Home program; 1 MB or more; GS/OS; not copy protected.* • $29.95 each retail • Abracadata; PO Box 2440; Eugene, OR 97402; 503-342-3030

Designer Prints • IIGS specific drawing and graphics utility • *Apple IIGS; 1 MB or more; GS/OS; copy protected.* • $89 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Draw Plus • Drawing program for use with Paintworks Plus, Writer's Choice Elite and Clip Art Gallery • *Apple IIGS; 512K; GS/OS; not copy protected.* • $69.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

DT Painter • Paint program • *Apple IIGS; color monitor recommended; 1 MB; GS/OS; not copy protected.* • $9 retail • P.D.E.; 2078C Walsh Ave.; Santa Clara, CA 95050; 408-496-0624 or 800-331-8125

Hometown, U.S.A. • Creativity and learning program; templates that allow users to design, print and produce miniature 3D buildings • *Apple IIGS; standard GS paint program (i.e., Paintworks Plus); not copy protected.* • $39.95 retail • Publishing International; 333 W. El Camino Real, Ste. 222; Sunnyvale, CA 94087; 408-738-4311

Image Master; Basic Paint • Paint program with up to 136 colors on screen at one time and eight million possible color mixtures • *Apple IIGS; 512K; GS/OS; not copy protected.* • $44.95 retail • Jada Graphics, Inc.; 7615 S. 48th St.; Omaha, NE 68157; 800-634-4552

Paint Write Draw • Three programs in one: Paintworks Plus, Writer's Choice Elite and Draw Plus • *Apple IIGS; color monitor; 1.25 MB suggested when using Writer's Choice Elite; 512K; GS/OS; not copy protected.* • $129.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

Paintworks Gold • Sophisticated paint program • *Apple IIGS; RGB monitor; 1.25 MB; GS/OS; not copy protected.* • $99.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

Paintworks Plus • Paint program containing clip art gallery of more than 650 images • *Apple IIGS; 512K; GS/OS; not copy protected.* • $79.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

Scholastic Hyperscreen • Multimedia presentation tool; grades 7 to 12 • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $99.95; net to educators (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

■ **Second Chance** • Graphics image enhancement • *Apple IIGS; 1 MB; GS/OS; not copy protected.*

Second Chance is a collection of 19 image enhancement routines for 320 mode, gray scale Apple IIGS graphics. Images that have been digitized or converted from the format of one computer to the format of another computer are sometimes of a lesser quality. Depending on the quality of the original image, Second Chance may be able to improve these images. Second Chance opens and saves graphics files in Apple Preferred Format, Paintworks Format and Screen Format. It will not operate on 640 mode SHR, Hi-Res or Double Hi-Res images.
$49.95 retail • Raptor, Inc.; PO Box 20756; Louisville, KY 40250; 502-491-6828

ShowOff • Produces professional-looking overhead transparencies, 16-color printed sheets and IIGS interactive video slide shows (includes more than 400 graphics, 126 borders and an icon editor lets users create their own graphics) • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $59.95 retail; consumer edition • $69.95 retail; school edition • $139.95 retail; Lab Pack • $10 retail; teacher's guide • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

Slide Shop • Versatile program that allows users to produce their own animated shows on a disk and run it on any compatible computer — even without the program disk; grades 4 to adult • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $79.95; net to educators (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

■ **SpringTime** • Clip art • *Apple IIGS; 1.25 MB; Deluxe Paint II or Paintworks Gold; color monitor and color printer recommended.*

SpringTime is a clip art collection that features Easter, Valentines, Mother's Day, birthday, anniversary and greeting cards; ornaments for Spring and Easter (flower basket, rabbits, Easter eggs, chick, Easter grass); gift holders (wishing well, Easter basket, small gift box); and clip art (butterflies, trees, flowers, Easter, Valentine's Day).
$17 retail • Cannoli Computer Graphics; 12354 Custer St.; Yucaipa, CA 92399; 714-792-5102

■ **Super GS Award Maker** • Instant printing of certificates • *Apple IIGS; 1 MB; GS/OS; ImageWriter; not copy protected.*

Super GS Award Maker gives users a choice of numerous, ready-made award certificates that can be personalized to reward that outstanding youngster for his or her special achievement. Orange Cherry has written the appropriate text and their artists have created many super high-resolution graphics for various completed certificates. All a user does is input the honoree's name, date and, in some cases, the presenter's name to print out top-quality, professional-looking awards.
$59 retail • $69 retail; educator's version • Orange Cherry-Talking Schoolhouse Software; PO Box 390 Westchester Ave.; Pound Ridge, NY 10576; 914-764-4104 or 800-672-6002

■ **The Super Sign Maker** • Tool for creating banners, signs, handouts and more • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.*

The Super Sign Maker is a powerful and creative tool for creating banners, signs, handouts, transparencies and more. It features a variety of typestyles and letter heights, along with special fonts, such as block, digital, stencil and foreign language characters. The program offers a choice of special borders (hearts, beads, bricks and more), which can be used for filling in letters. Graphics, outline letters and solid letters are also available.

Library Disk #2 contains two new fonts, 10 new patterned borders and more than 30 new pictures. The pictures are made especially for those special days of the year, such as Christmas, Chanukah and even Grandparents' Day.
$75 retail • $49 retail; Library Disk #2 • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

ThunderView • Low-cost program for creating personalized slide shows; designed for users of painting software and scanners • *Apple IIGS; other Apple II models; RGB monitor recommended; 64K; ProDOS 8; not copy protected.* • $29 retail • Thunderware, Inc.; 21 Orinda Way; Orinda, CA 94563; 415-254-6581

Desk Accessories

Beagle Bros GS Desk Accessories • Telephone dialer, keyboard macros, screen preserver, programmable scientific calculator, notepad, alarm clock and more • *Apple IIGS.* • $59.95 retail • Beagle Bros, Inc.; 6215 Ferris Sq., Ste. 100; San Diego, CA 92121; 619-452-5500, 800-345-1750 (orders) or 800-992-4022 in CA (orders)

CDA Power: Volume 1 • Classic desk accessories: Text File Editor, ASCII Table, 65816 Reference Chart, KeyCaps, Scientific Calculator, Mini-GS/OS Shell and Communications Program • *Apple IIGS; 150K RAM, in addition to the memory requirements of the primary application; not copy protected.* • $59.95 retail • 360 MicroSystems; PO Box 1192; Oviedo, FL 32765; 407-365-6714

DeskPak Desk Accessories • File tools, calculator, system security lock, file printer, appointment calendar, scrapbook and more under the Apple icon • *Apple IIGS; 10K per accessory; ProDOS 16; not copy protected.* • $89.95 retail • SSSI, Inc.; 4612 N. Landing Dr.; Marietta, GA 30066; 404-928-4388

The Desktop Manager • Accessories include: note pad, calculator, printer manager, envelope labeler, ASCII chart, screen print, cut and paste, appointment calendar, disk manager, communications manager, file finder, area codes and time zones • *Apple IIGS; 512K; GS/OS; not copy protected.* • $29.95 retail • On Three, Inc.; 1802 Mitchell Rd.; Lake Stevens, WA 98258; 206-334-8001

■ **Disk Access** • Lets users manage their files, folders and disks without having to quit their program and return to the Finder • *Apple IIGS; 128K; GS/OS; not copy protected.*

Disk Access is a full-blown application in a New Desk Accessory. Everything users can do with Apple's Finder can be done with Disk Access, without having to quit the program they are using. In addition to the Finder's capability to initialize disks, create new folders and copy, rename, delete and verify files, folders and disks, Disk Access finds files by name with a variety of options, shows the contents of a file and lets users change file information (including filetypes/auxtypes). It also handles data and resource "forks" found in "extended" files. Disk Access takes less disk space and is faster than the Finder. It works well with AppleWorks GS, GraphicWriter III and other GS/OS 5-compatible programs.
$49.95 retail • Seven Hills Software Corp.; 2310 Oxford Rd.; Tallahassee, FL 32304; 904-575-0566 or 800-627-3836

Disk Initializer • Lets users initialize 3.5- and 5.25-inch data disks from within other programs; works with any program that is GS/OS compatible • *Apple IIGS; GS/OS; not copy protected.* • $12.50 retail • Seven Hills Software Corp.; 2310 Oxford Rd.; Tallahassee, FL 32304; 904-575-0566 or 800-627-3836

Softswitch • Desk accessory that allows users to switch among several applications loaded into RAM • *Apple IIGS; 768K; ProDOS 16; not copy protected.* • $59.95 retail • Roger Wagner Publishing, Inc.; 1050 Pioneer Way, Ste. P; El Cajon, CA 92020; 619-442-0522

TDM Super Accessories #1 • Add-on ProDOS accessories: file type changer; character ruler; regular file viewer/printer; keyboard lockout; a clock with job timer capabilities; and more • *Apple IIGS; The Desktop Manager; 512K; GS/OS; not copy protected.* • $14.95 retail • On Three, Inc.; 1802 Mitchell Rd.; Lake Stevens, WA 98258; 206-334-8001

TDM Toolkit • Contains information needed to create a user's own desk accessories that work under The Desktop Manager • *Apple IIGS; The Desktop Manager; APW assembler; 512K; GS/OS; not copy protected.* • $39.95 retail • On Three, Inc.; 1802 Mitchell Rd.; Lake Stevens, WA 98258; 206-334-8001

Desktop Communications

ASCII Express • Advanced telecommunications program that supports data transfer speeds up to 9,600 baud • *Apple IIGS; other Apple II models; modem; 64K; ProDOS 8; not copy protected.* • $129.95 retail • United Software Industries; 22231 Mulholland Hwy., Ste. 212A; Woodland Hills, CA 91364; 818-887-5800 or 800-332-7244

Burple • Hardware/software attachment for the Apple IIGS that allows the micro to communicate with Burroughs mainframe computers using the Burroughs "poll select" protocol • *Apple IIGS; 64K; ProDOS 8; not copy protected.* • $495 retail • Midwest Data Source, Inc.; 1615 Burney Ave.; Cincinnati, OH 45230; 513-231-2023

MouseTalk • Telecommunications product with Mac-like user interface and pull-down menus that accommodates data transfer speeds up to 19,200 bits per second; mouse optional • *Apple IIGS; other Apple II models; modem; 128K; ProDOS 8; not copy protected.* • $119.95 retail • United Software Industries; 22231 Mulholland Hwy., Ste. 212A; Woodland Hills, CA 91364; 818-887-5800 or 800-332-7244

Point-To-Point • Versatile telecommunications program • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $99.95 retail • Beagle Bros, Inc.; 6215 Ferris Sq., Ste. 100; San Diego, CA 92121; 619-452-5500, 800-345-1750 (orders) or 800-992-4022 in CA (orders)

Proterm • Telecommunications program featuring scrollback buffer for capturing text on screen • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $129 retail • Checkmate Technology, Inc.; 509 S. Rockford Dr.; Tempe, AZ 85281; 602-966-5802 or 800-325-7347

ReadyLink • Communications software • *Apple IIGS; modem; 128K; ProDOS 8.* • $99 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Talk Is Cheap V3.10 • Communications program with powerful scripting capability • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $59.95 retail • Quality Computers; 20200 Nine Mile Rd.; St. Claire Shores, MI 48080; 313-774-7200

Teleworks Plus • IIGS-specific telecommunications program • *Apple IIGS; 768K; GS/OS; not copy protected.* • $99.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

Desktop Publishing

Beagle Bros Font Library/Volume I • IIGS fonts • *Apple IIGS.* • $49.95 retail • Beagle Bros, Inc.; 6215 Ferris Sq., Ste. 100; San Diego, CA 92121; 619-452-5500, 800-345-1750 (orders) or 800-992-4022 in CA (orders)

■ **Color Print Shop Graphics** • More than 600 color Print Shop graphics • *Apple IIGS; 512K; ProDOS 8; Print Shop IIGS; not copy protected.*

This program contains more than 600 color Print Shop graphics: 100+ sports and games, 100+ symbols and emblems, 100+ animals, 100+ people, faces and clothing, plus color and black and white holidays and borders. The program includes six disks and a copy of P.D.E.'s printed indexed directory "All That GS Jazz!," describing more than 100 disks full of software in all categories and a one-year membership to P.D.E.
$43.95 retail • P.D.E.; 2078C Walsh Ave.; Santa Clara, CA 95050; 408-496-0624 or 800-331-8125

FingerPrint Slide-Show • Desktop presentation and computer slide-show software • *Apple IIGS; FingerPrint GSi Version II; 256K; ProDOS 8; not copy protected.* • $25 retail • Thirdware Computer Products; 4747 NW 72nd Ave.; Miami, FL 33166; 305-592-7522

Font Factory GS • IIGS font editor • *Apple IIGS; 768K; GS/OS; not copy protected.* • $39.95 retail • Seven Hills Software Corp.; 2310 Oxford Rd.; Tallahassee, FL 32304; 904-575-0566 or 800-627-3836

GeoPublish • Graphically oriented desktop publishing • *Apple IIGS; other Apple II models; 128K (256K RAM expansion recommended); GEOS; not copy protected.* • $99.95 retail • Berkeley Softworks; 2150 Shattuck Ave.; Berkeley, CA 94704; 415-644-0883

Graph It! • High-impact presentation graphics • *Apple IIGS; other Apple II models; printer; 128K; ProDOS 8; not copy protected.* • $69.95 retail • Timeworks, Inc.; 444 Lake Cook Rd.; Deerfield, IL 60015; 708-948-9200

Graphics And Pictures Converter • Allows users to transfer a wide variety of graphic formats between Apple II programs • *Apple IIGS; other Apple II models; 512K; ProDOS 8; not copy protected.* • $9.95 retail • Big Red Computer Club; 423 Norfolk Ave.; Norfolk, NE 68701; 402-379-4680

GraphicWriter III • IIGS-specific desktop publisher with combination page layout, graphics and word processing • *Apple IIGS; 768K; GS/OS; not copy protected.* • $149.95 retail • Seven Hills Software Corp.; 2310 Oxford Rd.; Tallahassee, FL 32304; 904-575-0566 or 800-627-3836

GS07 And GS08 Graphics For Print Shop IIGS • Two disks containing multicolor graphics, borders and fonts compatible with The Print Shop IIGS • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $3.50 each retail • Big Red Computer Club; 423 Norfolk Ave.; Norfolk, NE 68701; 402-379-4680

Labels, Labels, Labels • Makes labels, badges, postcards, name tags, price tags and more • *Apple IIGS; other Apple II models; one disk drive; dot matrix printer; 128K; ProDOS 8; not copy protected.* • $39.95 retail • Big Red Computer Club; 423 Norfolk Ave.; Norfolk, NE 68701; 402-379-4680

Medley 2.0 • IIGS-specific integrated desktop publishing program combining word processing, artwork and page layout capabilities • *Apple IIGS; color monitor recommended; 1.25 MB; GS/OS; not copy protected.* • $129 retail • Milliken Publishing Co.; 1100 Research Blvd.; PO Box 21579; St. Louis, MO 63132; 314-991-4220 or 800-643-0008

Personal Newsletter • Graphics and page composition program • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $59.95 retail • $69.95 retail; academic • $174.88 retail; educational lab pak • Softsync, Inc.; 162 Madison Ave.; New York, NY 10016; 212-685-2080

The Print Shop Graphics Library Sampler Edition • Clip art for The Print Shop IIGS • *Apple IIGS; The Print Shop IIGS; 512K; ProDOS 16; not copy protected.* • $34.95 retail • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

The Print Shop IIGS • Personal publishing program with multicolor graphics editor that allows users to create, design and print out multicolor custom cards, signs, banners and letterheads • *Apple IIGS; printer; 512K; ProDOS 8; copy protected.* • $59.95 retail • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

Desktop Publishing

Printrix 1.1 • Typesetter of word processing text files • *Apple IIGS; printer; 128K; ProDOS 8; not copy protected.* • $65 retail • Data Transforms, Inc.; 616 Washington St.; Denver, CO 80203; 303-832-1501

PS Lovers' Utility Set • Makes charts of Print Shop graphics, borders and fonts; also makes bookmarks, mailing labels and envelope cachets • *Apple IIGS; other Apple II models; one disk drive; dot matrix printer; 256K; ProDOS 8; not copy protected.* • $39.95 retail • Big Red Computer Club; 423 Norfolk Ave.; Norfolk, NE 68701; 402-379-4680

Publish-It! 3 • Desktop publishing program that allows users to edit, design, lay out and print documents • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $129.95 retail • Timeworks, Inc.; 444 Lake Cook Rd.; Deerfield, IL 60015; 708-948-9200

SuperPrint II: The Next Generation • Curriculum-based printing program • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $69.95; net to educators (customized lab packs, site licenses and network versions available) • $29.95 retail; graphics packs • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Education

A+ Line • English, Spanish, French and German vocabulary and grammar • *Apple IIGS; 128K; DOS 3.3; copy protected.* • $24.95 each retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

The Adventures Of Sinbad • An exciting voyage in language arts; "talking" program • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Alge-Blaster Plus • Covers first and second semester algebra; ages 12 to adult • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains 10 disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Algebra Shop • Introduces pre-algebra concepts; grades 7 to 10 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $69.95; net to educators (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Algernon • Students program Algernon to find his way through a maze • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $260 retail; Corvus or AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

All About America • American history; "talking program" for ages 6 to 11 • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $59.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Animal Adaptations • Introduces students to the terminology and concepts associated with animal adaptation and survival • *Apple IIGS; other Apple II models; 64K; DOS 3.3; copy protected.* • $59.95 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

Animal Tracker 2.0 • Teaches about North American animals; grade 3 to adult • *Apple IIGS; 768K; GS/OS; not copy protected.* • $79.95 retail; stand-alone version • $350 retail; school site license • Nature Boy Software; PO Box 596; S. Lancaster, MA 01561; 508-481-2911

Ant Farm • Helps students examine assumptions using trial and error; grades 3 to 12 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail; includes backup • $260 retail; Corvus or AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

ASE III • Computerized timetabling • *Apple IIGS; Apple IIe; 60K; DOS 3.3; not copy protected.* • $795 retail; introductory price • $1,795 retail; regular price • Oden Software Limited; 247 Woodlawn Dr.; Sydney River, Nova Scotia, Canada B1S 1J3; 902-562-6009

Atlas Explorer • World geography quiz • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $49.95 retail • $100 retail; Lab Pack • Springboard Software Group; A Div. of Spinnaker Software Corp.; 201 Broadway; Cambridge, MA 02139; 612-944-3915

Audubon Wildlife Adventures: Grizzly Bears • Involves players in current issues on the effects of science and technology upon society • *Apple IIGS; 512K; GS/OS; not copy protected.* • $59.95 retail • Advanced Ideas; 2902 San Pablo Ave.; Berkeley, CA 94702; 415-526-9100

Audubon Wildlife Adventures: Whales • Involves students in current issues on the effects of science and technology upon society • *Apple IIGS; 512K; GS/OS; not copy protected.* • $59.95 retail • Advanced Ideas; 2902 San Pablo Ave.; Berkeley, CA 94702; 415-526-9100

Backyard Birds • Bird identification; grades 3 to jr. high • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

■ **Bataille De Mots And Batalla De Palabras** • French and Spanish language acquisition programs • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.*

Bataille De Mots (French) and Batalla De Palabras (Spanish) teach the vocabulary of school, food, sports, travel, daily life and occupations. They include a word display that gives meanings to and sentences for nouns, verbs and adjectives for each of six topics. Multiple choice and sentence completion exercises reinforce usage of the words, and the colorful arcade game challenges students to find the translations quickly. They contain colorful graphics, optional sound effects and an easy-to-use editor that enables users to create and print their own vocabulary, exercises and tests.
$39.95 each retail • Gessler Publishing Co., Inc.; 55 W. 13th St., Ste. 34; New York, NY 10011; 212-627-0099

Bookmate • Helps students find quality books to read; grades 4 to 6 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; Corvus or AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Bounce! • Introduces the concept of pattern and helps develop recognition skills • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail; includes backup • $260 retail; Corvus or AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

■ **Bunny Hop** • Helps in learning first number words and digits; grades K to 1 • *Apple IIGS; 128K; ProDOS 8; copy protected.*

Bunny Hop was designed to help special needs students develop a better understanding of numeration. It specifically helps those students who make reversals (confuse "18" with "81," etc.). Bunny Hop introduces the concept of place value and helps students develop a better understanding of the value of numbers up to 99. A student is carefully led through six lessons of increasing difficulty. There is detailed record keeping. The use of the Echo or Ufonic is an option. The customized voice allows students to hear the directions and number names, as well as see them. It is recommended for non-readers.
$39.95 retail • Hartley Courseware, Inc.; 133 Bridge St.; Dimondale, MI 48821; 517-646-6458 or 800-247-1380

Captain's Log • Cognitive training system • *Apple IIGS; other Apple II models; 64K; ProDOS 8.* • $495 retail; each module • $1,495 retail; complete system (four modules) • BrainTrain, Inc.; 1915 Huguenot Rd.; Richmond, VA 23235; 804-794-4841

Charlie And The Chocolate Factory • Literature; creative writing; grades 3 and 4 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Checkerboard Trails • Game involving mathematical and problem-solving skills for grades 3 to 8 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49 retail • Focus Media, Inc.; PO Box 865; 839 Stewart Ave.; Garden City, NY 11530; 516-794-8900 or 800-645-8989

The Children's Writing And Publishing Center • Word processing and desktop publishing for ages 7 to 14 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59.95 retail; home edition • $89.95 retail; school edition • $159.95 retail; lab pack • The Learning Co.; 6493 Kaiser Dr.; Fremont, CA 94555; 415-792-2101

Classroom Jeopardy • Classroom review game • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $29.95 retail • DEC Software; 5307 Lynnwood Dr.; West Lafayette, IN 47906

Classroom Toolbox • Teaching tool for teachers and students; grades 3 to adult • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $75 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

College Bound • College preparation • *Apple IIGS; other Apple II models; 64K; DOS 3.3; copy protected.* • $82.50 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

College Life • College orientation program; grades 11 and 12 • *Apple IIGS; other Apple II models; 64K; copy protected.* • $82.50 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

■ **Color 'N' Canvas** • Aids in the teaching of art concepts; grades 1 to 8 • *Apple IIGS; 1 MB; color monitor recommended; copy protected.*

Color 'N' Canvas is developed especially for the classroom to help in the teaching of art concepts. It contains color palettes of red, green, blue and red, yellow and blue. Students are able to work with a variety of colors rather than the standard primary colors. Other features include: an artist's toolbox filled with simple-to-use tools; tools that are based on mathematical figures (circles, triangles and rectangles); and a template option that allows a teacher or student to create an outline that other students can paint.
$99 retail • $297 retail; lab pack • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Education

CommuniKeys • Keyboarding lessons with language-arts activities; grades 3 to 8 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Competer Rabbit • Reinforces basic foreign language vocabulary skills; includes reading and writing exercises and a game • *Apple IIGS; 128K; DOS 3.3.* • $39.95 retail • Gessler Publishing Co., Inc.; 55 W. 13th St., Ste. 34; New York, NY 10011; 212-627-0099

Conquering Decimals (+, -) • Mathematics; grades 4 to 6 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Conquering Fractions (+, -) • Mathematics; grades 5 to 8 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Conquering Percents • Mathematics; grades 5 to 8 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Conquering Ratios And Proportions • Mathematics; grades 5 to 8 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Coordinate Math • Teaches graphing points in a Cartesian coordinate system for grades 4 to 12 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Creature Cube • Mathematics as reasoning; grades 7 to 12 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $260 retail; AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

CSL Marks • Grading software for teachers • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $95 retail; individual teacher license • $300 retail; school site license • Chancery Software, Ltd.; 1122 Mainland St., 4th Fl.; Vancouver, BC, Canada V6B 5L1; 800-937-0016

Curious George Goes Shopping • Explores classification of objects • *Apple IIGS; 64K; ProDOS 8; copy protected.* • $24.95 retail • $62 retail; Lab Pack • DLM Teaching Resources; One DLM Park; Allen, TX 75002; 800-527-4747

Curious George In Outer Space • Explores comparison skills • *Apple IIGS; 64K; ProDOS 8; copy protected.* • $24.95 retail • $62 retail; Lab Pack • DLM Teaching Resources; One DLM Park; Allen, TX 75002; 800-527-4747

Curious George Visits The Library • Explores position words and concepts • *Apple IIGS; 64K; ProDOS 8; copy protected.* • $24.95 retail • $62 retail; Lab Pack • DLM Teaching Resources; One DLM Park; Allen, TX 75002; 800-527-4747

Dataflo Math Duo • First Math, an introduction to number concepts and more; Flash Math, tutorials for addition, subtraction and multiplication; features additional speech capability • *Apple IIGS; other Apple II models; Applied Engineering's Phasor board for added speech capability; 64K; ProDOS 8; not copy protected.* • $49.95 each retail • Dataflo Computer Services, Inc.; HC 32, Box 1; Enfield, NH 03748; 603-448-2223

Dataflo Spelling And Vocabulary Trio • Lelps, a word Scrambler; Spell and Tell, a series of blank spaces that, when filled, reveal the correct word; and Tell and Spell, a classic spelling bee simulation; available in English and Spanish; all feature additional speech capability • *Apple IIGS; other Apple II models; Applied Engineering's Phasor board for additional speech capability; 64K; ProDOS 8; not copy protected.* • $49.95 each retail • Dataflo Computer Services, Inc.; HC 32, Box 1; Enfield, NH 03748; 603-448-2223

Decimal Concepts • Mathematics • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Designasaurus • Primary education program; composed of Walk-A-Dinosaur, Build-A-Dinosaur and Print-A-Dinosaur • *Apple IIGS; 768K; ProDOS 8; not copy protected.* • $49.95 retail • Britannica Software, Inc.; 345 4th St.; San Francisco, CA 94107; 415-597-5555 or 800-572-2272

Dinosaur Days Plus • Graphic writing program • *Apple IIGS; printer optional; Echo II synthesizer optional; 128K; ProDOS 16; copy protected.* • $49.95 retail • Learning Lab Publishing/Pelican Software; 21000 Nordhoff St.; Chatsworth, CA 91311; 818-341-9611, 800-247-4641 or 800-222-7026 in CA

Dinosaurs • Introduces preschool children to the skills of matching, classification, directionality, precounting and prereading • *Apple IIGS; 512K; GS/OS; not copy protected.* • $49.95 retail • Advanced Ideas; 2902 San Pablo Ave.; Berkeley, CA 94702; 415-526-9100

DiscoverCAD II And DiscoverCAD Courseware • Teaches students the fundamentals of computer-aided design • *Apple IIGS; other Apple II models; 128K; Applesoft Pascal 1.3; copy protected.* • $325 retail; DiscoverCAD II • $12.95 retail; DiscoverCAD Courseware • $335 retail; Discover CAD II and one copy of DiscoverCAD Courseware, student worksheets and instructor's guide • Hearlihy & Co.; 714 W. Columbia St.; PO Box 869; Springfield, OH 45501; 800-622-1000

