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A BASIC COLLECTION OF SOFTWARE FOR CHILDREN

by Susan Pine

Access to microcomputers is a necessary element of children's education and must be considered an integral component of public and school library use.



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Mount Rushmore has been stolen! Is this the latest headline from a tabloid? No, it is an invitation to sign in as a detective in pursuit of Carmen Sandiego and her notorious gang of thieves as they travel across the U.S.A. in the very popular and challenging software program, *Where in the U.S.A. Is Carmen Sandiego?* If you're not up to polishing your geography skills, you might consider having Stickybear walk "up" or "down" stairs in *Stickybear Opposites*, a program of concepts for preschoolers. Is math your game? Then try *King's Rules*, a software program of number riddles. If you can't work out the rules of numerical progression, then you won't win the key and you'll never enter the castle.

Have you met Bibbits and Gribbits? They appear in *Moptown Hotel* and *Moptown Parade*. They may be "tall" or "short," "fat" or "thin," or "red" or "blue." Are letters and words your game? How many words

can you form from the seven letters that the computer selects for you in *Word Detective*? Children's software does indeed present an exciting array of learning opportunities.

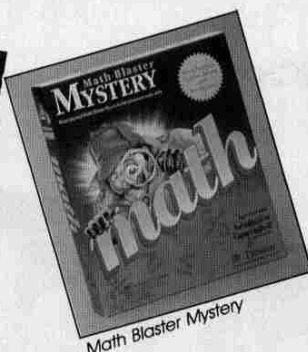
An Integral Component

Access to microcomputers is a necessary element of children's education and must be considered an integral component of public and school library use. Computers are a daily element in contemporary life and an essential information tool. Knowledge of microcomputers and their use also promotes self-assurance in handling technology, and fosters self-motivation, decision making, and a sense of accomplishment. Computers are patient and nonjudgmental.

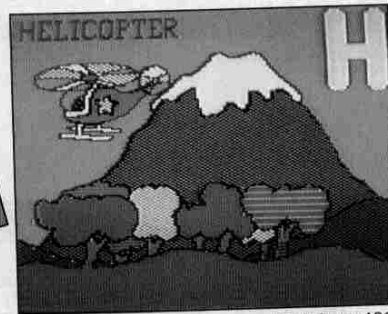
Librarians who are establishing a microcomputer collection must face budget and space limitations. Unlike a print collection, software is machine based and requires a system with a computer processing unit,



Where in Europe is Carmen Sandiego?



Math Blaster Mystery



Stickybear ABC

monitor, disk drive(s), and optionally a mouse, mouse pad, joystick, and printer. In addition, a security system may be necessary. After this outlay of \$1000-\$3000, the remaining budget for software will probably be limited and careful choice is essential.

The principles underlying the establishment of a print collection also apply in beginning a software collection. Librarians must purchase programs that meet the needs and interests of all patrons, while maintaining standards of excellence in selection. Children in public and school libraries generally have limited access, so quality time at the computer is a crucial factor.

From Toddlers on Up

Toddlers using a preschool program can enjoy their first computer experience while sitting on an adult's lap and pressing keys that result in entertaining and reinforcing sounds and graphics. Older children can play chess, write articles, solve number puzzles, or simulate historical events.

Programs for preschool children require constant adult interaction. Programs for children ages five to eight require some adult assistance. Those for older children should not.

Because software is machine based, it must fully utilize those capabilities and offer the best possible sound and graphics. Simple drill-and-response programs are not acceptable. Software should be easy to operate, whether users are working from a printed manual or onscreen prompting. A preschool program should offer picture menus for pre-literate children to follow. Software for older children must have precise step-by-step instructions to avoid frustration in its use.

Variety and movement are essential to all programs. The range of selections must be varied and there must be ease of movement from one section of a program to another. Preschoolers using an alphabet program may want to move from P to G to Z to C and then back to C and P. Older children may want to work on multi-

plication in a math program and then switch to division.

Use of the program should involve minimal frustration beyond waiting for the program to "boot up" (start). How many incorrect answers must one give before getting assistance or the correct answer? Correct answers should be acknowledged in a positive manner. Equally important, assistance must be provided for wrong answers in a way that reinforces learning. A program should offer levels of difficulty, if appropriate, and an option to save from one use to another. It should invite repeated use and present more than a video arcade challenge. Manual dexterity may be required to use a joystick; but hand-eye coordination should not be all that is required.

