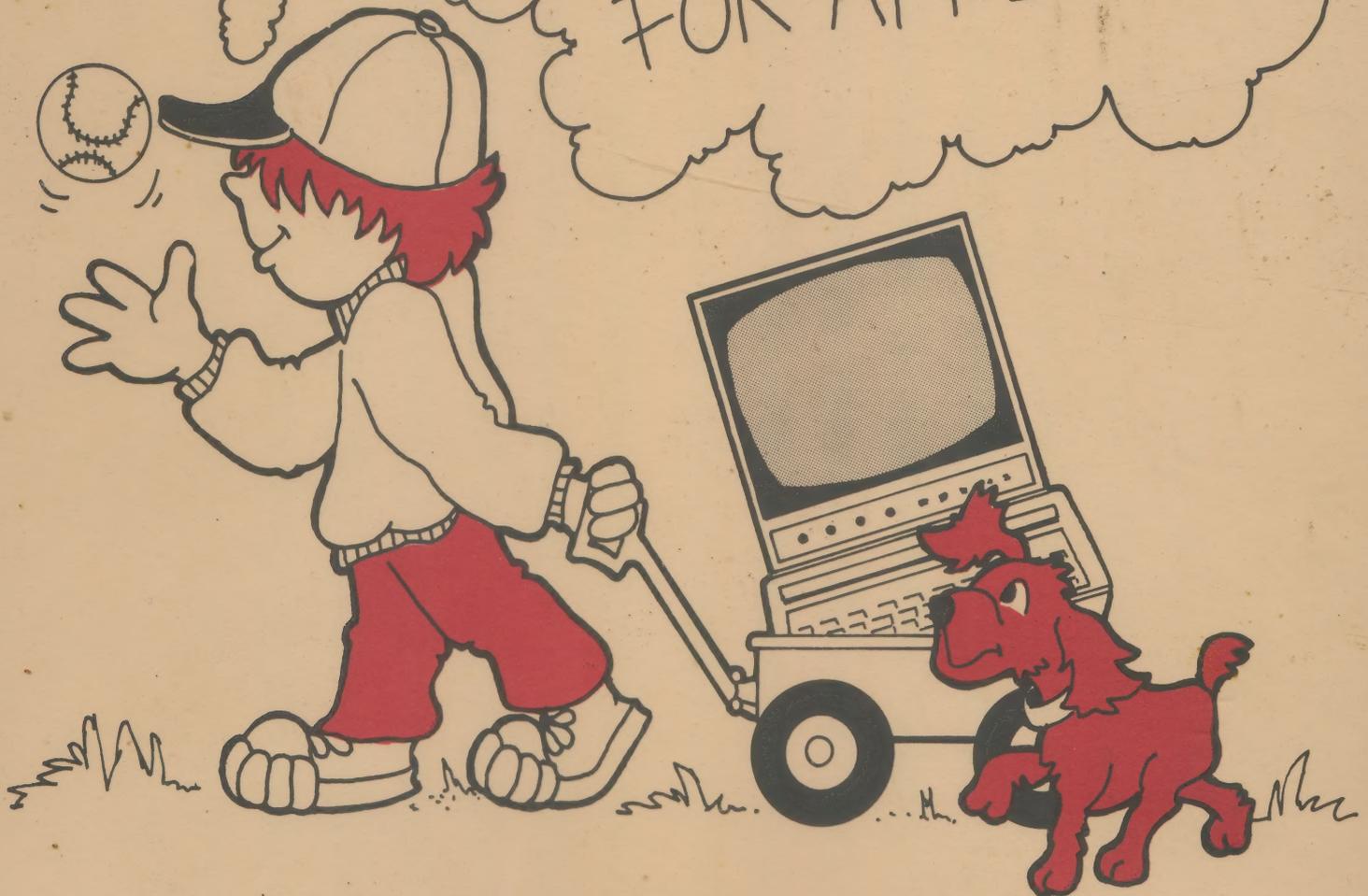


K-10
EDUCATIONAL
SOFTWARE

FOR APPLE II*



Hartley♥

Courseware, Inc.

MONEY! MONEY!

Author: Jane Hartley

Hartley Courseware, Inc. 1982; released 1983
Apple II+ (48K, DOS 3.3) Disk, \$39.95 #17-01

Beginning by counting pennies, nickels, and dimes, this program progresses through several stages of difficulty to one for "experts," which deals with adding multiple purchases and counting the change to be sure it is correct. The creation/modification of a lesson is an excellent feature of this program. In fact, with an easily understood two-page symbol code older elementary students can make up their own lessons. Some find the creation of these graphic pictures more fun than doing the actual lessons, so teachers might wish to limit such activity. A nice option is the section that displays the results of the students' work and, if a printer is used, allows for a hard copy. A number of minor editorial changes have recently been made in the program, which is good for elementary grades and excellent for older special education students to help them learn money skills. Gr. 1-6. AG.

To be published in Sept. 1983 issue of:
booklist American Library Association

PRESCRIPTIVE MATH DRILL

Individually prescribed practice in the four basic arithmetic operations.

Apple
Mathematics: Arithmetic Grades: 1-4

Summary Rating: 9/10

Equipment/Language: 48K Apple II, Applesoft in ROM, one disk drive.

Supplier: Hartley Courseware, P.O. Box 431, Dimondale, MI 48821

Tel: 942-8987

Packaging/Price: Four programs on disk, \$79.95

FUNCTIONAL DESCRIPTION

As its name implies, this product gives individually prescribed practice in the four basic operations on whole numbers. To set up for practice sessions, the teacher enters for each student: name, starting level for each operation, and a mastery criterion (per cent correct) for advancing to the next level. These parameters are stored on disk by the program.

For purposes of practice, problems are presented in a horizontal fashion (i.e., $a+b=c$) and the student is asked to provide any of the three elements of the problem (a, b, or c). As each student practices, the program keeps track of his or her performance. When a student has correctly answered 20 randomly generated problems at the specified passing level, he or she is automatically moved up a level.

The program includes facilities to enable the teacher, at any point, to change parameters for the students or review the performance of any student.

EVALUATION

COMMENTS

This is a very good program. The features we especially like are: large, easy-to-read letters; no sound distractions to disturb the rest of the class; great degree of teacher control; excellent recordkeeping capabilities; and very good documentation.

CHARACTERISTICS

0 Documentation

(++) Includes suggested course/subject and grade levels, goals statement, performance, objectives, operating instructions*, and listings and sample runs of programs. Documentation is written clearly.*.

(+) Partially fulfills the need for prerequisites for use of the program.

*Sound is an option

TEXT FILE NAME IS PRESBAR1/TXT:1,A

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(+) Partially fulfills the need for prerequisites for use of the program.

*Sound is an option

0 Instructions Given by Program

(++) Adequate instructions are given for the instructional task and for interacting with the program.* The user may skip instructions if already known.

0 Student-Computer Dialog

(++) Output is paged. User controls continuing to the next page. Appropriate amount of information presented is suitable. Output spaced and formatted well. Language is well suited to most students' reading abilities. Uses correct grammar, spelling, hyphenation, and punctuation.* Provides well for individual needs.* Dialog is well personalized. Makes good use of graphics. Reinforcing responses are quite appropriate. Allows a reasonable number of wrong answers. Responds appropriately to excessive wrong answers.* Includes good provisions for giving help if difficulty is encountered.* Good use of devices such as objective formats to minimize bad entries. Deals quite well with inappropriate entries.* All required entries are within student capabilities.* Good reporting of student performance.

(+) Some use of devices to get and maintain interest.

0 Miscellaneous Concerns

(++) Prerequisite concepts and vocabulary are quite reasonable. Operates properly and is free of bugs.*

School Microware Reviews
Winter 1982

EVALUATION

COMMENTS

This is a very good program. The features we especially like are large, easy-to-read letters; no sound distractions to disturb the rest of the class; great degree of teacher control; excellent recordkeeping capabilities; and very good documentation. The program should have a function to allow the user to change parameters for the students or review the performance of any student.

*Sound is an option

VOWELS

for Apple II, \$93.95
Hartley Courseware, Inc.
P.O. Box 431
Dimondale, MI 48821

Reviewed by: Merrienne Coon, University of Oregon

[Editor's Note: Merrienne Coon works as an itinerant teacher of learning disabled students for the Bend, Oregon School District. She is a doctoral student in educational psychology at the University of Oregon and is co-author of a booklet on computers and the learning disabled which ICCE plans to publish.]

VOWELS is only one of a variety of reading, language arts and math programs available from Hartley Courseware, Inc. About a third of their programs require the purchase of a magical black box called a cassette control device which allows your computer to activate a cassette recorder. The tapes, made by the teacher, are synchronized with the visual presentation, allowing the student both auditory and visual feedback. It is easy to believe Hartley's claim that their courseware is "classroom tested" as the format is uncluttered, the directions simple and specific, the readability is suited to the level of skill presentation and the graphic displays are engaging.

At first glance, the courseware seems expensive but a closer look shows that one gets one's money's worth. There are 53 separate lessons on this one disk. A bonus is that the lessons are short enough that they can be used effectively by a number of students during a single period. Another real bonus in terms of diagnostic teaching is that the program keeps records of the performance of up to one hundred students, giving an individual display of their name, the lesson and the

number of items missed. It even allows the teacher to pinpoint the child's vowel confusion by displaying the incorrect response and the response that should have been made.

Criticisms of the program include:

1. It is not kid-proof. A student could abort the program by pushing the reset key.
2. Pressing the space bar causes a correct answer to be displayed, although the computer does not record it as such.
3. A word counter to indicate progress through the lesson would have been a nice addition, both

4. There are no introductory remarks or directions to the student at the beginning of the lesson.

The above are minor criticisms. This is an educationally sound piece of software that would integrate nicely into traditional instructional programs as a genuine skill reinforcement aid. Hopefully, it's the sort of educational software we'll begin to see more of as educators enter the field of software development.

EDUCATIONAL SOFTWARE EVALUATION

by

EVALU-SOFT

DR. NANCY WHITE KELLY
72 VALLEY HILL ROAD
STOCKBRIDGE, GA 30281

SOFTWARE NAME: THE MEDALIST STATES

AUTHOR:

MANUFACTURER/DISTRIBUTOR: HARTLEY COURSEWARE, INC.

SYSTEM: Apple II with Applesoft in ROM - 48K 3.2 or 3.3 D.O.S.

FORMAT: 5 1/4" Floppy Diskette

LANGUAGE: Applesoft

LIST PRICE: \$39.95

RECOMENDED LEVEL (S):

UPPER ELEMENTARY

JR. HIGH

SR. HIGH

TESTED BY: DR. NANCY WHITE KELLY, Independent Software Evaluator;
Professional Educator: 20 yrs teaching experience -
(Preschool-College)/ Elementary & High School Principal

No. Students

Field Tested: 10

SUMMARY: This software package is extremely well documented. Though the graphics aren't up to par with the near arcade quality that students and teachers are coming to expect, the program accomplishes the goal of reinforcing prior knowledge about the states and adds interesting facts not commonly known.

My students found the medalist competition a lot of fun and challenging. A few of the students expressed a desire for a supplemental booklet, possibly in textbook style, that would contain the same or expanded information about the states (to use for initial study or for "boning."). This would give them a better chance in the competition - rather than having to rely on prior teaching that perhaps wasn't as comprehensive as the material contained in the quizzes.

This is a quality social studies program. I have no hesitation in recommending it to other educators.

5/28/83

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DR. NANCY WHITE KELLY
37 VALLEY HILL ROAD
STOCKBRIDGE, GA 30281

SOFTWARE NAME: THE MEDALIST STATES

MANUFACTURER/DISTRIBUTOR: HARTLEY COURSEWARE, INC.

SYSTEM: Apple II with Applesoft in ROM - 48K 3.2 or 3.3 D.O.S.

PROMAT 3 1/4" Floppy Diskette

LANGUAGE: Applesoft

LIST PRICE: \$29.95

RECOMMENDED LEVEL (S):

UPPER ELEMENTARY

JR. HIGH

SR. HIGH

TESTED BY: DR. NANCY WHITE KELLY, Independent Software Evaluator;
Professional Educator; 20 yrs teaching experience -
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EDUCATIONAL SOFTWARE EVALUATION

by

EVALU-SOFT

DR. NANCY WHITE KELLY
72 VALLEY HILL ROAD
STOCKBRIDGE, GA 30281

SOFTWARE NAME: THE MEDALIST CONTINENTS

AUTHOR:

MANUFACTURER/DISTRIBUTOR: HARTLEY COURSEWARE, INC.

SYSTEM: Apple II with Applesoft in ROM - 48K 3.2 or 3.3 D.O.S.

FORMAT: 5 1/4" Floppy Diskette

LANGUAGE: Applesoft

LIST PRICE: \$39.95

RECOMMENDED LEVEL (S):

UPPER ELEMENTARY

JR. HIGH

SR. HIGH

TESTED BY: DR. NANCY WHITE KELLY, Independent Software Evaluator;
Professional Educator: 20 yrs. teaching experience -
(Preschool-College)/Elementary & High School Principal

No. Students

Field Tested: 10

SUMMARY: This is an excellent software package. The documentation is easy to understand. Most students who participated in the field test enjoyed competing for the "medals," though a few chose to compete only with themselves.

The material depends on extensive prior knowledge. It would be helpful if your company could provide a TOTAL teaching package-- a teacher manual and ditto sheets for instruction with the diskettes used to reinforce the previously taught material.

The graphics aren't up to par with companies such as XEROX. However, graphics was the only area I would rate as deficient.

The medalist programs are excellent in content and provide teachers with easy access to alter the program material or defaults as needed. I will readily recommend this series.

CONFIDENTIAL - SECURITY INFORMATION

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B	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION
C	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION
D	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION
E	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION	CONFIDENTIAL - SECURITY INFORMATION

Subject Area: Telling Time

Grade Level: 1-6

Type of Program: Drill and Practice/
Tutorial/Diagnostic

System Requirements:

- Apple II, Applesoft, 48K, disk*
(printer optional)

Price: \$39.95

Publisher:

Hartley Courseware, Inc.
P.O. Box 431
Dimondale, MI 48821

Clock

Hartley Courseware, Inc.

A diverse, multi-leveled program for teaching telling time.

The other time-telling programs reviewed in this issue of COURSEWARE REPORT CARD, Orange Cherry Media's *Telling Time Computer Set* and Atari Program Exchange's *Hickory Dickory*, offer tutorials and drills. Hartley's *Clock* does that—and a lot more. This excellent program also allows students to manipulate the hands of an on-screen clock, provides the teacher with an efficient, easily accessible student planning file, and even offers a design option to further individualize the lessons.

Description of the Program

Clock contains both a Student Menu and a Teacher's Menu. After the program is loaded, the instructions "Type your name" appear. Typing a name takes you right to the Student Menu. Typing MENU takes you to the Teacher's Menu.

The latest revision of *Clock* contains four Student Menu choices (the fourth, a tutorial, is new): (1) You set clock hands (time is given digitally), (2) You type the digital time (time is shown by clock hands), (3) You set clock hands (time is given in words), and (4) Tutorial Mode (hands and digits shown). After the number of a choice is typed in and the RETURN key pressed, the screen clears and a second menu is displayed offering five levels of difficulty: (1) hour (2) half hour, (3) quarter hour, (4) 5 minutes, and (5) 1 minute. The teacher or student selects the level at which to work and types in the number, and a drill-and-practice sequence begins. We will give an example of each of the four Student Menu choices:

In choice 1 the time is given digitally and the student is to set the clock hands to match that time. A clock face appears on the screen and the student is instructed to "Set the clock to show 8:00 [for example] and press RETURN". The hands of the clock are moved forward by pressing the F key. They are moved counterclockwise, or backward, by pressing the B key. Graphic prompts for these procedures remain on the screen throughout the exercise. If an answer is correct, the screen displays "Correct" and continues to the next problem. A wrong answer elicits the response "Wrong—Try Again" and the same problem is repeated until it is answered correctly. Each lesson includes 20 problems (or 20 attempts). At the conclusion of the lesson the computer displays the results of the student's work. If there are no errors, the message will read "Congratulations, [name]. You got them all right!" Mistakes are shown along with the correct answers. This display remains on the screen until the RETURN key is pressed. The lesson format is the same for menu choices 1-3.

In choice 2 the time is shown by clock hands and the student types in the digital time. The clock face appears with hands fixed and set. The instructions read "Enter time. Press RETURN." The student enters the hour, a colon, and the minutes (example: 12:04).

Performance:	A
Ease of Use:	A
Error Handling:	B
Appropriateness:	A
Documentation:	A
Educational Value:	A

In choice 3 the time is given in words and the student must once again set the hands of the clock. If the student chooses (3), the computer automatically selects quarter-hour increments. A clock face is displayed on screen, the F and B graphic prompts are given, and the student is instructed to "Set the clock to [example] four-thirty." The student then sets the hands in the same manner as in choice 1. Information is input when the RETURN key is pressed.

Choice 4 is a tutorial. After the desired level of difficulty is selected, a clock face appears on the screen along with the F and B prompts and a digital-time display. As the student moves the hands of the clock, the digital time follows concurrently. Thus the student sees the position of the hands along with the digital time. No drill practice is included in this option.

The Teacher's Menu consists of four choices: (1) Run Lessons, (2) Student Planning, (3) Design Options, (4) See Catalogue. Choice 1 returns the teacher to the Student Menu. Choice 2 takes the teacher to the Student Planning File where student work has been recorded. After pressing (2), the computer shows the number of student records on file (a maximum of 100 may be stored). The computer then asks "Do you wish to clear the file? A (Y) response clears it and an (N) response elicits the question "Are you using a printer?" Recorded information includes the student's name, a lesson description, and the total number of problems missed. All incorrect responses are shown along with the response that should have been made. Hitting the ESCape key exits you from the file at any time.

Choice 3 on the Teacher's Menu is Design Option, another new addition to *Clock*. This option allows the teacher to decide whether he or she wishes the digital time to be on screen as the student moves the clock hands. As the program is set up, digital time is *not* shown on Student Choices 1 and 2. If the teacher chooses to implement this option, the digital time will change as the student moves the hand of the clock, as in the tutorial.

Evaluation

Performance: *Clock* contains quite a number of options, yet transition between any is smooth, quick, and simple. Instructions are clear and should be of little difficulty even for younger students. The on-screen clock face is well-defined and distinct; the program contains no sound effects.

Ease of Use: Because of the many levels of difficulty available in *Clock*, some initial teacher assistance may be expected. Once the child is familiar with the program, however, this assistance should prove to be minimal. Most students should be able to manipulate the hands of the clock with little difficulty. The on-screen cues help ensure that they won't forget how it's done. The Design Options for the teacher also provide help for students who need an extra bit of reinforcement as they work through a lesson.

Error Handling: A lesson may be exited at any time by pressing ESCape and the computer will display the results of problems answered to that point. (Of course, this information is also stored automatically in the Student Planning File.) Answers may be changed by using the backspace key before RETURN is pressed. In those exercises where the hands of the clock are moved, all inappropriate keys have been disabled. In those exercises that require numerical input, however, a letter key input by mistake will be considered an incorrect answer.

Appropriateness: *Clock* takes advantage of a computer's capabilities. Students are able to move the hands of a clock, choose from a wide variety of skill levels, and see the results of their own progress at any time. Teachers are given a record-keeping file and design options to help them best meet the needs of each student.

Documentation: Hartley's manual for *Clock* is excellent. Choices are clearly explained, examples given, and clear instructions will help the teacher be aware of all the program offers with a minimum of effort. Behavioral objectives for the program are also listed (*see below*).

Educational Value: Successful completion of *Clock* should clearly result in a student meeting the objectives of the program: (1) Given a diagram of a clock with hands showing "clock time," the student will be able to write the corresponding digital time to the nearest hour, half hour, quarter hour, and minute. (2) Given written expressions of time, the student can demonstrate the correct hand positions on the hour, half hour, and quarter hour. (3) Given digital time, the student will move the hands of a clock to represent the time to the nearest hour, half hour, quarter hour, five minutes, and minute. This is a carefully prepared, well-thought-out program that should be a welcome tool for anyone teaching time-telling skills.



March 23, 1982

Hartley Software
P. O. Box 431
Dimondale, MI 48821

Dear Sir:-

A member of the PCIC staff has written a review of your software. We have submitted the review to Electronic Education for possible publication.

If you have any additional software that you would like to have us review we would be happy to do so.