DLM Math Fluency Program • Teaches math facts to children in special and remedial education; addition, subtraction, multiplication and division • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $29.95 retail; Single Pack • $60 retail; Class Pack • $10 retail; Additional Student Disk • $225 retail; AppleShare Network • DLM Teaching Resources; One DLM Park; Allen, TX 75002; 800-527-4747

Dr. Peet's Talk/Writer • From letter recognition to word processing, "reads" all text and "sings" all menu items for children in grades pre-K to 2 • *Apple IIGS; other Apple II models; Echo speech synthesizer; 64K; copy protected.* • $69.95 retail; more than 100 other programs are available — call for catalog • Hartley Courseware, Inc.; 133 Bridge St.; Dimondale, MI 48821; 517-646-6458 or 800-247-1380

Dueling Questions 1.5 • Authoring tool/educational game, where students compete to answer their teachers' questions • *Apple IIGS; 512K; GS/OS; not copy protected.* • $39.95 each retail • Coyote Computing; PO Box 265; Dewitt, NY 13214; 315-446-1035

Easy Street • Shape and number recognition with optional speech; ages 4 to 7 • *Apple IIGS; color monitor recommended; 256K; no operating system necessary (direct disk); copy protected.* • $49.99 retail • Mindplay; 3130 N. Dodge Blvd.; Tucson, AZ 85716; 602-322-6163 or 800-221-7911

Educational Activities • Educational programs for pre-K to adult • *Apple IIGS; 48K, 64K or 128K; DOS 3.3; copy protected.* • $63 to $950 retail • Educational Activities, Inc.; PO Box 392; Freeport, NY 11520; 516-223-4666 or 800-645-3739

Electric Crayon Deluxe — Coloring Calendars • Computer coloring book that offers custom banner, calendar and poster-making capabilities • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $29.95 retail • Polarware, Inc.; 1055 Paramount Pkwy., Ste. A; Batavia, IL 60510; 312-232-1984

Electric Crayon Deluxe — Dinosaurs Are Forever • Teaches dinosaur evolution • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $29.95 retail • Polarware, Inc.; 1055 Paramount Pkwy., Ste. A; Batavia, IL 60510; 312-232-1984

En Route And Caminando • French and Spanish simulation programs; also available in German, Latin and ESL • *Apple IIGS; 128K; ProDOS 8.* • $39.95 each retail • Gessler Publishing Co., Inc.; 55 W. 13th St., Ste. 34; New York, NY 10011; 212-627-0099

Equation Math • Plotting algebraic equations • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

ESL Writer • Word processing program designed to help ESL (English as a Second Language) students write essays, reports, etc.; grades 5 to 9 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $99.95; net to educators (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Ethics And You • Introduces students to the terminology and concepts associated with ethics; grades 5 to 6 • *Apple IIGS; 64K; DOS 3.3; copy protected.* • $59.95 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

Explore-A-Science Series • Offers elementary and middle school students exciting and realistic reading/writing-based scientific investigations • *Apple IIGS; other Apple II models; 128K; ProDOS 8; program disk copy protected; student disk not copy protected.* • $75 retail; academic • $39.95 retail; home version • William K. Bradford Publishing Co.; 310 School St.; Acton, MA 01720; 508-263-6996 or 800-421-2009

Explore-A-Story Classics • Three classic children's tales; grades pre-K through 3 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; program disk copy protected; student disks not copy protected.* • $75 each retail; Stone Soup, The Three Little Pigs or The Princess and The Pea • William K. Bradford Publishing Co.; 310 School St.; Acton, MA 01720; 508-263-6996 or 800-421-2009

Explore-A-Story Series • Reading and writing skills environment for elementary and middle school students; includes 12 titles based on an original storybook • *Apple IIGS; other Apple II models; 128K; ProDOS 8; program disk copy protected; student disk not copy protected.* • $75 retail; academic • $39.95 retail; home version • William K. Bradford Publishing Co.; 310 School St.; Acton, MA 01720; 508-263-6996 or 800-421-2009

Explore-Australia • Interactive history adventure • *Apple IIGS; other Apple II models; 128K; ProDOS 8; program disk copy protected; student disk not copy protected.* • $99 retail • William K. Bradford Publishing Co.; 310 School St.; Acton, MA 01720; 508-263-6996 or 800-421-2009

Fact Blaster • Helps students learn facts; accommodates any subject • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $24.95 retail • DEC Software; 5307 Lynnwood Dr.; West Lafayette, IN 47906

File-Talk And Word-Talk • Talking database and word processor • *Apple IIGS; other Apple II models; synthesizer; 128K (512K preferred); ProDOS 16; not copy protected.*

Education

• $195 each retail • Access Unlimited-Speech Enterprises; 9039 Katy Freeway, Ste. 414; Houston, TX 77024; 713-461-0006

First Categories For The Apple IIGS • Beginning training in categories • *Apple IIGS; 512K; GS/OS; copy protected.* • $175 retail • Laureate Learning Systems, Inc.; 110 E. Spring St.; Winooski, VT 05404; 800-562-6801

First Letters And Words • Alphabet learning program with talking narrator; ages 3 to 8 • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • First Byte; Clauset Centre; 3100 S. Harbor Blvd., Ste. 150; Santa Ana, CA 92704; 714-432-1740 or 800-523-8070

First Shapes • Basic geometric shapes recognition with talking narrator; ages 3 to 6 • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • First Byte; Clauset Centre; 3100 S. Harbor Blvd., Ste. 150; Santa Ana, CA 92704; 714-432-1740 or 800-523-8070

First Verbs For The Apple IIGS • Training in verb comprehension, with animated pictures • *Apple IIGS; 512K; GS/OS; copy protected.* • $225 retail • Laureate Learning Systems, Inc.; 110 E. Spring St.; Winooski, VT 05404; 800-562-6801

First Words For The Apple IIGS • Language development • *Apple IIGS; 512K; GS/OS; copy protected.* • $225 retail • Laureate Learning Systems, Inc.; 110 E. Spring St.; Winooski, VT 05404; 800-562-6801

First Words II For The Apple IIGS • Language development • *Apple IIGS; 512K; GS/OS; copy protected.* • $225 retail • Laureate Learning Systems, Inc.; 110 E. Spring St.; Winooski, VT 05404; 800-562-6801

Food Chains • Helps elementary students gain an understanding of the relationships among organisms in a community • *Apple IIGS; 128K; DOS 3.3; copy protected.* • $59.95 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

Fraction Practice Unlimited • Develop fraction skills for children in grades 4 to 6 • *Apple IIGS; other Apple II models; 128K; CDOS; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Fractions Concepts, Inc. • Introduction to fractions for grades 4 through 6 • *Apple IIGS; other Apple II models; 128K; CDOS; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

The Game Show • Develops vocabulary, logical thinking and deductive reasoning skills; grades 3 to 8 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $39.95 retail • Advanced Ideas; 2902 San Pablo Ave.; Berkeley, CA 94702; 415-526-9100

Geographic Jigsaw • Players solve a jigsaw puzzle by using the individual states of the United States; ages 6 and up • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $39.95 retail • Eclat Microproducts; PO Box 570-756; Miami, FL 33257; 305-233-4666

The Geometric Presupposer • Explores introductory topics in geometry • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $99 retail • $396 retail; Corvus or AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

The Geometric Supposers • Includes triangles, quadrilaterals and circles • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $99 each retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Geometry • Interactive educational program designed to serve as an extension of classroom work, a refresher or a private tutor • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $79.95 retail; consumer version • $89.95 retail; School Edition (includes backup disk and Teacher's Guide) • $179.95 retail; Lab Pack (includes Teacher's Guide and five disks) • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

Gradebook Plus ProDOS 8 Edition • Teachers' student management program • *Apple IIGS; other Apple II models; 80-column card; 128K; ProDOS 8; not copy protected.* • $59.95 retail; individual version • $199.95 retail; building license • E.M.A. Software; PO Box 339; Los Altos, CA 94023; 415-969-4679

The Great Poster Disk • Posters for the classroom • *Apple IIGS; printer; 64K; ProDOS 8; copy protected.* • $25 retail • Psychological Psoftware Co.; 312 Los Altos Dr.; Aptos, CA 95003; 408-688-6808

GSNumerics • Mathematics • *Apple IIGS; 1 MB; GS/OS 5; not copy protected.* • $139.95 retail • Spring Branch Software, Inc.; RR 2, Box 268A; Manchester, IA 52057; 319-927-6537

Hide And Find • Memory game designed to reinforce recognition of the alphabetic and numeric characters and basic math symbols • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $29.95 retail • Dataflo Computer Services, Inc.; HC 32, Box 1; Enfield, NH 03748; 603-448-2223

Homeworker — The Student Organizer • Secondary education program providing Word Processor, Outliner, Flash Card Maker, Grade Keeper, Calendar and Calculator • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail; home edition • $179.95 retail; school lab pack (contains 10 disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

■ **Hop To It!** • Helps students strengthen their addition and subtraction skills, use mathematics to communicate and connect number facts to a geometric model; grades K to 3 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.*

In Hop To It!, students write number expressions to tell computer characters how far and which way to hop to collect objects along the number line. The program provides four warm-up activities to familiarize students with the number line. The three problem levels challenge students to develop strategies for collecting objects in a given order or with restrictions on the numbers that they are able to use in their expressions.

$65 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Information Laboratory Software: Chemistry IIGS • Research database of comprehensive chemistry information and interesting facts; features interactive graphics and includes tutorial and problem-solving situations • *Apple IIGS; 512K; GS/OS; not copy protected.* • $96 retail; consumer • $77.76 retail; academic • Addison-Wesley Publishing Co., Inc. — Electronic Publishing; 2725 Sand Hill Rd.; Menlo Park, CA 94025; 415-854-0300 or 800-227-1936

Information Laboratory Software: Earth Science IIGS • Research database of comprehensive earth science information and interesting facts; includes interactive graphics • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $96 retail; consumer • $77.76 retail; academic • Addison-Wesley Publishing Co., Inc. — Electronic Publishing; 2725 Sand Hill Rd.; Menlo Park, CA 94025; 415-854-0300 or 800-227-1936

Information Laboratory Software: Life Science IIGS • Research database of comprehensive life science information and interesting facts; features interactive graphics; includes tutorial and problem-solving situations • *Apple IIGS; color monitor; 512K; ProDOS 16; copy protected.* • $96 retail; consumer • $77.76 retail; academic • Addison-Wesley Publishing Co., Inc. — Electronic Publishing; 2725 Sand Hill Rd.; Menlo Park, CA 94025; 415-854-0300 or 800-227-1936

Information Laboratory Software: Physical Science IIGS • Research database of comprehensive physical science information and interesting facts; features interactive graphics and includes tutorial and problem-solving situations • *Apple IIGS; 512K; GS/OS; not copy protected.* • $96 retail; consumer • $77.76 retail; academic • Addison-Wesley Publishing Co., Inc. — Electronic Publishing; 2725 Sand Hill Rd.; Menlo Park, CA 94025; 415-854-0300 or 800-227-1936

Information Laboratory Software: World History IIGS • Research database of comprehensive world history information and interesting facts; features interactive graphics and includes tutorial and problem-solving situations • *Apple IIGS; 512K; GS/OS; not copy protected.* • $96 retail; consumer • $77.76 retail; academic • Addison-Wesley Publishing Co., Inc. — Electronic Publishing; 2725 Sand Hill Rd.; Menlo Park, CA 94025; 415-854-0300 or 800-227-1936

Instant Survey • Survey construction; grades 7 to 12, adult • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $89 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

The Integrated Learning System • Integrated learning system that features a comprehensive K through 8th grade reading, writing and mathematics software curriculum; works in an AppleShare environment • *Apple IIGS; 1.25 MB per workstation; GS/OS; copy protected.* • Call for pricing • Jostens Learning Corp.; 6170 Cornerstone Ct. E, Ste. 300; San Diego, CA 92121; 619-587-0087

Invisible Bugs • Life science; grades 3 to 6, junior high • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Joshua's Reading Machine Premium Pack • Reading program for ages 4 to 7 • *Apple IIGS; other Apple II models; color monitor; 128K; ProDOS 16; not copy protected.* • $49.95 retail • $99.95 retail; academic (contains five sets of disks, scope and a sequence chart and an instruction manual) • Compu-Teach Corp.; 78 Olive St.; New Haven, CT 06511; 203-777-7738 or 800-448-3224

■ **Jungle Safari** • Take a magical safari through deepest Africa; ages 2 to adult • *Apple IIGS; 512K; GS/OS; not copy protected.*

An exciting adventure awaits users who take this magical safari through deepest Africa. Users learn about animals and plants of the tropical jungle, including pond life. By exploring on their own, children become part of the habitat, seeing animals in their natural environment. As each new scene comes up, users can choose to explore in detail a section of that picture. They may find a parrot, a snake, a giraffe or any one of the many animals and plants that live in this jungle — all in super-high-resolution color. By clicking on a subject, users get to hear the sound of the animal and read a short description of facts about the animal. With the exception of animal facts, this program has no written menus or words and gives users complete freedom to go anywhere in the program desired. Users may also take "photos" of the various animals, which can be printed out when the safari is finished.

$49 retail • $59 retail; educator's version • Orange Cherry-Talking Schoolhouse Software; PO Box 390 Westchester Ave.; Pound Ridge, NY 10576; 914-764-4104 or 800-672-6002

Education

Just A Little Lie • Short stories; grades 6 to 8 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

■ **Katie's Farm** • Independent exploration for young children; ages 2 to 6 • *Apple IIGS; 512K; GS/OS; not copy protected.*

Katie's Farm is an exploration and language development program that contains no words. In Katie's Farm, children accompany McGee as he visits his cousin on her farm. In the chicken coop, Katie feeds the chickens and gathers eggs. Children see Aunt Thelma milk the cow in the barn; and the children go fishing at the pond. All animated sequences are accompanied by digitized sound.
$39.95 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

Keep Your Balance! • Students use deductive reasoning to solve balance equations; grades 5 to 8 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

KidsTime II Version 2 • Number and letter sequencing (Dot-to-Dot), letter-recognition/keyboard skills (ABKey) and introductory music (KidsNotes); ages 3 to 8 • *Apple IIGS; color monitor; 512K; ProDOS 16; not copy protected.* • $39.95 retail • Great Wave Software; 5353 Scotts Valley Dr.; Scotts Valley, CA 95066; 408-438-1990

KidTalk • Talking notebook with word-oriented and picture-oriented pull-down menus; ages 5 to 12 • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • First Byte; Clauset Centre; 3100 S. Harbor Blvd., Ste. 150; Santa Ana, CA 92704; 714-432-1740, 800-523-8070 or distributed by Electronic Arts (800-245-4525)

Kidwriter Golden Edition • Teaches writing and word processing skills; ages 6 to 10 • *Apple IIGS; 768K; copy protected.* • $49.95 retail • Spinnaker Software Corp.; 1 Kendall Sq.; Cambridge, MA 02139; 617-494-1200 or 800-826-0706

Kinderama • Five early learning games; "talking" program for ages preschool to 6 • *Apple IIGS; 1.25 MB; GS/OS; copy protected.* • $49.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Krell Software • K to 9, high school and college test preparation, SAT, ACT, GED, Logo, thinking skills games • *Apple IIGS; copy protected.* • $59.95 to $399.95 retail • Krell Software Corp.; Flowerfield Bldg. #7, Ste. 1D; St. James, NY 11780; 516-584-7900 or 800-245-7355

Land Of The Unicorn • An adventure in synonyms, antonyms and logic; "talking" program for ages 9 to 15 • *Apple IIGS; 1 MB; GS/OS; copy protected.* • $59.95 retail; four-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

LCSI Logo II • Enhanced version of Apple Logo II; both a programming language and a hands-on learning environment • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $549 retail; site license • $399 retail; lab pack • $99 retail; single user • Logo Computer Systems, Inc. (LCSI); 3300 Cote Vertu, Ste. 201; Montreal, Quebec, Canada H4R 2B7; 514-331-7090 or 800-321-5646

Learn About Animals • Introduces children to animal life • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $65 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

■ **Learn About Insects** • Takes students into the fascinating world of insects; grades 1 to 3 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.*

Learn About Insects takes primary students into the world of insects through program screens enlivened with interesting animation and activities. Students first identify insects and their parts, dissecting and reassembling insects and comparing their skeletal systems with those of other creatures. Students then learn to sequence insect growth and match insects with their homes and food. Insect movement is also explored, and the program discloses some interesting insect facts. Finally, students are invited to design real or imaginary insects and their worlds, and to write and print out their stories about them.
$65 retail • $195 retail; lab pack • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Learn About Plants • Teaches students about plants; grades 1 to 3 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $65 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Lego TC Logo Starter Pack • Educational construction set for children • *Apple IIGS; Apple IIe; 64K; ProDOS 8; not copy protected.* • $485 retail; school edition • Lego Systems, Inc.; 555 Taylor Rd.; Enfield, CT 06082; 203-749-2291 or 800-527-8339

Life Cycles • Elementary science; grades 3 to 6 • *Apple IIGS; other Apple II models; 64K; DOS 3.3; copy protected.* • $59.95 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

The Linguist • Language tutor • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $44.95 retail • Gessler Publishing Co., Inc.; 55 W. 13th St., Ste. 34; New York, NY 10011; 212-627-0099

Linkword Language Series • Foreign language tutorials • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $29.95 each course retail • Artworx Software Co., Inc.; 1844 Penfield Rd.; Penfield, NY 14526; 800-828-6573

Little Shoppers Kit • Elementary math made fun; grades K to 4 • *Apple IIGS; other Apple II models; ProDOS 8; 64K.* • $109.95 retail • Tom Snyder Productions, Inc.; 90 Sherman St.; Cambridge, MA 02140; 617-876-4433 or 800-342-0236

The Logic Master • Analogies and number series; "talking" program for grades 5 to high school • *Apple IIGS; 1 MB; GS/OS; copy protected.* • $59.95 retail • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

■ **Logo Math: Tools And Games** • Math lab for secondary mathematics; grades 6 to 12 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; Logo PLUS; not copy protected.*

Logo Math is a complete "math lab" for the secondary math curriculum. It contains 14 programs to help students investigate mathematics. Logo Math consists of six games and eight tools, and features a geometry construction tool and a graphing program. Other programs involve triangles, polar and cartesian coordinates, signed and complex numbers, symmetry, prime factorization, probability and statistics. Logo Math is designed to enhance the study of geometry, algebra, trigonometry, probability and statistics, precalculus and calculus. The six games have a practice mode to learn and refine skills and a play mode for a competitive challenge. The eight tools are incorporated into the Logo environment, giving users access not only to the tools, but to all of Logo's capabilities as well.
$39.95 retail; single package • $99.95 retail; site license • Terrapin Software, Inc.; 400 Riverside St.; Portland, ME 04103; 207-878-8200

Logo Plus • Full-featured version of the Logo language that allows students to create maps, animated stories, improved adventure games, detailed charts and graphs, and more complex and realistic pictures • *Apple IIGS; other Apple II models; 128K; ProDOS 8; single unit and lab packs not copy protected; site license not copy protected.* • $119.95 retail; single unit • $199.95 retail; lab pack (includes 5) • $299.95 retail; lab pack (includes 10) • $399.95 retail; lab pack (includes 20) • $399.95 retail; site license • Terrapin Software, Inc.; 400 Riverside St.; Portland, ME 04103; 207-878-8200

LogoWriter Home Edition • Integrates word processing, graphics and music in the Logo programming environment • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected* • $89 retail • Logo Computer Systems, Inc. (LCSI); 3300 Cote Vertu, Ste. 201; Montreal, Quebec, Canada H4R 2B7; 514-331-7090 or 800-321-5646

LogoWriter Software • Integrates word processing and graphics in the Logo programming environment • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $450 retail; site license (intermediate, secondary, primary) • $299 retail; primary lab pack • $299 retail; secondary lab pack • $299 retail; intermediate lab pack • $169 retail; primary set • $169 retail; secondary set • $169 retail; intermediate set • Logo Computer Systems, Inc. (LCSI); 3300 Cote Vertu, Ste. 201; Montreal, Quebec, Canada H4R 2B7; 514-331-7090 or 800-321-5646

LogoWriter Spanish • Combines Logo programming and graphics with word processing; grades 3 and up • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $169 retail; set • $299 retail; lab pack • $450 retail; site license • Logo Computer Systems, Inc. (LCSI); 3300 Cote Vertu, Ste. 201; Montreal, Quebec, Canada H4R 2B7; 514-331-7090 or 800-321-5646

Look, Listen & Touch • A sensory approach to learning; junior high school to adult • *Apple IIGS; other Apple II models; 64K; DOS 3.3; copy protected.* • $82.50 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

Lunar Greenhouse • Plant growth; grades 3 to 6, junior high • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Magic Slate II • Word processing program • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $129 retail; package includes 20, 40 and 80 column • $260 each retail; AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Magic Spells • Sharpens spelling skills for children ages 6 to 12 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail; home edition • $59.95 retail; school edition (includes backup disk, teacher's guide and online and offline activities) • The Learning Co.; 6493 Kaiser Dr.; Fremont, CA 94555; 415-792-2101

Magical Myths • A journey in Greek Mythology; ages 8 to 12 • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Map Skills • Teaches and reinforces map reading skills; ages 8 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Education

Master Gradebook Plus • Automates the task of recording, calculating and averaging students' grades • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $29.95 retail • DEC Software; 5307 Lynnwood Dr.; West Lafayette, IN 47906

Math And Me • Builds early math skills for children ages 3 to 6 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $29.95 retail • $129.95 retail; school lab pack (contains five disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Math Blaster Mystery • Develops problem-solving skills, logical thinking skills and strategies for solving word problems; ages 10 and up • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains 10 disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Math Blaster Plus • Addition and subtraction, multiplication and division, fractions, decimals and percents; for grades 1 through 6 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains five disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Math Blaster Plus IIGS • Builds accuracy and speed as students master skills in addition, subtraction, multiplication, division, fractions, decimals and percents; grades 1 to 6 • *Apple IIGS; 512K; GS/OS; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains 10 disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Math Masters • Consists of two programs that cover basic mathematical operations for numbers from 0 through 25 • *Apple IIGS; other Apple II models; 64K; ProDOS 6; copy protected.* • $46 retail • $115 retail; Lab Pack • DLM Teaching Resources; One DLM Park; Allen, TX 75002; 800-527-4747

Math Rabbit • Introduces key math concepts in a series of four image games; ages 3 to 7 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail; home edition • $59.95 retail; academic edition • $129.95 retail; lab pak • The Learning Co.; 6493 Kaiser Dr.; Fremont, CA 94555; 415-792-2101

Math Shop Jr. • Introduces math concepts; grades 1 to 4 • *Apple IIGS; other Apple II models; 64K (128K recommended); ProDOS 8; not copy protected.* • $69.95; net to educator (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Math Tutor • Skill-building in fractions, decimals and percentages; grades 1 to 6 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $59.95 each; net to educator (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Math Wizard • Four educational games; "talking" program for ages 5 to 13 • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Math Word Problems • Provides practice at analyzing and solving math word problems; ages 8 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

MathTalk • Talking notebook featuring math tutorials, simulations and games; ages 5 to 10 • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • First Byte; Clauset Centre; 3100 S. Harbor Blvd., Ste. 150; Santa Ana, CA 92704; 714-432-1740, 800-523-8070 or distributed by Electronic Arts (800-245-4525)

MathTalk Fractions • Talking notebook featuring decimals, fractions and percents; ages 8 to 15 • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • First Byte; Clauset Centre; 3100 S. Harbor Blvd., Ste. 150; Santa Ana, CA 92704; 714-432-1740, 800-523-8070 or distributed by Electronic Arts (800-245-4525)

Mavis Beacon Teaches Typing! • Expert-system typing teacher • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • The Software Toolworks; 19808 Nordhoff Pl.; Chatsworth, CA 91311; 818-885-9000

McGee • Independent exploration for young children • *Apple IIGS; other Apple II models; 512K; GS/OS; copy protected.* • $39.95 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

MeasureWorks • Linear measurement, area, perimeter measurement and appropriate units of measurement; grades 1 to 4 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy* protected. • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Memory Building Blocks • Memory skills; grades K to adult • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; Corvus or AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Memory Castle • Memory skills; grades 5 to 12 • *Apple IIGS; other Apple II models; 48K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; Corvus or AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Memory Machine • Memory skills; grades 5 to adult • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; Corvus or AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

MIDI Messenger • TML Pascal source-code-based IIGS programming tutorial and MIDI utility • *Apple IIGS; MIDI interface optional; 768K; GS/OS; not copy protected.* • $29.95 retail; single unit • $149.95 retail; lab pack (10 students) • MMP Systems; 20681 Celeste Cir.; Cupertino, CA 95014; 408-996-9270

The Milliken Storyteller • Interactive computer storybook; ages 4 to 7 • *Apple IIGS; color monitor recommended; 512K; GS/OS; not copy protected.* • $44.95 retail • Milliken Publishing Co.; 1100 Research Blvd.; PO Box 21579; St. Louis, MO 63132; 314-991-4220 or 800-643-0008

Miner's Cave • Physical science; grades 4 to 7 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Modular Management System For Schools (MMS) • Complete educational management system • *Apple IIGS; monitor and printer; 1 MB; GS/OS; not copy protected.* • $399 retail; Student Master File System • $449 retail; Attendance Reporting System • $349 retail; Discipline Reporting System • $949 retail; Grade Reporting System • $1,099 retail; Student Scheduling System • $449 retail; Tuition/Fee Accounting System • Computer Resources, Inc.; Rte. 125, PO Box 60; Barrington, NH 03825; 603-664-5811

Money Works • Teaches money recognition, counting and more; grades 1 to 4 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Monsters And Make Believe Plus • Graphic writing program • *Apple IIGS; printer optional; Echo II synthesizer optional; 128K; ProDOS 8; copy protected.* • $49.95 retail • Learning Lab Publishing/Pelican Software; 21000 Nordhoff St.; Chatsworth, CA 91311; 818-341-9611, 800-247-4641 or 800-222-7026 in CA

■ **More Special Days** • Language activities; grades K to 2 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.*

More Special Days is used with the Muppet Slate Teacher Disk. It contains many new pictures that are not available with either Muppet Slate or Seasons and Special Days. Pictures include: a Santa, a Christmas tree, a valentine, a ghost, fireworks, a shamrock, Martin Luther King and Susan B. Anthony. The Teacher's Guide provides lessons that include ideas for learning about the holiday, a pre-writing activity to stimulate thinking, individual computer writing, a system for making revisions and a method for sharing the final product.
$59 retail • $177 retail; lab pack • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

More Teasers From Tobbs • Decimal and fractions practice; grades 5 to 12 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $260 retail; AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