A program should be well-paced, accurate, non-stereotyped, and age-appropriate. It must respect the intelligence of children and offer a creative challenge and a positive experience.

Cognitive & Creative

Preschool programs: Programs for preschoolers are generally conceptual and focus on the letters of the alphabet, numbers, shape, and color discrimination. Care must be taken to assure that graphics are recognizable, and that there is immediate and positive reinforcement. Programs should be consistent in use of the keys and input (pressing a key) should always produce a result (a picture on the screen or a sound). The best of these programs enhance learning the ABC's and numbers, and recognizing shapes, colors, and simple concepts such as up/down, empty/full, and in/out.

Math programs: These range from counting to devising complicated formulas. The capability of the computer to offer random combinations provides a learning experience beyond that of a textbook. The best programs package math in a manner that resembles or becomes an educational game, whether asking users to simulate Pac-Man or bowl or compete in a stagecoach race.

Cognitive skills: Perhaps the best feature of the computer is its ability to offer multiple choices, especially when working with programs that require reasoning, sorting, determining patterns, and using logic. The computer can create and manipulate objects, place them in specified order or disorder, or remove them from view entirely. Users must then exercise their skills to match, arrange, sort, or retrieve.

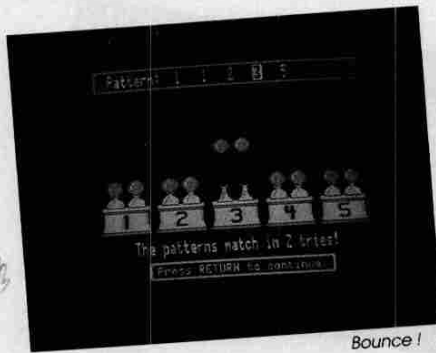
Language arts: The advantage that the computer offers when working with concepts applies equally successfully to working with letters and words and sentences. The computer can scramble letters to spell words, build words to create sentences, and shape sentences into paragraphs and reports and newsletters. The ability to edit one's writing without the drudgery of erasers and correction fluid allows children to focus their energy on the creative process.

History and travel: Software programs in history and travel offer the added dimension of "you are there," allowing users to determine the route to be travelled through time or across distances, often while racing against the clock. Note-taking is a necessary component of many of these programs.

Utility programs: Software programs can be building tools for creating signs, banners, artwork, music, calendars, or funny faces. A large pool of items permits users to assemble and design using colors, lines, and shapes.

A beginning collection will necessarily be small and require the staff to take time to familiarize themselves with the software. That collection should be excellent, challenging, stimulating, wide-ranging in appeal, and provide quality time use of the computer. Ideally, the space for the microcomputer should be out of main traffic patterns in the children's room and allow for use by two to three children at the same time or a parent with a child.

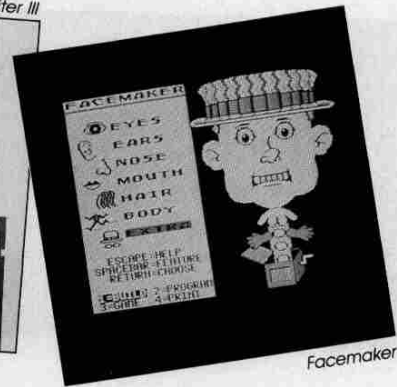
One of the determining factors in purchasing print material is grade level. However, with nonprint material indicating grade level is difficult and



Bounce!



Bank Street Writer III



Facemaker

problematic. Reading levels do not necessarily indicate ability in math or in reasoning. In addition, the recommended programs that follow have levels of difficulty that make them suitable for children anywhere from five to 12 years old. Programs for preschoolers should be designed specifically for their special needs. Other programs should be made available based on the interests of the particular child.

Before purchasing software, prepare a checklist of the hardware, noting the memory capability, the number and size of disk drives, and the compatible size disk (5.25" or 3.5"), the type of printer, and any accessories such as joysticks. Purchase 3.5" disks rather than 5.25" disks if possible as they are sturdier and more likely to have updated program features. Be certain that the software you purchase is compatible with your system. Note also whether lab packs are available, useful if you are part of a school district or buying consortium.