Sincerely,

Biel Suid

C. William Engel
Director

Title: Math Concepts, 1981
Hartley Courseware, 1981

Publisher: 18K Apple with Applesoft in ROM DOS 3.2 or 3.3

Computer: \$39.95 for disk

Cost: Sandra Turner, Florida Center for Instructional Computing. Rather

Reviewer: Math Concepts is not the run-of-the-mill elementary math program. It develops specific

Math Concepts is not the run-of-the-mill elementary math program. It develops specific

than providing drill and practice in computational skills. It develops specific

concepts through student interaction. Concepts developed for the primary level

include before/after, between, less than/greater than, odd/even, place/value,

counting by 2's, 3's, 4's, 5's and 10's and ordering numerals. At the inter-

mediate level, students match decimal numerals to their names, compare decimals,

round, and identify primes. Teachers may use the 22 pre-

pared lessons and 3 pre/posttests as they are, may modify the prepared lessons,

or may create their own lessons. Furthermore, the lessons may be used in dif-

ferent kinds of learners:

- a) to develop new concepts,
- b) to supplement and review classroom instruction, and
- c) to diagnose areas of weakness (using the pre/posttests)

The Prepared Lessons

The prepared lessons contain between 17 and 25 items and require 5 to 15 minutes to complete. The variation in format--helps to hold the student's interest. When a student responds correctly to a question, the screen shows a false, or just typing OK to show understanding--helps to hold the student's interest. When a student responds correctly to a question, the screen shows a brief message of praise and a small smiling face. If an answer is incorrect, the computer responds with the correct answer. The program allows for alternate correct responses, such as .9, 0.9 and .60. One error was noticed, but was easily corrected by using the CORRECT option from the menu.

Student Management

Student responses are automatically recorded in a student management file for the teacher's review. Information displayed includes student name, lesson number, number missed out of the total number of items, and for each error, the student's response and the correct response. A printer is optional but nice to have, especially since only 30 student lessons can be stored at one time. A teacher's guide contains complete documentation for using the software, plus a list of the skill objectives by lesson. The guide also cross-references each test item to the specific skill being tested.

Teacher-Created Lessons

By far the most appealing feature of this and other Hartley software is the capability for the teacher to create his/her own lessons and save them on the same disk. The CREATE section allows four lines of stimulus input (an explanation, a question, or maybe even a joke) in the large upper/lower case letters and up to four acceptable student responses. The CREATE capability alone is worth the cost of the disk. In fact, all or part of the prepared lessons may be deleted so that teachers can customize the disk to meet their own objectives. Or teachers may consider buying Hartley's Create Skills disk, which accomplishes the same purpose at half the cost.

Class of '82

Educational software is getting better—but don't trash the textbooks yet. Producers still have a lot to learn.

By Lloyd R. Prentice

Current statistics from credible sources are probably the best indicators of growth in the educational software field. But I have another metric. I visit my friend Rick.

Rick first called me some 18 months ago. "My company is thinking about distributing software to schools. Can you recommend products that we should add to our line?"

I was impressed. Rick's company had been selling stuff to schools for more than 100 years—everything from chalk erasers to shuttlecocks.

At that time Rick's office was tucked in the corner of a cavernous warehouse. We threaded down aisles of storage racks that groaned under pallets of blackboards and pencils and scissors and paste, and we entered a space the size of a roomy broom closet. "Our new microcomputer area," Rick announced proudly.

By my next visit the stroll to Rick's area was shorter and less of an adventure. Rick had a new assistant and new space. Their two desks seemed lost in the expanse of the new office.

During my third visit carpenters were hammering away in an adjacent area installing floor-to-ceiling shelves. "Storage for our inventory of software and books," Rick told me. He introduced me to his new secretary.

With each visit I watched the floor of Rick's domain disappear under desks and racks and computer stations. Rick introduced me to the manager of his new retail outlet and hinted at big deals brewing.

My last visit with Rick was just a few days ago and it's clear that lack of space is again crimping his style. My mind flashed back to the cavernous warehouse and for an instant I saw

pallets of floppy disks and three-ring binders piled to the fluorescent fixtures high above my head.

There are both pessimists and optimists in the educational software field. One publisher told me that schools just don't have money for software. But Talmis, a respected market research firm, sees sales growing from near zip three years ago to some \$75 million by 1985. Certainly my visits with Rick affirm that sales are on the rise. But the big question is—just what is being sold? What's available to help kids learn and how good is it? Progress in these areas is not so easy to gauge.

Recently my company did a detailed survey of the hardware and software products available to educators. We identified 1004 separate software products targeted for grades K through 12. This number, in fact, is misleading since many of the products that we turned up are actually series that include 10, 20 or 30 different units. So we're talking about maybe 1500 to 2000 separate programs. We found programs for art and music, computer literacy, early childhood, guidance, language arts and reading, library skills, mathematics, science, social science, special education and vocational and business education. We also found programs for instructional management and various "authoring" systems to make the process of developing instructional software less of a chore.

These 1004 packages were produced by some 217 companies—169 produce software exclusively, 30 produce both hardware and software and 18 produce both software and books. From the point of view of

quantity, then, producers are tripping over one another to get the product out and they seem to be cranking out something for everyone.

But what about quality? How good is the stuff? Here we plunge into a bucket of worms.

There are two sides to the quality question in educational software—technical quality and pedagogy. Technical quality comes down to questions like these:

- Does it run?
- Is it easy to use?
- Are the screens clear, easy to read, appropriately illustrated?
- Is the branching logic correct?
- Is the documentation complete, easy to use and correct?

Pedagogy is somewhat stickier. Indeed, the issue of appropriate pedagogy is the Falkland Islands of education. One camp is looking for structured presentation of content, explicit instructional objectives, accountability and emphasis on basic skills. Another camp wants to create a rich environment of information and tools and leave the learning to the innate curiosity, creativity and "constructionist" instincts of the child. This camp believes that children "construct" their own knowledge at their own pace out of their personal experiences with the physical and social environment.

Clearly, your basic philosophy of education will influence your approach to software development and evaluation.

Lloyd R. Prentice is president of Prentice Associates, Inc., 46 St. Johns St., Boston, MA, a software development and consulting company.

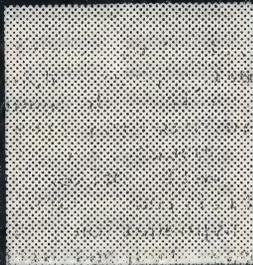
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You say your eprom programming needs are varied, but your engineering budget doesn't permit the purchase of that \$5,000-\$7,000 stand-alone programmer?

a.d.s. has the solution!

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The ads Prom Blaster eprom programming card sits on the I.E.E.E. 696/S-100 bus as an I/O device.



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Handles the following devices: 2708's thru 2764's, single and three supply parts, and the Hitachi 48016 eeprom! Device plugs into on-board LIF socket.

Software

Runs under CP/m* or adsmon MC6809 monitor. Price: \$299.00 A & T + shipping. Includes board & software.

For complete details contact:

ackerman
digital systems, Inc.
110 n. york rd.
elmhurst, il. 60126
(312) 530-8992

ads

*CP/m
trademark
Digital
Research, Inc.

But there are more concrete dimensions of quality as well:

- Does the content fit into the curricular goals of the educator?
- Is the presentation of content consistent with established learning principles?
- Is the content factually correct?
- Are the words properly spelled and the sentences grammatically correct?
- Does the software motivate the kids?

Unfortunately I have not had the pleasure of reviewing all 2000+ educational programs that turned up in our survey. But from what I've seen there is qualitative progress in at least two areas. First, there is a greater diversity of software in terms of both content and pedagogy. And, second, the best of recent releases reflect both better use of the computer as a medium and more consideration of the user. Here are some notable developments and trends that I would submit to support my case.

High on the list is the release of Logo for both the Apple and the Texas Instruments machines. Logo is a computer language developed at MIT. Its roots are in Lisp, artificial intelligence and the child psychology of Jean Piaget. It's easy for youngsters to master and offers significant expressive power. Versions of Logo for the Apple are available from Terapin, Inc., Krell Software and Apple Computer Systems, Inc. Logo for the TI machine is available from Texas Instruments. Logo has inspired various other "turtle graphics" systems—Atari Pilot, and Tom Smith's Kidstuff are two examples. The availability of Logo provides a powerful alternative to the tutorial and drill-and-practice modes of computer-assisted instruction.

Another trend is the reworking of drill-and-practice programs into arcade-game formats. Examples are Master Type from Lightning Software, the Arcademic series from Developmental Learning Materials, and Reston's Multiploy. Many of these programs are too martial for my taste, but kids eat them up. This development is important for two reasons. First, it reflects an attempt to understand and exploit the motivational value of the computer and, second, it requires producers to understand more fully the potential of the computer as an expressive medium.

There is also a trend toward simulations. This encourages me for many of the reasons that I've already cited.

The Search Series from McGraw-Hill is a hot property right now. The Search Series, developed by Tom Snyder of Massachusetts, helps teach social studies and problem-solving. A strong feature is that each program is designed to encourage group participation.

The Search programs are impressive from the point of view of creative pedagogy, but they are less impressive technically. Take the technical legerdemain of the arcade games and mix it with Tom Snyder's structure and you'd have *some* learning experience. In our survey we found an impressive number of simulations in both the science and social science areas.

Still another trend is the development of educational materials for the home. Most major publishers are eyeing this area carefully and a few, like Reader's Digest, are moving ahead with actual products. Educational programs for the home market must have high entertainment value, must be technically flashier than their counterparts for the classroom and generally have less thorough documentation and instructional management. A lucrative home market increases the incentive for producing top-rate educational materials.

The last trend, which is not as dramatic as the others but is equally important, is that the overall quality of educational packages from the point of view of packaging, documentation, instructional management and user friendliness is on the rise. Two companies praised on these counts by educators I've talked with are Milliken Publishing and Hartley Software. When one publisher establishes new benchmarks of quality in these areas, other publishers will have to meet or exceed them to remain competitive.

Last year (September 1981 *Microcomputing*, p. 86) I wrote that the educational software field is booming. Nothing has changed my mind. There are still problems—uneven quality, inadequate reviewing mechanisms, fragmentary offerings that fail to provide systematic coverage of a given curriculum area. Educators are still plagued with inadequate hardware and the lack of standardization of graphics, disk formats and operating systems. A producers are still vexed by piracy. But in two years the field has come a long way. I see a most promising future. ■

WORD FAMILIES

English: Reading
Grade Levels: 1 - 3

Primary students learn to discriminate among phonograms.

Apple
Summary Rating: 9/10

Producer: Hartley Software, 3268 Coach Equipment: 48K Apple with disk.
Lane #2A, Kentwood, MI 49508, Tel: 616/7 Packaging/price: Package of 3 programs on
942-8987. disk, \$29.95.
Language: Applesoft BASIC.

FUNCTIONAL DESCRIPTION

Word Families has primary students work with phonograms and provides performance information for the teacher. It uses a familiar framework, the TV screen, in which to do so. The program works with beginning and final consonants, and median vowels. Students choose appropriate substitutions in these areas and do so in a fun way. The teacher is involved in menu selection and any desired alterations in the word lists. The program was designed by a second grade teacher who has a masters degree in reading.

EVALUATION

Features that we like include: (1) letters are just like the ones kids work with all day - large and easy to read; (2) the program is silent - no distracting "Beeps" or song etc.; (3) teachers can easily change the word lists to fit individual class and student needs; (4) complete records are kept by the computer and can be obtained in hard copy form; and (5) the computer records incorrect answers. This helps the teacher diagnose problems.

CHARACTERISTICS

Documentation

(++) Includes description of suggested teaching strategies and student exercises. Includes operating instructions*. Documentation is written clearly*.

(+) Partially fulfills the need for suggested course/subject and grade levels, stated goals, and listing and sample of programs.

(-) Does not include stated objectives, correlation with standard texts, prerequisites for use of the program, or suggested follow-up references/activities.

o Instructions Given to User by Program
(++) Adequate instructions are given

* Good implementation of the feature referred to is considered essential for effective courseware.

Evaluative information provided by Steve Barnard, Principal, Huntington Woods Elementary School, Wyoming, Michigan.

MEMORANDUM FOR THE RECORD

On 11/11/54, the following information was received from the [redacted] office:

[redacted] advised that [redacted] had been [redacted] on [redacted] date.

ADMINISTRATIVE MATTERS

The [redacted] office has advised that [redacted] has been [redacted] on [redacted] date.

[redacted] advised that [redacted] has been [redacted] on [redacted] date.

OPERATIONAL MATTERS

The [redacted] office has advised that [redacted] has been [redacted] on [redacted] date.

[redacted] advised that [redacted] has been [redacted] on [redacted] date.

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[redacted] advised that [redacted] has been [redacted] on [redacted] date.

The [redacted] office has advised that [redacted] has been [redacted] on [redacted] date.

[redacted] advised that [redacted] has been [redacted] on [redacted] date.

Hartley Courseware, Inc., specializes in educational programs for the elementary and middle schools.

As educators, we believe that microcomputers offer an exciting potential for the classroom teacher. This potential will be realized as educators work closely with skilled programmers to produce quality software.

All Hartley software is designed as a result of the combined effort of classroom teachers and our technical staff. Each program has passed a rigorous test of student interaction and evaluation prior to release.

SPECIAL FEATURES

Detailed Recordkeeping

As a student interacts with a lesson, the teachers need to know exactly what responses the student is making to each frame. The student planning includes:

- 1) The lesson that was attempted.
- 2) How many frames were completed.
- 3) If the student made an error—what was that error and what the correct answer should have been.

This information is stored and made available at the end of the day/week/etc. (either on the monitor or on the printer).

Upper/Lower Case Letters

Hartley programs use three different upper/lower case letter sets. Teachers want easy-to-read upper/lower case letters on all elementary and language arts materials.

Voice Interface

To teach reading, students must hear the sounds of the words as well as see the words. The CCD allows teachers to synchronize their voice with computer lessons. This expands the computer usage to pre-school, special education and early elementary.

Modify Material

Most teachers want to modify the content of a program to meet the needs of their students. Hartley programs allow the teacher to change the words and concepts to fit their own individual curriculum.

Create Capability

Most teachers cannot program, but want their own material to be presented on the computer. Hartley programs include five Create disks plus create capabilities on twenty additional disks. This capability allows the teacher to draw on her/his instructional knowledge to design programs without technical programming skill.

Sound

At the specific request of our reviewing teachers, we have not used sound on our software. Although sound can be very motivational, it is also very distracting in the classroom.

Faint, illegible text at the top of the page, possibly a header or introductory paragraph.

Main body of faint, illegible text enclosed in a rectangular border, likely the primary content of the document.



FOR IMMEDIATE RELEASE

PRESIDENT'S PHYSICAL FITNESS

This program will save hours of time for Physical Education teachers. The teacher simply enters the student's name, age, sex, and scores of the six events. The program automatically computes the student's percentiles according to national norms. Scores may be updated or modified at any time. In addition to national rankings, the program calculates the rank order of all students on a specific event. If events are missed, the data may be added at any time with automatic updates to rank orders provided by the computer. There is also an "overall" physical fitness score which is very useful to coaches as they look at prospective recruits. A personalized print out is available for parents. This new release is available immediately from **Hartley Courseware, Inc., Dimondale, Michigan.** Disk plus Teacher's Guide - \$45.00. (Apple II or Apple Iie)



THE VOWELS TUTORIAL

Appropriate Grade Level: 1-3

Reading Level: 1-3

Language Arts

Mathematics

CCD

A three-disk series including: 1 disk - short vowels
2 disks - long vowels

Brief Description:

The Vowels Tutorial is an extensive series of lessons developed under a grant from the Apple Education Foundation.

The student is presented with a visual stimulus such as r_t. Auditory instructions are given, "Type the missing letter you hear in the word 'rat'." If the student makes an error, the program branches to a brief tutorial. A picture is shown of a word with the same vowel sound.

Additional words with the same vowel sound are presented. When a rule is involved the rule is given followed by several example words. The student then branches back to the main program.

Special Features:

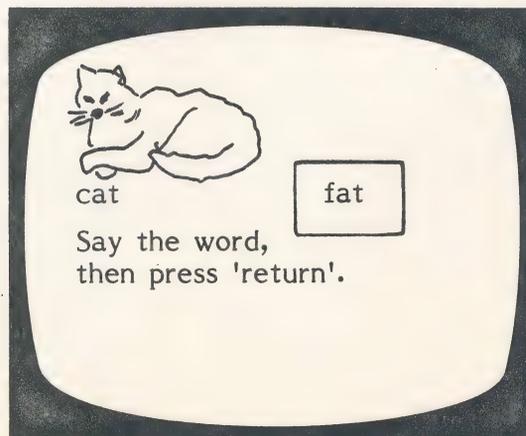
Easy directions for recording tapes are included.

Complete lists of all presentations.

Branching-tutorial.

Upper/lower case letters.

Student Planning (recordkeeping) included.



THE MOWER
LAWYERS

1. The Mower Law Firm is a partnership consisting of the following members:

2. The Mower Law Firm is a partnership consisting of the following members:

3. The Mower Law Firm is a partnership consisting of the following members:

4. The Mower Law Firm is a partnership consisting of the following members:

5. The Mower Law Firm is a partnership consisting of the following members:

6. The Mower Law Firm is a partnership consisting of the following members:



OPPOSITES

Appropriate Grade Level: 2-10

Reading Level: 2-5 (very difficult words
at upper level)

Language Arts ●

Mathematics ○

_____ ○

CCD ○

Brief Description:

The format is very similar to a number of standardized tests. You may use the words provided or add your own.

This is an excellent program for improving a student's vocabulary. The lessons begin at the third grade level and build to the 10th level. In each lesson, the words that are missed are repeated at the end of the lesson.

Special Features:

STUDENT PLANNING records student errors on the teacher's file for later review. The STUDENT PLANNING file holds up to **40 students' records** before you need to erase the file.

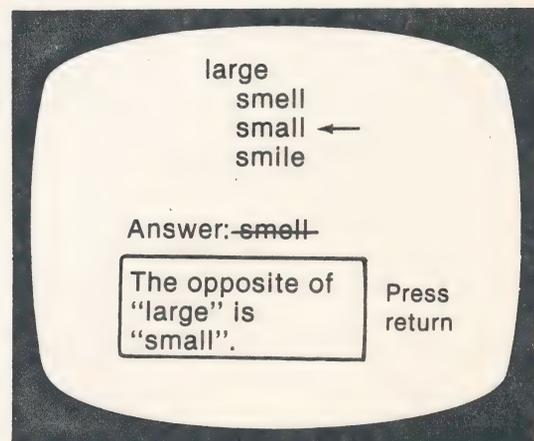
Easy modification of any file.

Create new lessons as desired.

Delete any file as desired.

Instructional DESIGN OPTIONS.

Pre/post Tests are included in the package.



Contents:

Instructional Notes

This disk has been developed to provide practice to the student in discriminating **opposites** of presented words.

There is a considerable range in the lessons presented. You may wish to delete lessons that are not appropriate to your students. This will give you more room to add lessons at the level of your own students.

VOWELS

Appropriate Grade Level: 1-3

Reading Level: 1-2

Language Arts ●

Mathematics ○

_____ ○
CCD ●

Brief Description: Over 1000 presentations!

A complete series of lessons on vowels is presented on this disk.

Fifty-three lessons of twenty presentations each cover long and short vowels, double vowels, diphthongs, r-controlled vowels, the schwa sound and other related skills.

Teacher records the instructions and directions on tape with the use of the CASSETTE CONTROL DEVICE (CCD).

This is a good way to help students learn to hear new sounds. It also can be used to provide repetitious practice for students who need to see the word, and hear the word many times!