■ **Movin' On** • Reading comprehension skills; grades 6 to 7 • *Apple IIGS; 128K; ProDOS 8; copy protected.*

Movin' On provides the adventures of Jodi, Jeremy, Jason and Anna. This material offers practice in the comprehension skills, with special attention to literacy techniques and concerns, including consideration of author's purpose, style, characterization, mood and theme. Specially designed worksheets and suggested activities help practice the skill of previewing — using prior knowledge to prepare for purposeful reading. The content is modifiable and record keeping is included.
$59.95 retail • Hartley Courseware, Inc.; 133 Bridge St.; Dimondale, MI 48821; 517-646-6458 or 800-247-1380

Mr. Py And I Coloring Adventures • Educational learning series in the form of a coloring book • *Apple IIGS; 3.5-inch disk drive; RGB monitor; 768K (1.25 MB suggested); ProDOS 16 and GS/OS; not copy protected.* • $59 retail • Pygraphics Corp.; PO Box 639; Grapevine, TX 76051; 817-481-7536 or 800-222-7536

■ **Multiply With Balancing Bear** • Number relationships in multiplication; grades 3 to 6 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.*

Balancing Bear helps students learn about number relationships in multiplication. Is the total cost of three balloons at four cents each the same as four balloons at three cents each? What about the total cost of six balloons at two cents each? Students choose balloons to make the total cost of balloons on one side of a balance beam equal to the total cost of balloons on the other side.
$65 retail • $195 retail; lab pack • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Education

The Muppet Collection • Develops skills in sorting and classifying, determining likenesses and differences and more; grades K to 1 • *Apple IIGS; other Apple II models; works with regular keyboard, Muppet Learning Keys or Touch Window; 64K; ProDOS 8; copy protected.* • $65 retail; Muppets On Stage (includes backup) • $65 retail; Muppetville (includes backup) • $65 retail; Muppet Word Book (includes backup) • $195 retail; Muppet Word Book lab pack (contains 10 programs) • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Muppet Slate • Word and picture processor; grades K to 2 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $75 retail • $225 retail; lab pack • $300 retail; Corvus or AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Music, MIDI, And Your Apple II Archive • Information newsletter compendium and educational resource • $17.95 retail • $21.95 retail; international orders • MMP Systems; 20681 Celeste Cir.; Cupertino, CA 95014; 408-996-9270

Mystery Objects • Physical science; grades 4 to 6 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

National Foreign Language Examination • Helps users prepare for the National Language Examinations and Achievement Tests; available in German, French and Spanish • *Apple IIGS; 128K; ProDOS 8; copy protected.* • $49.95 per level retail • $180 retail; set of four levels • Gessler Publishing Co., Inc.; 55 W. 13th St., Ste. 34; New York, NY 10011; 212-627-0099

National Gallery Of Art (ImageWorks Video Directory) • Video directories • *Apple IIGS; other Apple II models; 64K; ProDOS 8.* • $49.95 retail • Teaching Technologies; PO Box 3808; San Luis Obispo, CA 93403; 805-541-5100

The New Talking Stickybear Alphabet • Talking upper and lowercase letter recognition; features two pictures for each letter; three activities to complement and encourage alphabet learning; ages 3 to 6 • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

The New Talking Stickybear Opposites • Teaches beginning learners about opposites and helps build reasoning skills; ages 3 to 6 • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

The New Talking Stickybear Shapes • Helps children identify shapes; includes a poster and Stickybear stickers; ages 3 to 6 • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Newbery Adventures • Adventure series • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 each retail; Mrs. Frisby and the Rats of NIMH (grades 4 to 6), Island of the Blue Dolphins (grades 4 to 6), Charlotte's Web (grades 3 to 6), Mr. Popper's Penguins (grades 3 to 7), A Wrinkle In Time (grades 4 to 8) • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

OGI Pascal Development System • Allows development of programs using the Pascal programming language; targeted toward education environment • *Apple IIGS; other Apple II models; 128K; ProDOS 8; 80-column display; printer optional; not copy protected.* • $55 retail • On-Going Ideas; Rd. #1, Box 810; Starksboro, VT 05487; 802-453-4442

Once Upon A Time... II • Design and publish illustrated books; ages 6 to 12 • *Apple IIGS; color monitor; 512K; GS/OS; not copy protected.* • $59.95 retail • $119.95 retail; classroom edition • Compu-Teach Corp.; 78 Olive St.; New Haven, CT 06511; 203-777-7738 or 800-448-3224

Once Upon A Time... Talking IIGS • Desktop publishing program for ages 6 to 12 • *Apple IIGS; color monitor; 512K; GS/OS; not copy protected.* • $59.95 retail • $119.95 retail; classroom edition • Compu-Teach Corp.; 78 Olive St.; New Haven, CT 06511; 203-777-7738 or 800-448-3224

One For The Books • Program that generates personalized book lists and motivates students to read; grades 3 to 6 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $149 retail • Focus Media, Inc.; PO Box 865; 839 Stewart Ave.; Garden City, NY 11530; 516-794-8900 or 800-645-8989

One Of A Kind • Vocabulary; encourages originality; grades 3 to adult • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $65 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Patterns • Language arts; preschool • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Pfs: Write And Pfs: File/Report • Programs designed to help students in grades 7 through 12 master word processing, filing and reporting skills • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $79.95 each; net to educators (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

■ **Pickleface And Other Stories** • Reading comprehension skills; grades 4 to 5 • *Apple IIGS; 128K; ProDOS 8; copy protected.*

Students enjoy the adventures of Jodi and her friends as they build comprehension skills. Questions for each chapter stress the higher level skills, which include making inferences and predictions, distinguishing fact from opinion and expanding vocabulary in context. Worksheets and suggested activities help students practice the skill of previewing — using prior knowledge to prepare for purposeful reading. The author's techniques used in characterization, mood and theme are also discussed. All story content and questions are modifiable. Record keeping is included.

$59.95 retail • Hartley Courseware, Inc.; 133 Bridge St.; Dimondale, MI 48821; 517-646-6458 or 800-247-1380

■ **Picture Parade** • Helps young students conceptualize the time order of events; grades K to 2 • *Apple IIGS; 128K; ProDOS 8; copy protected.*

Picture Parade is a colorful program that lets students manipulate on-screen pictures to form logical sequences. Forty-eight sets of 2-, 3-, 4- and 6-part stories are pictured here. Students number each picture, see the pictures instantly rearranged according to their direction, check their own work and get feedback. Record keeping is included.

$39.95 retail • Hartley Courseware, Inc.; 133 Bridge St.; Dimondale, MI 48821; 517-646-6458 or 800-247-1380

Pow! Zap! Ker-Plunk! • Comic book maker • *Apple IIGS; Echo II board optional; 128K; ProDOS 8; copy protected.* • $49.95 retail • $59.95 retail; school edition • Learning Lab Publishing/Pelican Software; 21000 Nordhoff St.; Chatsworth, CA 91311; 818-341-9611, 800-247-4641 or 800-222-7026 in CA

ProWords And ProBraille • Word processor and translator for the blind • *Apple IIGS; other Apple II models; synthesizer (Echo or Slotbuster II); 128K per program (512K preferred); ProDOS 16; not copy protected.* • $150 retail; ProBraille • $195 retail; ProWords • Access Unlimited-Speech Enterprises; 9039 Katy Freeway, Ste. 414; Houston, TX 77024; 713-461-0006

Punctuation Rules • Teaches and reinforces the proper use of punctuation; ages 8 to 11 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

QuickTests • Test generator • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $180 retail; single user • $450 retail; unlimited copies per school or college department • Seven Hills Software Corp.; 2310 Oxford Rd.; Tallahassee, FL 32304; 904-575-0566 or 800-627-3836

Read & Rhyme • Four language-arts activities; "talking" program for ages 5 to 10 • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Read 'N Roll • Reading comprehension program for grades 3 through 6 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains five disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Read, Write And Publish • Process writing skills environment for grades 1 through 8; includes eight topics in each grade-level package • *Apple IIGS; other Apple II models; 128K; ProDOS 8; program disk copy protected; student disks not copy protected.* • $99 retail; academic • $99 retail; Spanish Edition • William K. Bradford Publishing Co.; 310 School St.; Acton, MA 01720; 508-263-6996 or 800-421-2009

Read-A-Rama • Five early learning activities; "talking" program for ages 5 to 8 • *Apple IIGS; 1 MB; ProDOS 16; copy protected.* • $59.95 retail • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Reader Rabbit • Talking early education program that reinforces reading, spelling and vocabulary skills; ages 3 to 7 • *Apple IIGS; color monitor recommended; 256K; ProDOS 16; copy protected.* • $59.95 retail; home edition • $79.95 retail; school edition • $149.95 retail; lab pack • The Learning Co.; 6493 Kaiser Dr.; Fremont, CA 94555; 415-792-2101

Reading And Me • Prepares children ages 4 to 7 for reading • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $39.95 retail • $129.95 retail; school lab pack (contains five disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Reading Comprehension • Includes 29 high-interest story and question sets designed to help children learn important reading skills; ages 9 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Education

Reading Magic Library • Storybooks that let parents and their children choose what happens next • *Apple IIGS; other Apple II models; 512K; ProDOS 8; copy protected.* • $34.95 each retail • Tom Snyder Productions, Inc.; 90 Sherman St.; Cambridge, MA 02140; 617-876-4433 or 800-342-0236

Reading Skills Development Program • Word analysis and vocabulary skills; grades 1 to 8 • *Apple IIGS; 256K; ProDOS 16; copy protected.* • $1,795 retail; networking and site licensing pricing also available • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Recycling Logic • Teaches basic principles of logic; ages 6 to adult • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail; includes backup • $260 retail; Corvus or AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Report Card II • Teacher's grading system • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $59.95 retail • Sensible Software, Inc.; 335 E. Big Beaver, Ste. 207; Troy, MI 48083; 313-528-1950

Return Of The Dinosaurs • An entertaining, problem-solving adventure that also teaches database access skills; ages 10 and older • *Apple IIGS; 256K; ProDOS 8.* • $39.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Revolution '76 • Historical simulation • *Apple IIGS; 1.2 MB; GS/OS.* • $49.95 retail • Britannica Software, Inc.; 345 4th St.; San Francisco, CA 94107; 415-597-5555 or 800-572-2272

The Right Turn • Students learn mathematical concepts of rotation and transformation • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $260 retail; AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

RSVP • National and international manners and customs • *Apple IIGS; 128K; DOS 3.3; copy protected.* • $39.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

School Speller And School Speller Manager • Spelling instruction • *Apple IIGS; other Apple II models; Magic Slate II; 128K; ProDOS 8.* • $75 retail; School Speller (40 or 80 column version) • $225 retail; lab packs • $65 retail; School Manager • $260 retail; AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Scorekeeper 3.0 • Gradebook management system • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protection limited.* • $79.95 retail • Stokes Publishing Co.; 1125 Robin Way, Ste. C; Sunnyvale, CA 94087; 408-736-4637

Seasons And Special Days • Language activities; grades K to 2 • *Apple IIGS; other Apple II models; Muppet Slate; 64K; ProDOS 8; copy protected.* • $59 retail • $177 retail; lab pack • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Sentence Fun • Word skills program; ages 8 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Sesame Street Series • Introduces children to ABCs, numbers and opposites • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $17.95 each retail; Letters For You, Numbers Count, Opposites Attract • Polarware, Inc.; 1055 Paramount Pkwy., Ste. A; Batavia, IL 60510; 312-232-1984

Sky Travel • Astronomy database program featuring 1,200 stars, 88 constellations and more • *Apple IIGS; 256K; ProDOS 8; not copy protected.* • $52.95 retail • MicroIllusions; 17408 Chatsworth St.; Grenada Hills, CA 91344; 818-360-3715

SmoothTalker • Software-only speech synthesizer that converts text into speech • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • First Byte; Clauset Centre; 3100 S. Harbor Blvd., Ste. 150; Santa Ana, CA 92704; 714-432-1740, 800-523-8070 or distributed by Electronic Arts (800-245-4525)

Solve It! • Teaches students how to search for information in a database; exercise logical thinking; organize and analyze data; and to enhance language art skills • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $75 retail • $300 retail; AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Space Waste Race • An animated storybook with learning games; preschool through grade 2 • *Apple IIGS; other Apple II models; 48K; ProDOS 8; copy protected.* • $65 retail • $260 retail; AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

SpaceLace • An interactive kaleidoscope and Basic tutorial • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $29.95 retail • Great Wave Software; 5353 Scotts Valley Dr.; Scotts Valley, CA 95066; 408-438-1990

Spell It Plus • Spelling; ages 10 and up • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains 10 disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Speller Bee • Incorporates talking notebook and graphics to improve spelling skills; for children ages 5 to 10 • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • First Byte; Clauset Centre; 3100 S. Harbor Blvd., Ste. 150; Santa Ana, CA 92704; 714-432-1740, 800-523-8070 or distributed by Electronic Arts (800-245-4525)

Spellevator • Spelling; grades 1 to 6 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Spelling Rules • Improves spelling accuracy; ages 8 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Spelling Series Toolkit • Creates word lists for Spellevator • *Apple IIGS; other Apple II models; 128K; ProDOS 8.* • $89 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Stars & Planets • Provides six educational games that reinforce early childhood learning skills; ages 2 1/2 to 6 • *Apple IIGS; 512K; GS/OS; not copy protected.* • $44.95 retail • Advanced Ideas; 2902 San Pablo Ave.; Berkeley, CA 94702; 415-526-9100

Stickybear Math • Basic addition and subtraction; great graphics motivate students through 20 levels of difficulty; program advances automatically — based on rate of success; ages 6 to 9 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail • $75 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Math 2 • Basic multiplication and division; features automatic level-of-difficulty monitor that adjusts to suit individual learning rates; ages 7 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail • $75 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Numbers • Counting and number recognition program; colorful animation reinforces "forward and backward" counting skills; multiple image options for each numeral; ages 3 to 6 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail • $75 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Opposites • Teaches beginning learners about opposites; helps build reasoning skills; package includes 32-page book and Stickybear stickers; ages 3 to 6 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail • $75 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Parts Of Speech • Helps children recognize parts of speech using both word lists and sentence formats to reinforce student skills • *Apple IIGS; other Apple II models; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Reading • Three interactive and highly enjoyable activities build vocabulary and reading comprehension skills; ages 4 to 8 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail • $75 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Reading Comprehension • Multilevel reading program containing 30 stories and comprehension question sets; program automatically advances to suit individual learning rates and can be customized with new story and question exercises; ages 7 to 9 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Shapes • Helps children identify shapes with bold, bright colors, music and animation; package includes poster, 32-page book and Stickybear stickers; ages 3 to 6 • *Apple IIGS; 64K; ProDOS 8; copy protected.* • $39.95 retail • $75 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Spellgrabber • Builds spelling and vocabulary skills with three exciting, arcade-style activities; ages 6 to 9 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Town Builder • Teaches basic map reading, compass reading, positioning and direction skills; children build their own towns complete with roads, parks, bridges, airports and more; ages 6 to 9 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* •

Education

$49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Typing • Typing instruction for all ages, featuring activities to sharpen both typewriter and computer keyboard skills • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Stickybear Word Problems • Provides beginning practice at analyzing and solving math word problems; rewards correct answers with bright, colorful animation; ages 7 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Studymate: The Grade Booster • Study tool for teens and adults • *Apple IIGS; IIc+; 128K; ProDOS 16; not copy protected.* • $49.95 retail • $99.95 retail; classroom edition • Compu-Teach Corp.; 78 Olive St.; New Haven, CT 06511; 203-777-7738 or 800-448-3224

Success With Literature • Computer-based approach to writing about literature; 12 programs in series; grades 8 to 12 • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $29.95 each; net to educator (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Success With Writing • Four-module program that guides students through the writing process; grades 7 to 12 • *Apple IIGS; other Apple II models; printer optional; 128K; ProDOS 8; not copy protected.* • $99.95; net to educators (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Super Factory • Problem-solving strategies learned from observing a 3-D cube • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail; includes backup • $260 retail; Corvus network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Super Story Tree • Interactive story maker that allows students in grades 4 through 9 to illustrate their stories with exciting graphics, music and sound effects • *Apple IIGS; other Apple II models; joystick, mouse or Koala Pad; Epson or Scribe printer; 128K; ProDOS 8; not copy protected.* • $79.95; net to educators (customized lab packs, site licenses and network versions available) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Tales From The Arabian Nights • A unique learning experience in reading comprehension; ages 8 to 12 • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Talking Aesop's Fables • Reading comprehension and language arts; ages 6 to 9 • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail; two-disk program • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Talking Math And Me • Builds early math skills using digitized speech; ages 3 to 6 • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains five disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Talking Reading And Me • Prepares children for reading using digitized speech; ages 4 to 7 • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains five disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

◆ **Talking Schoolhouse Series** • 16 software programs that use real human speech to teach basic skills • *Apple IIGS; 512K.*

The Talking Schoolhouse Series features 16 talking programs that teach children basic skills with a human voice and super high-resolution graphics.

The programs include: Talking ABC's (pre-K to 2), teaches the alphabet and early keyboarding; Talking Addition & Subtraction (K to 3), a voice adds and subtracts numbers; Talking Alpha Chimp (pre-K to 2), Harry the Chimp teaches alphabet and early numbers; Talking Animals (pre-K to 4), teaches shape, color and sound classification skills; Talking Clock (K to 3), helps children tell time; Talking Colors & Shapes (pre-K to 2), targeted for youngsters getting ready to read; Talking Dinosaurs (K to 4), takes kids back in time with Iggy the Dinosaur; Talking First Reader (K to 3), a perfect reading experience for beginning readers; Talking First Writer (1 to 4), helps children build sentences; Talking Money (K to 4), teaches the value and use of money; Talking Numbers (pre-K to 2), teaches numbers one to nine and their values; Talking Read-Along Stories (2 to 4), youngsters get help reading from a human voice; Talking School Bus (K to 3), kids choose some interesting trips for their school bus; Talking Speller (K to 3), youngsters spell words as they hear them; Talking USA Map (4 to 12), the states come alive with human speech; and Talking Reading Railroad (K to 4), builds early reading and word skills.
$49 each retail • $59 each retail; School Edition • Orange Cherry-Talking Schoolhouse Software; PO Box 390 Westchester Ave.; Pound Ridge, NY 10576; 914-764-4104 or 800-672-6002
Circle No. ???

Talking Text Libraries • Synthesized speech that reads stories aloud for young readers • *Apple IIGS; other Apple II models; Echo IIb board; 128K; ProDOS 8; not copy protected.* • $39.95 each; net to educators — Beginning Classics (Grades K to 1), Classics for Young Readers (Grades 2 to 3), Discover History (Grades 2 to 4), Explore Science (Grades 2 to 4) • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Talking Text Spelling • Talking spelling tutor • *Apple IIGS; other Apple II models; Echo IIb board; 128K; ProDOS 8; not copy protected.* • $99.95 each; net to educators (without board) for grade specific core package • $99.95; Echo board net to educators • $99.95; additional spelling list packages for grades 1 to 6 • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Talking Text Writer • Combines word processing with the Echo board from Street Electronics • *Apple IIGS; other Apple II models; Echo, Cricket or PC2 speech synthesizer board; 512K; ProDOS; not copy protected.* • $149.95; net to educators • $99.95; Echo board net to educators • Scholastic, Inc.; PO Box 7502; 2931 E. McCarty St.; Jefferson City, MO 65102; 800-541-5513 or 800-392-2179 in MO

Teasers By Tobbs With Integers • Mathematics; grades 2 to adult • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Teasers By Tobbs With Whole Numbers • Addition and multiplication using whole numbers or integers • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $260 retail; Corvus network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Teddy & Iggy • Memory and sequencing skills; grades K to 2 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; Corvus or AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Teddy's Playground • Critical-thinking skills; grades K to 4 • *Apple IIGS; other Apple II models; 48K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; Corvus or AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Test It! Deluxe • Allows teachers to create customized tests • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $69.95 retail • $164.95 retail; school site license • EduSoft; PO Box 2560; Berkeley, CA 94702; 415-548-2304 or 800-338-7638

Think Quick! • Fast-paced adventure game that helps develop thinking skills for ages 7 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • The Learning Co.; 6493 Kaiser Dr.; Fremont, CA 94555; 415-792-2101

The Thinking Machine • Educational system designed to help students use their brain more effectively • *Apple IIGS; printer optional; 64K; ProDOS 8; copy protected.* • $89.50 retail • Psychological Psoftware Co.; 312 Los Altos Dr.; Aptos, CA 95003; 408-688-6808

Ticket To London • Adventure that teaches social studies, art and literature; ages 10 to adult • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Ticket To Paris • Adventure that teaches French and social studies; ages 12 to adult • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Ticket To Spain • Adventure that teaches Spanish, social studies, art and literature; ages 12 to adult • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Ticket To The National Parks • Adventure that enriches a user's knowledge of our country's natural resources as they experience the splendor of our nation • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $44.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Ticket To Washington, D.C. • Adventure that teaches social studies, art and literature; ages 10 to adult • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $44.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Tiger's Tales • Interactive adventure stories; grades K to 2 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $260 retail; Corvus network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Time Navigator • History; grades 8 to 12 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Education

Time Patterns Tool Kit: American History • Historical database • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $99.95 retail • Tom Snyder Productions, Inc.; 90 Sherman St.; Cambridge, MA 02140; 617-876-4433 or 800-342-0236

To Preserve, Protect And Defend • U.S. Constitution lesson • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Toby's Terrific Pet • Story writing; grades 3 to 5 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Touch 'N Write • D'Nealian Manuscript Method or Palmer Manuscript Penmanship; grades K to 2 • *Apple IIGS; other Apple II mode;s 128K; ProDOS 8; copy protected.* • $75 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Tutor-Tech 2.6 • Apple IIGS hypermedia tool for educators featuring a tool box of writing and drawing tools, text fonts, various buttons similar to HyperCard, videodisc and video overlay card support and more • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $195 retail; basic • $290 retail; complete with gradebook manager • Techware Corp.; PO Box 151085; Altamonte Springs, FL 32715; 407-695-9000

Type To Learn • Teaches typing skills • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $75 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Typing Teacher • Typing tutor • *Apple IIGS; other Apple II models (including IIc+); 128K; ProDOS 8; not copy protected.* • $29.95 retail • Future Age Computers; 3 McCrary Dr. SW; Rome, GA 30161; 404-235-4948

Typing Tutor IV • Customizing keyboard instruction • *Apple IIGS; RGB color monitor recommended; 512K; ProDOS 16; not copy protected.* • $44.95 retail • Simon & Schuster Software; 1 Gulf + Western Plaza, 13th Fl.; New York, NY 10023; 800-624-0023 or 800-624-0024 in NJ

U.S. Geography • Interactive program for learning U.S. Geography • *Apple IIGS; 128K; DOS 3.3; copy protected.* • $24.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

U.S. History • Supplement to any introductory U.S. History course • *Apple IIGS; 128K; DOS 3.3; copy protected.* • $24.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

USA GeoGraph • Geography; IIGS specific; grades 5 to adult • *Apple IIGS; 768K; GS/OS; copy protected.* • $139 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

The Velveteen Rabbit • Literature; creative writing; grades 1 and 2 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

■ **Visual Tracking** • Emulates some of the features of mechanical reading machines; grades K to 4 • *Apple IIGS; 128K; ProDOS 8; copy protected.*

Visual Tracking was designed to emulate some of the features of mechanical reading machines, but with many added extras. Visual Tracking loads in a user-selected word processor text (ASCII) file and allows users to set the reading speed and the way in which the words of the text will be displayed on the screen. Also, special "reserved" characters may be placed within the body of the story, allowing word clustering and other unique options. During the reading session, a user may pause; change the reading level, speed or format; mark words as unknown; or end the session before all of the text has been read.
$59.95 retail • Hartley Courseware, Inc.; 133 Bridge St.; Dimondale, MI 48821; 517-646-6458 or 800-247-1380

Vocabulary Development • Increases vocabulary and strengthens reading skills with a multilevel series of high-interest questions; context clues, parts of speech, multiple meanings and more covered in 44 lessons; ages 8 and up • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail • $85 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

■ **Watership Down** • Literature; creative writing; grades 5 to 8 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.*

Watership Down is a totally entertaining book that fosters a sense of hope and joy through rabbit heroes in search of a better life. A wide variety of "whole language" experiences, to be used after reading portions of the book aloud to the class, are outlined in the teacher's guide.
$59 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Weeds To Trees • Plant succession; grades 3 to 10 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

What Do You Do With A Broken Calculator? • Math operations; grades 2 to adult • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

What's In A Frame? • Memory strategies; grades K to 6 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $195 retail; lab pack • $260 retail; Corvus or AppleTalk (128K) network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

Where In The World Is Carmen Sandiego? • Players track Carmen and her gang of thieves around the world to recover stolen treasures • *Apple IIGS; 512K; ProDOS 16.* • $44.95 retail • $54.95 retail; School Editions • $109.95 retail; Lab Packs • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

Winker's World Of Patterns • Offers three arenas for understanding patterns; grades K to 6 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $65 retail • $260 retail; AppleTalk network • Sunburst Communications, Inc.; 101 Castleton St.; Pleasantville, NY 10570; 914-747-3310 or 800-628-8897

The Wonders Of The Animal Kingdom • Six educational activities; prints in color; "talking" program for ages 6 to 12 • *Apple IIGS; 1 MB; ProDOS 16; copy protected.* • $49.95 retail • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

Wood Car Rally • Physical science; grades 4 to 7 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Word Attack Plus • Teaches students 700 new words and their definitions; grades 4 to 12 • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 retail • $149.95 retail; school lab pack (contains five disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

Word Attack Plus Spanish And Word Attack Plus French • Teaches students to master a beginning foreign language vocabulary; grade 7 to adult • *Apple IIGS; other Apple II models; 128K; ProDOS 8; copy protected.* • $49.95 each retail • $149.95 retail; school lab pack (contains 10 disks and coupon for free teacher's resource guide) • Davidson & Associates, Inc.; 3135 Kashiwa St.; Torrance, CA 90505; 213-534-2250 or 800-556-6141

The Word Master • Vocabulary builder; prints study sheets, quizzes and pretests; "talking" program for grades 3 to 8 • *Apple IIGS; 1 MB; GS/OS; copy protected.* • $49.95 retail • Unicorn Software Co.; 2950 E. Flamingo Rd., Ste. B; Las Vegas, NV 89121; 702-737-8862

World GeoGraph • Social studies; IIGS specific; grade 6 to adult • *Apple IIGS; two 3.5-inch drives recommended; color monitor; 768K; GS/OS; copy protected.* • $139 retail; includes illustrated user guide • $19 retail; comprehensive classroom guide • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

World Geography • Challenging, interactive program for learning world geography • *Apple IIGS; 128K; DOS 3.3; copy protected.* • $24.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