A Starter Pack of 48

The following recommended list of 48 titles is a "starter pack" of software for preschool through grade six, all issued since 1981. They provide a challenging assortment of programs in language arts, math, art, and cognitive thinking. These programs utilize the full graphics and sound capabilities of the systems and allow children to enjoy all or a portion of a program during a scheduled appointment. They are user-friendly so that time is spent on the program, not on working out the mechanics. They offer a learning experience that is not available in print, on tape, or on video. Each program, if applicable, has varied activities, levels of difficulty, teacher options, and the ability to save one's work from appointment to appointment.

A generous grant from the Aaron Diamond Foundation funded the purchase of Apple IIGS microcomputers and software collections for 15 neighborhood branches of the New York Public Library. This article is based on those collections.



Agent USA

AGENT USA. Scholastic. Apple II series, IBM; Commodore. \$37.45.

Read maps, study railroad time tables, plan routes, and travel across the country in an interactive program that features an element of danger. Particularly good for use by two or three at a time.

BANK STREET WRITER III. Scholastic. 128K Apple II series, IIGS; 128K IBM PC. \$79.95; Lab pack: \$129.95.

A speller and thesaurus, and teaching and lesson options are included in this easy-to-use, complete word processing program.

BOUNCE! Sunburst. 64K Apple II series. \$65; Lab pack: \$195.

A bouncing ball provides exercises in determining and remembering patterns and sequences.

CHARLIE BROWN'S ABC'S. American School Publishers; dist. by Queue. Apple II series, IIGS; IBM: \$39.95; Lab pack: \$79.95.

Charlie Brown and his friends introduce upper and lower case letters using graphics and sounds that are especially entertaining to preschoolers.

CHILDREN'S WRITING AND PUBLISHING CENTER. Learning Company. 128K Apple II series; 384K IBM PC (with color graphics card). \$89.95; Lab pack, Apple only: \$159.95.

A library of fonts and clip art enhance this word processing program that is best suited for writing short reports, stories, letters, or newsletters.

CLOCK WORKS. MECC. 64K Apple II series, IIGS. \$59; Lab pack: \$129.

Practice on analog and digital clocks that use both Arabic and Roman numerals. A humorous "design-your-own" clock is the last section of the program.

EARLY GAMES FOR YOUNG CHILDREN. Springboard. Apple II series, IIGS; IBM PC (with color graphics card), PCjr; Commodore 64; Macintosh. \$39.95.

Seven activities introduce the keyboard as letters and numbers are matched to their counterparts on the screen. Keys can also be used to draw pictures. Another component of the program involves recognizing simple shapes. A colorful and multifaceted program.

EASY AS ABC. Springboard. 64K Apple II series, IIGS; Commodore 64; 64K IBM PC (with color graphics card), PCjr; 128K Macintosh. Apple, Commodore, IBM: \$39.95; Macintosh: \$49.95; Lab pack: \$85.

Jumping frogs, honey bees, and dot-dot games provide activities for preschoolers learning the alphabet, putting letters in alphabetical order, and matching upper and lower case letters.

816/PAINT. Baudville. 128K Apple II series, 512K IIGS. Mouse, graphics tablet or touch pad required. \$75; Lab pack: \$275.

Design artwork using tools that paint, spray, zoom, mirror, and move. Fonts are also included.

FACEMAKER. Spinnaker. 48K Apple II series; Commodore 64; 48K IBM PC (with color graphics card), \$39.95; Lab pack: \$299.62.

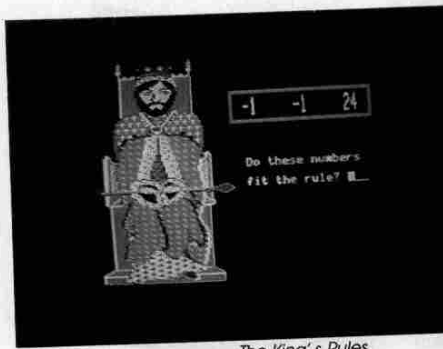
Construct a face from a selection of eyes, ears, mouths, noses, hair, and accessories. Program the parts to smile, blink, or wriggle. A very popular and entertaining program that also introduces computer operations.