Special Features:

- The Cassette Control Device is used to synchronize the teacher's voice on tape to the presentations on the computer screen. Any message-up to 8 seconds-may be recorded on the tape. The student hears the message and sees the word or words.
 - All words are in large, easy-to-read upper/lower case letters.
 - New lessons may be added with the teacher's own special words or skills.
 - Existing lessons may be modified to meet each teacher's needs. No technical programming skills are necessary.
 - STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records.This file holds up to 100 students.
 - A complete set of the words for every lesson is included in the documentation.
- NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

INSTRUCTIONAL SKILL STATEMENTS VOWELS

V1	discriminating a, short e - 1st level	
V2	discriminating short e, short i - 1st level	
V3	discriminating short o, short u - 2nd-3rd level	
V4	review, all short vowels - 2nd-3rd level	
V5	discriminating long a - spelled a-e,ai,ay -2nd-3rd lev.	
V6	discriminating long and short a	"
V7	discriminating long a - irregular spellings	"
V8	discriminating long e - spelled e,ea,ee	"
V9	discriminating long and short e	"
V10	discriminating long e - irregular spellings	"
V11	discriminating long i - spelled i-e,y-Grd 2 Voc."	"
V12	discriminating long and short i-Grd 2 Voc.	"
V13	discriminating long i - irregular spellings	"
V14	discriminating long o - spelled o-e,o,oa	"
V15	discriminating long and short o	"
V16	discriminating long o-including irregular spellings "	"
V17	discriminating long u - spelled u,ou,u-e	"
V18	discriminating long and short u	"
V19	review - long a,e,i	"
V20	review - all long vowel sounds	"
V21	discriminating sounds of the letters "oo" as in "book" and "fool"	"
V22	discriminating variant spellings of the "oo" sound in "book"	"
V23	discriminating variant spellings of the 2nd-3rd level "oo" sound in "fool"	"
V24	discriminating the "aw" sound-spelled a,o	"
V25	discriminating the "aw" sound - variant spelling	"
V26	discriminating the "ou" sound of "out" spelled ou, ow - Grd. 2 Voc.	"
V27	discriminating the "ou" sound of "out" spelled ou, ow - harder words	"
V28	discriminating two sounds for the letters "ow"	"
V29	selecting ae or ee for the sound of long e	"
V30	selecting ei or ee for the sound of long e	"
V31	change short vowel words to long	"
V32	change long vowel words to short	"
V33	discriminating three sounds for the letters "ea"	"
V34	r-controlled vowels discriminating between "ar", "or"	"
V35	r-controlled vowels - "er" sound in "her" discriminating between ir,er,ur	"
V36	the "ar" sound in "arm"-including variant spellings	"
V37	the "er" sound in "her" including variant spellings	"
V38	the "eer" sound in "cheer" spelled ear,eer	"
V39	the "eer" sound in "cheer" variant spellings	"
V40	the "or" sound in "for" variant spellings	"
V41	discrimination of "ar" and "air" sounds	"
V42	the "air" sound in "hair" variant spellings	"
V43	three sounds for the letters "or"	"
V44	two sounds for the letters "ar"-easier words	"
V45	two sounds for the letters "ar" - harder words "	"
V46	the "oi" sound in "boy"	"
V47	short e - irregular spellings	"
V48	short i - irregular spellings	"
V49	short o - irregular spellings	"
V50	short u - irregular spellings-easier words	"
V51	short u - irregular spellings-harder words	"
V52	short and long vowel discrimination-advanced	"
V53	the schwa sound-the letter "a"	"

MULTIPLE SKILLS

Appropriate Grade Level: 1-3

Reading Level: 1-2

Language Arts

Mathematics

CCD

Brief Description: A variety of lessons covering root words, affixes, homonyms, compound words, plurals and contractions are presented. Lessons include 1-3 level vocabulary. Each lesson indicates the appropriate reading level.

Over 800 presentations are included.

The instructions are presented to the student on the tape with the use of the CASSETTE CONTROL DEVICE (CCD).

The student responds on the computer.

Special Features:

- The Cassette Control Device is used to synchronize the teacher's voice on tape to the presentations on the computer screen. Any message-up to 8 seconds-may be recorded on the tape. The student hears the message and sees the word or words.
- All words are in large, easy-to-read upper/lower case letters.
- New lessons may be added with the teacher's own special words or skills.
- Existing lessons may be modified to meet each teacher's needs. No technical programming skills are necessary.
- STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 100 students.
- A complete set of the words for every lesson is included in the documentation.

NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

INSTRUCTIONAL SKILL STATEMENTS

Affixes

Given an auditory direction, the student will add the prefix/suffix to the word shown on the screen to make a new word.

- AF1 suffixes - "ful" and "y"
- AF2 suffixes - "ly" and "ment"
- AF3 suffixes - "er" and "ing"
- AF4 suffixes - "y" and "ly"
- AF5 suffix - "ing" - regular and doubled consonants
- AF6 suffix - "ing" - regular and drop final e
- AF7 suffix - "er" - words ending in e and y; doubled cons.
- AF8 suffixes - review - no change in root words
- AF9 suffixes - review - changes in root words
- AF10 root words - regular and doubled final consonants
- AF11 root words - ending in y and silent e
- AF12 prefixes - dis-, un-, re-
- AF13 suffixes - "er" and "ing", words ending in y, le
- AF14 suffixes - "ed", words ending in y
- AF15 Given a word, the student will type the root word. intermediate (3-4)
- AF16 Given a word, the student will type the root word. advanced (5-6)

Homonyms

Given the word used in a sentence and both homonyms, the student will select the correct word to fit the context.

- H01 homonyms - grade 1
- H02 homonyms - grade 2
- H03 homonyms - grade 3
- H04 homonyms - grade 3
- H05 homonyms through H015 - grade 2,3

Compound Word

Given the written words and auditory directions, the student will select the two words that make a compound word.

CP1 through CP 8

Confused Words

Given the word in context, the student will select between:

- CW1 bib-did, etc.
- CW2 three-there, etc.
- CW3 daity-diary, etc.

Plurals

- PL1 Given a word and an auditory direction, the student will type the plurals for words with regular and es endings.
- PL2 Given a word and an auditory direction, the student will type the plurals for words ending in y.
- PL3 Given a word and an auditory direction, the student will type the plurals for words with irregular "f" and "fe" endings.
- PL4 Given a plural word, the student will type the singular for words ending in s, ies, es.
- PL5 Given a plural word, the student will type the singular for irregular words and words ending in ves.

Contractions

- CT1 Given the words are, not, the student will write the contractions.
- CT2 } Given contractions, the student will write the
- CT3 } words.
- CT4 } Given words, the student will write the
- CT5 } contractions.

CONSONANTS

Appropriate Grade Level: 1-4

Reading Level: 1-3

Language Arts ●

Mathematics ○

_____ ○

CCD ●

Brief Description: A complete series of phonics lessons on sounds of consonants and consonant blends is presented on this disk. Initial and final consonants are included along with initial, final and medial blends.

Teacher records the instructions and directions on tape with the use of the CASSETTE CONTROL DEVICE (CCD).

Ideal to develop listening skills and to help students learn to discriminate between consonant sounds.

Special Features:

- The Cassette Control Device is used to synchronize the teacher's voice on tape to the presentations on the computer screen. Any message-up to 8 seconds-may be recorded on the tape. The student hears the message and sees the word or words.
- All words are in large, easy-to-read upper/lower case letters.
- New lessons may be added with the teacher's own special words or skills.
- Existing lessons may be modified to meet each teacher's needs. No technical programming skills are necessary.
- STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 100 students.

A complete set of the words for every lesson is included in the documentation.

NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

Given an auditory stimulus, the student will type the:

- C1 initial consonants
- C2 final consonants
- C3 medial consonants
- C4 initial 'l' blends
- C5 initial 'r' blends
- C6 initial 's', 'q', 't' blends
- C7 final blends
- C8 final blends
- C9 initial digraph (ending in h)
- C10 final digraphs
- C11 'le' and 'el' ending
- C12 'le' and 'el' ending
- C13 silent letters 'k' and 'w'
- C14 silent letters 'b' and 'l'
- C15 'gh' or 'ph' for the f sound
- C16 'tch', 'st' or 't' for the "silent" t
- C17 letters for the 'gh' sound
- C18 silent letters 'u', 'n', 'w', 'h', 'd'
- C19 'qu', or 'squ'

Given a word (auditory stimulus) the student will determine if:

- C20 it has a hard or soft 'c'
- C21 it has a hard or soft 'c'
- C22 it has a hard or soft 'g'
- C23 it has a hard or soft 'g' sound .
- C24 if the letters "su" has the sound 'ch', 'sh', or 'zh'
- C25 Given a word with the 'sh' sound, the student will write the letters which make the sound.
- C26 Given a word with the 'ch' sound, the student will write the letters which make the sound.
- C27 Given a word with the 'f' sound, the student will write the letters which make the sound.
- C28 Given a word, the student will determine if the 'y' is used as a vowel or consonant.

VOCABULARY- ELEMENTARY

Appropriate Grade Level: 2-4

Language Arts

Reading Level: 2-3

Mathematics

CCD

Brief Description:

This vocabulary development program includes 63 different lessons with up to 40 presentations per lesson. Words are at the 2-3 reading level and closely follow the Harcourt-Brace "Bookmark" reading; but may be easily changed to correspond directly to any reading series.

The lessons are designed so that each word is presented to the student on the computer. The student tries to pronounce the word and then press <RETURN>. The word (and definition if desired) is then heard from the tape.

Words that the student does not know are stored for later review by the teacher.

Special Features:

- Large easy-to-read upper/lower case letters.
- Synchronized voice presentations with computer lessons using the CCD.
- STUDENT PLANNING records the words that were difficult for each student. Printed lists may be obtained for individual study.
- Words on the files may be CHANGED as desired.
- New word lists may be added.

NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

This disk provides practice on recognition of basic words. The lists of words that are on the disks are included in this documentation.

Tape Script

You may use a variety of recorded messages. You will want to plan ahead and write the sentences if you use example 2.

Example 1: (word only)

around around

Example 2: (word used in context)

around I run around in circles.

VOCABULARY- DOLCH

Appropriate Grade Level: K-3

Reading Level: K-3

Language Arts ●

Mathematics ○

_____ ○
CCD ●

Brief Description:

This program provides an opportunity for students to see and hear the common words (Dolch pre-third level) that they will encounter in their reading.

The lessons are designed so that each word is presented to the student on the screen. The student tries to pronounce the word—then presses return to hear the word.

The recordkeeping system keeps track of all the words the student did not feel that he knew. These are printed out for a take home list. This is an ideal supplement to a reading basal.

Special Features:

- Large easy-to-read lower case letters.
- Synchronized voice presentations with computer lessons using the CCD.
- STUDENT PLANNING records the words that were difficult for each student. Printed lists may be obtained for individual study.
- Words on the files may be CHANGED as desired.
- New word lists may be added.

NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

04-05 VOCABULARY DOLCH

<u>PREPRIMER</u>	<u>PRIMER</u>	<u>1st LEVEL</u>	<u>2nd LEVEL</u>	
list: PP1	list: P1	list: D1-1	list D2-1	list: D3-1 cont'd
a	but	any	about	bring
am	call	ask	all	bay
an	came	brown	around	carry
and	eat	do	ate	clean
are	every	does	away	cold
as	fall	draw	both	could
at	far	find	by	don't
be	fast	first	out	found
big	for	fire	did	good
black	get	from	done	grow
blue	her	full	drink	got
can	him	gave	eight	had
come	his	give	fly	
down	I	going	four	list: D3-2
go	into	hot	funny	has
goes	jump	if	help	hold
green	look	light		hurt
he	no	long	list: D2-2	its
here	please	make		just
how	pretty	my	let	keep
		white	like	kind
		who	made	know
list: PP2	list: P2	why	many	laugh
in	pull	will	myself	live
is	put	work	now	may
it	read	yellow	of	much
little	red	your	old	must
me	said		only	new
on	sit	list: D1-2	open	never
one	sleep	not	out	or
play	small	once	over	our
run	so	pick	round	own
saw	some	ran	show	shall
say	three	ride	sing	soon.
see	today	right	warm	
stop	two	seven	wish	list: D3-3
the	walk	she	with	start
to	want	six	have	thank
us	was	take		that
yes	wash	tell	<u>3RD LEVEL</u>	their
	well	ten	list: D3-1	then
	you	them	after	there
		they	again	these
		together	always	think
		we	because	this
		what	been	those
		when	before	too
		where	best	try
		which	better	under
				upon
				use
				very
				went
				were
				would
				write

NOUNS/PRONOUNS

Appropriate Grade Level: 3-8

Reading Level: 3-4

Language Arts ●

Mathematics ○

_____ ○

CCD ○

Brief Description: A comprehensive multi-level program on nouns and pronouns. This disk includes:

1. recognition of common and proper nouns
2. possessives; nouns and pronouns
3. noun plurals, both regular and irregular
4. identification of pronouns
5. identification of pronoun antecedents

The vocabulary in the lessons is controlled to allow for each skill to be presented at different reading levels.

Each lesson includes an introductory frame and simple examples. Difficult words and concepts are presented at least twice in different formats.

Special Features:

- Special upper/lower case letters originally developed by MECC are used for all student lessons.
- **STUDENT PLANNING** - A teacher's student management file which automatically stores the student's incorrect responses along with specification of the lesson, the number of attempts and what the correct response should have been. The teacher may call up the records of any individual student as desired. If a printer is available, a hard copy of the records may be obtained for any or all students. This file holds up to 50 students and may be cleared at any time.
- Modification of any lesson may easily be made by the teacher without any programming skills.
- New Lessons may be added to the disk by the teacher by using the CREATE capability.

INSTRUCTIONAL SKILL STATEMENTS

Contents:

The lessons on nouns have been coded to reflect the skills covered and the reading level.

NOUNS	3rd	4th	5th	6th
Possessives	PS3	PS4	PS5	
Plurals	PL3	PL4	PL5	
Identification	ID3	ID4	ID5	
<u>PRONOUNS</u>				
Identification and Use	PR3	PR4	PR5	PR6
Antecedents		PR4	PR5	

For any given strand, PS; PL; ID, etc., the student should begin at the first level and work through the levels. More specific objectives for each lesson are listed below.

NOUNS-Identification

- ID3 The student will identify common nouns. The student will determine if an identified noun is a person, place or thing.
- ID4 The student will identify proper nouns. The student will identify proper nouns which are not capitalized.
- ID5 The student will identify proper nouns. The student will identify proper nouns which are not capitalized. Nouns considered are names, specific places, titles, regions, brand names, countries, cities, and states.

NOTE: In the proper noun lessons, the student must type the letter only of the multiple choice questions.

NOUNS-Plurals

- PL3 The student will select a singular or plural noun to fit the context (regular 's' ending).
- PL4 The student will type the correct plural of nouns which require -es, -ies and ves endings.
- PL5 The student will select or type the plural form of irregular nouns including words such as radius, ox, deer, man, etc.

NOUNS-Possessives

- PS3 The student will select the appropriate possessive form for singular or plural possessive (regular ending).
- PS4 The student will select the appropriate possessive form for singular or plural noun (with some irregular endings).
- PS5 The student will form the possessive or select the correct possessive for singular and plural nouns ending in 's'.

PRONOUNS-Identification and Use

- PR3 Given a sentence, the student will identify the pronoun subject of the sentence (singular or plural).
- PR4 The student will select the correct possessive pronoun to fit the context of the sentence.
- PR5 The student will select the correct object pronoun for use in the context of the sentence.
- PR6 The student will select the correct form of "who" (who, whose, whom) for use in the context of the sentence.

PRONOUN-Antecedent

- AT4 Given 1-2 sentences, the student will select the noun which the pronoun represents.
- AT5 Given 1-2 sentences with a slightly more difficult vocabulary, the student will select the noun which the pronoun represents.

HOMONYMS

Appropriate Grade Level: 3-8

Reading Level: 3-6

Language Arts ●

Mathematics ○

_____ ○

CCD ○

Brief Description:

This disk introduces each pair of homonyms with a definition and an example of correct usage. The student is then required to select the correct word from the context of another sentence.

Over 80 homonym pairs are introduced ranging from a very elementary level, SON/SUN, to a more advanced level, SUITE/SWEET.

Review lessons are included in each disk and may be used as pre/post tests or additional practice.

Special Features:

- Special upper/lower case letters originally developed by MECC are used for all student lessons.
- STUDENT PLANNING - A teacher's student management file which automatically stores the student's incorrect responses along with specification of the lesson, the number of attempts and what the correct response should have been. The teacher may call up the records of any individual student as desired. If a printer is available, a hard copy of the records may be obtained for any or all students. This file holds up to 50 students and may be cleared at any time.
- Modification of any lesson may easily be made by the teacher without any programming skills.
- New Lessons may be added to the disk by the teacher by using the CREATE capability.

Contents:

SKILL STATEMENTS

Each lesson is patterned along the same format. A pair of homonyms is introduced. In most cases both words are defined. When one member of a pair is very common (air, heir), only the more unusual word is defined (heir).

The student is then required to use the correct homonym in the context of a sentence.

The pairs of homonyms presented in each lesson are listed below.

The difficulty of the vocabulary increases as the student moves through the lessons. Lessons H05, H010, H015, and H020 are review lessons. They include those words that are underlined in the previous four lessons.

Homonyms in each H0 lesson:

H01	<u>sun</u> - <u>son</u> <u>hear</u> - <u>here</u> <u>see</u> - <u>sea</u> <u>one</u> - <u>won</u> <u>blew</u> - <u>blue</u> <u>made</u> - <u>maid</u> <u>flour</u> - <u>flower</u> <u>merry</u> - <u>marry</u> <u>plane</u> - <u>plain</u> <u>bare</u> - <u>bear</u> <u>right</u> - <u>write</u>
H02	<u>buy</u> - <u>by</u> <u>weak</u> - <u>week</u> <u>meet</u> - <u>meat</u> <u>bee</u> - <u>be</u> <u>road</u> - <u>rode</u> <u>pane</u> - <u>pain</u> <u>tale</u> - <u>tail</u> <u>four</u> - <u>for</u> <u>eight</u> - <u>ate</u> <u>beet</u> - <u>beat</u> <u>pail</u> - <u>pale</u>
H03	<u>prays</u> - <u>preys</u> - <u>praise</u> <u>know</u> - <u>no</u> <u>whole</u> - <u>hole</u> <u>brake</u> - <u>break</u> <u>fir</u> - <u>fur</u> <u>doe</u> - <u>dough</u> <u>bough</u> - <u>bow</u> <u>do</u> - <u>dew</u> - <u>due</u>
H04	<u>you're</u> - <u>your</u> - <u>yore</u> <u>daze</u> - <u>days</u> <u>knight</u> - <u>night</u> <u>choose</u> - <u>chews</u> <u>cent</u> - <u>sent</u> - <u>scent</u> <u>reel</u> - <u>real</u> <u>pause</u> - <u>paws</u> <u>feet</u> - <u>feat</u>
H05	Review of 1-4 (using words underlined above)
H06	<u>piece</u> - <u>peace</u> <u>our</u> - <u>hour</u> <u>there</u> - <u>their</u> - <u>they're</u> <u>clothes</u> - <u>close</u> <u>horse</u> - <u>hoarse</u> <u>deer</u> - <u>dear</u> <u>board</u> - <u>bored</u> <u>herd</u> - <u>heard</u> <u>earn</u> - <u>urn</u>
H07	<u>rain</u> - <u>rein</u> - <u>reign</u> <u>vein</u> - <u>vain</u> - <u>vane</u> <u>pare</u> - <u>pear</u> - <u>pare</u> <u>weather</u> - <u>whether</u>

H08	<u>coarse</u> - <u>course</u> <u>guessed</u> - <u>guest</u> <u>prince</u> - <u>prints</u> <u>tide</u> - <u>tied</u> <u>fin</u> - <u>find</u> <u>nose</u> - <u>knows</u>
H09	<u>to</u> - <u>too</u> - <u>two</u> <u>waste</u> - <u>waist</u> <u>great</u> - <u>grate</u>
H010	Review 6-9
H011	<u>ring</u> - <u>wring</u> <u>beech</u> - <u>beach</u> <u>passed</u> - <u>past</u> <u>steel</u> - <u>steal</u> <u>must</u> - <u>mussed</u>
H012	<u>awl</u> - <u>all</u> <u>lie</u> - <u>lye</u> <u>yolk</u> - <u>yoke</u> <u>hymn</u> - <u>him</u> <u>ewe</u> - <u>you</u> <u>ewes</u> - <u>use</u> <u>thyme</u> - <u>time</u> <u>aisle</u> - <u>I'll</u> - <u>isle</u> <u>so</u> - <u>sew</u> - <u>sow</u>
H013	<u>throne</u> - <u>thrown</u> <u>ball</u> - <u>bawl</u> <u>stairs</u> - <u>stares</u> <u>threw</u> - <u>through</u> <u>haul</u> - <u>hall</u>
H014	<u>berth</u> - <u>birth</u> <u>fare</u> - <u>fair</u> <u>weigh</u> - <u>way</u> <u>weight</u> - <u>wait</u> <u>rose</u> - <u>rows</u> <u>patience</u> - <u>patients</u>
H015	Review 11-14
H016	<u>heir</u> - <u>air</u> <u>mourn</u> - <u>morn</u> <u>raise</u> - <u>rays</u> <u>ferry</u> - <u>fairy</u> <u>flee</u> - <u>flea</u> <u>heal</u> - <u>heel</u> <u>bridle</u> - <u>bridal</u>
H017	<u>told</u> - <u>toll</u> <u>allowed</u> - <u>aloud</u> <u>cellar</u> - <u>seller</u> <u>foul</u> - <u>fowl</u> <u>dessert</u> - <u>desert</u>
H018	<u>cereal</u> - <u>serial</u> <u>counsel</u> - <u>council</u> <u>presence</u> - <u>presents</u> <u>taught</u> - <u>taut</u> <u>maze</u> - <u>maize</u>
H019	<u>carat</u> - <u>carrot</u> <u>capitol</u> - <u>capital</u> <u>principal</u> - <u>principle</u> <u>stationary</u> - <u>stationery</u> <u>suite</u> - <u>sweet</u> <u>sheik</u> - <u>chic</u>
H020	Review 16-19

ROOTS/AFFIXES

Appropriate Grade Level: 3-8

Language Arts

Reading Level: 3-5

Mathematics

CCD

Brief Description:

This program contains lessons on root words, prefixes and suffixes. Students identify root words and words with common roots. Prefixes and suffixes are identified and the student defines new words by combining roots with affixes. Noun forming suffixes and adjective/adverb forming suffixes are included. Both common prefixes and Latin/Greek prefixes are presented. The vocabulary in the levels is gradually increased from 3rd grade level to 8th grade level.