World History • Supplement for introductory world history courses • *Apple IIGS; 128K; DOS 3.3; copy protected.* • $24.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

■ **Wortgefecht** • German language program • *Apple IIGS; other Apple II models; 128K; DOS 3.3; copy protected.*

Wortgefecht is a two-disk program that teaches the vocabulary of school, food, sports, travel, daily life and occupations. It includes a word display that gives meanings to and sentences for nouns, verbs and adjectives for each of six topics. The multiple choice and sentence completion exercises reinforce usage of the words, and the colorful arcade game challenges students to find the translations quickly. It contains color graphics, optional sound effects and an easy-to-use editor that allows users to create and print their own vocabulary, exercises and tests.
$49.95 retail • Gessler Publishing Co., Inc.; 55 W. 13th St., Ste. 34; New York, NY 10011; 212-627-0099

Writer Rabbit • Builds reading comprehension and writing skills for ages 7 to 10 • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $49.95 retail; home edition • The Learning Co.; 6493 Kaiser Dr.; Fremont, CA 94555; 415-792-2101

Writer's Helper Stage II • Prewriting and revising software • *Apple IIGS; two disk drives (hard disk drive optional); printer recommended; 128K; ProDOS 8; copy protected.* • $120 retail • $240 retail; Educator Pack with six disks • Conduit; The University of Iowa; Oakdale Campus; Iowa City, IA 52242; 319-335-4100

Your First Job • Teaches students how to conduct a job search and to improve their chances of finding their first job • *Apple IIGS; 64K; DOS 3.3; copy protected.* • $69.95 retail • MCE, A Div. of Lawrence Productions; 1800 S. 35th St.; Galesburg, MI 49053; 800-421-4157

Zero In On Zero • Addition/subtraction; multiplication/division • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $46 each retail; single pack •

Education

$115 each retail; lab pack • $199 each retail; network • DLM Teaching Resources; One DLM Park; Allen, TX 75002; 800-527-4747

Zoyon Patrol • Game-like simulation that provides an environment for learning the scientific method • *Apple IIGS; other Apple II models; 128K; MDOS; copy protected.* • $59 retail • MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504

Entertainment

2088: The Cryllan Mission • Role-playing game • *Apple IIGS; 1 MB (new GS with ROM 3) or 1.25 MB (older GS); GS/OS; not copy protected.* • $69.95 retail • Victory Software; PO Box 821381; Houston, TX 77282; 713-493-3232 or 800-232-3828

4th & Inches • Football simulation featuring 20 plays and 11 different formations • *Apple IIGS; keyboard, joystick or mouse; 512K; ProDOS 16; copy protected.* • $44.95 retail • $14.95 retail; Team Construction Kit • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Anchorman • Realistic bowling game • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $39.95 retail • Virginia Real Software, Inc.; PO Box 8545; Norfolk, VA 23503; 804-587-4952

Ancient Land of Ys • Role-playing game • *Apple IIGS; 512K; joystick optional; copy protected.* • $44.95 retail • Kyodai Software Marketing, Inc.; 58 Mitchell Blvd.; San Rafael, CA 94903; 415-492-3592

Arkanoid II — The Revenge Of Doh • Arcade action in which users must penetrate an alien ship and break down 67 energy barriers • *Apple IIGS; 512K; GS/OS; copy protected.* • $34.95 retail • Taito Software, Inc.; 206 - 267 W. Esplanade; N. Vancouver, BC, Canada V7M 1A5; 604-984-3344 or 800-663-8067

Balance Of Power: The 1990 Edition • Global politics • *Apple IIGS; 1 MB; ProDOS 16; copy protected.* • $49.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

The Bard's Tale • Medieval adventure; the goal is to halt the evil magic spell spread by the wizard Mangar • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $19.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

The Bard's Tale II: The Destiny Knight • Features new story line, more areas to explore and more magic items • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $49.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Battle Chess • Animated chess game • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $49.95 retail • Interplay Productions; 1575 Corporate Dr.; Costa Mesa, CA 92626; 714-549-2411 (technical support) or 800-969-4263 (orders)

Beyond Zork • Adventure into the Great Underground Empire • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $19.95 retail • Infocom, Inc.; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0800

Black Jack Academy • Card game on disk • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $39.95 retail • MicroIllusions; 17408 Chatsworth St.; Grenada Hills, CA 91344; 818-360-3715

Bridge 6.0 • Bridge playing program • *Apple IIGS; 750K; ProDOS 16; not copy protected.* • $39.95 retail • Artworx Software Co., Inc.; 1844 Penfield Rd.; Penfield, NY 14526; 800-828-6573

Bubble Ghost • Bubble-blowing arcade action • *Apple IIGS; keyboard or mouse; 512K; ProDOS 16; copy protected.* • $34.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Captain Blood • Science-fiction adventure • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $44.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

CheatMaster • "Cheat" program that modifies a user's status in a game to improve their ability to win • *Apple IIGS; 768K.* • $20 retail • Martin Hill; 32 Chelford Rd.; Toronto, Ontario, Canada M3B 2E5; 416-449-8344

Club Backgammon • Accurate simulation of backgammon • *Apple IIGS; 512K; ProDOS; not copy protected.* • $39.95 retail • California Dreams; 780 Montague Expwy., #403; San Jose, CA 95131; 408-435-1445

Clue Master Detective • Criminal detection • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $39.99 retail • Virgin Mastertronic Int'l., Inc.; 18001 Cowan, Ste. A; Irvine, CA 92714; 714-833-8710

Crossword Creator • Creates crossword puzzles • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $29.95 retail • DEC Software; 5307 Lynnwood Dr.; West Lafayette, IN 47906

Dark Castle • Adventure • *Apple IIGS; supports Super-Sonic Card; 768K; GS/OS; not copy protected.* • $44.95 retail • Three-Sixty Pacific, Inc.; 2105 S. Bascom Ave., Ste. 380; Campbell, CA 95008; 408-879-9144

Defender Of The Crown • Adventure into the Age of Chivalry; battle against the Normans to save England • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail • Cinemaware Corp.; 4165 Thousand Oaks Blvd.; Westlake Village, CA 91362; 805-495-6515

Deja Vu II: Lost In Las Vegas • Mystery • *Apple IIGS; RGB monitor; 768K; ProDOS 16; copy protected.* • $49.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Deja Vu: A Nightmare Comes True • Murder mystery • *Apple IIGS; RGB monitor; 768K; ProDOS 16; copy protected.* • $49.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Dondra: A New Beginning... • An animated graphics quest for the Apple IIGS • *Apple IIGS; 768K; ProDOS 16; not copy protected.* • $49.95 retail • MicroIllusions; 17408 Chatsworth St.; Grenada Hills, CA 91344; 818-360-3715

Dragon Wars • Fantasy role-playing game • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $49.95 retail • Interplay Productions; 1575 Corporate Dr.; Costa Mesa, CA 92626; 714-549-2411 (technical support) or 800-969-4263 (orders)

The Duel: Test Drive II • Driving simulation • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • $21.95 each retail; California Challenge (scenery disk), European Challenge (scenery disk), The Supercars (car disk), The Muscle Cars (car disk) • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Famous Courses Volume II • Three golf courses for use with Mean 18 • *Apple IIGS; mouse; Mean 18; 512K; ProDOS 16; copy protected.* • $19.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Famous Courses Volume III & IV • Six golf course simulations for use with Mean 18 • *Apple IIGS; mouse; Mean 18; 512K; ProDOS 16; copy protected.* • $34.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Fast Break • Three-on-three basketball simulation • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $44.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

The Fidelity Chessmaster 2100 • Computer chess • *Apple IIGS; 512K; not copy protected.* • $49.95 retail • The Software Toolworks; 19808 Nordhoff Pl.; Chatsworth, CA 91311; 818-885-9000

Final Assault • A mountain-climbing adventure • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $19.95 retail • Epyx; 600 Allerton St.; Redwood City, CA 94063

Fire Power • Arcade tank battle game • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $24.95 retail • MicroIllusions; 17408 Chatsworth St.; Grenada Hills, CA 91344; 818-360-3715

Flintstones • Prehistoric adventures • *Apple IIGS; ROM 1.1; 768K; ProDOS 16; not copy protected.* • $39.95 retail • MicroIllusions; 17408 Chatsworth St.; Grenada Hills, CA 91344; 818-360-3715

Fractal Explorer • High-resolution color graphic fractal generation program • *Apple IIGS; 256K; ProDOS 8; not copy protected.* • $39.95 retail • Eclat Microproducts; PO Box 570-756; Miami, FL 33257; 305-233-4666

Garfield Trivia Game • Mind-teasing questions about the world's favorite "fat cat" • *Apple IIGS; printer; 64K; ProDOS 8; copy protected.* • $24.95 retail • $62 retail; Lab Pack • DLM Teaching Resources; One DLM Park; Allen, TX 75002; 800-527-4747

Gauntlet • Arcade game featuring attacks by ghosts, grunts, demons and sorcerers • *Apple IIGS; 256K; ProDOS 16; copy protected.* • $14.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Gnarly Golf • Miniature golf • *Apple IIGS; color monitor; 512K; ProDOS 8; copy protected.* • $29.95 retail • Britannica Software, Inc.; 345 4th St.; San Francisco, CA 94107; 415-597-5555 or 800-572-2272

Gold Rush • Sell your land, pack your bags and grab the next ride out • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

GrailQuest • Interactive graphic adventure • *Apple IIGS; 1 MB; ProDOS 16; not copy protected.* • $29.95 retail • Artworx Software Co., Inc.; 1844 Penfield Rd.; Penfield, NY 14526; 800-828-6573

Grand Prix Circuit • Formula One racing simulation • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $44.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Grandstand Play • Race through complex, multiscene grandstands after that prized big league baseball • *Apple IIGS; 128K; ProDOS 8; joystick optional; not copy protected.* • $29.95 retail • Virginia Real Software, Inc.; PO Box 8545; Norfolk, VA 23503; 804-587-4952

Great Western Shootout • Action-packed arcade game • *Apple IIGS; color monitor; 512K; ProDOS 8; copy protected.* • $29.95 retail • Britannica Software, Inc.; 345 4th St.; San Francisco, CA 94107; 415-597-5555 or 800-572-2272

HardBall! • Baseball simulation • *Apple IIGS; color monitor; 512K; ProDOS 16; copy protected.* • $44.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Entertainment

Hostage • S.W.A.T. terrorist attack • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Hunt For Red October • Submarine combat simulation • *Apple IIGS; 768K; ProDOS 16; copy protected.* • $49.95 retail • The Software Toolworks; 19808 Nordhoff Pl.; Chatsworth, CA 91311; 818-885-9000

Impossible Mission II • Action-packed strategy game • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $19.95 retail • Epyx; 600 Allerton St.; Redwood City, CA 94063

Indoor Sports • Bowling, darts, air hockey and ping-pong • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Jack Nicklaus' Greatest 18 Holes Of Major Championship Golf • Golf simulation • *Apple IIGS; mouse, joystick or keyboard; 512K; ProDOS 16; copy protected.* • $49.95 retail • $21.95 retail; Jack Nicklaus Presents The Major Championship Courses of 1989 (add-on accessory disk) • $21.95 retail; Jack Nicklaus Presents The International Course Disk (add-on accessory disk) • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Jigsaw! The Ultimate Electronic Puzzle • Puzzle game • *Apple IIGS; color monitor; 768K; ProDOS; not copy protected.* • $39.95 retail • $19.95 retail; additional image disks • Britannica Software, Inc.; 345 4th St.; San Francisco, CA 94107; 415-597-5555 or 800-572-2272

John Elway's Quarterback • Football action • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $14.99 retail • Virgin Mastertronic Int'l., Inc.; 18001 Cowan, Ste. A; Irvine, CA 92714; 714-833-8710

KaleidoKubes • Strategy game • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $29.95 retail • Artworx Software Co., Inc.; 1844 Penfield Rd.; Penfield, NY 14526; 800-828-6573

Keef The Thief • Role-playing experience that mixes humor with action • *Apple IIGS; 512K.* • $49.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

King Of Chicago • Struggle for power • *Apple IIGS; 768K; GS/OS; copy protected.* • $24.95 retail • Cinemaware Corp.; 4165 Thousand Oaks Blvd.; Westlake Village, CA 91362; 805-495-6515

King's Quest I: Quest For The Crown • 3-D medieval adventure that takes Sir Graham on a journey to find the magical items that will save the kingdom of Daventry • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

King's Quest II: Romancing The Throne • Graham goes on a search for a Queen to share his kingdom • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

King's Quest III: To Heir Is Human • Gwydion searches for his true name, identity and royal destiny • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

King's Quest IV: The Perils Of Rosella • Rosella sets out to save her ailing father, the King • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

LaserForce • Three-dimensional, arcade action game • *Apple IIGS; color monitor; 1.2 MB; ProDOS 8; copy protected.* • $29.95 retail • Britannica Software, Inc.; 345 4th St.; San Francisco, CA 94107; 415-597-5555 or 800-572-2272

The Last Ninja • Action/adventure martial arts game • *Apple IIGS; 128K; GS/OS; copy protected.* • $19.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

Leisure Suit Larry • 3-D animated adventure game featuring Larry, the nerd, in Lost Wages • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

Mad Match • Visual perception game • *Apple IIGS; 512K; GS/OS; not copy protected.* • $39.95 retail • Baudville, Inc.; 5380 52nd St. SE; Grand Rapids, MI 49512; 616-698-0888

Mancala • Comprehensive simulation of the national game of Africa • *Apple IIGS; 512K; ProDOS; not copy protected.* • $39.95 retail • California Dreams; 780 Montague Expwy., #403; San Jose, CA 95131; 408-435-1445

Manhunter: New York • Aliens invade The Big Apple • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

Marble Madness • Six levels of 3-D runway mazes with stereo music • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $19.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Mean 18: Ultimate Golf • Realistic golf simulation • *Apple IIGS; mouse; 512K; ProDOS 16; copy protected.* • $44.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Mines Of Moria; Mines Of Moria II • Text fantasy adventures • *Apple IIGS; 256K; ProDOS 8; not copy protected.* • $19.95 each retail • DAR Systems International; PO Box 16-4933; Miami, FL 33116; 305-529-3572

Mini-Putt • Miniature golf simulation • *Apple IIGS; mouse; 512K; ProDOS 16; copy protected.* • $19.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Mixed-Up Mother Goose • Transports children to an "adventure in Mother Gooseland", for the home, nursery school and kindergarten class • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $29.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

Neuromancer • Role-playing adventure • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $49.95 retail • Interplay Productions; 1575 Corporate Dr.; Costa Mesa, CA 92626; 714-549-2411 (technical support) or 800-969-4263 (orders)

Omega • Players design the future's ultimate military cybertank • *Apple IIGS; 64K; ProDOS 8; copy protected.* • $49.95 retail • Origin Systems, Inc.; PO Box 161750; Austin, TX 78716; 512-328-0282

Paperboy • Paper route packed with the unexpected • *Apple IIGS; joystick; 256K; ProDOS 16; copy protected.* • $14.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Pirates! IIGS • 17th century Spanish adventure on and around the Caribbean Sea • *Apple IIGS; 256K; ProDOS 8; copy protected.* • $44.95 retail • MicroProse Software, Inc.; 180 Lakefront Dr.; Hunt Valley, MD 21030; 301-771-1151

Pits Of Doom! • Text adventure • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $19.95 retail • DAR Systems International; PO Box 16-4933; Miami, FL 33116; 305-529-3572

Police Quest • 3-D animated adventure featuring Sonny Bonds in an attempt to stop the flood of illegal drugs into his community • *Apple IIGS; color monitor (SuperSonic stereo card optional); 512K; ProDOS 16; not copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

QIX • Arcade game • *Apple IIGS; 512K; GS/OS; copy protected.* • $34.95 retail • Taito Software, Inc.; 206 - 267 W. Esplanade; N. Vancouver, BC, Canada V7M 1A5; 604-984-3344 or 800-663-8067

Questmaster I — The Prism Of Heheutotol • First of a trilogy • *Apple IIGS; joystick optional; 768K; GS/OS; not copy protected.* • $49.95 retail • MicroIllusions; 17408 Chatsworth St.; Grenada Hills, CA 91344; 818-360-3715

Questron II • Sequel to Questron • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • Strategic Simulations, Inc.; 675 Almanor Ave., Ste. 201; Sunnyvale, CA 94086; 408-737-0800

Rastan • Venture to an ancient world of danger • *Apple IIGS; 512K; GS/OS; copy protected.* • $34.95 retail • Taito Software, Inc.; 206 - 267 W. Esplanade; N. Vancouver, BC, Canada V7M 1A5; 604-984-3344 or 800-663-8067

Realm Of Altair Series • Trilogy of all-text adventures • *Apple IIGS; 256K; ProDOS 8; not copy protected.* • $69.95 retail • DAR Systems International; PO Box 16-4933; Miami, FL 33116; 305-529-3572

Renegade • Street-style karate action • *Apple IIGS; 512K; GS/OS; copy protected.* • $34.95 retail • Taito Software, Inc.; 206 - 267 W. Esplanade; N. Vancouver, BC, Canada V7M 1A5; 604-984-3344 or 800-663-8067

Roadwar 2000 • Futuristic war game • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $44.95 retail • Strategic Simulations, Inc.; 675 Almanor Ave., Ste. 201; Sunnyvale, CA 94086; 408-737-6800

Rocket Ranger • Movie tale involving time travel, vile Nazis, mind control machines and a jet propelled rocket suit • *Apple IIGS; 768K; ProDOS 16; not copy protected.* • $49.95 retail • Cinemaware Corp.; 4165 Thousand Oaks Blvd.; Westlake Village, CA 91362; 805-495-6515

Scooby Doo • Join Scooby and the gang on four mysteries • *Apple IIGS; ROM 1.1; 768K; ProDOS 16; not copy protected.* • Call for pricing • MicroIllusions; 17408 Chatsworth St.; Grenada Hills, CA 91344; 818-360-3715

Serve & Volley • Action/strategy tennis simulation • *Apple IIGS; keyboard; 512K; ProDOS 16; copy protected.* • $39.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

Shadowgate • Fantasy • *Apple IIGS; RGB monitor; 768K; ProDOS 16; copy protected.* • $49.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Shanghai • Derived from an ancient oriental game called Mah Jongg • *Apple IIGS; 512K; GS/OS; copy protected.* • $19.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

Silent Service • World War II submarine simulation game • *Apple IIGS; color monitor recommended; 256K; ProDOS 8; copy protected.* • $39.95 retail • MicroProse Software, Inc.; 180 Lakefront Dr.; Hunt Valley, MD 21030; 301-771-1151

Entertainment

Silpheed • Shoot-'em-up action game • *Apple IIGS; 512K.* • $34.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

Sinbad And The Throne Of The Falcon • Epic seafaring quest in a search for the Caliph • *Apple IIGS; 768K; GS/OS; not copy protected.* • $24.95 retail • Cinemaware Corp.; 4165 Thousand Oaks Blvd.; Westlake Village, CA 91362; 805-495-6515

Skate Or Die • Skateboarding competition • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $19.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Solitaire And Cribbage • Card games • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $34.95 retail • Computrek; 28278 Enderly St.; Canyon Country, CA 91351; 805-252-4244

Solitaire Royale • Eight solitaire games and three classic children's card games in color • *Apple IIGS; 512K (768K recommended); GS/OS 5.0 or later; not copy protected.* • $34.95 retail • Spectrum Holobyte; A Div. of Sphere, Inc.; 2061 Challenger Dr.; Alameda, CA 94501; 415-522-3584

Space Quest I — The Sarien Encounter • Animated 3-D adventure game that features Roger Wilco, sanitation engineer turned space-age swashbuckler • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

Space Quest II — Vohaul's Revenge • 3-D animated space adventure game with quality graphics • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $49.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

■ **Spirit Of Excalibur** • Fantasy role playing • *Apple IIGS; 64K; not copy protected.*

From the knights of the Round Table, a hero must be chosen to lead a band to restore right through might to carry on in honor of King Arthur. The first in a series of FRP games with transferrable characters, Spirit of Excalibur combines elements of traditional fantasy role playing, animated adventure and strategy. With five major quests and dozens of lesser challenges, the game is played on both map and scene levels for additional variety.
Call for pricing • Virgin Mastertronic Int'l., Inc.; 18001 Cowan, Ste. A; Irvine, CA 92714; 714-833-8710

Star Saga: One, Beyond The Boundary • An interstellar, interactive, role-playing space opera set 800 years in the future; first of a trilogy • *Apple IIGS; monitor; 512K; ProDOS 16; not copy protected.* • $79.95 retail • Masterplay Publishing Corp.; 8417 Sun State St.; Tampa, FL 33614; 813-888-7773

Star Saga: Two, The Clathran Menace • Combines a captivating science fiction story with the tactics and strategy of a challenging board game • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $79.95 retail • Masterplay Publishing Corp.; 8417 Sun State St.; Tampa, FL 33614; 813-888-7773

Stickybear Basketbounce • A multilevel game with bright graphics and animation for the entire family • *Apple IIGS; other Apple II models; 64K; ProDOS 8; copy protected.* • $39.95 retail • $75 retail; five-disk lab pack • Weekly Reader Software From Optimum Resource, Inc.; 10 Station Pl.; Norfolk, CT 06058; 203-542-5553 or 800-327-1473

Street Sports Soccer • Playing soccer with the old neighborhood gang • *Apple IIGS; 512K; ProDOS 8; copy protected.* • $12.95 retail • Epyx; 600 Allerton St.; Redwood City, CA 94063

Strip Poker II • Five-card draw poker game with some different stakes; for 18 years and older • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $39.95 retail; master disk • $19.95 each retail; data disk • Artworx Software Co., Inc.; 1844 Penfield Rd.; Penfield, NY 14526; 800-828-6573

Sub Battle Simulator • Command a Navy sub or German Kreigsmarine U-Boat between 1939 and 1945 • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $19.95 retail • Epyx; 600 Allerton St.; Redwood City, CA 94063

Superpuzzle • Fun and learning; scramble standard SHR and 256 color pictures • *Apple IIGS; color monitor; 512K; ProDOS 8; not copy protected.* • $44.95 retail • El Kassir Software; 232 Thorne St., Ste. C; Los Angeles, CA 90042; 213-257-6882

Superstar Ice Hockey • Multilevel ice hockey simulation • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $44.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Superstar Soccer • Soccer simulation • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Task Force • Clean up five major U.S. cities of a dangerous terrorist movement • *Apple IIGS; 512K; GS/OS.* • $39.95 retail • Britannica Software, Inc.; 345 4th St.; San Francisco, CA 94107; 415-597-5555 or 800-572-2272

Tetris IIGS • Game for developing quick reflexes • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $39.95 retail • Spectrum Holobyte; A Div. of Sphere, Inc.; 2061 Challenger Dr.; Alameda, CA 94501; 415-522-3584

Thexder • Pilot an armored robot through multiple attack scenarios and more • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $34.95 retail • Sierra On-Line, Inc.; PO Box 485; Coarsegold, CA 93614; 209-683-4468

The Third Courier • Role-playing spy adventure • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail • Accolade, Inc.; 550 S. Winchester Blvd., Ste. 200; San Jose, CA 95128; 408-296-8400

The Three Stooges • Interactive movie • *Apple IIGS; stereo card and joystick optional; 1 MB; ProDOS 16; GS/OS; not copy protected.* • $49.95 retail • Cinemaware Corp.; 4165 Thousand Oaks Blvd.; Westlake Village, CA 91362; 805-495-6515

Ticket To Hollywood • Hollywood trivia; ages 15 to adult • *Apple IIGS; 512K; ProDOS 16; copy protected.* • $39.95 retail • American Educational Computer, Inc.; 7506 Broadway Ext., Ste. 505; Oklahoma City, OK 73116; 405-840-6031

Tomahawk • Simulates the cockpit of the U.S. Army's AH-64A Apache helicopter • *Apple IIGS; joystick; 768K; ProDOS 16; copy protected.* • $39.95 retail • Datasoft/IntelliCreations, Inc.; 19808 Nordhoff Pl.; Chatsworth, CA 91311; 818-886-5922

Treasures Of Moctezuma • Treasure hunt adventure • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $44.95 retail • Virginia Real Software, Inc.; PO Box 8545; Norfolk, VA 23503; 804-587-4952

TrianGo • Futuristic game of strategy and cunning based on the ancient oriental game of "Go" • *Apple IIGS; 512K; ProDOS; not copy protected.* • $39.95 retail • California Dreams; 780 Montague Expwy., #403; San Jose, CA 95131; 408-435-1445

Trilogy • Sophisticated adventure game involving many intricate plot twists • *Apple IIGS; 256K; ProDOS 8; not copy protected.* • $49.95 retail • DAR Systems International; PO Box 16-4933; Miami, FL 33116; 305-529-3572

Tunnels Of Armageddon • Fast action arcade-style game • *Apple IIGS; 512K for ProDOS 16; 768K for GS/OS; not copy protected.* • $39.95 retail • California Dreams; 780 Montague Expwy., #403; San Jose, CA 95131; 408-435-1445

Uninvited • Supernatural graphic adventure • *Apple IIGS; RGB monitor; 768K; ProDOS 16; copy protected.* • $49.95 retail • Mindscape, Inc.; 3444 Dundee Rd.; Northbrook, IL 60062; 708-480-1948

Vegas Craps • Accurate simulation of craps as it's played in big Vegas casinos • *Apple IIGS; 512K; ProDOS; not copy protected.* • $39.95 retail • California Dreams; 780 Montague Expwy., #403; San Jose, CA 95131; 408-435-1445

Vegas Gambler • Enter the exciting world of a Las Vegas casino • *Apple IIGS; 512K; ProDOS; not copy protected.* • $39.95 retail • California Dreams; 780 Montague Expwy., #403; San Jose, CA 95131; 408-435-1445

War In Middle Earth • Fantasy game • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.99 retail • Virgin Mastertronic Int'l., Inc.; 18001 Cowan, Ste. A; Irvine, CA 92714; 714-833-8710

Warlock • Arcade adventure that combines clever animation and humor • *Apple IIGS; 512K; ProDOS 16.* • $39.95 retail • Three-Sixty Pacific, Inc.; 2105 S. Bascom Ave., Ste. 380; Campbell, CA 95008; 408-879-9144

Windwalker • Oriental adventure set in the third century B.C.; FRP/martial arts action • *Apple IIGS; 128K; ProDOS 8; copy protected.* • $39.95 retail • Origin Systems, Inc.; PO Box 161750; Austin, TX 78716; 512-328-0282

World Tour Golf • Features the world's great courses, complete with hills, trees, sand traps and weather • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $19.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

■ **Wraith — Devil's Demise** • Adventure game • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.*