FANTAVISION. Broderbund. 48K Apple II series, IIGS; 256K IBM PC; 256K Tandy. \$49.95; Apple IIGS, \$59.95.

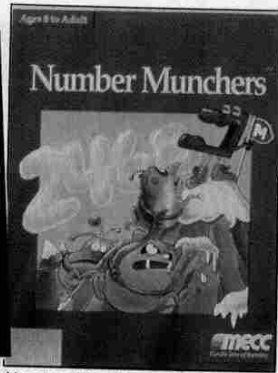
Combine shapes, lines, colors, and sound effects frame by frame to create an "animated" movie.

THE FIDELITY CHESSMASTER 2100. Software Toolworks. Apple II series, IIGS; IBM; Macintosh. \$49.95.

A state of the art experience that allows one to design the board and pieces and play at all levels from tutorial to master.



The King's Rules



Number Munchers



The Oregon Trail

GERTRUDE'S PUZZLES. Learning Company. 48K Apple II series, IIGS; 256K IBM PC (with color graphics card), PCjr. \$59.95; Lab pack: \$119.95.

A series of puzzles challenges the child to work with shape and color patterns. A sequel to *Gertrude's Secrets*.

GERTRUDE'S SECRETS. Learning Company. 48K Apple II series, IIGS; 256K IBM PC (with color graphics card), PCjr. \$59.95; Lab pack: \$119.95.

Sort colorful puzzle pieces by shape and color and receive a prize from Gertrude the Goose. For younger children. Followed by *Gertrude's Puzzles*.

THE HINKY PINKY GAME. Mindscape. 48K Apple II series, IIGS. \$49.95; Lab pack: \$99.90.

Determine the answer to the rhyming clue by definitions and by the number of syllables. Write your own Hinky Pinkys, too.

HOW THE WEST WAS ONE + THREE X FOUR. Sunburst. 64K Apple II series, IIGS; 256K IBM PC (with color graphics card), PCjr, PS/2; 256K Tandy 1000. \$65; Lab pack: \$195.

Use mathematical formulas and strategy, spin for three numbers, and race to the finish line of the Old West Trail as either the locomotive or the stagecoach. Play against a friend or the computer.

THE KING'S RULES: MATHEMATICS AND DISCOVERY. Sunburst. 48K Apple II series, IIGS (48K); Commodore 64; 128K IBM PC (with color graphics card), PCjr, PS/2; 256K Tandy 1000. \$65; Lab pack: \$195.

Solve number riddles by determining and testing whether or not a series of numbers follow a given rule. The key to the castle is the reward.

MATH AND ME. Davidson. 128K Apple IIe (with extended 80 column card), IIc, IIGS; 256K IBM PC (with color graphics card); 256K Tandy 1000. \$39.95; Lab pack: \$129.95.

Preschoolers learn about shapes, patterns, numbers and addition from zero to nine with the help of some monkeys, a xylophone, and hot air balloons.

MATH BLASTER MYSTERY. Davidson. Apple II series, IIGS; IBM; Macintosh. \$49.95.

Solve four different types of math problems with the help of an onscreen calculator. Work with story problems, sequence numbers on scales, determine numerical

equations, or calculate hints to determine the mystery number in a "Clue" setting. A challenging experience.

MATH BLASTER PLUS! Davidson. 128K Apple II series, IIGS; 256K IBM PC (with color graphics card), PS/2; 256K Tandy 1000. \$49.95; Lab pack: \$149.95.

A multi-leveled program with problems in addition, subtraction, multiplication, division, and fractions. The last section of the program features rocket ships that blast off when fueled by the correct answers.

MATH RABBIT. Learning Company. 64K Apple II series, IIGS; 128K IBM PC, PCjr, PS/2; 256K Tandy 1000. \$59.95; Lab pack: \$119.95.

Rabbit, clowns, and fish help preschoolers count from one to ten. The "Mystery Match Game" tests memory by matching numbers to objects.

MOPTOWN HOTEL. Learning Company. 48K Apple II series, IIGS. \$59.95; Lab pack: \$119.95.

Use rules of logic to determine which "Bibbits" and "Gribbits" fit given patterns. A sequel to *Moptown Parade*.