Special Features:

- Special upper/lower case letters originally developed by MECC are used for all student lessons.
- STUDENT PLANNING - A teacher's student management file which automatically stores the student's incorrect responses along with specification of the lesson, the number of attempts and what the correct response should have been. The teacher may call up the records of any individual student as desired. If a printer is available, a hard copy of the records may be obtained for any or all students. This file holds up to 50 students and may be cleared at any time.
- Modification of any lesson may easily be made by the teacher without any programming skills.
- New Lessons may be added to the disk by the teacher by using the CREATE capability.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

3rd Grade Readability Level

- RT3 identify root words
identify words sharing common roots
- PRE3 identify words with prefixes
meaning and use of un, mis, re, and pre prefixes
- SUF3 identify suffixes
define and use adjective forming suffixes -ful,
-less, -ish, and -able in context
- AFF3 identify word parts
use prefixes in context

4th Grade Readability Level

- RT4 identify root words
identify and use Latin root "spect" in context
- PRE4 equate value with numeric prefixes mono, bi,
tri, pent, octo, cent
use numeric prefixes in context
- SUF4 identify and use suffixes
use noun-forming suffixes -ship, -ness, -hood,
and -ist
- AFF4 identify prefixes, roots, and suffixes
use word parts marin, sub, bio, micro, tele,
and scope

5th Grade Readability Level

- RT5 identify words with common roots
use the roots scrib, port, and vis in context
- PRE5 use prefixes inter, super, sub, en, and de
in context
supply prefix to match definition
- SUF5 identify and use suffixes
use adjective/adverb-forming suffixes -al, -y,
-ous, and -ly in context
- AFF5 supply appropriate prefix, root, or suffix
to fit context
use knowledge of word parts to decipher meaning

6th Grade Readability Level

- RT6 identify words with common roots
use the Latin roots struct, ven, viv, and fin
in context
- PRE6 use negating prefixes dis-, im-, il-, in-, ir-,
and un- in context
- SUF6 identify and use suffixes
supply suffixes -able, -ible, -ness, and -ment
to context

7th Grade Readability Level

- RT7 identify words with common roots
use the roots junct, loc, rupt, and man in
context
- PRE7 use prefixes in context
identify meanings of the prefixes re-, be-, en-,
and de-
- SUF7 identify words with suffixes
supply suffixes -ance, -ence, -dom, and (i)ty
to context

8th Grade Readability Level

- RT8 identify meaning of miscellaneous Latin/Greek
roots
- PRE8 identify meaning of miscellaneous prefixes

ANTONYMS/ SYNONYMS

Appropriate Grade Level: 3-8

Reading Level: 3-6

Language Arts

Mathematics

CCD

Brief Description:

This disk provides reinforced drill on recognition and use of synonyms and antonyms. The difficulty for each of the 21 lessons is gradually increased from 3rd level to 8th level.

This is a good way to help students develop their vocabulary.

Special Features:

- Special upper/lower case letters originally developed by MECC are used for all student lessons.
- STUDENT PLANNING - A teacher's student management file which automatically stores the student's incorrect responses along with specification of the lesson, the number of attempts and what the correct response should have been. The teacher may call up the records of any individual student as desired. If a printer is available, a hard copy of the records may be obtained for any or all students. This file holds up to 50 students and may be cleared at any time.
- Modification of any lesson may easily be made by the teacher without any programming skills.
- New Lessons may be added to the disk by the teacher by using the CREATE capability.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

The lessons on this disk were developed to help students expand their vocabulary. The objectives are similar for each of the six reading levels.

3rd Grade Readability Level-Given a word used in context:

- SY3 the student will select the correct synonym.
- AN3 the student will select the correct antonym.
- SA3A the student will identify words as antonyms or synonyms.
The student will select the correct antonym or synonym.
- SA3B the student will identify words as antonyms or synonyms.
The student will select the correct antonym or synonym.

4th Grade Readability Level-Given a word used in context:

- SY4 same as level 3.
- AN4 "
- SA4A "
- SA4B "

5th Grade Readability Level-Given a word used in context:

- SY5 same as level 3.
- AN5 "
- SA5A "
- SA5B "

6th Grade Readability Level-Given a word used in context:

- SY6 same as level 3.
- AN6 "
- AS6A "

7th Grade Readability Level-Given a word used in context:

- SY7 same as level 3.
- AN7 "
- AS7A "

8th Grade Readability Level-Given a word used in context:

- SY8 same as level 3.
- AN8 "
- SA8A "

VERBS

Appropriate Grade Level: 3-8

Language Arts ●

Reading Level: 3-5

Mathematics ○

_____ ○

CCD ○

Brief Description: This disk provides practice on many of the common problems students encounter when working with verbs. It includes lessons on:

1. recognition and identification of verbs
2. tense of regular and irregular verbs
3. subject-predicate correspondence
4. contractions
5. correct usage

The vocabulary in the lessons is controlled to allow for each skill to be presented at different reading levels.

Special Features:

- Special upper/lower case letters originally developed by MECC are used for all student lessons.
- STUDENT PLANNING - A teacher's student management file which automatically stores the student's incorrect responses along with specification of the lesson, the number of attempts and what the correct response should have been. The teacher may call up the records of any individual student as desired. If a printer is available, a hard copy of the records may be obtained for any or all students. This file holds up to 50 students and may be cleared at any time.
- Modification of any lesson may easily be made by the teacher without any programming skills.
- New Lessons may be added to the disk by the teacher by using the CREATE capability.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

3rd-4th Level Skills (2-3rd level reading)

- ID3 (Identifying Verbs) The student will identify a verb as an action word.
The student will identify a word as a verb or noun depending on its use.
- TN3 (Tense) Given a sentence, the student will identify the verb as present or past tense.
- AG3 (Agreement) Given a sentence, the student will select the correct verb for a singular or plural verb (regular).
- CN3 (Contractions) Given a contraction, the student will select the two words which it stands for.
Given two words, the student will write the contraction.
- TN4 (Tense) The student will identify past forms of irregular verbs (requiring the changing of 'i' to 'a').
The student will select the correct form of these irregular verbs in context.
- TN4A (Tense) The student will identify past forms of irregular verbs (requiring the change of 'i' to 'e' or 'o').
The student will select the correct form of these verbs in context.
- AG4 (Agreement) The student will select the correct verb form to agree with singular or plural subjects. Verbs will form the past tense by adding s, ies, or es.
- CN4 (Contractions) The student will form contractions given the two words which are used.
The student will select the two words used, given the contraction.

5th-6th Level Skills (3-4th level reading)

- AG5 (Agreement) The student will select the correct form of the verb "to be" (past tense or present tense) to agree with the subject.
- TN5 (Tense) The student will select the appropriate past tense form of irregular verbs.
- ID5 (Identifying) The student will identify helping verbs.
- TN6 (Tense) The student will determine if a sentence is past, present or future.
- ID6 (Identifying) The student will identify the complete verb of a sentence.

7th-8th Level Skills (4-5th level reading)

- AG7 (Agreement) The student will select the correct verb form for singular and plural subjects which are exceptions to the general rules of agreement.
-money
-collective nouns
-fractions
- AG8 (Agreement) The student will select the correct verb form for special problem sentences.
-clauses beginning with what.
-verbs which precede subjects.
-intervening phrases.
-subjects joined by 'or'.
- TN7 (Tense) Identifying the infinitive form, the past, and past participle of the verb.
The student will use the past and past participle correctly.
- TN8 (Tense) The student will identify the past and past participles of the verbs be, hang and lie.
The student will use the correct form of the above verbs.
- TN9 (Tense) The student will type the correct form of a given verb to agree with the subject and tense of a given sentence.
- SB8 (Subjunctive) The student will identify sentences which require the subjunctive form of the verb.
The student will select the correct verb form.

These lessons cover only a few of the verbs that are commonly used. Use the CREATE capability to add new lessons with verbs that are difficult for your students.

VERB USAGE

1, 2 & 3

Appropriate Grade Level: 2-6

Reading Level: 2-4

Language Arts

Mathematics

CCD

Brief Description:

These programs were written in response to many requests from teachers whose students needed simple, repetitive work on verbs.

Each disk contains 20 lessons and 4 tests on verb usage. Each lesson requires the student to discriminate between the present, past and past participle form of commonly used and misused verbs.

These programs give students who have difficulty with correct verb usage the added practice they need. (The lessons on VERB USAGE 1, 2, and 3 give more indepth practice at an elementary level than our VERBS program.

Sentences that are missed are presented to the student at a later time.

Special Features:

STUDENT SAFEGUARDS - Ten successive correct responses or less than 41% (discounting the 1st four frames) terminates the presentation.

Create your own lessons.

Modify existing lessons

Delete lessons as desired

Upper/lower case letters

STUDENT PLANNING - Holds up to 40 records before you have to erase the file.

I _____ going downtown.

a. was

c. be

d. is

d. been

answer:

Contents:

INSTRUCTIONAL NOTES and BEHAVIORAL OBJECTIVES

This three-disk package was developed to give students the extra practice they need in discriminating the correct usage of common verbs.

There are 20 presentations in each lesson. Each lesson reviews one verb. The student must choose between the **present, past, past participle** and **infinitive** form of the verb.

PRE/POST TESTS are on the disks. Each test has 20 questions. Four questions are from each lesson. Two of these questions are in the first 10 items on the test. Two of these questions are in the second 10 items on the test. The test will terminate if the first 10 items are correct.

Lesson 1	items 1,2,11,12
Lesson 2	items 3,4,13,14
Lesson 3	items 5,6,15,16
Lesson 4	items 7,8,17,18
Lesson 5	items 9,10,19,20

These tests may be used for placement or mastery. Tests 6-10, etc. are written in the same format.

Specific Objectives

VERB USAGE 1

TEST 1-5 This measures the student's knowledge of the information on Lessons 1-5.

Lessons 1-5 (Skill Level 2-3)

US1 Given a sentence, the student will select the correct form (present, past, past participle, or infinitive) of the verb to **DO**.

US2 Same as US1...of the verb to **SEE**.

US3 Same as US1...of the verb to **GO**.

US4 Same as US1...of the verb to **EAT**.

US5 Same as US1...of the verb to **TAKE**.

TEST 6-10 This measures the student's knowledge of the information on Lessons 6-10.

Lessons 6-10 (Skill Level 2-3)

US6 Given a sentence, the student will select the correct form (present, past, past participle, or infinitive) of the verb to **GIVE**.

US7 Same as US6...of the verb to **BLOW**.

US8 Same as US6...of the verb to **GROW**.

US9 Same as US6...of the verb to **KNOW**.

US10 Same as US6...of the verb to **THROW**.

TEST 11-15 This measures the student's knowledge of the information on Lessons 11-15.

Lessons 11-15 (Skill Level 2-3)

US11 Given a sentence, the student will select the correct form (present, past, past participle, or infinitive) of the verb to **RUN**.

US12 Same as US11...of the verb to **COME**.

US13 Same as US11...of the verb to **RING**.

US14 Same as US11...of the verb to **SING**.

US15 Same as US11...of the verb to **BEGIN**.

VERB USAGE 2

TEST 16-20 This measures the student's knowledge of the information on Lesson 16-20.

Lessons 16-20 (Skill Level 3-4)

US16 Given a sentence, the student will select the correct form (present, past, past participle, or infinitive) of the verb to **RIDE**.

US17 Same as US16...of the verb to **DRINK**.

US18 Same as US16...of the verb to **SPEAK**.

US19 Same as US16...of the verb to **BREAK**.

US20 Same as US16...of the verb to **CHOOSE**.

TEST 21-25 This measures the student's knowledge of the information on Lesson 21-25.

Lessons 21-25 (Skill Level 3-4)

US21 Given a sentence, the student will select the correct form (present, past, past participle, or infinitive) of the verb to **SWIM**.

US22 Same as US21...of the verb to **FREEZE**.

US23 Same as US21...of the verb to **DRIVE**.

US24 Same as US21...of the verb to **TEAR**.

US25 Same as US21...of the verb to **WEAR**.

TEST 26-30 This measures the student's knowledge of the information on Lesson 26-30.

Lessons 26-30 (Skill Level 3-4)

US26 Given a sentence, the student will select the correct form (present, past, past participle, or infinitive) of the verb to **FLY**.

US27 Same as US26...of the verb to **WRITE**.

US28 Same as US26...of the verb to **BRING**.

US29 Same as US26...of the verb to **DRAW**.

US30 Same as US26...of the verb to **SHAKE**.

VERB USAGE 3

TEST 31-35 This measures the student's knowledge of the information on Lesson 31-35.

Lessons 31-35 (Skill Level 4-5)

US31 Given a sentence, the student will select the correct form (present, past, past participle, or infinitive) of the verb to **STEAL**.

US32 Same as US31...of the verb to **FALL**.

US33 Same as US31...of the verb to **SWING**.

US34 Same as US31...of the verb to **SAY**.

US35 Same as US31...of the verb to **BE**.

TEST 36-40 This measures the student's knowledge of the information on Lessons 36-40.

Lessons 36-40 (Skill Level 4-5)

US36 Given a sentence, the student will select the correct form of the verbs **IS - ARE**.

US37 Same as US36...of the verbs **WAS - WERE**.

US38 Same as US36...of the verbs **ISN'T - AREN'T**.

US39 Same as US36...of the verbs **WASN'T - WEREN'T**.

US40 Same as US36...of the verbs **DOESN'T - DON'T**.

LETTER RECOGNITION

Appropriate Grade Level: K-1

Language Arts

Reading Level: K-1

Mathematics

CCD

Brief Description: Primary programs at two levels may be selected by the teacher.

kindergarten
first grade

Easy-to-read letters and numerals are presented. The student must find the corresponding letter or numeral on the keyboard.

The following choices are available:

1. Upper case letters only
2. Lower case letters only
3. Numerals (0-9)
4. Mixed characters

An excellent 'first' program on the computer for K-1 students!

Special Features:

- Large easy-to-read numerals and letters.
- **STUDENT PLANNING** - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 100 students.
- Colored fireworks are displayed for every 10 correct responses.

Contents:

BEHAVIORAL OBJECTIVES

Given a capital letter on the screen, the student matches the letters on the screen to capital letters on the keyboard.

Given a lower case letter on the screen, the student matches lower case letters to upper case letters on the keyboard.

Given a number word, the student matches number words on the screen (one-nine) to digits (1-9) on the keyboard.

Given a number word from eleven-nineteen, the student matches a number word on the screen to numerals.

Given a number word (multiples of 10), the student matches the word on the screen to the numbers on the keyboard.

Upper case to upper case is a good introductory program for students who are just learning the keyboard.

CAUTION YOUR STUDENTS:

Zero is not O
1 is not L

The computer is very picky.

You may also wish to point out the use of the line through the zero (Ø) to help tell the difference between o and Ø.

WORD FAMILIES

Appropriate Grade Level: 1-3

Reading Level: 1-2
Only three and four-letter words.

Language Arts ●

Mathematics ○

_____ ○

CCD ○

Brief Description: This disk includes three different categories of presentation.

The teacher may select

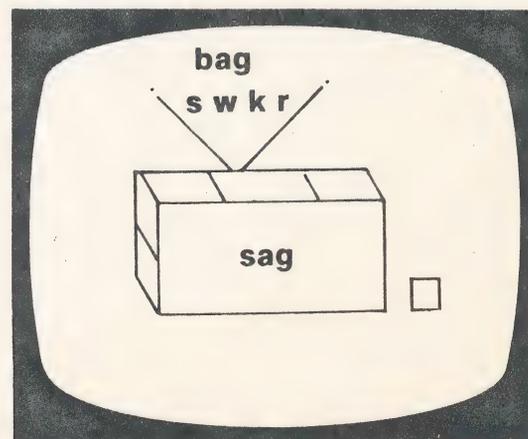
1. beginning consonant substitution.
2. final consonant substitution.
3. medial vowel substitution.

There are 300 separate presentations.

For each presentation, the word is shown to the student with four additional letters. The student selects other letters that will make a word. If the student's selection is correct, the letter disappears from the list and the word appears on the screen. If the selection is incorrect, the response is recorded on the student's file. The screen does not change for incorrect responses.

Special Features:

- Large, easy-to-read letters are used.
- **STUDENT PLANNING** - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 100 students.
- New words may be substituted for the existing words (3-4 letters) in the files.
- Existing words may be deleted if desired.



Contents:

BEHAVIORAL OBJECTIVES

- 1 Given a 3 or 4-letter word with the beginning consonant underlined, the student will select the correct replacement letters for the underlined consonant needed to make new words.
- 2 Same as #1.
- 3 Same as #1.
- 4 Given a 3 or 4-letter word with the medial vowels underlined, the student will select the correct replacement letters for the underlined vowels needed.
- 5 Same as #4.
- 6 Same as #4.
- 7 Given a 3 or 4-letter word with the ending consonants underlined, the student will select the correct replacement letters for the underlined consonants needed.
- 8 Same as #7.
- 9 Same as #7.

WHO, WHAT, WHERE, WHEN, WHY

Appropriate Grade Level: 1-5

Reading Level: 1-3

Language Arts

Mathematics

CCD

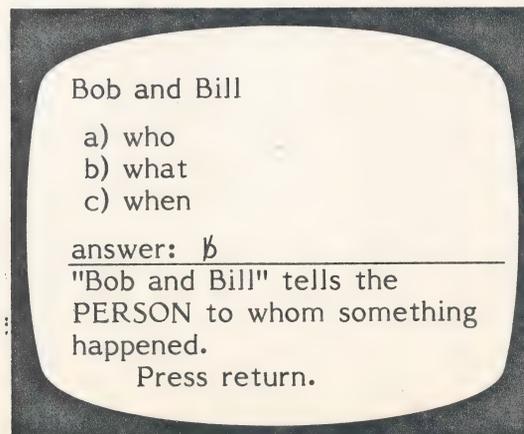
Brief Description:

Fourteen lessons have been carefully written and sequenced from easy to difficult. Each lesson contains twenty presentations which require the student to discriminate between who, what, when, where and why.

Two lines are presented to the student. The first line tells who, or what, etc. The second line shows the student which of two words he/she must type.

Special Features:

- Large easy-to-read upper/lower case letters are used.
- STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class' records. This file holds up to 30 students.
- Any existing presentation may be MODIFIED. For example, some teachers have changed the response to multiple choice.



Contents:

INSTRUCTIONAL SKILL STATEMENTS

Given a phrase such as "down the hall"
the student must discriminate:

- WW1 when, where 1st level vocabulary
- WW2 who, what 1st level vocabulary
- WW3 when, where 2nd level vocabulary
- WW4 who, what 3rd level vocabulary
- WW5 who, when 3rd level vocabulary
- WW6 when, where 2-3 level vocabulary
- WW7 what, when 2-3 level vocabulary
- WW8 where, what 2-3 level vocabulary
- WW9 when, why 2-3 level vocabulary
- WW10 when, what, how 2-3 level vocabulary
- WW11 who, what, when, where, why, how 3-4 level vocab.
- WW12 who, what, when, where, why, how 3-4 level vocab.
- WW13 who, what, when, where, why, how 5-6 level vocab.
- WW14 who, what, when, where, why, how 5-6 level vocab.