Wraith is a graphic adventure game that comes complete with on-screen instructions, a map, a demo play option and dungeons. The object of the game is to search out and destroy the evil Wraith to save the mythical island of Arathia. To succeed at this quest, an adventurer must fend off many monsters, learn magic spells and purchase weapons and armor to defeat the evil Wraith.
$14.95 retail • Nite Owl Productions; 5734 Lamar Ave.; Mission, KS 66202; 913-362-9898

Xenocide • Science fiction arcade game • *Apple IIGS; joystick recommended; 512K.* • $49.95 retail • Micro Revelations, Inc.; PO Box 70430; Reno, NV 89570; 702-825-1132 or 800-442-6002

Zany Golf • A wacky fantasy into miniature golf • *Apple IIGS; other Apple II models; 512K; ProDOS 8; copy protected.* • $19.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Hardware And Peripherals

A-Hive Disk Enclosure • Components for assembling drive subsystems • *Apple IIGS.* • $119 (30 watts) to $169 (65 watts) retail • Tulin Corp.; 2156H O'Toole Ave.; San Jose, CA 95131; 408-432-9025

A-Hive Hard Disk Subsystem • Hard drive subsystems • *Apple IIGS; IIe.* • $549 (32 MB) to $1,949 (200 MB) retail • Tulin Corp.; 2156H O'Toole Ave.; San Jose, CA 95131; 408-432-9025

Hardware And Peripherals

■ **A-Hive Removable Cartridge Drive** • Removable drive • *Apple IIGS.*

The A-Hive Removable Cartridge Drive provides infinite storage (25ms) for the Apple IIGS — users just add more cartridges. It includes the Apple High-Speed SCSI Card.
$779 retail • $89 retail; 44 MB cartridge • Tulin Corp.; 2156H O'Toole Ave.; San Jose, CA 95131; 408-432-9025

A-Hive Tape Subsystem • Tape drive subsystems • *Apple IIGS; IIe.* • $669 (50 MB) to $769 (155 MB) retail • Tulin Corp.; 2156H O'Toole Ave.; San Jose, CA 95131; 408-432-9025

A2S Series • 20, 30, 45 and 60 MB external SCSI hard disk subsystems • *Apple IIGS.* • Call for pricing • CMS Enhancements, Inc.; 1372 Valencia Ave.; Tustin, CA 92680; 714-259-9555

■ **Apollo M200** • Monochrome portable LCD projector • *Optional Apple IIGS interface.*

The Apollo M200 is a monochrome LCD projector that gives users portable convenience with a super-bright, high-resolution image. A single quartz halogen lamp projects super-bright monochrome images. It also eliminates the need for an overhead projector. Measuring 8 by 13.6 by 6.8 inches and weighing under 18 pounds, the Apollo Portable can project from a 3-foot image at a distance of 6 feet to a 7-foot image at 14 feet. It also provides instant lamp change, two-chamber cooling and remote control capability.
$3,589 retail • Apollo Audio Visual; 60 Trade Zone Ct.; Ronkonkoma, NY 11779; 516-467-8033

Apollo PC Presenters For Apple IIGS • Allows users to display large-screen presentations; no special software required • *Apple IIGS.* • $1,165 retail; PC-9100GS (add-on) • $1,898 retail; PC-9601 (add-on) • $1,481 retail; PC-9250GS (built-into OHP) • $1,932 retail; PC-9296 (built-into OHP) • $2,373 retail; PC-9350GS (built-into OHP and portable) • $2,815 retail; PC-9396 (built-into OHP and portable) • $149 retail; PC-9670 Wireless Remote for PC-9601, PC-9296, PC-9396 • Apollo Audio Visual; 60 Trade Zone Ct.; Ronkonkoma, NY 11779; 516-467-8033

■ **Apollo TC200** • 512 true color, self-contained LCD projector • *Optional Apple IIGS interface.*

The Apollo TC200 is a high-resolution, 512 true color, self-contained LCD projector. It projects data and graphics with three quartz halogen lamps through three separate red, green and blue LCDs. Features include: brighter than add-on LCD panels; compared to 8-color panel, the TC200 is four times brighter, has no convergence problem when mixing basic colors and no distortion or compression of VGA and Hercules text; lightweight transportability; ultra-fast pixel refresh rate (eliminates ghosting); high resolution in true real colors (with maximum resolution of 720 by 480 pixels); amplified "Y" cable plug-in to run monitor and LCD projector in parallel; and projection size approximately from a 3-foot rectangular image at an approximate distance of 6 feet up to approximately a 7-foot image at 14 feet.
$12,495 retail • Apollo Audio Visual; 60 Trade Zone Ct.; Ronkonkoma, NY 11779; 516-467-8033

Apple 3.5 Drive • The IIGS standard drive; provides 800K of program and file storage • *Apple IIGS.* • $429 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple 5.25 Drive • Runs earlier Apple II software released on 5.25-inch disks • *Apple IIGS.* • $329 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple Hard Disk 20SC And 40SC • Provides 20 and 40 MB of storage • *Apple IIGS; Apple SCSI Card.* • $899 retail; 20SC • $1,299 retail; 40SC • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

■ **Apple II High-Speed SCSI Card** • Lets users connect the Apple IIGS or IIe to any device that uses the SCSI standard • *Apple IIGS; IIe; 3.5-inch disk drive.*

The Apple II High-Speed SCSI Card lets users connect their Apple IIGS or IIe computer to any device that uses the SCSI standard, such as hard disk drives, CD-ROM drives, scanners, tape drives or laser printers. Using direct memory access (DMA) data transfer, the card offers rapid data throughput; it functions more than 10 times faster than the previous version. In addition, it comes with software utilities for use with hard disk drives and CD-ROM drives.
$129 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple II Video Overlay Card • Enables users to superimpose computer graphics over video images from an external source • *Apple IIGS; 512K; ROM Version 01 or higher; AppleColor Composite or RGB monitor.* • $549 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple IIGS Memory Expansion Card • Extended memory board expandable to 1 MB using additional memory in 256K increments • *Apple IIGS.* • $229 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple IIGS System Fan • Cools Apple IIGS with three or more expansion cards • *Apple IIGS.* • $49 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple IIGS Upgrade • Transformer kit for Apple IIe; includes 256K of built-in memory, with RAM that is expandable to 8 MB • *Apple IIe.* • $499 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple MIDI Interface • Musical instrument digital interface (MIDI); includes one MIDI-In plug and one MIDI-Out plug • *Apple IIGS; MIDI-equipped instrument; compatible software.* • $99 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple Personal Modem • 1,200/300-baud modem • *Apple IIGS.* • $279 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

AppleCD SC • Optical disc storage device • *Apple IIGS; Apple SCSI Card (Rev. C).* • $899 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

AppleColor RGB Monitor • Displays high-resolution text and color graphics • *Apple IIGS.* • $599 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Audio Animator • MIDI device, stereo digitizer and stereo playback machine combined; includes software and external connector box • *Apple IIGS; 1 MB; GS/OS.* • $239 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

ComputerEyes IIGS • Color video digitizer that captures images for use in popular desktop publishing and paint programs • *Apple IIGS; video source; 1 MB; GS/OS.* • $249.95 retail • Digital Vision, Inc.; 270 Bridge St.; Dedham, MA 02026; 617-329-5400

ComputerEyes/2 • Video digitizer with GS software support that captures images for use in popular desktop publishing and paint programs • *Apple IIGS; video source; 256K; ProDOS 8.* • $129.95 retail; ComputerEyes/2 • $19.95 retail; ComputerEyes/2 GS Support Package • Digital Vision, Inc.; 270 Bridge St.; Dedham, MA 02026; 617-329-5400

Conserver • Integrated unit providing six AC outlets, surge protection and a fan • *Apple IIGS.* • $119 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

The CrystalPrint Publisher • PostScript-language-compatible page printer • *Apple IIGS.* • $4,499 retail • Qume Corp.; 500 Yosemite Dr.; Milpitas, CA 95035; 408-942-4000

CT-20; CT-40; CT-80; CT-105 • 20, 40, 84 and 105 MB external hard disk drives • *Apple IIGS; IIe.* • $769 retail; CT-20 (27ms, 8K cache) bundled with Apple SCSI card • $929 retail; CT-40 (25ms, 8K cache) bundled with Apple SCSI card • $1,399 retail; CT-80 (19ms, 64K cache) bundled with Apple SCSI card • $1,469 retail; CT-105 (19ms, 64K cache) bundled with Apple SCSI card • Chinook Technology; 615 Main St., #635; Longmont, CO 80501; 303-678-5544

D6OUTSP AC Surge Protector • Six-outlet strip offering continuous spike protection • *Apple IIGS.* • $35.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

DataLink 1200 And DataLink 2400 • Internal 1,200 bps and 2,400 bps modem boards complete with communications software • *Apple IIGS; other Apple II models.* • $179 retail; DataLink 1200 • $239 retail; DataLink 2400 • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

DataLink Express • External modem • *Apple IIGS; other Apple II models.* • $249 retail; upgrade options include send-fax and MNP-5 • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

DCA1000 • Six outlet strip with surge suppressors and phone/modem protection • *Apple IIGS.* • $59.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

Deluxe Power Console-Plus Surge Suppressor And Noise Filter • Surge suppressor and noise filter • *Apple IIGS.* • $135.95 retail • Kalglo Electronics Co., Inc.; 6584 Ruch Rd.; E. Allen Township; Bethlehem, PA 18017; 215-837-0700 or 800-524-0400

DoubleTalk • Speech synthesizer • *Apple IIGS; other Apple II models; 64K; ProDOS 8.* • $249.95 retail • RC Systems, Inc.; 121 W. Winesap Rd.; Bothell, WA 98012; 206-672-6909

DSTM2 Modem/Fax/Telephone Lightning Surge Protector • Protects equipment that transmits and receives data via telephone lines • *Apple IIGS.* • $34.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

Echo IIb Speech Synthesizer • Text-to-speech board compatible with software written for the Echo II and Echo+ boards • *Apple IIGS; 256K; ProDOS 8 and DOS 3.3.* • $129.95 retail • Street Electronics Corp.; 6420 Via Real; Carpinteria, CA 93013; 805-684-4593

FastMath • Math coprocessor card • *Apple IIGS.* • $179 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

FingerPrint G+ • Parallel graphic interface for parallel printers • *Apple IIGS; printer.* • $79 retail • Thirdware Computer Products; 4747 NW 72nd Ave.; Miami, FL 33166; 305-592-7522

FingerPrint GSi Version III • Screen dump graphic utility card • *Apple IIGS; printer.* • $149 retail • Thirdware Computer Products; 4747 NW 72nd Ave.; Miami, FL 33166; 305-592-7522

FingerPrint SuperSerial • Enhanced serial graphic printer interface card • *Apple IIGS; printer.* • $79 retail • Thirdware Computer Products; 4747 NW 72nd Ave.; Miami, FL 33166; 305-592-7522

Hardware And Peripherals

First Link • AppleTalk-compatible network starter kit • *Apple IIGS.* • $99.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

FX/20, FX/45, FX/80 • External SCSI hard disk drive; contains FX System Software on 3.5-inch disk • *Apple IIGS; SCSI board.* • $649 to $1,129 retail • GCC Technologies, Inc.; 580 Winter St.; Waltham, MA 02154; 617-890-0880

Grappler 9 Pin • Universal parallel printer interface for Epson, Okidata, Star and other printers • *Apple IIGS; parallel printer.* • $129 retail • Orange Micro, Inc.; 1400 N. Lakeview Ave.; Anaheim, CA 92807; 714-779-2772

Grappler+ • Parallel printer interface • *Apple IIGS; Apple IIe.* • $119 retail • Orange Micro, Inc.; 1400 N. Lakeview Ave.; Anaheim, CA 92807; 714-779-2772

GS Juice Plus • Memory cards that provide 1 to 4 MB of memory expansion • *Apple IIGS.* • $125 retail; 1 MB • $199 retail; 2 MB • $399 retail; 4 MB • Ingenuity, Inc.; 14922M Ramona Blvd.; Baldwin Park, CA 91706; 818-960-1485 or 800-346-0811

GS-RAM And GS-RAM Plus • Extended memory boards; comes with AppleWorks enhancement, graphic memory test and disk caching software • *Apple IIGS; ProDOS 8.* • $169 retail; 256K GS-RAM • $219 retail; 512K GS-RAM • $319 retail; 1 MB GS-RAM • $419 retail; 1.5 MB GS-RAM • $339 retail; 1 MB GS-RAM Plus • $499 retail; 2 MB GS-RAM Plus • Call for pricing; GS-RAM 3-8 MB • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

GS-RAM Ultra • Memory expansion • *Apple IIGS; ProDOS 16 or GS/OS.* • $219 retail; 256K • $259 retail; 512K • $339 retail; 1 MB • Call for pricing; 2 MB to 4 MB • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

■ **Half Shell** • Compact hard drive • *Apple IIGS.*

The Half Shell is a 40 MB compact hard drive (1.4 by 5.5 by 7.5 inches) with an access time of 25ms. It includes the Apple High-Speed SCSI Card and a carrying case.
$609 retail • Tulin Corp.; 2156H O'Toole Ave.; San Jose, CA 95131; 408-432-9025

■ **Hermit Crab** • Small, portable hard drive • *Apple IIGS.*

The Hermit Crab is a small, portable hard drive (2.5 by 5.5 by 7.5 inches) with a 40 MB capacity and an access time of 25ms. It includes the Apple High-Speed SCSI Card and a carrying case.
$609 retail • Tulin Corp.; 2156H O'Toole Ave.; San Jose, CA 95131; 408-432-9025

ImageWorks II Board • Gives the Apple IIGS advanced imaging and graphics capabilities • *Apple IIGS; other Apple II models; 64K.* • $350 retail; ImageWorks Board • $150 retail; ImageWorks II Color Adapter • Redshift Limited; PO Box 4335; Mountain View, CA 94040; 415-322-7373

ImageWriter II • Apple standard printer • *Apple IIGS; other Apple models.* • $595 retail; ImageWriter II • $99 retail; ImageWriter II 32K Memory Option • $225 retail; Sheet Feeder • $63 retail; Black Ribbon (pack of six) • $83.70 retail; Color Ribbon (pack of six) • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

ImageWriter LQ • Letter-quality, wide-carriage, dot matrix printer • *Apple IIGS; other Apple models.* • $1,399 retail; ImageWriter LQ • $299 retail; Sheet Feeder • $169 retail; Additional Bins • $49 retail; Envelope Feed • $114 retail; Black Ribbon (pack of six) • $150 retail; Color Ribbon (pack of six) • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Indiana Cash Drawer • Cash drawers • *Apple IIGS.* • $220 to $472 retail; price depends on application • Indiana Cash Drawer Co., Inc.; PO Box 236; Shelbyville, IN 46176; 317-398-6643

Inner Drive • Internal hard disk drives • *Apple IIGS; IIe.* • $475 retail; 20 MB • $575 retail; 40 MB • $1,199 retail; 100 MB • Ingenuity, Inc.; 14922M Ramona Blvd.; Baldwin Park, CA 91706; 818-960-1485 or 800-346-0811

J/L 910 • 14-inch high-resolution color monitor on swivel; 1,120 by 750 pixels • *Apple IIGS.* • $1,000 retail • J/L International Trading Co. USA, Inc.; 8730 Sunset Blvd.; Los Angeles, CA 90069; 213-657-1836

KoalaPad+ • Graphics input system for the Apple II family of computers • *Apple IIGS; 48K; DOS 3.3.* • $139.95 retail • Koala Technologies; 70 N. 2nd St.; San Jose, CA 95113; 408-287-6311

■ **LightningScan GS** • Hand-held scanner • *Apple IIGS; 3.5-inch disk drive; 512K; GS/OS.*

LightningScan GS is a hand-held scanner that scans more than 3 inches per second at 100 dpi. Scanning any flat surface up to 4-inches wide in user-selectable resolutions up to 400 dpi, the scanner gives users real-time display to see images updated on the screen while scanned. The hardware lets users scan images in a line-art mode or in three dither patterns. The software offers three different options to convert the dithers to 16 levels of true gray scale. LightningScan GS comes complete with a scanner, an interface card and SnapGuide, a plastic wing that snaps onto the scanner to make straight scanning easy.
$295 retail • Thunderware, Inc.; 21 Orinda Way; Orinda, CA 94563; 415-254-6581

Line-Saver Uninterruptible Power Systems (UPS) • Provide emergency power when the utility power fails or is unstable; Novell and Unix compatible • *Apple IIGS; other Apple II models.* • $730 retail; starting price • Kalglo Electronics Co., Inc.; 6584 Ruch Rd.; E. Allen Township; Bethlehem, PA 18017; 215-837-0700 or 800-524-0400

■ **LocalTalk-Compatible Connector Kit** • Connector kit • *Apple IIGS.*

The Connector Kit contains one AppleTalk-compatible connector 8-pin mini DIN/3-pin computer cable, one 2-meter 3-pin computer cable and one 3-pin cable extender (splice).
$65.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

M300 • 3.5-inch 800K floppy disk drive • *Apple IIGS.* • $259 retail • SystemGate, Inc.; 1406 S. Raymond Ave.; Alhambra, CA 91803; 818-282-4720

MagniView 200C • Computer-data display panel • *Apple IIGS.* • $1,095 retail • Dukane Corp.; 2900 Dukane Dr.; St. Charles, IL 60174; 800-695-2525 or 800-695-2727

Master Piece Remote • Two-part power center (outlet strip and remote control) with five outlets, surge, noise and modem protection • *Apple IIGS.* • $169.95 retail • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Meirick UPS Systems • Uninterruptible power system (UPS) that provides continuous computer-grade power during power failures, brownouts and surges • *Apple IIGS; other Apple II models.* • $495 retail; Meirick 400 • $595 retail; Meirick 450 Slimline • $795 retail; Meirick 850 Slimline • $895 retail; Meirick 1000 • $1,095 retail; Meirick 1400 • Meirick, Inc.; Box 298; Frisco, CO 80443; 303-668-3251

MemorySaver • Hardware/software system that transforms standard IIGS memory boards into instant-access ROM disks • *Apple IIGS; compatible memory card; 256K; ProDOS 8.* • $149.95 retail • Checkmate Technology, Inc.; 509 S. Rockford Dr.; Tempe, AZ 85281; 602-966-5802 or 800-325-7347

Modunet • Networking connectors • *Apple IIGS; AppleTalk network.* • $37.95 to $47.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

ModuNet EZ • AppleTalk-compatible network connecting system • *Apple IIGS.* • $49.95 each retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

Multi-Kache Card • Fast multidisk DMA caching controller • *Apple IIGS.* • $295 retail; 256K • $465 retail; 1 MB • $79.95 retail; SCSI option add-on • Ohio Kache Systems Corp.; 4162 Little York Rd., Ste. E; Dayton, OH 45414; 513-890-3913 or 800-338-0050

MultiRam GS • Extended memory board adding from 256K to 2 MB of memory • *Apple IIGS; 256K; ProDOS 8.* • $254 retail; 256K • $399 retail; 512K • $689 retail; 1 MB • $1,238 retail; 2 MB • $7.95 retail; MemorySaver Adapter • $39.95 retail; MemorySaver Extender • Checkmate Technology, Inc.; 509 S. Rockford Dr.; Tempe, AZ 85281; 602-966-5802 or 800-325-7347

OCS 2-40 Stereo Amplifier; JBL Control 1 Speakers • Stereo amplifier • *Apple IIGS.* • $179 retail; OCS 2-40 • $239 retail; JBL Control 1 Speakers • Orange County Speaker, Inc.; 13686 Newhope St.; Garden Grove, CA 92643; 714-530-3860

On-Board • Memory expansion card • *Apple IIGS.* • $94.95 retail; 0K • $119.95 retail; 1,024K • $195.95 retail; 2,048K • $349.95 retail; 4,096K • On Three, Inc.; 1802 Mitchell Rd.; Lake Stevens, WA 98258; 206-334-8001

Outer Drive • External hard disk drives • *Apple IIGS.* • $399 retail; 20 MB • $499 retail; 40 MB • Ingenuity, Inc.; 14922M Ramona Blvd.; Baldwin Park, CA 91706; 818-960-1485 or 800-346-0811

Parallel Pro and Buffer Pro • Parallel printer interface and buffer • *Apple IIGS; other Apple II models.* • $99 retail; Parallel Pro • $109 retail; Buffer Pro Option with 32-page buffer • $127 retail; Buffer Pro Option with 128-page buffer • $162 retail; Buffer Pro Option with 256-page buffer • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Passport MIDI Interface For IIGS (Serial Port) • Provides one MIDI In and one MIDI Out • *Apple IIGS; any MIDI equipped synthesizer or drum machine.* • $129.95 retail • Passport Designs, Inc.; 625 Miramontes St., Ste. 103; Half Moon Bay, CA 94109; 415-726-0280

PC Transporter • Board that brings MS-DOS capabilities to the Apple IIGS • *Apple IIGS; other Apple II models; 64K; ProDOS 8.* • $399 retail; PC Transporter with 768K • $259 retail; 5.25" 360K Drive • $389 retail; Dual-Drive 5.25" System • $139 retail; optional IBM-style keyboard • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Phasor • Speech synthesizer and sound board that runs many sound-oriented software programs written for Apple II computers • *Apple IIGS; 64K; ProDOS 8.* • $169 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Power Tree • Outlet strip surge suppressors • *Apple IIGS.* • $29.95 retail; Power Tree 10 • $49.95 retail; Power Tree 20 • $99.95 retail; Power Tree 50 • Kensington Microware Ltd.; 251 Park Ave. S; New York, NY 10010; 212-475-5200 or 800-535-4242

Hardware And Peripherals

PowerLine • Surge suppressors • *Apple IIGS.* • $14.95 retail; PowerLine One Model S1 • $29.95 retail; PowerLine Four Model S4A • $29.95 retail; PowerLine Six Model S6A • Computer Accessories Corp.; 6610 Nancy Ridge Dr.; San Diego, CA 92121; 619-457-5500

Professional Plus • MIDI interface • *Apple IIGS; any MIDI-equipped synthesizer.* • $125 retail • Opcode Systems; 3641 Haven Dr., Ste. A; Menlo Park, CA 94025; 415-369-8131

ProModem 2400A • Internal modem • *Apple IIGS; other Apple II models; communications software; 64K.* • $179 retail • Prometheus Products, Inc.; 7225 SW Bonita; Tigard, OR 97223; 503-624-0571

Proxima Compact Power Director • Power protection and surge suppression with four-outlet power control center • *Apple IIGS.* • $99.95 retail • Computer Accessories Corp.; 6610 Nancy Ridge Dr.; San Diego, CA 92121; 619-457-5500

Proxima Data Display 200 • LCD display panel that projects computer images via an overhead projector • *Apple IIGS.* • $1,199 retail • Computer Accessories Corp.; 6610 Nancy Ridge Dr.; San Diego, CA 92121; 619-457-5500

Proxima Intelligent Power Systems • Standby power supply • *Apple IIGS.* • $549.95 retail; Proxima IPS 450+ • $649.95 retail; Proxima IPS 500+ • Computer Accessories Corp.; 6610 Nancy Ridge Dr.; San Diego, CA 92121; 619-457-5500

Quickie • Hand-held scanner • *Apple IIGS; other Apple II models; Laser 128.* • $299 retail • Vitesse, Inc.; 13909 Amar Rd., Ste. 2; La Puente, CA 91746; 818-813-1270 or 800-777-7344

■ **RAM 4000** • Memory expansion card • *Apple IIGS.*
The RAM 4000 is a user-upgradable 4 MB RAM card for the Apple IIGS and Apple IIe upgraded to a IIGS. It uses standard 1 MB by 1 RAM chips and may be configured for 1, 2 or 4 MB of memory. The card follows Apple standards and may be used on either a ROM 1 or ROM 3 GS with no changes required. By following Apple's standards, the card is also 100 percent direct memory access (DMA) compatible.
$74.95 retail; 0K • $159 retail; 1 MB • $245 retail; 2 MB • $417 retail; 4 MB • Chinook Technology; 615 Main St., #635; Longmont, CO 80501; 303-678-5544

RamKeeper • Constant power for RAM boards; provides instant access to programs • *Apple IIGS; 256K; extended memory board.* • $189 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

RAMTalker • A SmoothTalking speech card • *Apple IIGS; Apple IIe; 64K; ProDOS 8.* • $159.95 retail • Electronic Learning Systems, Inc.; 2630 NW 39th Ave.; Gainesville, FL 32605; 800-443-7971

Serial Pro • Multifunction board combining a serial port with a functioning clock/calendar board • *Apple IIGS; other Apple II computers.* • $139 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Sider • External hard disk drive and tape backup system • *Apple IIGS; IIe.* • $465 retail; Sider Model D2 (20 MB/65ms) • $895 retail; Sider Model DF4 (40 MB/25ms) • $745 retail; Sider Model T6 Tape (60 MB/89 ips) • $949 retail; Sider Model D7T (70 MB/29ms) • $1,395 retail; Sider Model D9 (87 MB/18ms) • $1,995 retail; Sider Model C96 (87/60 MB combo) • First Class Peripherals; 1700 Forrest Way; Carson City, NV 89706; 702-883-8885

Sider ProDOS Only ROMs • Speed up the operation of a Sider hard disk and provide additional storage capacity • *Apple IIGS; 128K; ProDOS 8, 16 or GS/OS; Sider or Trustor hard disk.* • $59.95 retail • On Three, Inc.; 1802 Mitchell Rd.; Lake Stevens, WA 98258; 206-334-8001

Slide-On • Replacement battery kit for Apple IIGS • *Apple IIGS; 512K.* • $14.95 retail • Nite Owl Productions; 5734 Lamar Ave.; Mission, KS 66202; 913-362-9898

Slot-Mover • Expansion card • *Apple IIGS; RamKeeper.* • $39 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

SmartCard • SCSI board that allows the MacCrate external drives to be compatible with the Apple IIGS and IIe • *Apple IIGS; IIe.* • $129 retail; SmartCard • $645 retail; bundled with MacCrate 20 • $840 retail; bundled with MacCrate 40 • $939 retail; bundled with MacCrate 60 • Crate Technology; 6850 Vineland Ave., Bldg. M; N. Hollywood, CA 91605; 818-766-4001

Smartmodem 1200; Smartmodem 2400 • Provide 1,200 and 2,400 bps communications and more • *Apple IIGS; 64K; communications software; 80 column display card.* • $399 estimated retail; Smartmodem 1200 • $499 estimated retail; Smartmodem 2400 • $119 retail; Smartcom I V2.0 software • Hayes Microcomputer Products, Inc.; PO Box 105203; Atlanta, GA 30348; 404-449-8791

Sonic Blaster • Stereo digitizer that records, amplifies, allows editing and plays back in full stereo; includes software • *Apple IIGS; 512K; GS/OS.* • $129 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

SoundAce 2.0 • Audio digitizer that uses powerful mouse-and-windows software to record and edit sounds • *Apple IIGS; 768K; GS/OS.* • $34.95 retail; software only • $79.95 retail; with microphone and hardware • Parallax, Inc.; 6200 Desimone Ln., #69A; Citrus Heights, CA 95621; 916-721-8217