MOPTOWN PARADE. Learning Company. 48K Apple II series, IIGS. \$59.95; Lab pack: \$119.95.

"Bibbits" and "Gribbits" are tall or short, fat or thin, red or blue. A series of activities asks the user to note similarities and differences.

MUPPET LEARNING KEYS. Sunburst. 128K Apple II series, IIGS; Commodore 64; 128K IBM PCjr, 256K IBM PS/2. Apple, Commodore, IBM PCjr: \$128; 256K IBM PS/2: \$149.

A special keyboard for little fingers with upper and lower case letters in alphabetical order, color selection keys, and action keys such as "stop" and "go." Comes with *Muppets on Stage*.

MUPPET WORD BOOK. Sunburst. 64K Apple II series, IIGS. \$65; Lab pack: \$195.

A "Table of Contents" lists the activities for preschool children who work with Muppet characters to sort letters, shapes, and symbols or match upper and lower case letters. In one game, pressing a letter on the keyboard produces a word and its picture that float in space. A large type word processor prints beginner's sentences.

MUPPETS ON STAGE. Sunburst. 128K Apple II series, IIGS; Commodore 64; 256K IBM PS/2, 128K IBM PCjr. \$65; Lab pack: \$195.

Pressing letter and number keys results in entertaining and colorful pictures of Muppet characters onscreen. Preschoolers can also match keyboard letters to letters on the screen or count pictures on the screen.

MUPPETVILLE. Sunburst. 64K Apple II series, IIGS. \$65; Lab pack: \$195.

Kermit the Frog rides his unicycle to five town locations where preschool children can play matching games with musical tunes, numbers, and shapes and colors. At the zoo, they help Gonzo select which object is different and at "Muppet Movies" they can press a letter and watch a picture on Miss Piggy's movie screen.

THE NEW PRINT SHOP. Broderbund. Apple II series; IBM; Macintosh. \$49.95; Lab pack, Apple: \$95.; Lab pack, IBM, Macintosh: \$115.

The essential tool for all ages to create banners, signs, letterheads, stationery, calendars, posters, and greeting cards. Companion disks provide additional fonts and graphics. The design of this program also makes it a useful introduction to computer operations. *The Print Shop IIGS* is designed specifically for the Apple IIGS. Broderbund. \$49.95. Lab pack, \$112.95.

NOW YOU SEE IT, NOW YOU DON'T. Sunburst. 64K Apple II series. \$75; Lab pack: \$225.

A picture appears on the screen and then disappears. Test your memory by trying to recall everything that you've seen.

NUMBER FARM. DLM. 48K Apple II series, IIGS; Commodore 64/128; 128K IBM PC, PCjr. \$32.95; Lab pack: \$83.

Old MacDonald and his noisy animals plus some fruits and vegetables all have to get counted or put in order. Nine is the highest number.

NUMBER MUNCHERS. MECC. 64K Apple II series, IIGS. \$59; Lab pack: \$129.

The screen looks like Pac-Man as the user searches for correct answers in multiple numbers, factors, prime numbers, equal numbers, or unequal while avoiding hungry "Troggles."

THE OREGON TRAIL. MECC. Apple II series, IIGS; IBM. \$34.95; Lab pack: \$104.95.

Travel west on the Oregon Trail facing danger and limited supplies. An involving interactive activity especially inviting for use by more than one.

THE PLAYROOM. Broderbund. 128K Apple II series, IIGS; IBM; Macintosh. \$49.95; Lab pack: \$95.

The screen is a playroom with multiple activities for preschool children ranging from counting to recognizing letters, and spelling three letter words. Other components include a computerized flippgame and picture storytelling.

PUZZLE TANKS. Sunburst. 48K Apple II series, IIGS; Commodore 64; 128K IBM PC (with color graphics card), PCjr, 256K IBM PS/2 Model 25; 256K Tandy 1000. \$65; Lab pack: \$195.

Two tanks must be filled, emptied, or moved using the right combination of numbers in order to fill the truck; and sometimes there is no possible solution.

READER RABBIT. Learning Company. 64K Apple II series, IIGS; 256K IBM PC (with color graphics card), PCjr; Macintosh. \$59.95; Lab pack: \$119.95.