CAPITALIZATION

Appropriate Grade Level: 3-8

Reading Level: 3-4



Language Arts

Mathematics

CCD

Brief Description:

This series includes both a Practice Disk and a Test Disk.

The Test Disk includes complete student management files which keep records on all student responses.

Students learn basic rules of capitalization and practice applying them. Rules are presented, followed by examples and 25 practice sentences. Students work on each sentence until they believe it is right. If there is an error, the corrected sentence appears directly below the student's work.

Special Features:

STUDENT SAFEGUARDS - The practice lessons will automatically terminate if they are too easy (ten consecutive correct answers), or too difficult (less than 41% disregarding the first 4 frames).

MENU DRIVEN - Lessons are selected by typing in a single digit number.

ADD/DELETE sentences on the Practice Disk.

Modify sentences on both disks

STUDENT PLANNING on the Test Disk only.

Upper/lower case letters

his aunt mary is from boston.

Press C to capitalize.

Press E to erase.

Press SPACEBAR to move the line.

**INSTRUCTIONAL NOTES
and
BEHAVIORAL OBJECTIVES**

Contents:

Lesson 1 - (First Word and I)

#1 - Given a sentence with all lower case letters, the student will correctly capitalize the beginning word in each sentence.

#2 - Given a sentence with lower case letters for I, the student will correct it.

Lesson 2 (Proper personal names)

#3 - Given a sentence with all lower case letters the student will correctly capitalize all proper personal names such as Mrs., Mr., Miss and Ms.

Lesson 3 (Days and Months)

#4 - Given a sentence with all lower case letters, the student will correctly select and capitalize the names of the days of the week.

#5 - Given a sentence with all lower case letters, the student will correctly capitalize the names of the months.

Lesson 4 (Holidays, A.M.,P.M.)

#6 - Given a sentence with all lower case letters, the student will correctly capitalize names of holidays, A.M. and P.M.

Lesson 5 (Proper names)

#7 - Given a sentence with all lower case letters, the student will select and capitalize proper names.

Lesson 6 (Titles)

#8 - Given a sentence with all lower case letters, the student will select and capitalize titles of books, newspapers, magazines, movies, television programs, etc.

Lesson 7 (Miscellaneous)

#9 - Given a sentence with all lower case letters, the student will capitalize proper nouns, personal titles, and abbreviations of directions.

#10 - Given a sentence with all lower case letters, the student will capitalize personal titles such as Doctor Jones, but not the doctor.

We hope that you enjoy using this disk as much as our validation schools have. Feel free to change the sentences on the Practice Disk to reflect the vocabulary of your own students.

CAUTION: If you do change the sentences so that they no longer drill on the same objectives, be sure to change the corresponding sentences on the Test Disk and make a note in your documentation for future users.

Mathematics

1870

1871

C

1872

1873

1874

1875

1876

1877

1878

1879

1880

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896

1897

1898

1899

1900

1901

MATH CONCEPTS

Appropriate Grade Level: 2-6

Language Arts

Reading Level: 2-3

Mathematics

CCD

Brief Description:

This disk has 22 lessons which provide drill/practice over a variety of elementary math concepts. Many of the lessons are tutorial in nature. Lessons are divided into two levels-

Beginning
Intermediate

There are three pre/post tests which may be used to measure a student's grasp of the concepts and appropriately place students in the lessons they need.

Special Features:

- STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 30 students.
- Upper/lower case letters with special large mathematical symbols; ℓ , \div , \times , \neq , $<$, $>$, $+$, $=$, 3 , 2 (exponents), $^\circ$ (degree).
- Modification of any file can be easily accomplished without programming skills.
- New Lessons can be added. Each lesson will have all the features of the regular lessons—STUDENT PLANNING, upper/lower case with special symbols, and easy modification.

Contents:

SKILL STATEMENTS

Math Concepts - Beginning

- CB1 Given a sequence of numbers, the student will determine which comes before or after a number (numbers 1-10 and multiples of 10).
- CB2 Given a sequence of numbers, the student will determine which comes before or after a number (numbers 1-1000).
- CB3 Given two numbers, the student will determine which number comes before, after or between.
- CB4 Given a number, the student will determine if it is ODD/EVEN (numbers 1-20).
- CB5 Given a number, the student will determine if it is ODD/EVEN (numbers ending in 2,4, or 3, 9).
- CB6 Given a number, the student will determine if it is ODD/EVEN (all numbers).
- CB7 Given a series of numbers, the student will fill in the missing numbers (counting by 5's, 10's).
- CB8 Given a series of numbers, the student will fill in the missing numbers (counting by 2's, 3's, 4's).
- CB9 Given two whole numbers, the student will use $>$, $<$, $=$ correctly.
- CB10 The student will select the ordinal position of a letter in a word.
- CB11 Given a number, the student will write it as tens and ones.
- CB12 The student will convert tens and ones to ones.
- CB13 The student will identify numbers that are more or less.
- CB14 The student will identify numbers in order from smallest to largest.

Math Concepts - Intermediate

- CI1 The student will match decimal numbers to decimal words (tenths, hundredths).
 - CI2 The student will round to the nearest ten or hundred.
 - CI3 The student will identify PRIME numbers.
 - CI4 The student will relate multiplication to successive addition.
 - CI5 Given a number, the student will identify digits in the ones, tens, hundreds, thousands place.
 - CI6 The student will round to the nearest tenth or hundredth.
 - CI7 The student will compare decimals to determine which is more/less.
 - CI8 The student will compare decimals and determine $<$, $>$, $=$ for tenths and hundredths.
- TEST CB1-7 Pre/post test on skills in lessons B1-B7.
- TEST CB8-14 Pre/post test on skills in lessons B7-B14.
- TEST CI 1-8 Pre/post test on skills in lessons C11-8.

CLOCK

Appropriate Grade Level: 1-5

Language Arts

Reading Level: 2nd

Mathematics

Teacher will need to select appropriate lesson or tell student what number to choose.

CCD

Brief Description: This program helps students learn to tell time and to convert from 'clock time' to digital time. There are three separate concepts:

1. Set the hands of the clock given the time digitally
2. Type the digital time given 'clock time'
3. Set the hands of the clock when the time is given in words.

For categories 1 and 2 the student can work at five levels of difficulty.

hour

half-hour

quarter-hour

5 minutes

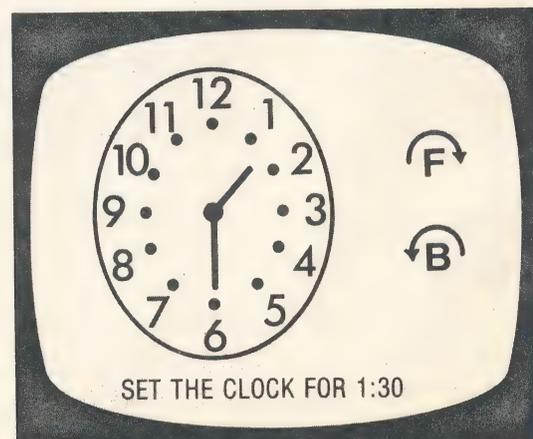
1 minute

For category 3, the student can write out hour, half-hour and quarter-hour only.

Special Features:

• High resolution graphics is used for clock face. The student uses the F key and B key to move the hands.

• STUDENT PLANNING - A teacher's student management file allows for storage of incorrect responses for up to 100 students.



Contents:

BEHAVIORAL OBJECTIVES

Given a diagram of a clock with hands showing "clock time" the student will be able to write the corresponding digital time to the nearest

- hour
- half-hour
- quarter hour
- 1 minute

Given written expressions of time, the student can demonstrate the correct hand positions on the

- hour
- half-hour
- quarter-hour

Given digital time, the student will move the hands of a clock to represent the time to the nearest

- hour
- half-hour
- quarter-hour
- five minutes
- 1 minute

NUMBER WORDS— LEVEL I

Appropriate Grade Level: K-2

Reading Level: Number words only.

Language Arts

Mathematics

CCD

Brief Description:

This is a good beginning program. There are five different levels of difficulty.

1. digits 0-9
2. number words (0-9)
3. number words (10's and teens)
4. number words (21-59)
5. number words (51-99)

The lessons are menu driven which makes lesson selection very easy. For each lesson the number word is presented on the screen, the student must type in the correct numeral.

Special Features:

- Large lower case letters make the number words easy to read.
- STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 30 students.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

Given a digit on the screen, the student matches to digit on the keyboard.

Given a number word, the student matches number words on the screen (one-nine) to digits (1-9) on the keyboard.

Given a number word from eleven-nineteen, the student matches a number word on the screen to numerals.

Given a number word (multiples of 10), the student matches the word on the screen to the numbers on the keyboard.

Given a number word (twenty-one to fifty-nine), the student matches the word on the screen to the numbers on the keyboard.

Given a number word (fifty-one to ninety-nine), and student matches the word on the screen to the numbers on the keyboard.

CAUTION YOUR STUDENTS:

Zero is not 'oh'

1 is not l

The computer is very picky!

CALENDAR SKILLS

Appropriate Grade Level: 2-5

Reading Level: 2-3

Language Arts

Mathematics

CCD

Brief Description:

This is a drill/practice disk which provides great follow-up to a teacher's presentation.

There are a variety of lessons which provide practice on such topics as:

ordering the days of the week, and
the months of the year.

writing abbreviations for months and
matching the months with their respective
season.

The dates of the more important holidays are included and the seasons in which they occur.

Special Features:

- **STUDENT PLANNING**—A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 30 students.
- Modification of any file can be easily accomplished without programming skills.
- New Lessons can be added. Each lesson will have all the features of the regular lessons—**STUDENT PLANNING**, upper/lower case with special symbols, and easy modification.
- **Placement Guide** - In the documentation, a placement guide helps the teacher determine which questions to assign based on the pre/post test results.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

- CA1 Given statements regarding the ordinal position of a month, the student will identify them as true or false.
- CA2 Given the names of two months, the student will fill in the name of the month which falls between the two given months.
- CA3 Given abbreviations for the months and days of the week, the student will write the correct names.
- CA4 Given the name of the month, or day of the week, the student will write the correct abbreviation.
- CA5 Given facts about the seasons, months, days of the year, the student will identify them as true or false.
- CA6 Given the word for an ordinal number, the student will write the correct abbreviation.
- CA7 The student will drill on the number of days in a week, year, leap year and months in the season.
- CA8 Given special days or holidays, the student will select the month in which they occur.
- CA9 Given special days or holidays, the student will select the month in which they occur.
- CA10 The student will practice writing the date in the short form. (/ /)
- YTT This is a logical exercise requiring a student to use the relationship between yesterday, today and tomorrow.

USING A CALENDAR

Appropriate Grade Level: 2-4

Reading Level:

Language Arts

Mathematics

CCD

Brief Description:

A great way to teach a child introductory calendar skills!

The lessons are written at three levels of increasing difficulty. Each lesson presents a picture of a calendar. Information and questions are scrolled below the calendar picture. Concepts include simple date/day relationships; and general interpretations. Scrolling is under student control.

The disk comes with 24 lessons.

Special Features:

Teacher may create his/her own calendar by specifying the month and the first day. Questions may then be entered.

Review-Questions missed will be presented to the student later in the lesson.

Teacher can change existing lessons.

Upper/lower case letters.

May

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

The first Tuesday in the month is on the __th.
(4 6 11)

TYPE
PRESS 'RETURN' KEY

Contents:

INSTRUCTIONAL NOTES and BEHAVIORAL OBJECTIVES

There are 24 lessons on this disk. The first ten lessons CAL1 - CAL10 are in order of difficulty. TEST may be used to quickly review the content of the ten beginning lessons.

You may also use TEST as a quick way to determine if a child needs to work on any of the first 10 lessons.

Level 1

- CAL1 (March) Given a picture of a calendar, the student will tell a) the month, b) the year, and c) what day of the week a given date falls on. (dates 1-10)
- CAL2 (January) Given a picture of a calendar, the student will tell a) what day of the week a given date falls on (1-31), and b) the number of days in the month.
- CAL3 (February) Given a picture of a calendar the student will tell
a) number of days in the month.
b) day of the week a major holiday falls on.
c) if it is a leap year by the number of days shown.
- CAL4 (April) Given a picture of a calendar (April), the student will tell
a) the number of days in the month.
b) the day of the week a major holiday falls on.
c) the number of any given day (e.g. number of Saturdays in the month).
- CAL5 (July) The student will discriminate between DAY and DATE.
Given a calendar, the student will give the DATE of selected DAYS.
- CAL6 (September) Given a calendar, the student will determine either the DAY or the DATE as requested.
- CAL7 (June) The student will be able to state the ordinal position of any day of the week.
- CAL8 (November) The student will be able to state which week of the month a given DAY or DATE occurs.
- CAL9 (May) By using a calendar, the student will be able to answer simple word problems requiring observation and counting days or weeks.
- CAL10 (October) By using a calendar, the student will be able to answer simple word problems requiring observation and counting days or weeks.
- TEST (December) This lesson is a review on Lessons CAL1 - CAL10.

Level 2

JAN2-DEC2 present a series of hard problems which require the student to 'read' the calendar and answer questions. These lessons also provide many interesting facts about the months and their holidays.

Level 3

JAN3 - Extras for Experts! This lesson includes the more difficult word problems. It will be a challenge for your students.

MONEY! MONEY!

Appropriate Grade Level: 2-5

Reading Level: 2-3

Language Arts

Mathematics

CCD

Brief Description:

This disk was developed to give the student extra practice in working with money. It was designed to provide the teacher with a "mini-authoring" system to use for the development of additional electronic worksheets.

There are 15 lessons which vary in difficulty from 1st to 5th grade. There is also room to write additional lessons at the level your students need.

The overall objectives of this program are to help the student in:

- counting money.
- determining if (s)he has ENOUGH money to buy an item.
- determining the BEST amount to give for an item.
- counting CHANGE to see if it is correct.

Special Features:

STUDENT PLANNING-Holds up to **30 records**. You may erase the record file at any time.

Easily modify any file.

Create new lessons.

Delete any file as desired.

Special graphics allows the teacher to create lessons mixing text and pictures (coins and bills).

Your change:

1	1	5	5
1	1	5	5

5

Two tickets to the movies cost \$7.95. You gave the man \$10.00. Is this the right change?

Yes/No

Answer: _____

BEHAVIORAL OBJECTIVES
and
SUGGESTIONS

Level 2

M1 Given a picture of pennies, the student will count them.

Given a picture of pennies, the student will determine their value in cents.

Given a picture of (1-3) nickels, the student will determine their value in cents.

Level 2-3

M2 Given pictures of nickels, the student will count by 5's to determine their value in cents.

Given pictures of coins (pennies and nickels mixed), the student will determine their value in cents.

M3 Given pictures of dimes, the student will count by 10's to determine their value in cents.

Given an amount of cents (less than 50¢) and two sets of coins (nickels, dimes, and pennies), the student will select the set that has the given value.

Given a selection of coins (pennies, nickels, and dimes), the student will determine their value in cents.

Level 3-4

M4 Word Problems:

Given a set of coins (pennies, nickels, dimes) and the cost of an item, the student will answer yes/no to the question, "Do you have enough money?"

M4 (cont)

Given the price of an item and 2 sets of coins (pennies, nickels, dimes), the student will select the set that should be used to pay for the item.

M5 Word Problems

Given the cost of an item (under 50¢) and the coins (penny, nickel, dime), given to the clerk, the student will state the amount of cents returned in change.

Given the cost of an item (under 50¢) and the amount of money (in cents) given the clerk, the student will say if the display of coins returned by the clerk is correct.

Given the cost of an item (under \$1.00) and the amount of money (in cents) given the clerk, the student will choose between two sets of change (pennies, nickels, dimes).

M6 Given pictures of quarters, the student will determine the value in cents.

Given pictures of two sets of coins, the student will select the set that represents a given value.

Given a set of coins (quarters, nickels, dimes, pennies), the student will determine their value in cents (less than 50¢).

Level 4-5

M7 Word Problems

Given a set of coins and the cost of an item (up to 99¢), the student will determine if he can 'buy' the item with the coins.

Given two sets of coins (quarters, dimes, nickels, pennies) and the cost of an item, the student will determine which would be the best set to use to pay for the item.

Given the cost of an item and the amount paid, the student will determine the appropriate change.

M8 Given a selection of coins (half-dollars, quarters, dimes, nickels, pennies), the student will determine their value in cents.

M9 Word Problems

Given a set of coins (half-dollar, quarters, dimes, nickels and pennies), the price of an item, the student will determine if there is enough money to pay for the item.

Given 2 sets of coins (halves, quarters, nickels, dimes, and pennies) and the cost of an item, the student will determine which set would be the best to use to pay for the item.

Given the price of an item, what was paid, and 2 sets of change (halves, quarters, dimes, nickels, and pennies), the student will select the correct set of change.

M10 Given pictures of coins (halves, quarters, dimes, nickels, and pennies), the student will determine their values and write it in decimal form.

Level 5-6

M11 Given pictures of dollars and 1 or 2 coins, the student will write the amount in decimal form.

M12 Given 1, 2, and 5 dollar bills mixed with coins, the student will write the value in decimal form. (\$X.XX)

M13 Word Problems

Given an amount of money and the cost of an item, the student will determine if the money is enough.

Level 6

M14 Word Problems

Given the price of an item and the amount paid, the student will determine if the change shown is correct. (Change shown in bills and coins.)

M15 Extras for Experts—Word Problems

This lesson has a selection of difficult word problems which require the student to count money (bills and coins) and calculate change.

Given the price and the change, the student must determine the amount given, and whether or not the change is correct. In some cases, this requires a two or three-step process.

EXPANDED NOTATION

Appropriate Grade Level: 2-5

Reading Level: 2-3

Language Arts

Mathematics

CCD

Brief Description:

This disk uses the same format as the programs with the 12-prefix. A numeral is presented in expanded form and the student must write the numeral. Place value is also introduced.

Ten lessons of twenty presentations each may be selected. Skills begin with simple presentations of TENS and ONES. The lessons then build to THOUSANDS, HUNDREDS, TENS, AND ONES.

Special Features:

- Special upper/lower case letters originally developed by MECC are used for all student lessons.
- STUDENT PLANNING - A teacher's student management file which automatically stores the student's incorrect responses along with specification of the lesson, the number of attempts and what the correct response should have been. The teacher may call up the records of any individual student as desired. If a printer is available, a hard copy of the records may be obtained for any or all students. This file holds up to 50 students and may be cleared at any time.
- Modification of any lesson may easily be made by the teacher without any programming skills.
- New Lessons may be added to the disk by the teacher by using the CREATE capability.

4 tens + 2 ones

= _____ ones

TYPE
PRESS 'RETURN' KEY

4 thousands +
3 hundreds +
6 tens +
2 ones = _____

TYPE
PRESS 'RETURN' KEY

Contents:

SKILL STATEMENTS

This disk contains 20 lessons.

There are three lessons, EX12, EX18 and EX19 that provide review over previous work. For incorrect answers on these lessons the computer will give the student the name of the lesson he/she should study to improve their knowledge of this skill.

Lesson EX20 is more difficult and should be used only as enrichment. The chart enclosed in the documentation showing the periods in the base-ten system will be helpful for this lesson.

Rather than an objective statement, a sample problem has been taken from each lesson. This will provide a better understanding of the sequence of skills.

EX1 This provides an introduction to place value.

43
4 is in the tens place
3 is in the ___ place

EX2 43
4 is in the ___ place

- A. tens
B. ones

EX3 4 tens + 3 ones
= _____

EX4 43
= _____ tens + 3 ones

EX5 32
may be expanded to
(3 x _____) + (2 x 1)

EX6 Introduction to hundreds
432
____ is in the hundreds place
3 is in the tens place
2 is in the ones place

EX7 475
What digit is in the hundreds place?

EX8 364
May be expanded to:
300 + _____ + 4

EX9 273
May be expanded to:
_____ hundreds + 7 tens + 3 ones

EX10 4 hundreds + 6 tens + 7 ones
= _____

EX11 426

May be expanded to:
(4 x 100) + (2 x 10) + (6 x ___)

EX12 Review of skills presented in Lessons EX1-EX11

EX13 Introduction to thousands

7956
What digit is in the thousands place?

EX14 4756
May be expanded to:
4000 + _____ + 500 + 6

EX15 6432
May be expanded to:
6 thousands +
4 hundreds +
_____ tens +
2 ones

EX16 7 thousands +
9 hundreds +
4 tens +
8 ones
= _____

EX17 4579
May be expanded to:
(4 x 1000) + (5 x ___) + (7 x 10) + (9 x 1)

EX18 Review of skills in EX1-EX17

EX19 Review of skills in EX1-EX17

EX20 Introduction to the periods of the base-ten number system; ones, thousands, and millions.