SP011 Wall Mount Surge Protector • Six-outlet surge suppressor • *Apple IIGS.* • $23.95 retail • Data Spec; 9410 Owensmouth Ave.; Chatsworth, CA 91311; 818-772-9977

Studio Plus Two • MIDI interface • *Apple IIGS; any MIDI-equipped synthesizer.* • $225 retail • Opcode Systems; 3641 Haven Dr., Ste. A; Menlo Park, CA 94025; 415-369-8131

Super-Comm • Serial interface card that makes communications possible between any Apple or Franklin computer and a variety of devices • *Apple IIGS; other Apple II models.* • $89.95 retail • Sequential Systems, Inc.; 1200 Diamond Cir., Ste. M-2; Lafayette, CO 80026; 303-666-4549

TeleSpiker • Surge suppressor/power line filter • *Apple IIGS.* • $99.95 retail • Kalglo Electronics Co., Inc.; 6584 Ruch Rd.; E. Allen Township; Bethlehem, PA 18017; 215-837-0700 or 800-524-0400

ThunderScan • Replaces an ImageWriter's ribbon cartridge with a digitizing scanning cartridge • *Apple IIGS; other Apple II models; ImageWriter; 512K; ProDOS 16.* • $219 retail; includes ThunderScan IIGS specific software • Thunderware, Inc.; 21 Orinda Way; Orinda, CA 94563; 415-254-6581

TransWarp GS • Accelerator card that increases the IIGS' processing speed 2.5 times; compatible with all standard software and hardware • *Apple IIGS.* • $399 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

V-Series Smartmodem 2400 • Provides 2,400 bps communications and more • *Apple IIGS; communications software.* • $649 estimated retail; V-Series Smartmodem 2400 X.25 • $649 estimated retail; V-Series Smartmodem 2400 V.42 • Hayes Microcomputer Products, Inc.; PO Box 105203; Atlanta, GA 30348; 404-449-8791

V-Series Smartmodem 9600 • Provides 9,600 bps communications and more • *Apple IIGS; communications software.* • $999 estimated retail; V-Series Smartmodem 9600 X.25 • $999 estimated retail; V-Series Smartmodem 9600 V.42 • Hayes Microcomputer Products, Inc.; PO Box 105203; Atlanta, GA 30348; 404-449-8791

Vulcan • Internal hard disk drives • *Apple IIGS; IIe.* • $699 retail; 20 MB • $899 retail; 40 MB • $1,795 retail; 100 MB • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Æ 3.5 Drive • External 3.5-inch drive • *Apple IIGS; Apple IIe.* • $279 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Æ 5.25" Disk Drive • External 5.25-inch disk drive • *Apple IIGS; other Apple II models with 5.25-inch controller card.* • $149 retail • Applied Engineering; PO Box 5100; Carrollton, TX 75011; 214-241-6060

Music

A Guide To Computer Music • Introductory resource book for musical electronics, Apple II, GS, Macintosh and MIDI setups • $16.95 retail; complete line of MIDI products and books available (call for catalog) • Sound Management; PO Box 3053; Peabody, MA 01961; 800-548-4907

Barney Whistle's Music Games • Music exploration for young children • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $39.95 retail • AABACA; 3137 James Ave. S; Minneapolis, MN 55408; 612-822-9279

Diversi-Tune • Turns the Apple IIGS into a MIDI synthesizer and recorder; plays up to 32 channels simultaneously • *Apple IIGS; MIDI interface optional; 512K; ProDOS 8; not copy protected.* • $75 retail • Diversified Software Research, Inc.; 34880 Bunker Hill; Farmington, MI 48331; 313-553-9460

ECS Music Training Programs • Family of music training products • *Apple IIGS; internal MIDI card; synthesizer; 512K; DOS 3.3; copy protected.* • $39.95 retail; Keyboard Tutor-MIDI • $39.95 retail; Early Music Skills-MIDI • $79.95 retail; Keyboard Extended Jazz Harmonies-MIDI • $79.95 retail; Keyboard Fingerings-MIDI • $79.95 retail; Keyboard Chords-MIDI • $79.95 retail; Keyboard Arpeggios-MIDI • $79.95 retail; Keyboard Speed Reading-MIDI • $39.95 retail; Musical Stairs-MIDI • $39.95 retail; Note Speller • $99.95 retail; Elements Of Music • $99.95 retail; Music Flash Cards • $99.95 retail; Patterns In Pitch • $99.95 to $129.95 retail; 21st Century Music Series • Electronic Courseware Systems, Inc.; 1210 Lancaster Dr.; Champaign, IL 61821; 217-359-7099

Fundamentals Of Music • Fundamental musical concepts and literacy • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $39.95 retail • AABACA; 3137 James Ave. S; Minneapolis, MN 55408; 612-822-9279

Instant Music • Music creativity tool; up to four instruments can be played at once; uses colored bars in place of standard notation to allow anyone to make music quickly • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $19.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Instant Synthesizer • Turns the IIGS into a sampling synthesizer • *Apple IIGS; 768K; ProDOS 16; not copy protected.* • $49.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

Music

Intervals, Scales & Chords • Provide exercises in constructing intervals, scales and chords, all in treble clef; intended for more advanced students of music theory • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $39.95 retail • AABACA; 3137 James Ave. S; Minneapolis, MN 55408; 612-822-9279

Jam Session • Music performance program • *Apple IIGS; 768K.* • $49.95 retail • Broderbund Software, Inc.; 17 Paul Dr.; San Rafael, CA 94903; 415-492-3500, 415-492-3200 (dealers only) or 800-521-6263

Master Tracks Jr. For IIGS • Personal MIDI recording studio that provides tools for composing, recording and editing music via a graphical interface • *Apple IIGS; Passport serial port MIDI interface; MIDI-equipped instrument; 1.25 MB; GS/OS; not copy protected.* • $99.95 retail • Passport Designs, Inc.; 625 Miramontes St., Ste. 103; Half Moon Bay, CA 94109; 415-726-0280

Master Tracks Pro • Professional MIDI recording and graphic editing sequencing program • *Apple IIGS; Passport serial port MIDI interface or compatible; MIDI instrument(s); 1.25 MB; GS/OS; not copy protected.* • $395 retail • Passport Designs, Inc.; 625 Miramontes St., Ste. 103; Half Moon Bay, CA 94109; 415-726-0280

Music Construction Set • Music composition system; 33 digitized instruments; MIDI output; and stereo music capability • *Apple IIGS; stereo card and speakers recommended; 256K; ProDOS 8; not copy protected.* • $19.95 retail • Electronic Arts; 1820 Gateway Dr.; San Mateo, CA 94404; 415-571-7171

The Music Studio 2.0 • Music creation program with pull-down menus, music paint box and more • *Apple IIGS; 768K; GS/OS; not copy protected.* • $99.95 retail • Activision; 3885 Bohannon Dr.; Menlo Park, CA 94025; 415-329-0500

MusicShapes — Family Version • Creative learning environment that involves everyone in the process of music making and idea development; uses Ensoniq sound chip; also MIDI compatible • *Apple IIGS; 512K; GS/OS; not copy protected.* • $79.95 retail • Music Systems for Learning, Inc.; 76 Davenport Rd.; Roxbury, CT 06783; 203-355-3454

Pyware Instrument Designer • Sound-wave designer that enables users to create an infinite variety of synthesized sounds using the built-in Ensoniq chip; sounds can be ported to the Pyware Music Writer • *Apple IIGS; synthesizer and printer optional; 512K; ProDOS 16; not copy protected.* • $129 retail • Pygraphics Corp.; PO Box 639; Grapevine, TX 76051; 817-481-7536 or 800-222-7536

Pyware MIDI Translator • Converts sequencer files into notation files to be used with Pyware Music Writer • *Apple IIGS; synthesizer and sequencer program; 768K; ProDOS 16 and GS/OS; not copy protected.* • $79 retail • Pygraphics Corp.; PO Box 639; Grapevine, TX 76051; 817-481-7536 or 800-222-7536

Pyware Music Writer • Professional music writing program designed for the IIGS; any type of markings and notations are available; tutorial on basic music theory available with Level I • *Apple IIGS; printer; optional MIDI-compatible synthesizer; 768K; ProDOS 16 and GS/OS; not copy protected.* • $119 retail; Limited Edition • $295 retail; Special Edition • $595 retail; Professional Model • Pygraphics Corp.; PO Box 639; Grapevine, TX 76051; 817-481-7536 or 800-222-7536

Sonix • Music interface for Basic programs • *Apple IIGS; two 3.5-inch drives; RGB monitor; 1 MB; ProDOS 8; not copy protected.* • $60 retail • So What Software; 10221 Slater Ave., Ste. 103; Fountain Valley, CA 92708; 714-964-4298 or 714-963-3392

Supermusic • Adds six music commands to Applesoft Basic • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $39.95 retail • Lynx Computer Products, Inc.; 15115 Ramona Blvd.; Baldwin Park, CA 91706; 818-960-4839 or 800-824-3522

SysExGS • Allows users to save, store, load and retransmit information from their MIDI equipment • *Apple IIGS; 768K; GS/OS; not copy protected.* • $34.95 retail • $5.95 retail; demo • Lindsay Hough; PO Box 212; Slingerlands, NY 12159; 518-439-7266

Understanding Music • Helps develop the cognitive concepts necessary to understand and deal with fine music • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $39.95 retail • AABACA; 3137 James Ave. S; Minneapolis, MN 55408; 612-822-9279

The Well-Tempered Ear • Ear training • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $39.95 retail • AABACA; 3137 James Ave. S; Minneapolis, MN 55408; 612-822-9279

Networking

AppleShare File Server V2.0 • Workgroup file server software • *Apple IIGS; other Apple computers.* • $799 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

AppleShare IIGS Workstation Software • Workgroup software • *Apple IIGS; other Apple models.* • $99 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

AppleShare Print Server • Network print server; enhanced version of LaserShare • *Apple IIGS; other Apple computers.* • $299 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Aristotle • Provides educational institutions with access to ProDOS applications stored on an AppleShare File Server • *Apple IIGS; other Apple II models.* • $199 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

ELAN Networking System • Educational Local Area Network (ELAN) • *Apple IIGS; other Apple II models; one Satellite board; one expander card; twisted pair cable; AROS III software; 128K; ProDOS 8; DOS 3.3; copy protected.* • $267 retail; per remote station • Lan-Tech, Inc.; 11811 N. Tatum Blvd., Ste. P-150; Phoenix, AZ 85028; 602-953-6300

Inter•Poll Network Administrator's Utility • Contains tools that an AppleTalk network administrator can use to implement a network support program • *Apple IIGS; workstation software.* • $129 retail • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

MouseFiler Network Utilities • Enables an Apple II user to work with an AppleShare server over the AppleTalk network; Macintosh-style desktop using windows, pull-down menus and the mouse • *Apple IIGS; AppleShare Server, AppleTalk Network and Apple II Workstation board; 128K; ProDOS 8; not copy protected.* • $199.95 retail; institutional POs accepted • Harbor Software, Inc.; 403 Great Rd., Ste. 8; Acton, MA 01720; 508-263-1870

■ **Q-System GS** • Intelligent print spooler • *Apple IIGS.*
Q-System GS is an intelligent print spooler that automatically spools and queues print jobs from up to seven computers simultaneously. The Q-System GS is a standalone system that is completely automatic and transparent to users. Available with up to 4 MB of buffer memory, the Q-System GS eliminates the long waiting times normally associated with printer sharing devices. The Q-System GS is equipped with eight general purpose mini DIN 8 ports that may be used in any input/output configuration. It is compatible with the Apple IIGS, II, IIe and Mac. Any combination of those computers may be connected to the Q-System GS to share a common serial device, such as the ImageWriter, HP LaserJet or plotter. In addition to its serial output, the Q-System GS has a parallel output port for added flexibility.
Call for pricing • Sequential Systems, Inc.; 1200 Diamond Cir., Ste. M-2; Lafayette, CO 80026; 303-666-4549

Online Databases

America Online • Online service • *Apple IIGS; Hayes-compatible modem; 512K; ProDOS 16 (disk also contains ProDOS 8 version that will be launched if 256K); not copy protected.* • $5.95 per month retail; includes one free connect hour • $5 per hour retail; evenings and weekends • $10 per hour retail; daytime use • Quantum Computer Services, Inc.; 8619 Westwood Center Dr.; Vienna, VA 22182; 800-227-6364

Boston CitiNet • Free online information service • *ASCII terminal with modem.* • Free to access • Boston CitiNet; Ste. 717, World Trade Center; Boston, MA 02210; 617-439-5678 or 617-439-5699 (modem)

CompuServe Information Service • Online information service with several Apple forums • *Apple IIGS; modem; communications software; Videx communications software available.* • $39.95 retail; Membership Kit • CompuServe Information Service; PO Box 20212; Columbus, OH 43220; 614-457-0802 outside U.S. or 800-848-8199

Delphi • Online information service • *Apple IIGS; communications program.* • $49.95 retail; Membership Fee (includes manual and credit equal to two hours online time) • $7.20 per hour retail; non-prime time • $17.40 per hour retail; prime time • General Videotex Corp.; Three Blackstone St.; Cambridge, MA 02139; 617-491-3342

GEnie • Online database with an Apple II special interest group • *Apple IIGS; modem.* • $5 per hour retail; after hours • $35 per hour retail; prime time • General Electric Information Services Co.; 401 N. Washington St.; Rockville, MD 20850; 800-638-9636

Personal Productivity

Address Master • Integrated name and address database • *Apple IIGS; printer optional; 512K; GS/OS; not copy protected.* • $34.95 introductory retail • Prelude Software, Inc.; PO Box 1317; Costa Mesa, CA 92628; 714-751-5736

Dollars And Sense 2.0 • Financial management package • *Apple IIGS; other Apple II models; 3.5-inch drive; 128K; ProDOS 8; not copy protected.* • $119.95 retail • Monogram; 21821 Plummer St.; Chatsworth, CA 91311; 818-700-6200

Family Matters • Household organization • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $49.95 retail • Springboard Software Group; A Div. of Spinnaker Software Corp.; 201 Broadway; Cambridge, MA 02139; 612-944-3915

Family Roots • Genealogy research program • *Apple IIGS; other Apple II models; 128K; ProDOS 8 (works with GS/OS); not copy protected.* • $225 retail • Quinsept, Inc.; PO Box 216; Lexington, MA 02173; 617-641-2930 or 800-637-7668

Personal Productivity

The Food Processor II • Nutrition and diet analysis with 2,400 foods and 30 nutrients • *Apple IIGS; other Apple II models; one or two disk drives; 128K; ProDOS 8; not copy protected.* • $295 retail; free demo available • $25 to $99 each retail; expanded food databases • ESHA Research; PO Box 13028; Salem, OR 97309; 503-585-6242

Genealogical Data Base System (GDBS) 2.0 • Genealogical software for novices or professionals • *Apple IIGS; other Apple II models; 64K; ProDOS 8 and DOS 3.3; not copy protected.* • $99.95 retail • Data Base Systems; PO Box 7263; Huntsville, AL 35807; 205-881-6957

L.I.F.E. Diary • Diary text, idea and reminder files, tables and graphs, etc., for understanding stress • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $24.95 retail • Maretech; 325 Newell St., Dept. A3; Walla Walla, WA 99362; 509-529-1894

Managing Your Money 4.0 • Financial planning, budgeting and checkbook and small business package combining nine integrated programs into one; exports to AppleWorks GS • *Apple IIGS; two disk drives; 256K; ProDOS 8; not copy protected.* • $149.95 retail • MECA Ventures, Inc.; 327D Riverside Ave.; Westport, CT 06881; 203-226-2400

Multidimensional Personality Inventory 3 • Personality evaluation • *Apple IIGS; printer; 64K; ProDOS 8; copy protected.* • $89.50 retail • Psychological Psoftware Co.; 312 Los Altos Dr.; Aptos, CA 95003; 408-688-6808

Nutriplan • Diet and nutritional analysis software • *Apple IIGS; printer optional; 128K; ProDOS 8 and DOS 3.3; not copy protected.* • $75 retail • Micromedx Computer Software Corp.; 187 Gardiners Ave.; Levittown, NY 11756; 800-535-3438

Personal Accountant 2.6 • Personal accounting system for personal and small business use • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $49.95 retail • Softsync, Inc.; 162 Madison Ave.; New York, NY 10016; 212-685-2080

Quicken • Single-entry bookkeeping software for small business and personal use • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $59.95 retail • Intuit, Inc.; 155 Linfield Dr.; Menlo Park, CA 94026; 415-322-0573

Sports Scheduler • Creates league schedules for any sport; League/Team Standings allows quick entry of game results, then sorts, arranges and saves the data entered • *Apple IIGS; other Apple II models; 80-column card; 128K; ProDOS 8; copy protected.* • $109.95 retail; Sports Scheduler (includes referee/facility scheduler program on disk) • $39.95 retail; Universal League/Team Standings (can use the same files used with Sports Scheduler) • Sports Software Associates; 75 Recreation Park Dr.; Hingham, MA 02043; 617-749-7880

TaxView • Tax preparation and planning • *Apple IIGS; 512K; ProDOS 16; two 3.5-inch disk drives or hard disk drive; not copy protected.* • $99 retail • Softview, Inc.; 1721 Pacific Ave., Ste. 100; Oxnard, CA 93033; 805-388-5000 or 800-662-6829

Total Stress Management System • Covers many techniques to reduce stress and tension • *Apple IIGS; printer optional; 64K; ProDOS 8; copy protected.* • $89.50 retail • Psychological Psoftware Co.; 312 Los Altos Dr.; Aptos, CA 95003; 408-688-6808

Programming And Utilities

360 Text Toolkit V2.0 • System library for APW/ORCA-based languages • *Apple IIGS; APW or ORCA development environments; GS/OS; not copy protected.* • $64.95 retail; Library with Assembly Macros • $24.95 retail; ORCA/Pascal Interface (requires Library) • $24.95 retail; APW C Interface (requires Library) • 360 MicroSystems; PO Box 1192; Oviedo, FL 32765; 407-365-6714

AC/Basic Compiler • Basic compiler; MS QuickBasic compatible; NCP • *Apple IIGS; 512K; ProDOS 16.* • $125 retail • Absoft Corp.; 2781 Bond St.; Rochester Hills, MI 48309; 313-853-0050

Apple IIGS Icon Editor • Tool to create and modify icons • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $25 retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

Apple IIGS Source Code Sampler, Volume I • Contains source code for IIGS applications that use the desktop interface • *Apple IIGS; ProDOS 16; APW native or MPW IIGS cross-development system; not copy protected.* • $30 retail; includes two 3.5-inch Apple II disks and one 3.5-inch Macintosh disk • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

Apple IIGS System Software (GS/OS) Version 5.0 • Increases the speed and performance of an Apple IIGS • *Apple IIGS; 512K (768K for AppleShare); GS/OS; not copy protected.* • $49 retail; documentation and disks • (Software available separately, free of charge, from Authorized Apple Dealers) • Apple Computer, Inc.; 20525 Mariani Ave.; Cupertino, CA 95014; 408-996-1010

Apple IIGS System Software V5.0.2 (Developer Package) • Contains the most current release of IIGS System Software for developers • *Apple IIGS; 512K (768K for AppleShare); GS/OS; not copy protected.* • $30 retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

APW C: Apple IIGS Programmer's Workshop C V1.0.2 • APW C compiler • *Apple IIGS; APW; 1.25 MB; ProDOS 16; two 3.5-inch disk drives or one 3.5-inch disk drive and a hard disk drive; hard disk drive highly recommended; not copy protected.* • $100 retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

APW: Apple IIGS Programmer's Workshop V1.0.2 • Software development system • *Apple IIGS; 1.25 MB; ProDOS 16; two 3.5-inch disk drives or one 3.5-inch disk drive and a hard disk drive; hard disk drive highly recommended; not copy protected.* • $100 retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

Call-Box • Multilanguage Toolbox programming system with Basic interface • *Apple IIGS; two 3.5-inch drives; RGB monitor; 1 MB; ProDOS 8, ProDOS 16 and GS/OS; not copy protected.* • $99 retail • So What Software; 10221 Slater Ave., Ste. 103; Fountain Valley, CA 92708; 714-964-4298 or 714-963-3392

Chinook SCSI Utilities • Utilities for use with embedded SCSI drives and the Apple II SCSI card • *Apple IIGS; 64K; ProDOS 8.* • $29.95 retail • Chinook Technology; 615 Main St., #635; Longmont, CO 80501; 303-678-5544

Copy II Plus • Backs up copy protected disks • *Apple IIGS; other Apple II models (all Laser 128 series must have 80-column card); 128K; ProDOS 8; not copy protected.* • $39.95 retail • Central Point Software, Inc.; 15220 NW Greenbrier Pkwy., Ste. 200; Beaverton, OR 97006; 503-690-8090

Cross-Works 2.0 • Utility that exchanges AppleWorks (except AppleWorks GS) with IBM PC software • *Apple IIGS; 128K; ProDOS 8 and DOS 3.3; not copy protected.* • $99.95 retail • SoftSpoken Co.; PO Box 18343; Raleigh, NC 27619; 919-870-5694

Directory Labeler II V2.1 • Disk labeling utility • *Apple IIGS; other Apple II models; 80-column card and Apple-compatible printer interface card; 128K; ProDOS 8; not copy protected.* • $26.95 retail • Grafik Solutions; Sourceware Software Products; 6899 S. Yukon Ct.; Littleton, CO 80123; 303-933-9148

Disc Commander • ProDOS disk editor • *Apple IIGS; two 3.5-inch disk drives; RGB monitor; 512K; ProDOS 8; not copy protected.* • $40 retail • So What Software; 10221 Slater Ave., Ste. 103; Fountain Valley, CA 92708; 714-964-4298 or 714-963-3392

Disk Label Printer Pro V3.0 • Reads 3.5-inch disks and makes labels showing the contents; also makes AppleWorks database files • *Apple IIGS; 128K; ProDOS 8; ImageWriter II; not copy protected.* • $30 retail • HardSoft Products; PO Box 90012; Honolulu, HI 96835

Disk Util II V1.2 • Backs up copy protected software • *Apple IIGS; 3.5-inch disk drive; 512K; GS/OS; not copy protected.* • $59.95 retail • FWB, Inc.; 2040 Polk St., Ste. 215; San Francisco, CA 94109; 415-474-8055

The Diversi Series • Family of utility software designed to enhance performance of the Apple IIGS and disk drives • *Apple IIGS; 512K; ProDOS 8; not copy protected.* • $45 retail; Diversi-Key (requires 512K) • $35 retail; Diversi-Cache (requires 512K) • $30 retail; Diversi-Copy (any Apple II) • Diversified Software Research, Inc.; 34880 Bunker Hill; Farmington, MI 48331; 313-553-9460

EasyDrive • Software interface for hard disk drives • *Apple IIGS; 3.5-inch disk or hard disk drive; 128K; ProDOS 8, ProDOS 16 and GS/OS; not copy protected.* • $59.95 retail • Quality Computers; 20200 Nine Mile Rd.; St. Claire Shores, MI 48080; 313-774-7200

Fasthouse • Software program for controlling the X-10 Powerhouse • *Apple IIGS; other Apple II models; disk drive; X-10 Home Control Interface; 64K; ProDOS 8; not copy protected.* • $34.95 retail; includes cable • $39.99 retail; X-10 Home Control Interface • KADO Systems; Ste. 115, 4032 S. Lamar #500; Austin, TX 78704; 512-990-2390

File Utilities I & II • Shell utilities for APW/ORCA programming environments • *Apple IIGS; APW or ORCA development system; GS/OS; not copy protected.* • $34.95 each retail • 360 MicroSystems; PO Box 1192; Oviedo, FL 32765; 407-365-6714

GDL 2.0 • Graphic disk labeler • *Apple IIGS; color monitor; ImageWriter II; 1 MB; GS/OS; not copy protected.* • $39.95 retail • $9.50 retail; GDL Graphic Disk • $11.95 retail; extra label packages (250) • Triad Venture, Inc.; PO Box 12201; Hauppauge, NY 11788; 516-360-0797

Graphic Environment Operating System (GEOS) • Operating system that brings a Macintosh-like graphic interface to all Apple II computers; key features include word processor, spell checker, mail merge, paint program and desk accessories • *Apple IIGS; other Apple II models; 128K; not copy protected.* • $69.95 retail • Berkeley Softworks; 2150 Shattuck Ave.; Berkeley, CA 94704; 415-644-0883

The Graphic Exchange • Universal graphics conversion utility • *Apple IIGS; 768K; ProDOS 8; not copy protected.* • $49.95 retail • Roger Wagner Publishing, Inc.; 1050 Pioneer Way, Ste. P; El Cajon, CA 92020; 619-442-0522

Programming And Utilities

Graphics Supermarket • General purpose painting program • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $49.95 retail; program only • $149.95 retail; program and source code • Abracadata; PO Box 2440; Eugene, OR 97402; 503-342-3030

GS Memory Test • Performs diagnostic tests on the Apple and Apple IIGS memory expansion board • *Apple IIGS; extended memory card; 512K; ProDOS 8; not copy protected.* • $19.95 retail • On Three, Inc.; 1802 Mitchell Rd.; Lake Stevens, WA 98258; 206-334-8001

GSBug And Debugging Tools V4.0B1 • Machine language debugger • *Apple IIGS; 512K; GS/OS; not copy protected.* • $30 retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

HyperLaunch V3.0 • Launcher/program switcher • *Apple IIGS; hard disk drive; RGB monitor; 512K; ProDOS 16 and GS/OS; not copy protected.* • $60 retail • So What Software; 10221 Slater Ave., Ste. 103; Fountain Valley, CA 92708; 714-964-4298 or 714-963-3392

HyperStudio • Hypermedia authoring system • *Apple IIGS; 1.25 MB; GS/OS.* • $149.95 retail • Roger Wagner Publishing, Inc.; 1050 Pioneer Way, Ste. P; El Cajon, CA 92020; 619-442-0522

KeyLISP • Advanced Lisp programming language; 424-page bound manual • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $149 retail; single (or first) copy • $39 retail; manual only for additional user (site license) • XPrime Corp.; 10835 Santa Monica Blvd., Ste. 204A; Los Angeles, CA 90025; 213-470-4663

LifeGuard • File recovery software for files deleted under ProDOS 8, ProDOS 16 and GS/OS • *Apple IIGS; 256K; ProDOS 16 and GS/OS; not copy protected.* • $29.95 retail • MindCraft Publishing Corp.; 52 Domino Dr.; Concord, MA 01742; 508-371-1660

Lisa 816 V5.0 • Apple IIGS native mode release of the Lisa interactive assembly language development system • *Apple IIGS; 512K; 1 MB recommended; ProDOS 16; not copy protected.* • $70 retail • H.A.L. Labs; 9472 Magnolia Ave.; Riverside, CA 92503; 714-359-8480