Four games using 200 three-letter words encourage beginning readers to sharpen spelling and memory skills. "Reader Rabbit" has "Word Train" where you select the correct word for the train and a "Match-up" game where you match picture to picture, picture to word, or word to word.

STICKYBEAR ABC. Weekly Reader Software. 64K Apple II series, IIGS; Commodore 64/128. \$29.95; Lab pack: \$75.

Pressing a letter key results in a colorful and animated matching activity on the screen.

STICKYBEAR NUMBERS. Weekly Reader Software. 48K Apple II series, IIGS; Commodore 64/128; 128K IBM PC, XT, AT, PS/2 (with color graphics card). \$39.95; Lab pack: \$75.

Pressing a number key or the spacebar produces a corresponding colorful and animated activity on the screen. Numbers go from zero to nine.

STICKYBEAR MATH 1. Weekly Reader Software. 64K Apple II series, IIGS; Commodore 64/128; 128K IBM PC (with color graphics card). \$39.95; Lab pack: \$75.

Solve easy addition and subtraction problems and help Stickybear out of a sticky situation.

STICKYBEAR MATH 2. Weekly Reader Software. 64K Apple II series, IIGS; Commodore 64/128; 128K IBM PC (with color graphics card). \$39.95.

Stickybear presents problems in multiplication and division.

STICKYBEAR OPPOSITES. Weekly Reader Software. 48K Apple II series, IIGS; Commodore 64/128, IBM. \$39.95.

The arrow keys animate opposite activities for the very engaging Stickybear. For preschoolers.

STICKYBEAR TOWNBUILDER. Weekly Reader Software. 48K Apple II series, IIGS, Commodore 64/128. \$29.95; Lab pack: \$75.

Build a town and sharpen directional and map reading skills by driving through it to locate missing keys.

THINK QUICK! Learning Company. 64K Apple II series, IIGS; 128K IBM PC (with color graphics card). \$49.95.

Enter a castle filled with mazes and secret panels and collect objects needed to become a knight. The Map Room is helpful but Slime Worms can eat you if you aren't careful. A very involving activity requiring planning and logic.

WHERE IN EUROPE IS CARMEN SANDIEGO? Broderbund. 128K Apple II series; Commodore 64/128; 256K IBM; Macintosh. \$49.95; Lab pack: \$100.

Carmen is the leader of a group of thieves who steal national objects and who must be tracked down across the continent. But the clock is ticking down,

so be sure to use the accompanying *Rand McNally's Concise Atlas of Europe* to save time. Don't forget to take notes on the villains in order to obtain arrest warrants.

WHERE IN THE USA IS CARMEN SANDIEGO? Broderbund. 64K Apple II series, IIGS; Commodore 64/128; 128K IBM PC; 800K Macintosh. \$54.95; Lab pack: \$99.95.

Track Carmen and her gang of thieves across the United States, but don't forget to take notes on personal characteristics because you can't arrest the villains without a warrant. Use the companion, *Fodor's USA Travel Guide* for help with geography clues.

WHERE IN TIME IS CARMEN SANDIEGO? Broderbund. Apple II series (requires 2 5.25" disk drives), IIGS; IBM; Macintosh. \$49.95; Lab pack, Apple: \$95; Lab pack, IBM, Macintosh: \$100.

Carmen and her notorious band of thieves are stealing treasures not only around the world but also through time. You need to follow them using knowledge of geography and history. Refer to the packaging for *The New American Desk Encyclopedia* to check your facts.

WORD-A-MATION. Sunburst. Apple II series, IIGS. \$65; Lab pack: \$195.

The Word-a-Mat uses first letters, antonyms, homophones, past tense, and category to complete word chains.

WORD DETECTIVE. Sunburst. Apple II series; 128K IBM PC (with color graphics card); 256K Tandy 1000; Commodore 64. \$65; Lab pack: \$195.

The computer spins out seven letters. How many different words can you make from them?

WRITER RABBIT. Learning Company. 64K Apple II series, IIGS; 256K IBM PC, PCjr, PS/2 (with color graphics card). \$69.95; Lab pack, Apple series: \$129.95.

Rabbit is holding a sentence party. Do you know the who, what, when, and where in his sentences? □

DISTRIBUTORS

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