PRESCRIPTIVE MATH DRILL

Appropriate Grade Level: 1-4

Reading Level: 1-2

Language Arts

Mathematics

CCD

Brief Description:

The teacher enters the names of the students into the file. He/she then sets the level at which the students are to begin work. The teacher also decides what percent accuracy is necessary to advance to another level.

ADDITION	5	(sums to 5)
SUBTRACTION	6	(differences to 6)
MULTIPLICATION	3	(facts with 3's)
DIVISION	4	(facts with 4's)

PASSING SCORE: 85%

After the student has completed 20 randomly presented problems at the prescribed passing level, the computer automatically moves the student to the next higher level.

The MENU allows the teacher excellent control.

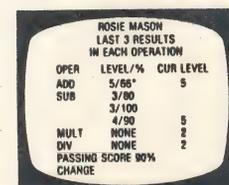
#1 and #2 ADD and DELETE STUDENTS
Allows students to be added or deleted at any time. The computer will store records for up to 100 students.

#3 VIEW/CHG STUDENT

#4 DISPLY/PRNT ALL STUDENTS
Allows the teacher to change the current level and the passing score for each student.

#5 CLEAR ALL RECORDS
Allows the teacher to clear all records.

#6 DSPLY/PRINT NAMES & PASWRDS
Each student has an assigned password. No student can have access to another student's file.
Of course, all records can be printed at any time or viewed by the teacher on the video.



Contents:

BEHAVIORAL OBJECTIVES

Addition

Given a horizontal addition problem in the form

$$a + b = c$$

where 'c' represents the prescribed level, student will supply either a missing addend or sum a, b, or c.

'c' may be assigned any value 2-99.

Subtraction

Given a horizontal subtraction problem in the form

$$a - b = c$$

where 'a' represents the prescribed level, the student will supply the missing minuend or difference.

'a' may be assigned any value 2-99.

Multiplication

Given a horizontal multiplication problem in the form

$$a \times b = c$$

where a or b represents the prescribed level, the student will supply the missing factor a, b, or c. a or b may be assigned any value 2-99.

Division

Given a horizontal division problem in the form

$$a \div b = c$$

where 'b' represents the prescribed level, the student will supply the missing quotient or dividend.

'b' may be assigned any value 2-99.

NUMBER WORDS LEVEL 2

Appropriate Grade Level: 2-6

Reading Level: 2-3
All number words.

Language Arts

Mathematics

CCD

Brief Description:

Ten lessons of twenty presentations each cover number words from one hundred to one million.

Lessons are carefully graduated in difficulty to help the child learn this content area.

Students are presented with the written number and must type the correct numeral.

Special Features:

- **STUDENT PLANNING** - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 30 students.
- Upper/lower case letters with special large mathematical symbols; ℓ , \mp , \times , \neq , $>$, $<$, $+$, $=$, 3 , 2 , (exponents), $^\circ$ (degree).
- Modification of any file can be easily accomplished without programming skills.
- New Lessons can be added. Each lesson will have all the features of the regular lessons—STUDENT PLANNING, upper/lower case with special symbols, and easy modification.

Contents:

Number Words - Level II

N1 Given a number word between ten and ninety-nine, the student will type the correct numeral.
(This lesson is a review of the skills in Number Words - Level I. If your students have difficulty, you may wish them to begin on Level I which is much easier.)

N2 Given a number word between one hundred (100) and nine hundred ninety-nine (999), the student will type the correct numeral (a digit given for each place).

N3 Given a number word between one hundred (100) and nine hundred ninety-nine (999), the student will type the correct numeral (zero digit required in one or more places).

N4 Given number words for 1000 to 9999 (a digit given for each place), the student will type the correct numeral.

N5 Given number words for 1000 to 9999 (with zero required for one or more places), the student will type the correct numeral.

TEST N1-5 Pre-post test over the skills in N1 through N5.

N6 Given number words for 1000 to 9999 with alternate number words, e.g. eleven hundred or one thousand one hundred, the student will type the correct numeral.

N7 Given number words 10,000 to 99,000 (all multiples of 1000), the student will type the numeral.

N8 Given number words for 10,000 to 99,999, the student will type the correct numeral.

N9 Given number words for 100,000 to 999,000 (multiples of 1000), the student will type the correct numeral.

N10 Given number words for 100,001 to 999,999, the student will type the correct numeral.

N11 Given number words for 100 to 1,000,000, the student will type the correct numeral.

TEST N6-11 Pre-post test over skills in lessons N6 through N11

INTEGERS/ EQUATIONS

Appropriate Grade Level: 6-8

Reading Level: 4-5

Revised

Language Arts

Mathematics

CCD

Brief Description:

This disk provides practice for the intermediate student who is just beginning to work with equations. There are three series:

- 1) There is a 4 lesson series covering variables. A pre/post test for placement into this series is included on the disk.
- 2) There is a 5-lesson series covering introduction to integers. Practice is provided on addition, subtraction, multiplication and division of positive and negative integers. There is a pre/post test over this series.
- 3) There are 9 additional lessons dealing with elementary equations. Again, pre/post tests are available for placement or additional review on this series.

Special Features:

- STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class' records. This file holds up to 30 students.
- Upper/lower case letters with special large mathematical symbols; ℓ , $\frac{1}{2}$, \times , \neq , $<$, $>$, $+$, $=$, 3 , 2 (exponents), $^\circ$ (degree).
- Modification of any file can be easily accomplished without programming skills.
- New Lessons can be added. Each lesson will have all the features of the regular lessons—STUDENT PLANNING, upper/lower case with special symbols, and easy modification.
- Placement Guide - In the documentation, a placement guide helps the teacher determine which lessons to assign based on the pre/post test results.

Intents:

INSTRUCTIONAL SKILL STATEMENTS

Variables

- V1 Introduction to variables with addition of like variables.
Given an expression, the student will select the term which contains a variable.
Given expressions with 2 terms containing like variables, the student will find the sum.
- V2 Given an expression with terms containing like variables and whole numbers, the student will simplify the expression (requires addition of like variables).
- V3 Given an expression with terms containing like variables and whole numbers, the student will simplify the expression by adding or subtracting terms as indicated.
- V4 Given an expression with terms containing like variables and whole numbers, the student will be required to add and subtract positive and negative terms to simplify the expression.

TEST V1-V4 Pre-post test over the skills in Lessons V1 through V4.

- E6 Given an equation of the form $ax + c = c$, the student will combine terms and solve for x.
- E7 Given an equation of the form $ax + c = c$, the student will combine terms and solve for x.
- E8 The student will state if the commutative property holds for addition, subtraction, multiplication, or division.
- E9 The student will state if the associative property holds for addition, subtraction, multiplication, or division.
- E10 The student will use the associative property to solve equations.
- TEST E6-10 Pre-post test over skills in Lesson E6 through E10

The student will use the associative and commutative properties to solve equations.

The student will state that: multiplication is distributive over addition and subtraction.

Review of associative, commutative, and distributive properties.

Using the distributive property to solve equations multiplication over addition/subtraction.

TEST E11-14 Pre-post test over skills in Lessons E11 through E14.

Integers

- INT1 The student will be able to recognize an integer (positive, negative and zero).
- INT2 The student will add positive and negative integers.
- INT3 The student will subtract positive and negative integers.
- INT4 The student will multiply positive and negative integers.
- INT5 The student will divide positive and negative integers.

TEST INT1-5 Pre-post test over skills in INT1 through INT5

Equations

- E1 Given an equation, the student will state whether or not it is true or false.
- E2 Given a simple equation of the form $x + a = b$, the student will
 - 1) state that you add -a to BOTH sides to isolate x
 - 2) solve for x
- E3 Given an equation of the form $x + a + b = c$, the student will simplify by combining like terms and solve for x.
- E4 Given an equation of the form $x - a - c = b$, the student will
 - 1) simplify
 - 2) state that you add +a to BOTH sides to isolate x
 - 3) solve for x
- E5 Given an equation of the form $3x = 9$, the student will
 - 1) state that you divide BOTH sides by +3 to isolate x
 - 2) solve for x

TEST E1-5 Pre-post over skills in Lessons E1 through E5

METRIC DRILL

Appropriate Grade Level: 3-8

Reading Level: 3-4

Language Arts

Mathematics

Brief Description:

This is a good drill practice program which can be used to reinforce the skills students must learn in the metric system. Some of the lessons are tutorial, however, the program was designed as a supplement to instruction.

Lessons are grouped into three levels; Beginning, Intermediate and Advanced. Pre/post tests (on the disk) may be used to place students in the lessons they need or as final exams after lesson completion.

Special Features:

- STUDENT PLANNING - A teacher's student management file automatically stores the student's incorrect responses along with the specific lesson, the number of items attempted and what the correct response should have been. The teacher may review the student's work at a later time or may have a print out of the entire class's records. This file holds up to 30 students.
- Upper/lower case letters with special large mathematical symbols; l , \div , \times , \neq , $<$, $>$, $+$, $=$, 3 , 2 (exponents), $^\circ$ (degree).
- Modification of any file can be easily accomplished without programming skills.
- New Lessons can be added. Each lesson will have all the features of the regular lessons—STUDENT PLANNING, upper/lower case with special symbols, and easy modification.
- Placement Guide - In the documentation, a placement guide helps the teacher determine which lessons to assign based on the pre/post test results.

*Revised System
2 disk
Same Price*

10cm = _____ m

Mass of an elephant.
a 3kg
b 3t

Contents:

INSTRUCTIONAL SKILL STATEMENTS

Beginning Skills

- MB1 relationship between metres and centimetres (including symbols)
- MB2 relationship between metres and kilometres (including symbols)
- MB3 relationship between grams and kilograms (including symbols)
- MB4 introduction to litres, symbol for litres; review of symbols for metres, grams
- MB5 common temperatures in degree Celcius
- MB6 selection of appropriate unit to measure length, mass, capacity
- TEST MB7 pre/post test covering skills in B1-B6

Intermediate Skills

- MI1 relationship between centimetres, decimetres, and metres
- MI2 relationship between centimetres, decimetres, kilometres, and metres
- MI3 relationship between grams, kilograms, tonnes
- MI4 relationship between litres and millilitres
- MI5 prefixes and their values (kilo, hecto, deca)
- MI6 prefixes and their values (milli, deci, centi)
- MI7 symbols for prefixes
- MI8 selecting the appropriate unit of measure
- TEST MI9 pre/post test covering skills in MI1-MI8

Advanced Skills

- MA1 converting between linear units (km,m,cm), requiring use of decimals
- MA2 converting between linear units (mm,dm,cm,m,km), requiring use of decimals
- MA3 converting between units of mass (mg,g,kg,t)
- MA4 converting between units of capacity (l,ml)
- MA5 converting between units of capacity, length, mass
- MA6 estimate the length, mass or capacity
- TEST MA7 pre/post test covering skills in MA1-MA6

CREATE YOUR OWN

Appropriate Grade Level:

Reading Level:

This information applies to the next five disks.

Language Arts

Mathematics

CCD

Brief Description:

A unique series of five specially designed programs allow teachers to CREATE their own courseware. By using the CREATE YOUR OWN disks, teachers can build lessons which directly correspond to their own instructional programs.

Using the CREATE YOUR OWN disks, the teacher types in his/her own examples, questions, or word lists. The documentation for each disk gives examples of various types of programs that can be created. There are literally hundreds of programs that can be made.

There are five separate formats.

01-00	CREATE-FILL IN THE BLANKS
03-00	CREATE-SPELL IT
04-00	CREATE-VOCABULARY
11-00	CREATE-ELEMENTARY (MATHEMATICS)
12-00	CREATE-INTERMEDIATE (Language Arts)
13-01	WORDSEARCH
25-00	CREATE-MEDALISTS

There are seven separate disks on which you may create your own programs, plus the Create capability on thirty additional Hartley disks.

CREATE FILL IN THE BLANK

Appropriate Grade Level: This program is most appropriate for the elementary level.

Reading Level:

Language Arts ●

Mathematics ●

_____ ○
CCD ●

Brief Description:

The program allows the teacher to create a series of lessons that have a visual stimulus of up to 15 letters. There must be at least one blank and one correct response. Either directions or another stimulus is recorded on the cassette tape.

Special Features:

- Large easy-to-read lower case letters for disks 01,04, and 11.
- Each disk will hold fifty different files of up to 20 presentations per file.
- Tapes are easy to record. Directions and sample scripts are included in the documentation.
- The STUDENT PLANNING special feature is on all CREATE disks. This feature will keep track of the errors your students make as they work through the lessons. If you have a printer, you can have printed reports of all student records.
- 30 to 100 students' records can be saved on each CREATE disk.
- Complete documentation makes program development easy even if the teacher has no programming skills and minimal experience with a computer.

NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

CREATE
FILL IN THE BLANK

SUGGESTIONS FOR USE

This disk is designed to be used for simple presentations where 1 word or part of a word is required as a response.

It is excellent for giving students practice on recognizing sounds.

It can also be used to 'prompt' spelling-

h e _ _ o

or to learn special rules-

pat_ing

SPELL IT

Appropriate Grade Level: All levels.

Reading Level: All levels.

Language Arts ●

Mathematics ●

_____ ●
CCD ●

Brief Description:

This is a great work saver for any teacher who has ever given a spelling test.

Each disk holds up to fifty lessons of twenty words each. The words are presented orally to the student. The student types in the words and the computer stores those that were spelled incorrectly. The teacher specifies the words to be used and records the words on the tape.

Special Features:

- Each disk will hold fifty different files of up to 20 presentations per file.
- Tapes are easy to record. Directions and sample scripts are included in the documentation.
- The STUDENT PLANNING special feature is on all CREATE disks. This feature will keep track of the errors your students make as they work through the lessons. If you have a printer, you can have printed reports of all student records.
- 30 to 100 students' records can be saved on each CREATE disk.
- Complete documentation makes program development easy even if the teacher has no programming skills and minimal experience with a computer.

NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

INSTRUCTIONAL SKILL STATEMENTS
AND SUGGESTIONS FOR USE

This disk was designed for use in helping students practice their spelling.

It can be used for any lesson where an auditory question or direction is used and a written word or phrase response is desired.

Tape Stimuli

Example 1: spelling

"house, Spell house, house"

Example 2: discriminating words by usage

*"I have a pain in my foot.
Type the right word for pain."*

Example 3: information recall

"Write the Spanish word for house."

Example 4: for use with verbal problems

"How much is 12 dollars and 9 dollars?"

Example 5: For use with simple letter/sound matching.

"Type the letter that says ah, as in father."

CREATE — VOCABULARY

Appropriate Grade Level: All levels.

Reading Level: All levels.

Language Arts ●

Mathematics ○

_____ ○

CCD ●

Brief Description:

This special program has been developed specifically to help teachers build vocabulary drill and individualize testing. The disk will hold over 50 different lists of 40 words each.

The teacher types in the vocabulary words he/she want students to drill on. She/he then records the words on tape.

The computer presents the word to the student on the screen. The student tries to pronounce the word—then presses return to hear the word.

The recordkeeping system keeps track of all the words the student did not feel that he knew. These are printed out for a take home list. This is an ideal supplement to a reading basal.

Special Features:

- Large easy-to-read lower case letters for disks 01, 04, and 11.
- Each disk will hold fifty different files of up to 20 presentations per file.
- Tapes are easy to record. Directions and sample scripts are included in the documentation.
- The STUDENT PLANNING special feature is on all CREATE disks. This feature will keep track of the errors your students make as they work through the lessons. If you have a printer, you can have printed reports of all student records.
- 30 to 100 students' records can be saved on each CREATE disk.
- Complete documentation makes program development easy even if the teacher has no programming skills and minimal experience with a computer.

NOTE: Tapes are not included. Any tape recorder may be used. The tapes should be recorded on the same recorder that they will be played on for accurate synchronization.

Contents:

INSTRUCTIONAL SKILL STATEMENTS

This disk was developed to help students learn to recognize words and phrases.

Tape Script

You may use a variety of recorded messages. You will want to plan ahead and write the sentences if you use example 2.

Example 1: (word only)

around around

Example 2: (word used in context)

around I run around in circles.

CREATE SKILLS — ELEMENTARY

Appropriate Grade Level: All levels.

Reading Level: All levels.

Language Arts ●

Mathematics ●

_____ ●
CCD ○

Brief Description:

This CREATE disk does not use the CCD. It allows for four lines of stimulus input.

stim 1
stim 2
stim 3
stim 4

The program allows for more than one acceptable response. This may be important. For example, both "4" and "four" might be correct.

resp 1
resp 2

There is an unlimited number of uses for this format. The large letters and numerals do limit the length of each stimulus and response to fifteen spaces. (This varies slightly with the letters). If longer stimuli are desired, you may want to use CREATE-INTERMEDIATE.

Special Features:

- This disk has special graphic symbols for l , $^{\circ}$ (degree), $<$, $>$, $-$, $+$, \div , \times , and the exponents 2 and 3 .
- Large easy-to-read upper/lower case letters.
- Each disk will hold fifty different files of up to 20 presentations per file.
- The STUDENT PLANNING special feature is on all CREATE disks. This feature will keep track of the errors your students make as they work through the lessons. If you have a printer, you can have printed reports of all student records.
- 30 to 100 students' records can be saved on each CREATE disk.
- Complete documentation makes program development easy even if the teacher has no programming skills and minimal experience with a computer.

Contents:

SUGGESTIONS FOR USE

This disk can be used for any content and in many different formats. Here are a few examples.

Example 1:

Tab _____ up a
tree.

- a ran
- b rans

Example 2:

$$24 + 32 = \underline{\quad \quad \quad}$$

Example 3:

Jim is go
going

up the hill.

Example 4:

$$1 \text{ metre} = \underline{\quad \quad \quad} \text{ km}$$

- a 1000
- b .001
- c 10

Example 5:

Which is larger?

- 432
- 342
- 243

CREATE INTERMEDIATE

Appropriate Grade Level: All levels.

Reading Level: All levels.

Language Arts ●

Mathematics ●

CCD ○

Brief Description:

This CREATE disk is similar to ELEMENTARY except it allows the teacher to type in longer sentences. There is room for 9 lines of instructions or text material at the beginning of each lesson.

1
2 Introductory material
· or information here.
9

The frames which follow this introduction allow six lines for questions or additional information.

stim 1 Any questions here or further
stim 2 information
· a. multiple choice
stim 6 b. completion
 c. etc.

For each question there can be up to 4 correct answers; e.g. 4, four, 4.0 would all be correct.

This disk is ideal for teachers who want to create their own tutorial tests or drill in their own content area.

Special Features:

- Large easy-to-read upper/lower case letters.
- Each disk will hold fifty different files of up to 20 presentations per file.
- The STUDENT PLANNING special feature is on all CREATE disks. This feature will keep track of the errors your students make as they work through the lessons. If you have a printer, you can have printed reports of all student records.
- 30 to 100 students' records can be saved on each CREATE disk.
- Complete documentation makes program development easy even if the teacher has no programming skills and minimal experience with a computer.

Contents:

SUGGESTIONS FOR USE

This disk can be used for any content and in many different formats. Here are a few examples.

Example 1:

Use the nine lines for directions.

- (1) IN THIS LESSON YOU WILL
- (2) BE ASKED TO ALPHABETIZE
- (3) THE WORDS TO THE SECOND
- (4) LETTER.
- (5) LOOK AT THE LIST OF WORDS.
- (6) TYPE THE FIRST WORD IF
- (7) THEY WERE ALL PLACED IN
- (8) ALPHABETICAL ORDER.
- (9) BEGIN THE LESSON.

<RETURN>

STIM 1 CANNING
STIM 2 CATALOG
STIM 3 CARTEL
STIM 4 CAVERN
STIM 5 CARNIVAL
STIM 6 CASEROLE

OF CORRECT RESPONSES 1

RESP 1 CANNING

STIM 1
STIM 2 additional words
STIM 3
STIM 4
STIM 5
STIM 6 ETC.

Example 2:

- (1) ON THE WAY HOME FROM TOWN
- (2) YESTERDAY AFTERNOON, TOM
- (3) SAW A LARGE OBJECT. IT
- (4) LOOKED LIKE A FLYING
- (5) SAUCER. IT HAD A STRANGE
- (6) LIGHT. AFTER ABOUT FIVE
- (7) MINUTES IT WENT AWAY.
- (8) EVERYBODY THOUGHT HE WAS
- (9) CRAZY WHEN HE TOLD THEM.