MacroMate • Universal macro program • *Apple IIGS; 768K; ProDOS 16 or GS/OS.* • $49.95 retail • Roger Wagner Publishing, Inc.; 1050 Pioneer Way, Ste. P; El Cajon, CA 92020; 619-442-0522

Menu Maker • Allows users to design custom pull-down menus • *Apple IIGS; two 3.5-inch drives; RGB monitor; 512K; ProDOS 8; not copy protected.* • $20 retail • So What Software; 10221 Slater Ave., Ste. 103; Fountain Valley, CA 92708; 714-964-4298 or 714-963-3392

Menu Master • Menu system for launching ProDOS, GS/OS and DOS 3.3 applications • *Apple IIGS; other Apple II models; 128K; ProDOS 8 or 16.* • $49 retail; single-user version • $149 retail; network version • Electronic Learning Systems, Inc.; 2630 NW 39th Ave.; Gainesville, FL 32605; 800-443-7971

Merlin 8/16 • Includes two versions of Merlin 8 for assembling 8-bit ProDOS and DOS 3.3 programs and Merlin 16 for assembling 8- and 16-bit ProDOS programs • *Apple IIGS; other Apple II models; 128K; ProDOS 8, ProDOS 16 or DOS 3.3; not copy protected.* • $124.95 retail • Roger Wagner Publishing, Inc.; 1050 Pioneer Way, Ste. P; El Cajon, CA 92020; 619-442-0522

Micol Advanced Basic 3.0 • Allows programmers to write Basic programs that operate specifically for the IIGS • *Apple IIGS; 768K; GS/OS; not copy protected.* • $145 retail • Micol Systems; 9 Lynch Rd.; Willowdale, Ontario, Canada M2J 2V6; 416-495-6864

Micol Macro • Integrated text editor, monitor/shell and self-relocating macro-assembler; designed for programmers working in assembly language • *Apple IIGS; 768K; GS/OS; not copy protected.* • $99.95 retail • Micol Systems; 9 Lynch Rd.; Willowdale, Ontario, Canada M2J 2V6; 416-495-6864

MouseFiler 2.0 • Replaces the Finder in the Apple IIGS with a much faster desktop; includes program selector, find file searching and more • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $69.95 retail • Harbor Software, Inc.; 403 Great Rd., Ste. 8; Acton, MA 01720; 508-263-1870

MPW IIGS • Cross development system; development environment; cross development assembler; cross development C compiler; cross development Pascal compiler • *Apple IIGS; Macintosh with 2 MB of RAM; MPW 2.0.2 or later; MPW IIGS Tools; not copy protected.* • $50 retail; MPW IIGS Tools V1.1 • $150 retail; MPW V3.1 • $100 retail; MPW IIGS Assembler V1.0 • $150 retail; MPW IIGS C V1.0.1 • $175 retail; MPW IIGS Pascal V1.0B1 • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

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ORCA/Desktop For The IIGS • Programming environment for APW compatible languages • *Apple IIGS; memory depends on language used; ProDOS 16; not copy protected.* • $60 retail • The Byte Works, Inc.; 4700 Irving Blvd. NW, Ste. 207; Albuquerque, NM 87114; 505-898-8183

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ORCA/Pascal For The IIGS • Pascal programming language with desktop programming environment and source level debugger • *Apple IIGS; 768K for text environment; 1,024K for desktop environment; ProDOS 16; not copy protected.* • $150 retail; ORCA/Pascal with desktop and debugger • The Byte Works, Inc.; 4700 Irving Blvd. NW, Ste. 207; Albuquerque, NM 87114; 505-898-8183

PDQ Pascal • Pascal for beginning programmers • *Apple IIGS; other Apple II models; ProDOS 16; not copy protected.* • $79.95 retail • Pecan Software Systems, Inc.; 1410 39th St.; Brooklyn, NY 11218; 718-851-3100

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Programming Tools And Interfaces For APW • Development tools and interfaces to help programmers take advantage of the new features of Apple IIGS System Software 5.0 • *Apple IIGS; two 3.5-inch drives or one 3.5-inch drive and hard disk drive; 1.25 MB; GS/OS; not copy protected.* • $50 retail • APDA — Apple Computer, Inc.; 20525 Mariani Ave., MS 33G; Cupertino, CA 95014; 800-282-2732

RamUp 4.0 • Organizes and speeds up RAM disks • *Apple IIGS; Applied Engineering or Checkmate RAM card; 128K; ProDOS 8; not copy protected.* • $39.95 retail • Quality Computers; 20200 Nine Mile Rd.; St. Claire Shores, MI 48080; 313-774-7200

■ **Salvation** • Disk utilities: backup and restore; disk optimizer; virus detector and cure; program launcher; directory repair and file recovery • *Apple IIGS; 1 MB (768K for The Exorciser and Wings); GS/OS 5.0; hard disk drive; 3.5-inch drive; not copy protected.*

Salvation is a family of Apple IIGS utility software. Guardian is a backup and restore utility that lets users choose the disk, folder or specific files to be archived, then backs them up quickly. Guardian's incremental backups, custom macros and stop/restart capabilities give users true flexibility and control. Renaissance optimizes drive utilization by allowing users to pack files, eliminating the normal data re-write fragments that occur every time a file is modified. The Exorciser automatically cures floppy disks and hard drives of viruses. Wings is a program launcher. Deliverance is a directory repair and file recovery utility.

$49.95 retail; Guardian • $49.95 retail; Renaissance • $39.95 retail; The Exorciser • $79.95 retail; Wings • $49.95 retail; Deliverance • Vitesse, Inc.; 13909 Amar Rd., Ste. 2; La Puente, CA 91746; 818-813-1270 or 800-777-7344

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TML Basic V1.10 • Full-featured 16-bit Basic compiler • *Apple IIGS; 768K; GS/OS; not copy protected.* • $125 retail • TML Systems, Inc.; 8837-B Goodbys Executive Dr.; Jacksonville, FL 32217; 904-636-8592

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UniDOS Plus • Allows users to use 3.5-inch disks with DOS 3.3 • *Apple IIGS; 256K; DOS 3.3; not copy protected.* • $39.95 retail • MindCraft Publishing Corp.; 52 Domino Dr.; Concord, MA 01742; 508-371-1660

VCR Backup • Hard drive to VCR backup program • *Apple IIGS; VCR; 1 MB; GS/OS; not copy protected.* • $199 retail • Ingenuity, Inc.; 14922M Ramona Blvd.; Baldwin Park, CA 91706; 818-960-1485 or 800-346-0811

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BeagleWrite GS • Word processor • *Apple IIGS.* • $99.95 retail • Beagle Bros, Inc.; 6215 Ferris Sq., Ste. 100; San Diego, CA 92121; 619-452-5500, 800-345-1750 (orders) or 800-992-4022 in CA (orders)

The Character Factory • Lets users print special characters used in math, science, foreign languages, etc. • *Apple IIGS; other Apple II models; 64K; ProDOS 8; not copy protected.* • $24.95 retail; single user • $49.95 retail; unlimited copies per school or college department • Seven Hills Software Corp.; 2310 Oxford Rd.; Tallahassee, FL 32304; 904-575-0566 or 800-627-3836

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MouseWrite Version 2.6 • ProDOS moused-based word processor with print spooling, spelling checker, mail merge, AppleWorks conversion and more • *Apple IIGS; other Apple II models; extended memory card recommended for expanded desktop (384K); two disk drives; 128K; ProDOS 8; not copy protected.* • $149.95 retail • Roger Wagner Publishing, Inc.; 1050 Pioneer Way, Ste. P; El Cajon, CA 92020; 619-442-0522

Sensible Grammar • Proofreading program that checks word processing files for common grammatical errors • *Apple IIGS; word processing program; 128K; ProDOS 8; copy protected.* • $99.95 retail • Sensible Software, Inc.; 335 E. Big Beaver, Ste. 207; Troy, MI 48083; 313-528-1950

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Sensible Writer • Word processor featuring built-in mail merge and automatic envelope addressing; shares data with AppleWorks • *Apple IIGS; 128K; ProDOS 8; not copy protected.* • $99.95 retail • Sensible Software, Inc.; 335 E. Big Beaver, Ste. 207; Troy, MI 48083; 313-528-1950

Wordbench • Word processing program • *Apple IIGS; other Apple II models; 128K; ProDOS 8; not copy protected.* • $149 retail • Addison-Wesley Publishing Co., Inc.; 1 Jacob Way; Reading, MA 01867; 617-944-3700

WordPerfect For The Apple IIGS • Full-featured word processor with more than 110 features • *Apple IIGS; two disk drives or hard disk drive recommended; additional memory card recommended; 512K; ProDOS 16; GS/OS (System 5.0) compatible; not copy protected.* • $179 retail • WordPerfect Corp.; 1555 N. Technology Way; Orem, UT 84057; 801-225-5000

Other Software

Apple IIGS Software Library • Total of 170 disks of public domain software and shareware • *Apple IIGS; 512K; ProDOS 16; not copy protected.* • $9 each retail • $39.95 retail; IIGS Editor's Choice Set (six-disk set featuring six reviews: Wheel, Iconed, Bounce-It!, F1 Race, Viewer and Control Panel NDA) • Write or call for catalog • $4.95 retail; P.D.E.'s Guide to Affordable IIGS Software (contains detailed descriptions of nearly 1,000 files from 100 P.D.E. IIGS public domain and shareware disks) • P.D.E.; 2078C Walsh Ave.; Santa Clara, CA 95050; 408-496-0624 or 800-331-8125

Public Domain Catalog • Public domain software catalog • *Apple IIGS; other Apple II models; 512K; ProDOS 8 or ProDOS 16; not copy protected.* • $3.50 retail; each disk • Catalog free on request • Big Red Computer Club; 423 Norfolk Ave.; Norfolk, NE 68701; 402-379-4680

Public Domain Software On File CD-ROM • CD-ROM public domain software • *Apple IIGS; other Apple II models; color or monochrome monitor; Apple II SCSI Card, Rev C; CD-ROM drive with compatible SCSI interface; printer optional; 64K; ProDOS 8 or ProDOS 16; not copy protected.* • $195 retail • Facts On File, Inc.; 460 Park Ave. S; New York, NY 10016; 212-683-2244

Softdisk G-S • Monthly software periodical • *Apple IIGS; RGB monitor preferred; 768K (1.25 MB recommended); GS/OS; not copy protected.* • $12.95 retail; single copy • $29.95 retail; three-issue subscription • Softdisk Publishing; PO Box 30008; Shreveport, LA 71130; 318-221-8718 or 800-831-2694

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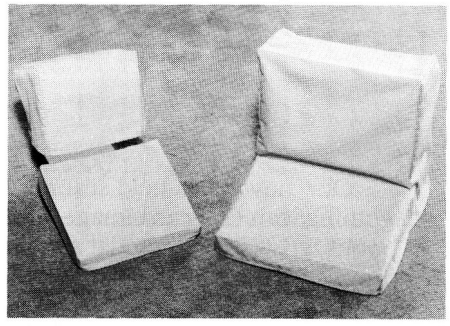

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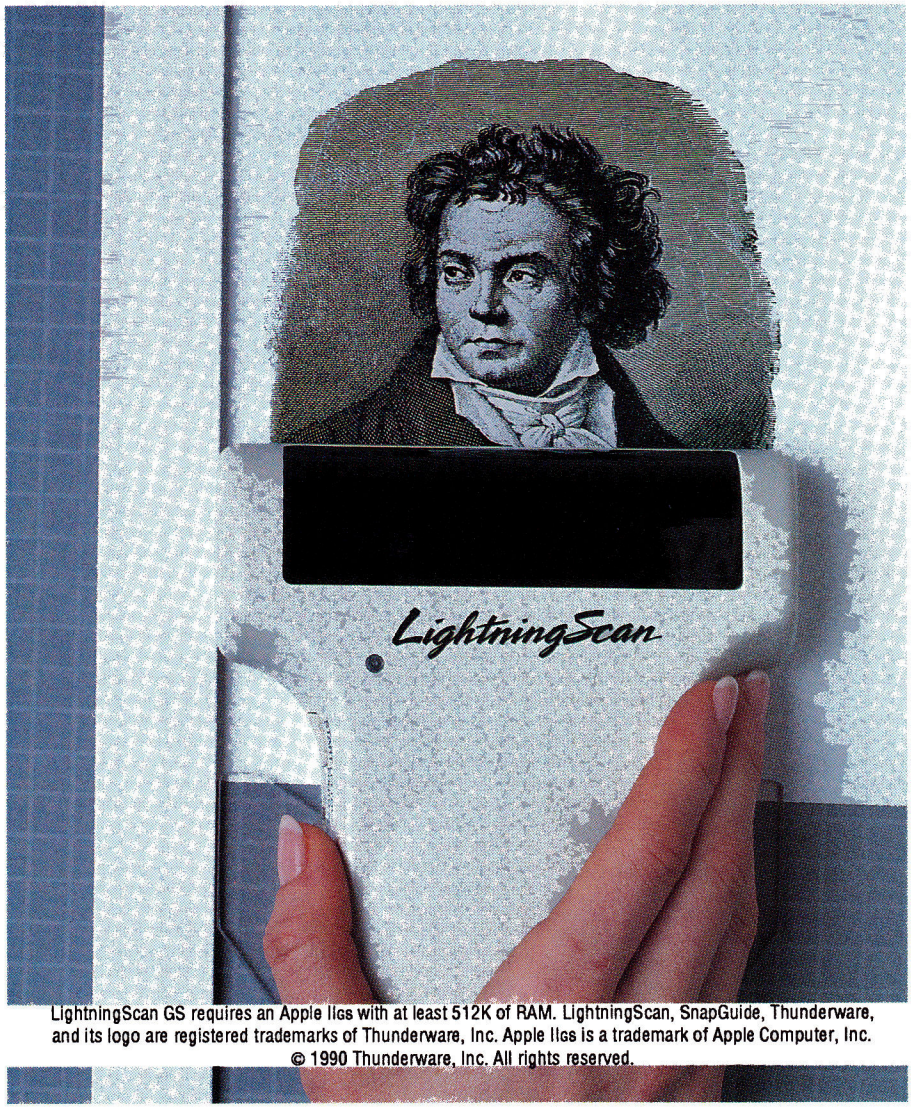

LightningScan GS requires an Apple IIgs with at least 512K of RAM. LightningScan, SnapGuide, Thunderware, and its logo are registered trademarks of Thunderware, Inc. Apple IIgs is a trademark of Apple Computer, Inc.
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Circle Reader Service Number 15

LogoWriter GS

A Kid's Programming Environment

Logo is a computer language that teaches kids to program by manipulating a friendly electronic creature called the "turtle." When youngsters issue commands, the reptile responds on screen. With turtle graphics, budding programmers actually see how their programs work.

LogoWriter GS

The language's word processing capabilities simplify integration of text and graphics within a programming environment.

The Apple IIGS now has its own version of the popular LogoWriter. The product took a long time to reach the market, but the end result is a real show stopper! With LogoWriter GS, turtle graphics have come of age.

We examined the LogoWriter GS (LWGS) Secondary Kit for this review. Primary and Intermediate Materials Kits for younger children are available as well. The same software ships with each product.

The Secondary Kit places more emphasis on programming. The package comes with teaching materials and student manuals for youngsters in junior high and high school. LWGS Secondary is also appropriate for upper elementary grade students who are familiar with activities in the LogoWriter Intermediate Kit.

The accompanying documentation is first-rate. Youngsters unfamiliar with LogoWriter basics can work through two introductory manuals. They learn to draw with the turtle, use the word processor, write procedures, manipulate shapes,

define Control-key events and more. Once students feel comfortable with fundamental techniques and elementary programming procedures, they can try more advanced projects.

Some projects emphasize graphics and special effects. Others encourage youngsters to compose an animated song, write an action-packed adventure story or program video games.

Teacher reference materials explain the more technical aspects of LogoWriter. They provide a quick guide to LogoWriter's Scrapbook, language primitives (built-in vocabulary), special keys and key combinations. *Teacher's Notes* furnishes instructors with practical suggestions for using the project books with students.

Individuals already familiar with the Apple II version of LogoWriter (ProDOS 8) can easily switch to LogoWriter GS. While there are several new commands and added features, file system primitives are virtually identical.

Programmers can even load older LogoWriter 2.0 (ProDOS 8) format pages with LogoWriter GS, so existing procedures are not lost. However, graphics and shapes from LogoWriter 2.0 cannot be transferred. In addition, some programming adjustments may be necessary to get older procedures to run under LWGS.

LWGS takes advantage of the enhanced memory capabilities of the 16-bit IIGS. The greater the IIGS RAM configuration, the more memory available to define procedures. The IIGS version also lets programmers work with a 16-color palette rather than with just the six shades available in the Apple II edition.

There's a rainbow of available IIGS hues, consisting of colors such as aquamarine, deep red, dark gray and brown. Truly imaginative users can define background, text and graphic tints for any procedure, plus adjust the red, green and blue intensities for any selected color.

A Fill command directs the program to fill shapes or the whole screen. You'll find plenty of opportunity to create dazzling special effects with this option.

With LWGS, the turtle can stamp out 90 different shapes, because the Shapes page has room for 90 customized graphics. Only 20 shapes are predefined. Several of these shapes are almost identical to the ones in LogoWriter 2.0.

To see beyond the first 30 LWGS shapes, simply scroll through the list. As in LogoWriter 2.0, individuals can turn from the front side to the flip side of the Shapes page to access the Shapes editor.

In LWGS, the Shapes editor consists of a boxed grid, measuring 16 by 16 squares. This grid provides more control over a shape's appearance than the 16- by 10-pixel grid in LogoWriter 2.0.

Youngsters draw or modify a shape the same way in both versions of the software. They use the space bar to stamp or erase a pixel. However, as the pixilated shape gets built in the IIGS grid, a WYSIWYG (what you see is what you get) shape illustration appears to the left of the editing box.

This preview feature is not available in LogoWriter 2.0.

LogoWriter GS is a far cry from the original Apple Logo introduced in 1982. Early Apple Logo manuals were written for grownups, not kids, and the programming language was awkward.

Contemporary turtle graphics are fun. Like a good leather baseball mitt, the latest version of LogoWriter has improved with age.

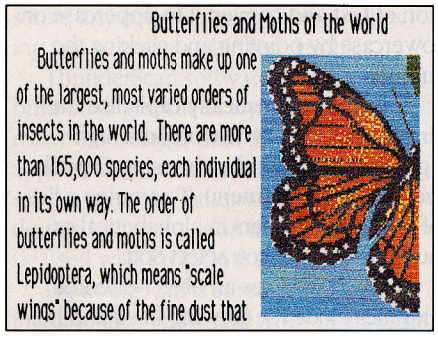
It includes printer drivers for Epson parallel printers, as well as Apple's serial ImageWriter I and II. Kids can print in color on an ImageWriter II equipped with a color ribbon.

LogoWriter GS provides youngsters with a programming environment they can understand, master and enjoy.

— Carol S. Holzberg, Ph.D.

Product: LogoWriter GS
Price: $169 (single-user set) retail; $450 site/network license; $299 six-disk lab pack; $35 for IIGS update.
Company: Logo Computer Systems, Inc. (LCSI); 3300 Côte Vertu, Bureau 201; Montreal, Quebec, Canada H4R 2B7; LAG or 514-331-7090
Requirements: Apple IIGS, 512K, RGB monitor
Circle Reader Service Number 42

MERCURY
EASY-TO-USE WORD PROCESSOR



Mercury

Mercury, Roman god of eloquence and messenger of the gods, has been reincarnated as a word processor for the IIGS. We put the product through its paces by using it to write this review. It was up and running in a matter of moments.

Mercury has the familiar look and feel of other IIGS word processors (BeagleWrite GS and AppleWorks GS). There are pull-down menus, scroll bars and dialog boxes. You'll also find the conventional File, Edit, Font, Size and Style menus.

Point-and-click mouse control simplifies operation, and several keyboard-equivalent commands function much as they do in other applications (e.g., Cut, Copy, Paste, Open, Close and Save).

Individuals familiar with the IIGS or Macintosh interface will find the program easy to use. You may even get by without having to consult the manual. Online help for a variety of topics is available from the Apple menu, just in case.

Mercury includes several standard word processing features. A ruler assists with margins, paragraph indents and tab settings. The Format menu offers four justification options (left, right, center and full). You can configure left, right, center and decimal tabs. A Search and Replace feature hunts for characters as well as type styles.

Documents may contain headers and footers with text, date, time and page numbers. Users can display date, time and page numbers in several formats. Dates can be configured in Danish,

English, French, German, Italian, Spanish and Swedish.

Speed is one of Mercury's most pleasing features. Screen updating takes place quickly and smoothly. You will also appreciate being able to highlight a portion of text and convert it to uppercase or lowercase by pointing and clicking the mouse.

You can automatically capitalize the first character of each word in a highlighted text portion by choosing Capitalize from the Style menu. To arrange a list of numbers or letters in alphabetical or numerical order, you select Sort.

Mercury features an object-oriented graphics mode for drawing filled and hollow geometric shapes, plus lines of varying widths. Users can draw in 16 different colors and 32 black and white patterns.

Super-high-resolution (640 by 200 pixels) shapes and graphics from other bit-mapped programs may be imported into an open document. Sample clip art ships with the package. All graphics placed in a document can be resized and reshaped.

Mercury is targeted at teachers and students (grades 3 and up), but it does not include a spelling checker or a thesaurus. There is no command that will let users erase characters to the right of the insertion point.

When we tried Option-Delete as a possibility, the screen froze and we had to reboot. There's no option to select an entire line for editing, and the program limits you to one open file at a time.

Whenever you configure a header or footer, Mercury returns you to the beginning of the document, instead of the top or bottom of the page where you exited to format.

The Statistics feature counts all the words in an open document. It won't let you count the words in a selected portion, however. So if you want a word count for a specific paragraph, you're out of luck.

All things considered, Mercury delivers a true WYSIWYG writing environment. The product works with ImageWriter, LaserWriter and Epson parallel printers.

It's fast and powerful, as word processors go, but the current version is prone to crashing. In addition to the Option-Delete crash described above, the program froze three more times during our review: once when we switched from Graphics to Text mode, once during a cut and paste procedure, and once when we double-clicked on a word to select it.

Luckily, we had been saving the document (this review) all along, so only a small portion of the text was lost. Other users might not be so fortunate.

Mercury has potential, but it requires a programming boost. The vendor should add a spelling checker and thesaurus, have the program work with multiple open documents and make the program less prone to crashing.

It's already easy to use; it merely needs a few productivity perks.

— Carol S. Holzberg, Ph.D.

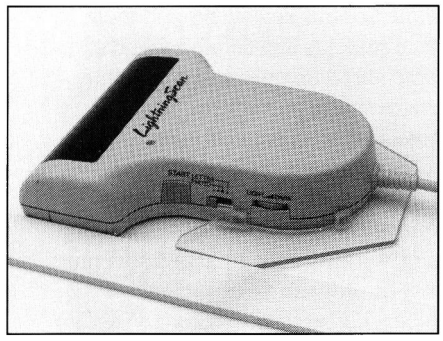
Product: Mercury, Version 1
Price: $89 retail
Company: MECC; 3490 Lexington Ave. N; St. Paul, MN 55126; 612-481-3500 or 800-228-3504
Requirements: Apple IIGS, 1 MB of RAM, two disk drives recommended
Circle Reader Service Number 43

LIGHTNINGSCAN
HAND-HELD SCANNER

Apple IIGS owners have had the capability to capture images and create computer graphics from printed media such as magazines and photographs since 1987. The resulting graphics can be printed out, used with paint programs or used as clip art for desktop publishing projects.

The device that has allowed graphic artists and desktop publishers to use their computers as a digital darkroom is Thunderware, Inc.'s ThunderScan, an extraordinary tool that attaches to an ImageWriter printer and turns it into a complete image processing system.

With a ThunderScan, Apple IIGS owners can digitize photographs, brochures or postcards and recreate vivid, realistic computer graphics with near photographic quality.



LightningScan

In May Thunderware released LightningScan, the next generation of graphic imaging scanners for the Apple IIGS. The LightningScan is a small hand-held unit slightly larger than 4 inches wide.

To scan an image, one simply rolls the scanner over the image and, almost by magic, the image appears on the computer screen. The scanner can accurately reproduce images from newspapers, books, magazines, photographs or even T-shirts. A user can store the images in a variety of Apple IIGS graphic formats, and the graphic images can be loaded into virtually any Apple II or IIGS paint, desktop publishing or hypermedia program.

The LightningScan package includes the scanner, an interface card, a well-written 72-page manual filled with hints and tips, three software programs, and a Snapguide. The latter is a plastic guide that attaches to the scanner to help you scan straight.

Installation of the interface card is possible in any open slot. If placed in slot 3 or 4, it does not interfere with any devices connected to those slots' equivalent port. If placed in any other slot, Control Panel settings must be changed to "Your Card."

Provided with the scanner is the LightningScan GS software — the GS/OS-compatible version of the ThunderScan software — and the ProDOS 8 ThunderScan software. The ThunderScan software allows printing, manipulation or colorization of the graphics.

As all graphic formats are supported, you could just as easily load the graphics into a paint program to get them "picture perfect."

Installation of the interface cards takes several minutes. All that's required is a small Phillips-head screwdriver to attach a connector to the back of the IIGS. The scanner attaches to the connector in plug-and-play fashion.

The software is not copy protected and is hard drive installable.

When you are ready to start scanning, you'll need a flat surface to lay the graphic on. Then you just run the LightningScan software, choose the resolution you want to scan at, select the dithering setting, choose whether the graphic should be scanned as line art or 10 or 16 shades of gray-scale art and you're ready to roll.

Experimentation is generally the best teacher when learning how to reproduce high-quality graphics. Although you may be scanning 10 minutes after opening the box, it can take a few hours to understand the intricacies of using the scanner and the relationship between the many options available.

The scanner works using four different dots-per-inch (DPI) settings. Scans done at 400 DPI are larger than those done using the 100, 200 or 300 DPI settings, and they also have a greater resolution. After several scans, which only take seconds to complete, the use of the DPI settings becomes very apparent.

Learning about the dithering controls takes more experimentation. The LightningScan hardware is only capable of outputting graphics in black and white. The capability to reproduce the graphics in 10 or 16 shades of gray scale is controlled by the software.

Although there are four dithering settings on the Photo/Letter switch, when scanning from photographs the differences in quality obtained by the different dithering settings are almost imperceptible. The switch must be changed to the Letter setting if scanning from line-art graphics.

Dithering, by the way, is the process by which the computer simulates shades of gray by using patterns of black and white dots.

Roller wheels are located on the bottom of the scanner, making it relatively easy to roll the scanner in a straight line. The Snapguide and straightedge help produce an acceptable scan on the first attempt.