STIM 1 IN THE STORY, WHICH IS
STIM 2 SPECIFICALLY STATED?
STIM 3 A THE OBJECT HAD A LIGHT.
STIM 4 B THE OBJECT MOVED FAST.
STIM 5 C TOM TOLD HIS TEACHER.
STIM 6

ETC.

WORDSEARCH

Appropriate Grade Level: All levels.

Reading Level: Will vary with teacher input.

Language Arts

Mathematics

Any Curriculum
Area

CCD

Brief Description:

This program allows a teacher to enter a series of words to create a WORDSEARCH. The Apple II creates the WORDSEARCH to the specifications of the user. This saves hours of work and is simple to use.

The teacher has the option of

- overlapping words, if desired.
- words frontwards, backwards, diagonal
- words left to right and top to bottom only.

When completed the computer prints the WORDSEARCH. The words are presented at the bottom of the search. The computer will also print an answer key on request. The puzzle may be reprinted as many times as desired or the teacher may wish to use a copy machine and prepare a ditto master.

Special Features:

YOU NEED A PRINTER TO USE THIS PROGRAM.

You have an option to select different printers.

- 1-Paper Tiger (IDS)
- 2-Centronics
- 3-Epson (MX-80)
- 4-Epson (Wide Char.)
- 5-Anadex
- 6-Silentype (Apple Co.)

If you are not using one of these printers, the program should run but you will have to experiment with the selection that is best for you.

PARENT REPORTING

Appropriate Grade Level: All levels

Reading Level:

Language Arts ●

Mathematics ●

Any subject ●

CCD ○

Brief Description:

The purpose of this program is to help a teacher produce a report to all of the parents of his/her students. This report is composed of three parts:

- 1) A standard paragraph (with individual student names where desired).
- 2) Grades in subjects (chosen by the teacher).
- 3) A paragraph unique to each individual student.

The teacher may name the subjects.

The teacher may also specify the code and define the grades.

This is a very handy program if you are a reasonably good typist!

A great way to keep your parents informed of what is happening in the classroom.
PRINTER REQUIRED TO USE THIS PROGRAM.

LINCOLN ELEMENTARY
WEEKLY REPORT TO PARENTS
MARCH 25, 1982

ALL OF THE STUDENTS HAVE DONE A FINE JOB THIS WEEK IN THEIR STUDIES. ON FRIDAY, WE HAD THE OPPORTUNITY TO HEAR SENATOR PROXMIRE DISCUSS THE OPERATION OF THE CONGRESS AND FEDERAL GOVERNMENT. AFTERWARDS, SALLY SUE TOOK PART IN A CLASS DISCUSSION.

P.S. PLEASE RESERVE SOME TIME ON MONDAY, APRIL 15, FOR PARENT-TEACHER CONFERENCES. THANK YOU.

ENGLISH	2 (AVERAGE)
SPELLING	1 (EXCELLENT)
SCIENCE	3 (NEEDS WORK)

SALLY COMPLETED HER EXTRA CREDIT PROJECT THIS WEEK AND RECEIVED AN "A" FOR HER GRADE. TELL HER TO KEEP UP THE GOOD WORK!

SHE ALSO GOT ALL OF HER WORDS RIGHT ON THIS WEEK'S SPELLING TEST!

IF YOU HAVE QUESTIONS, CALL ME AT 555-2368.

MR. FRANKLIN

WORD-A-TACH

Appropriate Grade Level: K-4

Reading Level: K-4

Language Arts

Mathematics

CCD

Brief Description:

The purpose of this disk is to provide another mode for children to drill on word recognition. The program has been written to allow the teacher to put in any word list (s)he wishes and set the speed options at which the words are presented to the student. The student may select one of the teacher-determined options which control the duration of time the word is on the screen.

Many teachers who use the program have the student say the words into a tape recorder. Others simply have children work in pairs and use it as a challenge program to see who can call the word more quickly.

This program turns your computer into a flash card drill with carefully controlled duration times.

Special Features:

Words presented tachistoscopically

Four different time durations may be selected by the teacher

Modify existing word lists

Create new word lists

Large upper/lower case letters

STUDENT WORD STUDY

Appropriate Grade Level: 2-6

Reading Level:

Language Arts

Mathematics

SPELLING

CCD

Brief Description:

The purpose and use of this disk is to help students study either spelling or vocabulary words. This program was designed to allow students to put in a list of words and sentences using those words. Each student has his/her own file. Each file will hold up to 15 words and corresponding sentences.

The most common use of this program is to review spelling words or vocabulary words. The student should work from a list of words prepared by the teacher to ensure correct spelling of the words by the student.

After the words and sentences are entered, the sentences are presented to the student with a blank where the word used to be. The student must recall the word based on the context of the sentence. When the word is typed in correctly, that sentence is automatically deleted from the student's file.

This program was developed by a fifth grade teacher to provide a more meaningful way for students to study spelling words.

Students should be familiar with the keyboard as they are required to type their own sentences.

the Medalists

PRESIDENTS

CONTINENTS

STATES

CREATE

BLACK AMERICANS

WOMEN IN HISTORY

Appropriate Grade Level:

Varies: Approx. range 4-10

This is a six disk series, each sold separately.

The MEDALISTS SERIES; Presidents, Continents, States, Black Americans, Women in History, and Create, was developed to provide an enjoyable way for upper elementary and middle school students to study and learn important facts about different subjects.

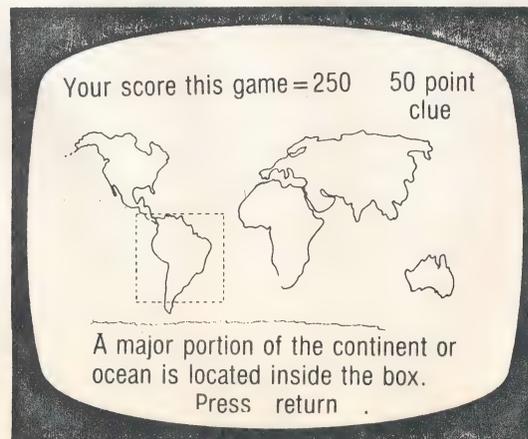
Multiple levels of clues are presented to the student. The student 'buys' clues to guess the president, state, etc. the computer has chosen. Teachers may continuously change the clues to challenge even the best student. Difficult clues add very few points; easy clues add lots of points! The object is to guess the president, state, etc., chosen without accumulating too many points.

All students' records are stored for the teacher or for "self-challenge", but only the three best (medalists) players' scores are shown to other challenging students.

The Create disk may be used for any instructional area where facts or categories of information are important. The disk holds up to 50 different categories. Each category will hold up to 40 clues with point values of 5, 10, 25, or 50 points. The student recordkeeping will hold 50 records. This disk provides a vehicle for reinforcement of a presentation; a means by which the student can study and learn important facts about things, people, places, and/or concepts.

States and continents contain high resolution graphics.

Teachers may change clues or their point value at any time.



CONTINENTS



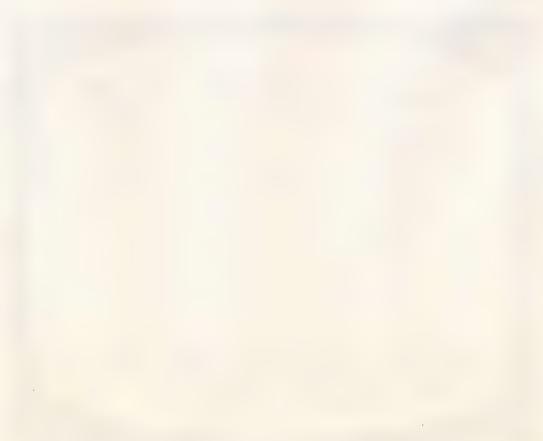
STATES

Hartley

EXHIBIT

1911

...



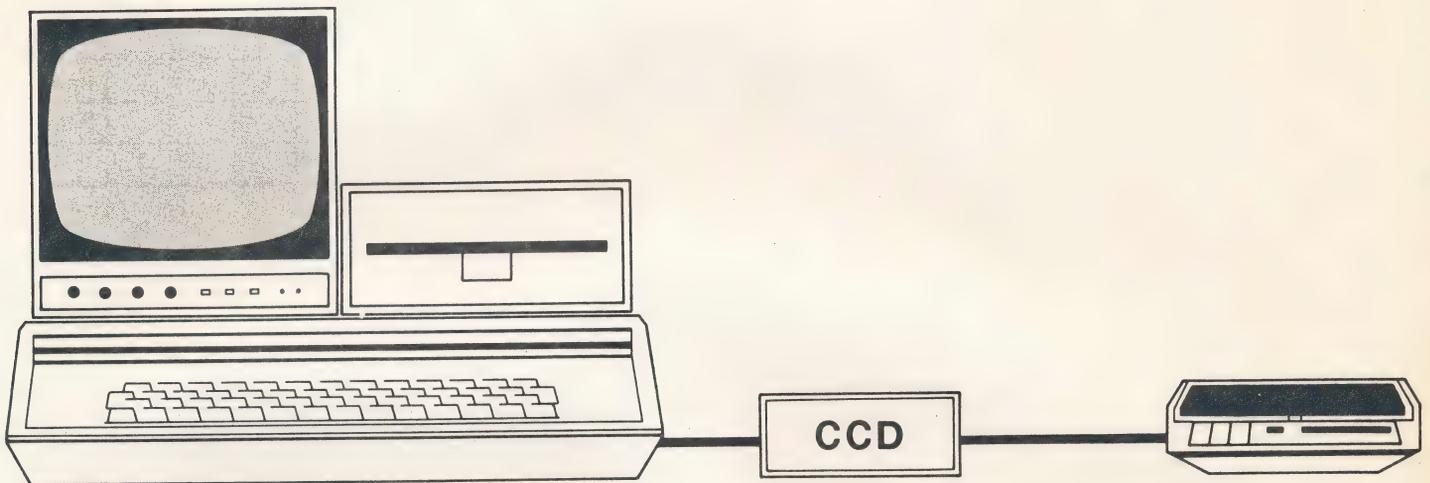
...



CCD

CASSETTE CONTROL DEVICE

This marvelous electronic device allows your computer to activate a cassette tape recorder. This is invaluable in working with students. Teachers may record words, directions, definitions or any oral presentation they wish on the tape. The tape is then synchronized directly with the presentation on the computer.



Teachers are using the CCD for

- presenting directions to students who do not read well.
- presenting the sounds of letters and words to non-readers.
- testing spelling words.
- presenting and defining new vocabulary.
- developing ESL presentations with the auditory stimulus presented in the native language of the student and the video display presented in English.

The CCD is easily installed. Complete directions are included. Courseware listed in this catalog which makes use of the CCD is indicated on the Table of Contents page. Samples of scripts are included with the documentation of all programs which use the CCD.

The CASSETTE CONTROL DEVICE (CCD) may be used with any cassette recorder with a remote control jack.

Do use batteries to run the cassette recorder when recording with the CCD. Play the tapes on the same recorder they were taped.

CCD-A with 16-pin plug for regular Apple II

CCD-B with round plug for Bell & Howell Educational accessory

THE UNIVERSITY OF CHICAGO



[The remainder of the page contains extremely faint, illegible text, likely bleed-through from the reverse side of the document.]

12-09

**NOUNS/
PRONOUNS**





NOUNS/PRONOUNS

SPECIAL FEATURES

STUDENT PLANNING records student errors on the teacher's file for later review.

Select any student, or group of students, to view work.

Print out or view on screen exact record of errors.

Easy MODIFICATION of any file.

CREATE new lessons as desired.

DELETE any file as desired.

Instructional DESIGN OPTIONS.

All Hartley courseware requires
a 48K Apple II* with Applesoft in
ROM and one Disk Drive.

All Courseware will boot on 3.2 or 3.3 DOS.

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TEACHER'S GUIDE

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Throughout this Teacher's Guide the terms **lesson** and **list** are used interchangeably (the decision of a committee).

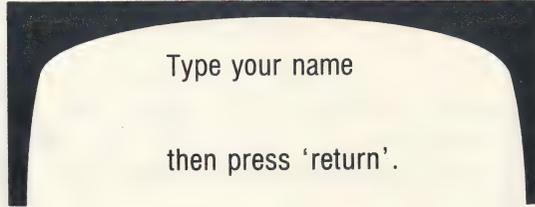
CREDITS

The upper/lower case alphabet used on this disk was developed by MECC, 2520 Broadway Dr., Lauderdale, Minn. 55113.

Permission for its use has been granted to Hartley Courseware.

QUICK NOTES FOR OLD PRO'S

To get the teacher's MENU, type MENU when

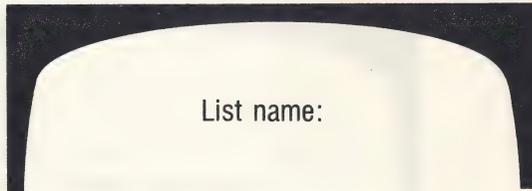


appears on the screen.

To stop the program, press **ESC** when a student response is called for.

Starting again without rebooting: type **RUN HELLO**.

To see the **CATALOG**: type **?** when



appears on the screen.

Lessons on This Disk

(See back of this book for objectives in each lesson.)

3rd Level

PS3
PL3
ID3
PR3

4th Level

PS4
PL4
ID4
PR4
AT4

5th Level

PS5
PL5
ID5
PR5
AT5

6th Level

PR6

STARTING FROM SCRATCH

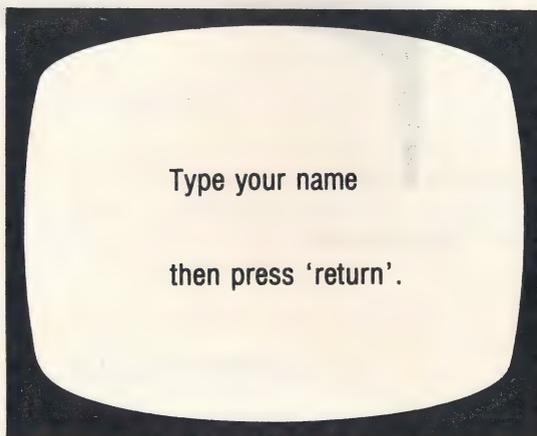
This disk will 'boot' on either a 3.2 or 3.3 Disk Operating System.

Put the disk in Drive #1; close the small door. Turn on your computer. If you have an Apple II Plus, the disk will boot automatically when you turn on the computer.

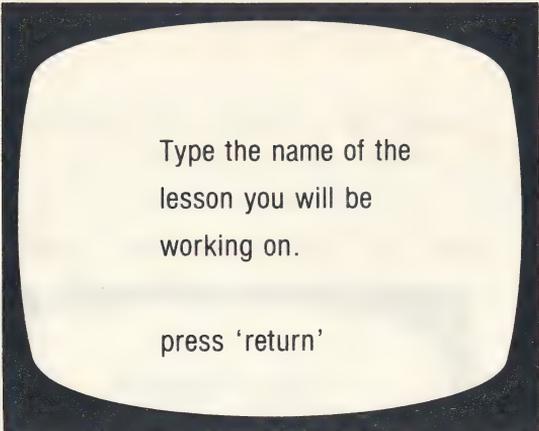
If you have an Apple II - type **PR#6** Press **RETURN**.

The program will load into your computer and run automatically - don't type CATALOG!

The credits will vanish and the screen will say:



If you are running the program, you (or a student) could type in any name and press **RETURN**.



Type the name of the
lesson you will be
working on.

press 'return'

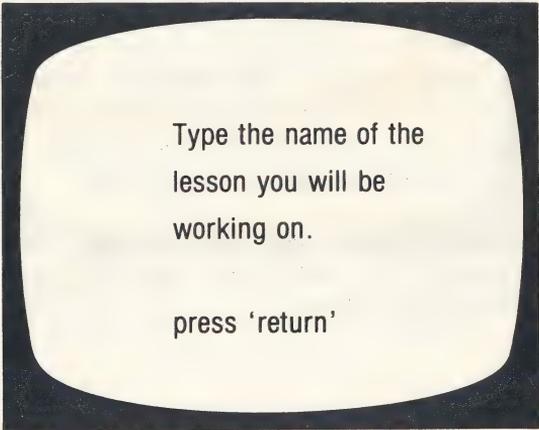
The lessons on this disk are listed on page 2 of this Teacher's Guide. A complete description of the skills taught in each lesson are listed on the last pages of this guide.

If you don't have a guide, or want a quick review, type:

? press **RETURN**

This will display the **CATALOG** which shows all the lessons on the diskette (you can only run text (T) files).

Continue to press **RETURN**. After all lessons on the **CATALOG** have been shown, the computer will return to:



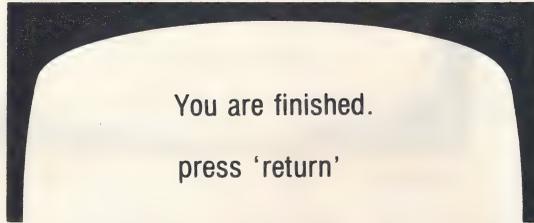
Type the name of the
lesson you will be
working on.

press 'return'

Now, type in the name of the lesson; PS3, PL4, ID5 or whatever.

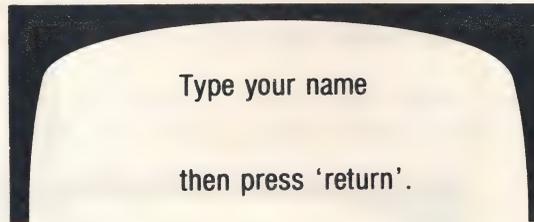
Unless the lesson is stopped by pressing **ESC*** when a response is called for, all items in the lesson will be presented.

When the lesson is completed the screen will show:



The next frame will display the student's results in terms of the number of items correct out of the total responses together with the correct response for each item missed. After viewing the displayed results, the student should press **RETURN** for a "BYE-BYE" message and then,

press **RETURN** to return to the



frame once more, ready for another student or another lesson.

*The **ESC** key may be used to exit the program when a reponse or answer has been requested.

Students' results will be automatically stored in the student response file for later teacher use in the **STUDENT PLANNING** program.

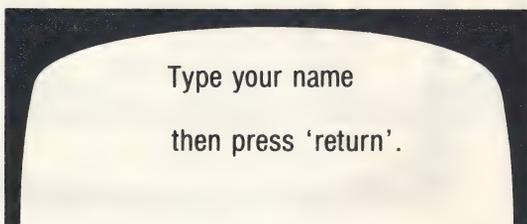
THE TEACHER'S MENU

The lessons on this disk are for the student.

There are also programs for the teacher. These programs allow the teacher to "do things" to the student lessons on the disk.

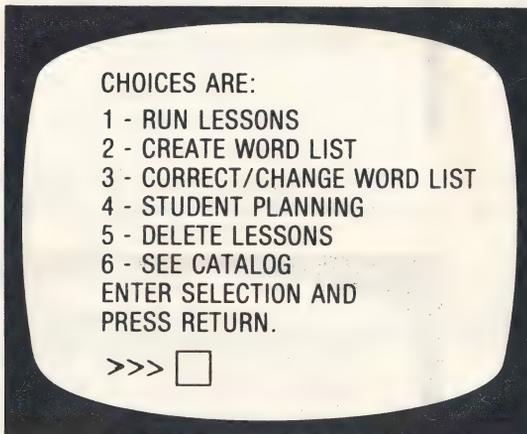
The teacher's programs may be accessed by using the name MENU.

When the following screen is shown:



type the word MENU, press RETURN.

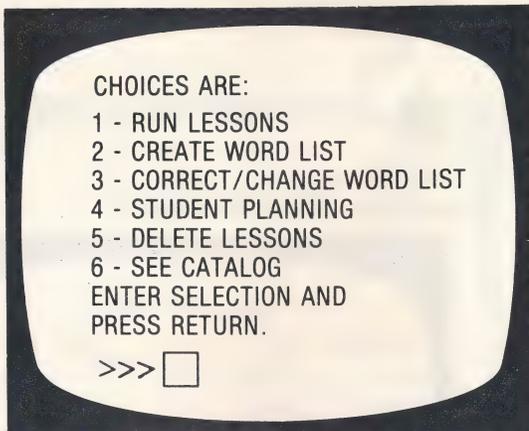
The following MENU will be shown.



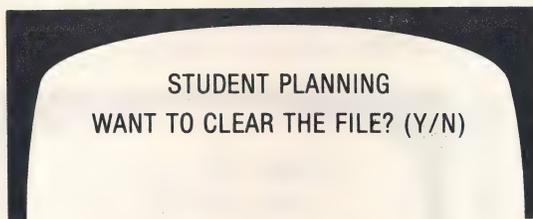
The following pages will describe exactly how to use each of these programs on the teacher's MENU.