The scanner must be rolled at approximately 3 inches per second. If you roll it too quickly, you'll be alerted by a light on the scanner and by a buzzing noise. Scans that are done too quickly become slightly distorted.

If the light goes off during a scan, just press "R" (to restart) and move the scanner to the top of the image.

During the scan the monitor displays the patterns of dots that the scanner "sees." Once the scan is complete, press the Return key and within two to three seconds the completed graphic is displayed. Once a scan is completed, you have the option of modifying the contrast or brightness via a pull-down menu.

Although the scanner software operates using the 320 mode, it is simple to change to 640 mode using the pull-down menus.

320 mode graphics can contain up to 16 different colors or levels of gray scale, while 640 mode can only display four colors or shades of gray scale. That is the built-in limitation of the IIGS that affects all IIGS graphics-based programs. It is a significant factor that must be contended with when determining how you want your end product to look.

Graphics created in 320 mode look like photographs on screen; 640 mode graphics do not.

In the future it may not matter which mode you use, as Apple's Developer Technical Support department has devised a method for 640 mode programs to accurately display 320 mode graphics. Therefore, we hope that programs such as AppleWorks GS will be updated so they will be able to also accurately display 320 mode graphics.

The LightningScan software provides a unique feature not seen before. The File pull-down menu has an option, named Transfer, that allows you to quit the program and immediately launch another application, bypassing the Finder. The technique allows you to instantly launch the ThunderScan software or a paint program.

Quite often, scans need to be touched up with a paint program. When reproducing a graphic from a magazine, unwanted text may appear that can be removed with a paint program.

The LightningScan Software cannot print your graphic, but a paint program or the ThunderScan software can. The ThunderScan software allows you to substitute any color for gray, thereby allowing you to create colorized graphics.

ThunderScan software also lets you print out a graphic as a poster that is many times larger than the graphic appears on screen. And it allows you to save graphics as either high-resolution or double high-resolution images that can be used with ProDOS 8 software.

LightningScan is sure to significantly increase the variety and types of graphics that are now available. It will also let those with the inclination easily transfer paper-based graphics to the computer, which will be a boon for desktop publishers.

Despite the fact that the software used for this review was version 1.0, it is remarkably bug free and efficient. All in all, the only problem we've had since acquiring LightningScan is getting to bed at a reasonable hour of the night.■

—Joe Kohn

Product: LightningScan
Price: $295 retail (registered ThunderScan owners can purchase LightningScan at a special price)
Company: Thunderware, Inc.; 21 Orinda Way; Orinda, CA 94563; 415-254-6581
Requirements: Apple IIGS; 768K RAM
Circle Reader Service Number 44

How To Create Different 'Cap' Letters

When designing a layout for a document that contains a great deal of information, it is necessary to use various techniques to make sure that introductory paragraphs stand out. Major subdivisions may also need to be highlighted.

One of the best ways to emphasize a paragraph is by starting it with a large capital letter. These enlarged letters can add greatly to the design and help a reader progress through the document.

The rule of thumb is to use large cap letters prudently. If you use too many, readers can become confused and lose their way. They may also have difficulty determining what is the most important information.

There are three basic kinds of cap letters that can be used to start a paragraph. A raised cap letter is the easiest to create. The other two, hanging and drop cap letters, require more effort.

None of the desktop publishing programs that we used require much exertion to create a raised cap letter. All you do is select the first letter of the first word of a paragraph and increase that letter's point size.

It is up to you and the design of your document as to what size letter to make. For instance, an extremely large letter could be impressive, but might overwhelm delicate subject matter. Select a point size and font that complement the subject.

The only problem we encountered when creating a raised cap letter concerned the second line of the paragraph. Invariably, there was more space between the second line and the first line than between the second line and the third line.

The best solution was to create a new region or area to hold the majority of the paragraph. Using this technique, only the first line of the paragraph would appear in the first region; the remainder of the paragraph would be in a second region.

Hanging And Drop Caps

Because of the automatic text wrap features of Medley, GraphicWriter III and Springboard Publisher, we were able to easily create both hanging and drop initial caps. Other desktop publishing programs required that we create up to three regions or areas to achieve the effect of a drop or hanging cap letter.

To create either hanging or drop cap letters with Medley, we had to create a rectangular art area then select the Paint Tool. We were then able to type a large capital letter into this area. We put the text into an art area because Medley automatically wraps text around an art area. We were able to type in the rest of the paragraph after returning to the Word Processor.

Whether a cap letter would be a hanging cap or drop cap in Medley was determined by the height of the art area that we created. When the art area was close to the same size of the cap letter, the text wrapped down and under the letter, thereby producing a drop cap. By stretching the art area's vertical height down the page, we created a narrow strip of open space along the side of the paragraph. This method created a hanging cap.

If you don't want the art area to have a border, select Convert Art Areas under the Areas menu to turn off the border.

We used a similar approach with GraphicWriter III and Springboard Publisher to create hanging and drop caps. All three programs worked equally well.

AppleWorks GS and Publish It! 2 required the creation of extra regions or areas to produce either drop or hanging caps. First, a region was created to hold the cap letter. A second text region was used to hold the paragraph that was placed next to the letter.

A hanging cap letter can be turned into a drop cap by adding an additional text region. After creating the regions for the cap letter and beginning of the paragraph, another region was created just below the cap letter to hold the rest of the text.

Getting Fancy

If you need extremely decorative type, it is possible to use a paint program such as DeluxePaint II or PaintWorks Gold to sketch a cap letter. Depending upon your desktop publishing software, you may also be able to use the painting or drawing tools that come with the program.

We used PaintWorks Gold in 640 mode to type in the basic letter, then retouched the letter to create a simple pattern behind it. The painting was saved and then opened in AppleWorks GS' Graphics application. The cap letter was copied and pasted into our page layout application.

Springboard Publisher has powerful tools for creating cap letters. These tools include Distort, Perspective and Trace Edges. We used Trace Edges to create a decorative "S." Medley and AppleWorks GS also have extensive painting modules.

Another place to look for decorative cap letters is on clip art disks. For instance, the clip art disk produced by Activision has a complete alphabet.

Decorative letters are also included in printed clip art books. You can scan letters using hardware such as ThunderScan or ComputerEyes. Either method will produce excellent results. If you use ThunderScan, you will probably need to select the Best Quality mode and Ultra Res. Because most IIGS desktop publishing programs are in 640 mode, save your files in this mode so they can be directly imported.

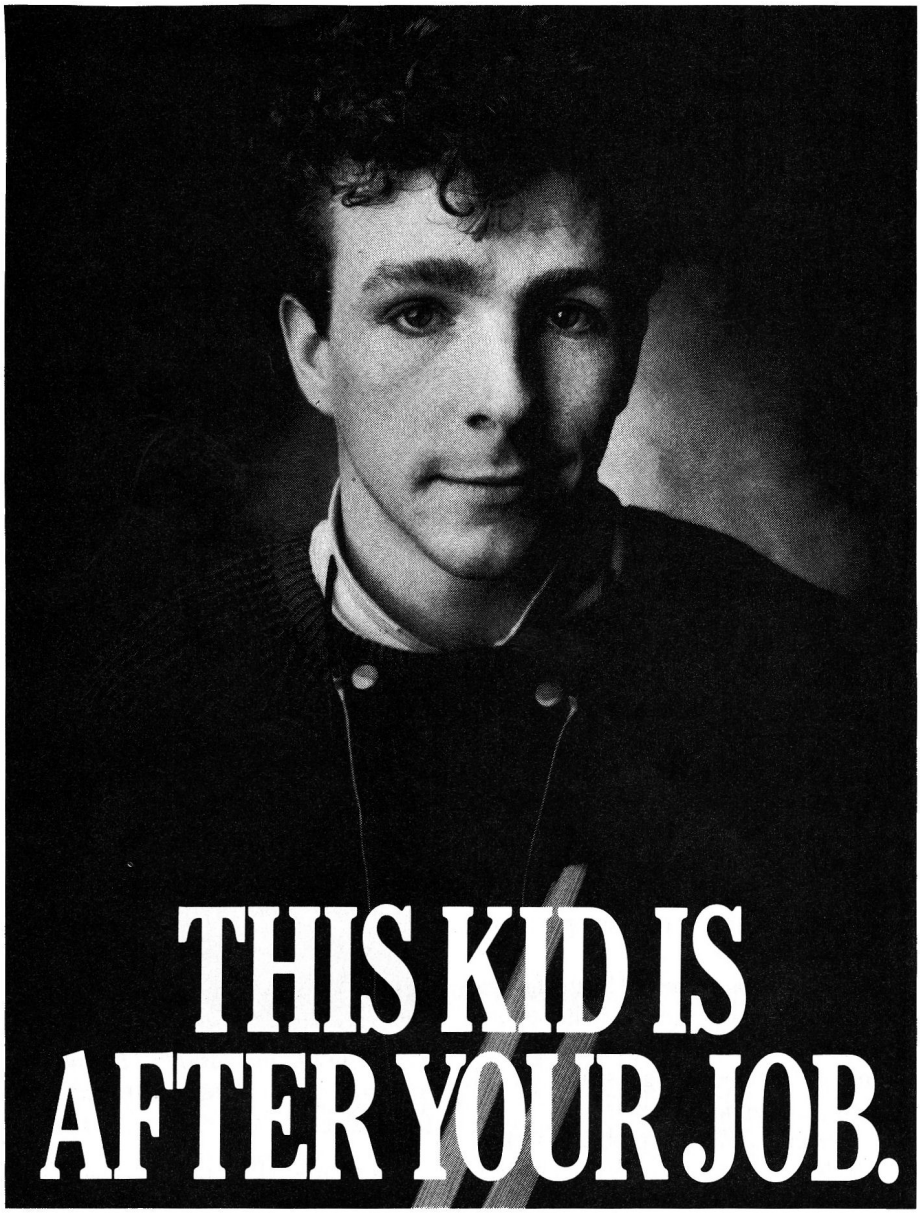
ComputerEyes GS will probably give you the best results if your video camera has a macro feature. If not, you may be limited in the size that you can digitize a letter.

After digitizing or scanning the clip art, save the image in a compatible file format then import it into your desktop publishing program.

Used judiciously, large cap letters can add to the design of a document and make the information contained easier to understand. If you need to emphasize certain paragraphs, try using a large cap letter. There are many variations upon this basic theme. The results are only limited by your imagination. ■

— *Gary Ramey*

The author is a desktop publishing consultant based in Florida. He can be reached on CompuServe (72247,2312), GEnie (G.RAMEY1) and MCI Mail (GRAMEY).



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STUDYING MANKIND'S GREATEST ADVENTURE

Virtually everyone who was alive in 1969 will always remember the thrill and excitement they felt as they first heard Apollo 11 astronaut Neil Armstrong's historic transmission from the moon's Sea of Tranquility: "That's one small step for man; one giant leap for mankind."

In the intervening 21 years, mankind has witnessed both tragedy and exhilaration as we embark on our journey from the safety of our home planet to the vastness of interstellar space, in an attempt to fulfill our destiny of the exploration of the final frontier.

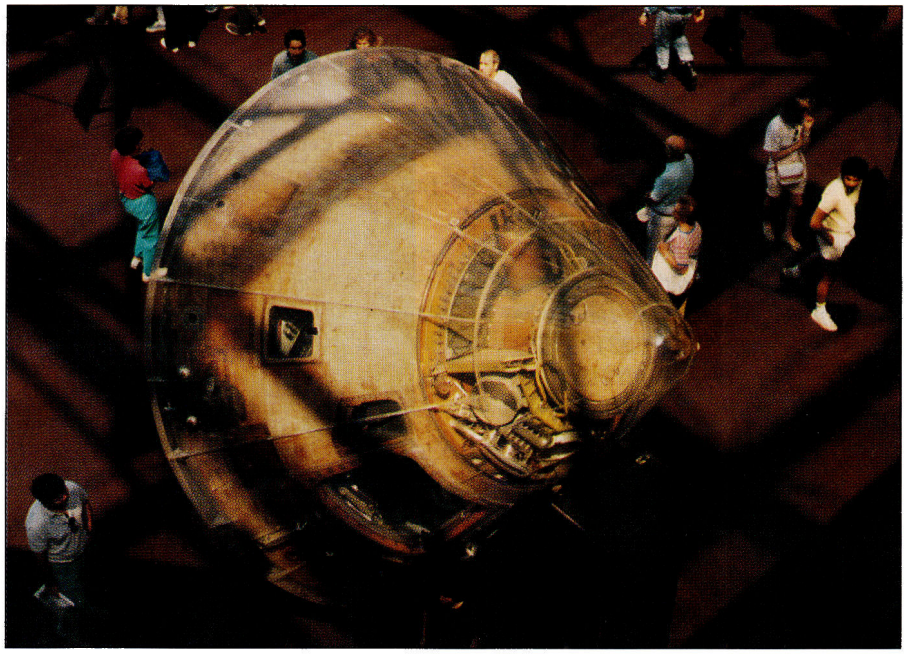
We have been thrilled by the first pictures to be transmitted from the surface of another world and stunned by digital images from the Voyager spacecraft as it flew past the outer planets.

Recently launched probes to Venus and Jupiter will send back even more scientific data, and the Hubble Space Telescope, in orbit above the Earth, will transmit images from as far away as 15 billion light years.

With its superior graphics and sound capabilities, the Apple IIGS is an ideal computer to relive the glories of our past accomplishments and to learn about mankind's continuing search of the unknown.

There are an enormous amount of scanned NASA photographs and graphics available; many digitized sound files from the Mercury, Gemini, Apollo and space shuttle programs; and excellent programs written by NASA and other space enthusiasts. Therefore, it's quite possible that any IIGS user or educator can be among the most knowledgeable about mankind's exploration of the universe.

Thanks to Guy T. Rice and his wonderful freeware start-up program, called StartSound, we are inspired by Neil Armstrong's words each time we turn on our computer. We can also use Mr. Rice's other start-up INIT program, StartPic, to display — as GS/OS is loading — a super-high-resolution graphic of a picture of one of the Apollo 11 astronauts on the moon.



The historic Apollo 11 command module at the Smithsonian Institute's National Air and Space Museum, Washington, D.C.

Thanks to Jason Harper and his shareware graphic utility, SHRConvert, we can review many super-high-resolution digitized NASA photographs that were created on computers not generally compatible with the IIGS.

Thanks to Paul James and his freeware sound utility, Sound Studio, we can listen to the countdown and thundering launch of a space shuttle or to the first words transmitted to Earth from the surface of the moon.

Thanks to NASA, we can load nearly a 100-page *Official Press Packet* describing every aspect of the next space shuttle launch into our favorite word processor.

Thanks to the public affairs office at NASA's Goddard Spaceflight Center near Washington, D.C., we can learn about the Hubble Space Telescope with a public domain, graphic-based program.

Thanks to John Graham of Airship Software, we are able to run the shareware IIGS-specific mini-planetarium program, Tonight's Sky, allowing us to locate, on any given day, the galaxy or star cluster that the Hubble Telescope is aimed at.

Thanks to HyperStudio, a commercially available program, we are able to use freeware and shareware hypermedia interactive "stacks" written by fellow NASA enthusiasts and educators who take us on an interactive audiovisual tour of a space shuttle flight or a guided tour of the solar system.

Thanks to the Future Sound audio digitizer, and to the digitizer supplied with HyperStudio, we can digitally record on our IIGS the countdown of the space shuttle and incorporate it into a HyperStudio stack.

Thanks to Thunderware and its ThunderScan and LightningScan graphic digitizers, we can scan into our computer

the latest NASA and space-related photographs published in our local newspaper or favorite space-related magazine.

Thanks to the National Space Society, we can connect to their electronic Bulletin Board System via modem by calling 412-366-5208 to get the latest NASA and other space-related news, or we can access the NSS on America Online.

Thanks to NASA we can call, via modem, the NASA Spacelink Bulletin Board System in Huntsville, Ala., at 205-895-0028, and download an educational program that runs on the Apple II.

Thanks to dedicated NASA employees, we can call up CompuServe's Space Forum or GEnie's Spaceport Roundtable and access the latest "NASA Headline News," get up-to-the-minute status reports from the Kennedy Space Center, ask a technical question about Voyager or read a report about the Soviet version of the space shuttle, Buran.

Thanks to CompuServe, GEnie and America Online; to public domain and shareware mail-order houses such as Public Domain Exchange and Big Red Computer Club; and to the Apple II User Groups located throughout the country, you can have access to all these materials, too, and much more. The material is ideal for classroom activities, homework assignments or personal enlightenment.

There appears to be a high correlation between interest in computers and interest in the space program. In an effort to share information with the American public, NASA has started making materials available through the online services that used to be available only to the press.

To assure that the material is spread as widely as possible, networks such as CompuServe suspend their standard copyrights so NASA can share information with people who have not yet entered the telecommunications age.

NASA materials, being public domain, can be improved upon by anyone with the desire and skill. Jim Hirsch, an educational consultant from Coon Rapids, Minn., has done an excellent job integrating NASA informational packets into HyperStudio. His HyperShuttle stack is a wonderful example of how HyperStudio can be used to present educational materials in a creative, fun-filled environment.

He acquired the NASA Official Press Packet for the October 1989 flight of the space shuttle Atlantis. Mission STS-34 successfully launched the interplanetary Galileo probe on its six-year circuitous flight to Jupiter.

Upon arrival, part of the Galileo probe will orbit Jupiter and a smaller package will travel down through Jupiter's atmosphere.

Through the use of digitized sounds of the takeoff and graphics of the shuttle and Jupiter, HyperShuttle presents information on all aspects of the mission, from liftoff to speculation on what the probe will find when it descends into the Jovian atmosphere.

By the time you read this, HyperStudio 2.1 will be in widespread use. That version includes a Run Time Module, which will allow people who don't own the program to use HyperStudio stacks. As there will be no licensing fee required for public domain distribution of self-booting HyperStudio stacks, we can expect to see a profusion of many more NASA and space-related stacks.

Note: Of special interest is a joint project between the author of this column (Joe Kohn) and Mr. Hirsch, called Hyper NASA: 3/90, which provides a detailed look of one month at NASA, including all press releases, status reports, scientific studies and mission reports issued during March 1990.

Given the amount of NASA and space-related materials available in the public domain, and the fact that many Apple IIGS computers are used in classrooms around the country, it is clear that the IIGS can — and should be — used to teach the nation's youth about mankind's greatest adventure.■

— Joe Kohn

The author is the public domain librarian for the Big Red Computer Club. His address is 166 Alpine St., San Rafael, Calif. 94901.

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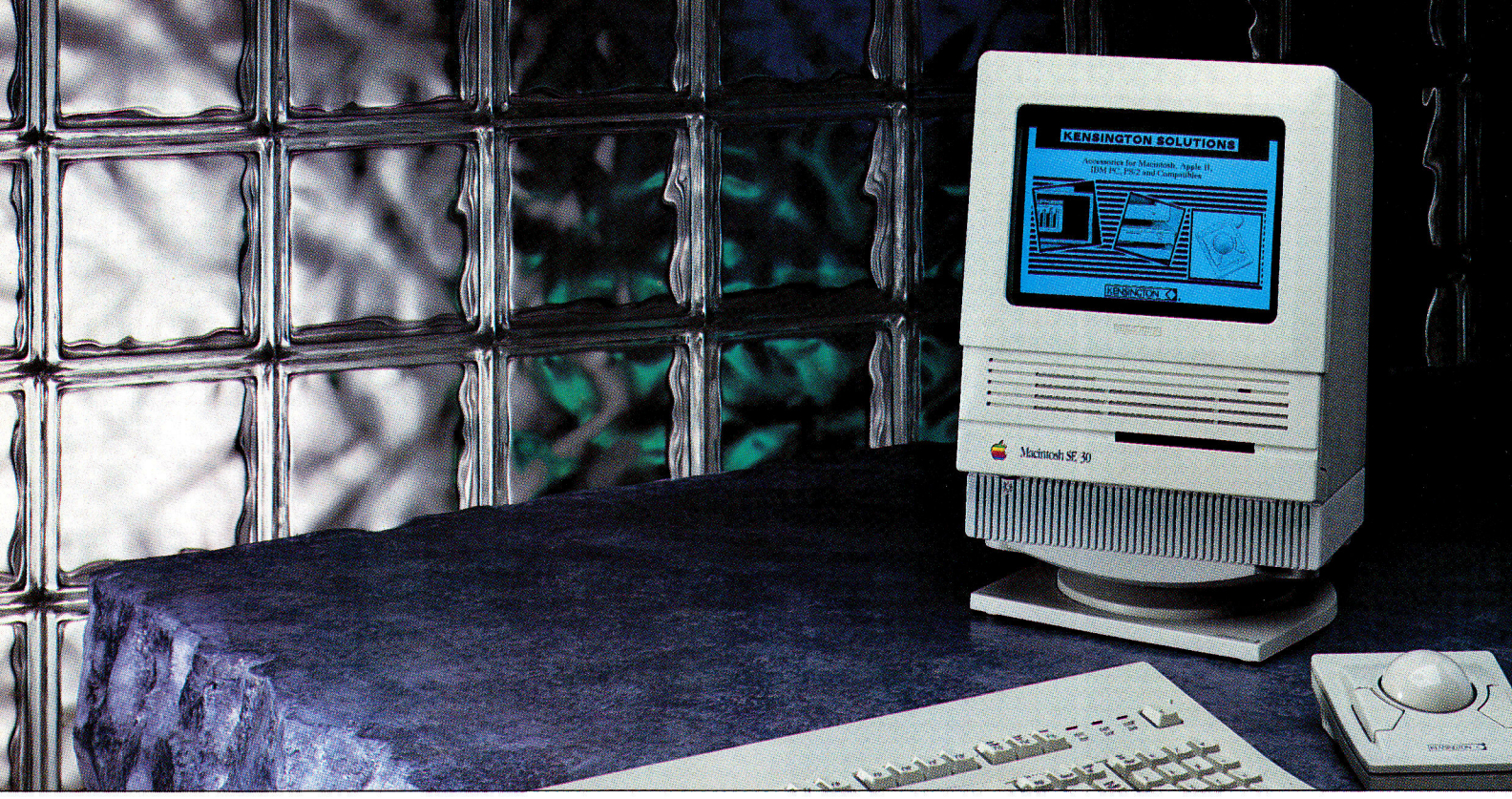


EYESORE VS. EYE PROTECTION

As today's monitors get bigger and brighter, anti-glare filters become less of an option and more of a necessity.

The right filter can combat eye fatigue, help eliminate headaches, even reduce overall body stress.

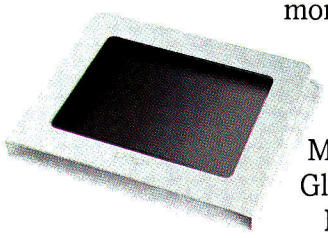
Yet, the irony is that something so good for your eyes can be such an eyesore.

In fact, most filters look like they belong to someone else's system.

The fit is sloppy. The colors don't match. The materials are different.

Kensington has a different idea.

Instead of making a filter that will fit on any monitor, we make filters that will only fit a *specific* monitor.



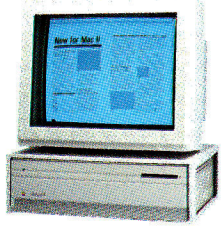
An example is our Maccessories® SE Anti-Glare Filter.

It looks so much a part of the SE, you would think it was designed by the same people who designed the SE.

The styling is complementary. The color identical. Even the same material is used.

And unlike generic filters, the fit is perfect. So light passes through the filter, never around it.

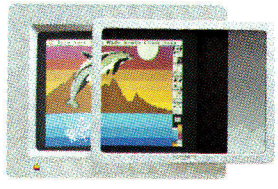
Kensington uses only optical quality glass with a ceramic anti-reflection and scratch-resistant coating.



The result is a 96% reduction in glare. And an improvement in contrast and clarity of up to 20 times.

In short, the most advanced eye-protection system you can find today–it even filters out VLF and ELF radiation and dissipates static.

Kensington has custom designed screens for the Mac, Mac Plus, Mac SE, Apple IIGS, as well as for the entire Mac II family of large screen monitors.



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"Elegant, innovative, flexible and in all aspects the leader of the field." — *Incider Magazine*

Accolades continue to pour in. Vulcan hard drives were recently awarded FIVE stars by Incider Magazine, a rating reserved for products judged "excellent and remarkable". Incider went on to say, *"The Vulcan sets a new performance standard for hard drives . . . Applied Engineering has done it again."*

Hard drives tremendously boost your productivity. The Apple II's operating system, hardware and memory-gobbling software take on a new agility and finesse with the addition of a hard drive.

Speed? The IIGS Buyer's Guide put it this way, *"Everything this drive does is fast. TimeOut modules, installed in AppleWorks and configured as disk-based, came up as fast as if they were memory-based. Graphics load almost immediately. Even that damnable lie, 'One Moment Please' suddenly delivers its promise. We recommend the Vulcan wholeheartedly."*

And Incider said, *"The Vulcan walks all over the competition. Twelve seconds to the GS Finder; 10 seconds to AppleWorks GS. Sounds good doesn't it? It is. That sizzling speed is achieved thanks to a high-quality internal tracking unit."* Vulcan incorporates an ultra-fast 16-bit data bus controller, not the less expensive 8-bit others use.

Features? As Nibble Magazine said, *"AE drives support more operating systems and have more features in the supporting software."* And Incider added, *"Applied Engineering has put together the most complete set of utilities to date for an internal hard drive that leads the market."* And since Vulcan's made by Applied Engineering, you're assured of full compatibility with current and future AE products.

Power? Vulcan's high-efficiency power supply is rated in excess of 70 watts, *nearly double* the capacity of other hard drives. The power supply components are heatsinked to the aluminum case for cool operation and long life. To harness all that power, Vulcan incorporates an ultra-quiet, flush mounted cooling fan, keeping the temperature inside the Vulcan, and inside your Apple lower than before.

Flexibility? Choose a Vulcan from 20, 40, 100 — all the way to 200 MEGs. Upgradeable Vulcan grows as your needs grow. And we don't mean by daisy-chaining additional hard drives. When you upgrade Vulcan, you pop one out and *replace* it with another.

Only Vulcan lets you use virtually any operating system: GS/OS (v5.0 is included), ProDOS 8, DOS 3.3, CP/AM or Pascal 1.3. Vulcan supports them all with sixteen partitions (access four simultaneously). Choose slot 1, 2 4, 5, 6 or 7. Even pseudo-slot to slot 7 from elsewhere. Vulcan works on 110/220 VAC, even European 115/230 VAC at 50-60 Hz.

Ease of Use? Incider says, *" The true test of a hard drive lies in its ease of use and maintenance. In that respect, the Vulcan brings together a more complete package that any of its current competitors."* Vulcan simply pops in; replacing the Apple power supply under your computer's hood. Our built-in firmware automatically installs itself as a Desk Accessory for write protection and partitioning. The software we provide lets you easily park heads, back up and reformat.

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