USING STUDENT PLANNING

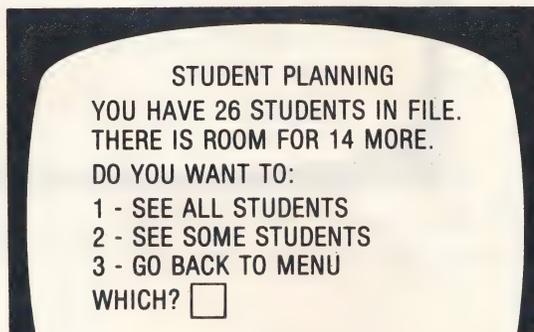
As a student works though a lesson, the errors that he/she makes are recorded into the STUDENT PLANNING file. To see the file, bring up the MENU.



Select **4 - STUDENT PLANNING** press **RETURN**



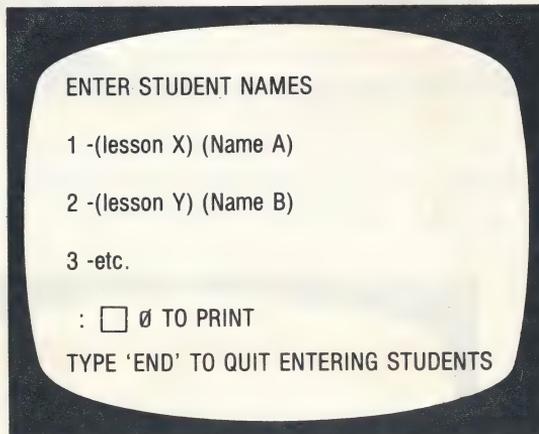
Type **N** if you want to see it; **Y** if you want to completely erase all student results. press **RETURN**.



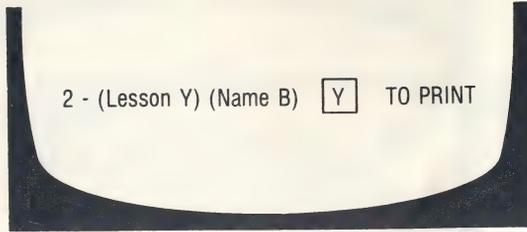
If you want to see only some of the students select
2-SEE SOME STUDENTS press RETURN



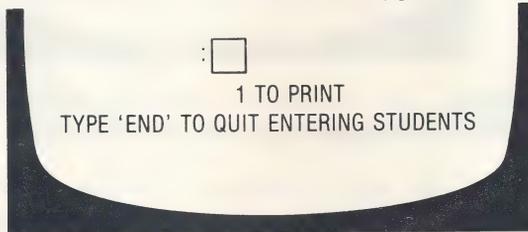
As you select the students whose records you want
to view, you will be typing just the number.



Type the number of a student you want to see and press **RETURN**. For Example: 2

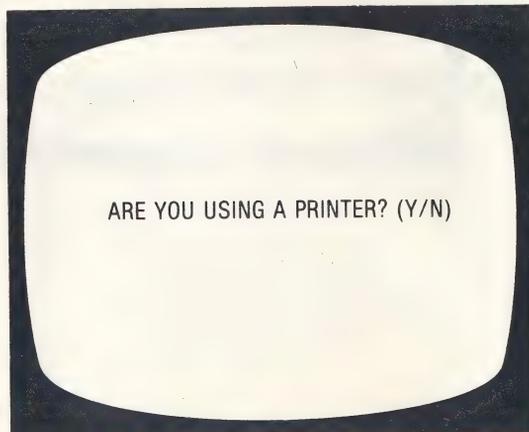


This frame gives you a chance to change your mind. If you want the record on the student, type **Y**.

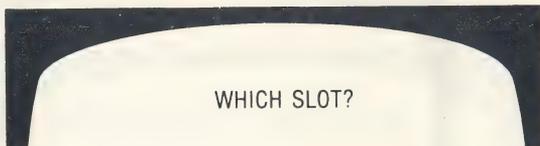


Continue selecting students whose records you want to print. The computer will keep a running tally on the number you have selected.

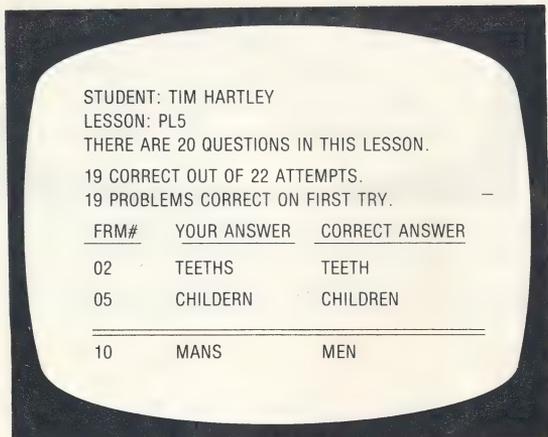
When you have entered all of the students, type **END** (in place of another number).



If you type **Y**, the printer will list the records. If you type **N**, the records will come up on your monitor screen.

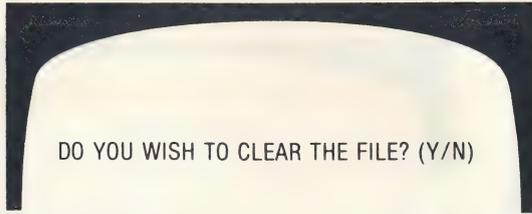


It will usually be **1** or **2**. If you are not sure, take off the cover and check. The printout will be in the following format.



① The line separates the items missed on the lesson from those missed when questions were presented after the lesson was completed.

After all information is displayed you will be asked:



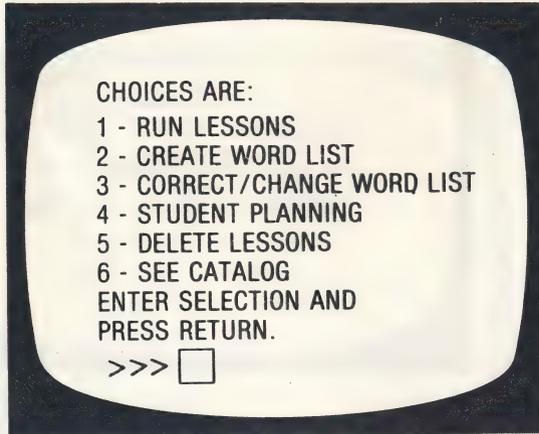
Respond as desired.

The **ESC** key may be pressed at any time to terminate display or printout of student results. A maximum of 40 records can be stored in **STUDENT PLANNING** before the files must be emptied. To empty the response file answer **Y** to the question at the end of the display/printout.

A printer is nice to have with **STUDENT PLANNING**. This program is designed to accommodate a printer interface in any slot which can be accessed by the "PR#" command.

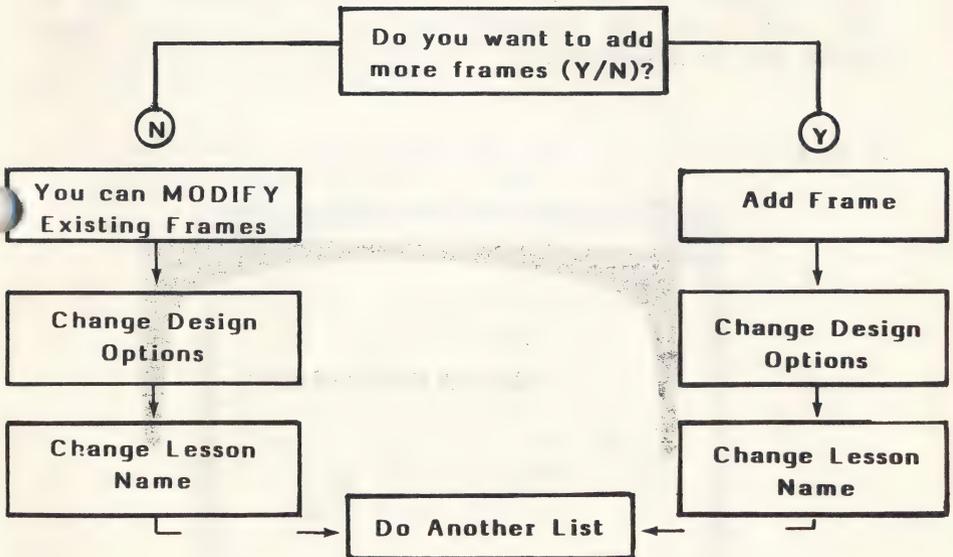
CORRECT/CHANGE WORD LIST

Your screen is now showing the Teacher's MENU.



Select 3 - CORRECT/CHANGE WORD LIST

The YES/NO sequence of Correcting or Changing word lists.



You can MODIFY or ADD frames. To do both you must cycle through both the Y and N option.

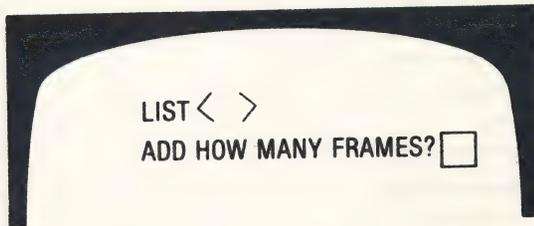
First, you will need to identify the lesson you wish to consider.



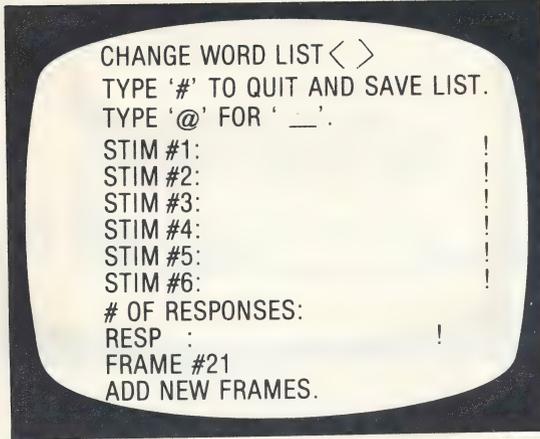
The **DEFAULT** value is the value the computer will accept if you simply press **RETURN** and do not change the number or letter. The default value is the one that the original program designer opted to use.

If you want to increase the number of items, type **Y**. You will then go immediately to the program which allows you to add items.

If **YES**



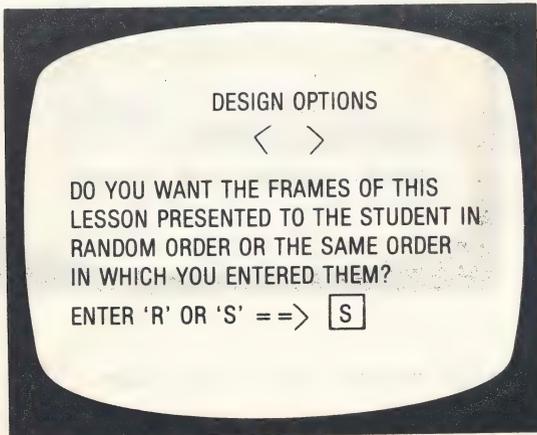
This frame will then appear.



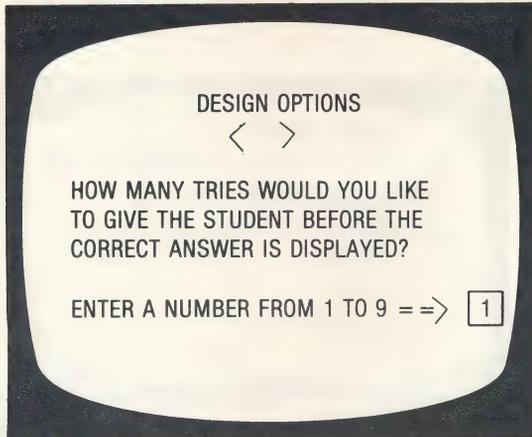
For more information see the section on CREATE a New Lesson.

The exclamation marks are indicators of maximum length per line (approx. 25 spaces).

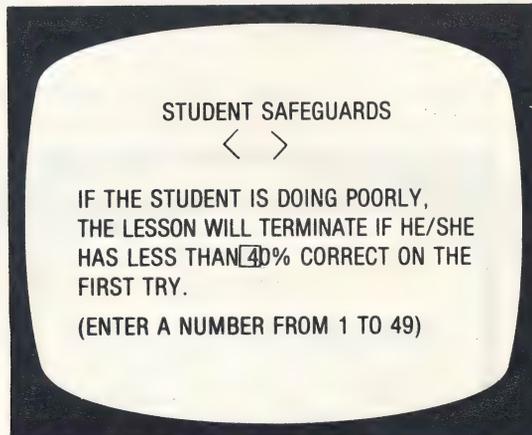
After new frames are added the computer will branch you to the Design Options for that lesson.



Be careful about changing this on existing lessons. Some are graduated in difficulty. For new lessons you Create, this is a nice flexibility.



If it's a "fill-in-the-blank" answer, you may want to change this. On a 2-response, multiple choice you obviously would not.



The next question relates to this decision.

STUDENT SAFEGUARDS

< >

EVEN IF THE STUDENT IS DOING POORLY, AT LEAST 4 FRAMES WILL BE PRESENTED BEFORE THE LESSON IS TERMINATED.

(ENTER A NUMBER FROM 1 TO 20)

You will need to skip at least some frames. If you don't the lesson will terminate on the first frame if there is an error (0% will be below any % that you set in the previous step).

STUDENT SAFEGUARDS

< >

IF A STUDENT IS DOING WELL, THE LESSON WILL TERMINATE AFTER 10 CONSECUTIVE CORRECT ANSWERS ON THE FIRST TRY.

(ENTER A NUMBER FROM 1 TO 20)

If there are a variety of skills taught or reviewed in one lesson, you may want the student to complete all the work no matter how well he/she does on the first 10. If so, change to 20.

DESIGN OPTIONS



AFTER THE STUDENT HAS GONE THROUGH ALL THE FRAMES IN A LESSON, DO YOU WANT THE QUESTIONS HE/SHE MISSED TO BE PRESENTED AGAIN?

ENTER 'Y' OR 'N' ==>

DESIGN OPTIONS

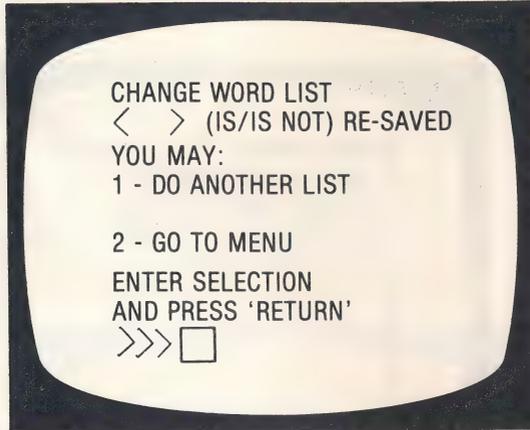


WHEN THE QUESTIONS ARE PRESENTED AGAIN, HOW MANY TRIES WOULD YOU LIKE TO GIVE THE STUDENT BEFORE THE CORRECT ANSWER IS DISPLAYED?

ENTER A NUMBER FROM 1 TO 9 ==>

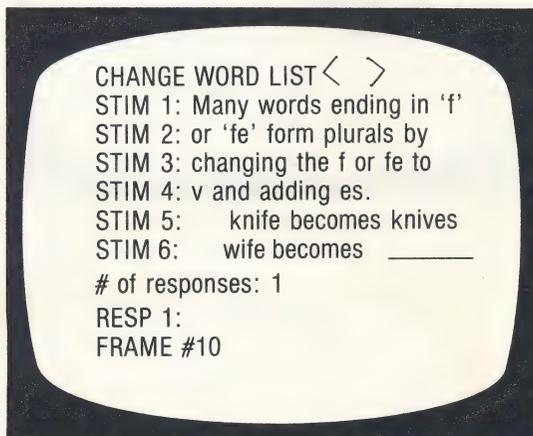
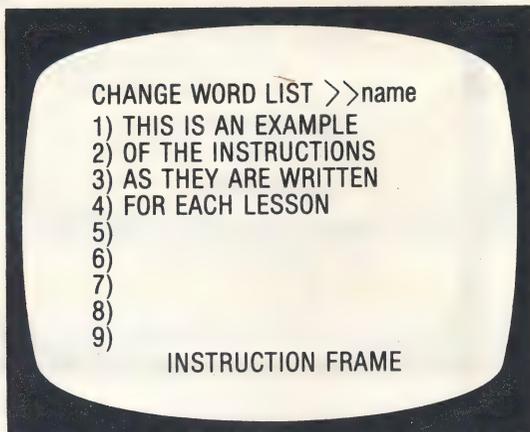
The student safeguards do not apply to these questions. The authors assumed the teacher would want all missed items reviewed.

You will then be asked if you want to Save this List and Change the List Name. If you answer **YES**, this frame will appear.



After you have answered all of these questions, the computer will go back to the MENU.

Now, we are going back to page 12 and take the **NO** option. If you answer **NO** to the question: Do You Want to Add More Frames? (Y/N) the computer displays Instructional frames and Lesson Frames for correction.



Hypothetical example of frame to change.

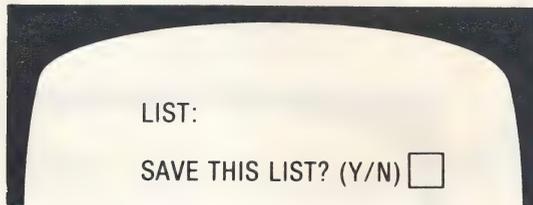
Each line will be displayed with the cursor on it.

If you don't want to change that line, press **RETURN**.

If you do, type the new stimulus or response.

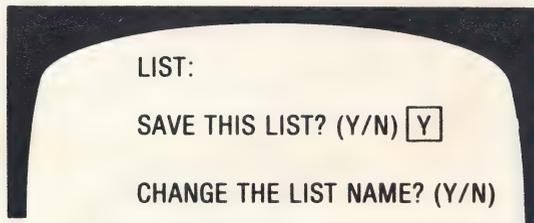
Use the ← key to move the cursor back over previous lines. When the entire list has been reviewed, the computer will branch you to the Design Options. These are the same as shown on pages 14-17.

After the Design Options:



LIST:
SAVE THIS LIST? (Y/N)

Type **Y** if you want the corrections to replace the lines that were in the original list. Type **N** if you have changed your mind about the corrections or did not make any. If you type **Y**, the final question will be:



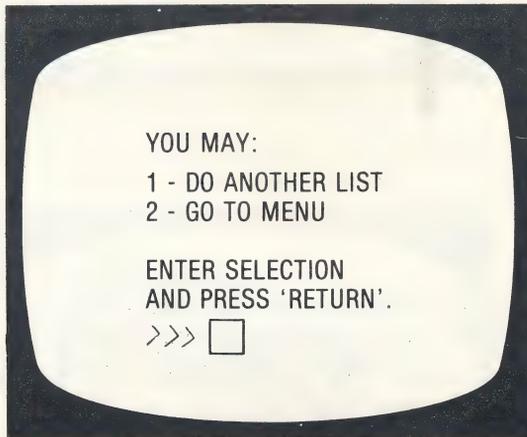
LIST:
SAVE THIS LIST? (Y/N)
CHANGE THE LIST NAME? (Y/N)

This allows you to keep both the 'old' lesson and the 'new' lesson. You'll find this advantageous if you are creating a lot of lessons or trying some experimental work with your CAI lessons.

The design decisions you have made may vary from lesson to lesson depending on the content and the teacher's preference.

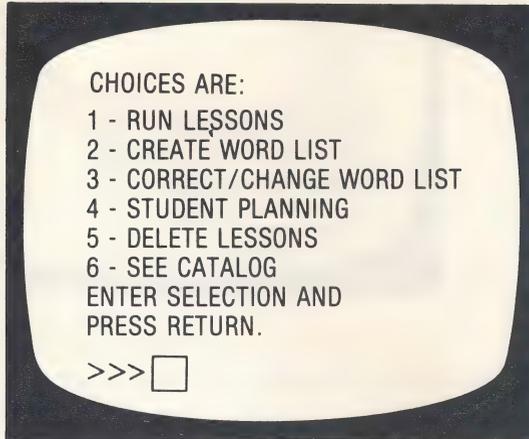
You may make different decisions for each lesson. Your decisions will only affect that lesson. If you want all lessons to be presented randomly (for example) you will need to make that modification on each lesson.

When you are finished with one lesson:



CREATE A NEW LESSON

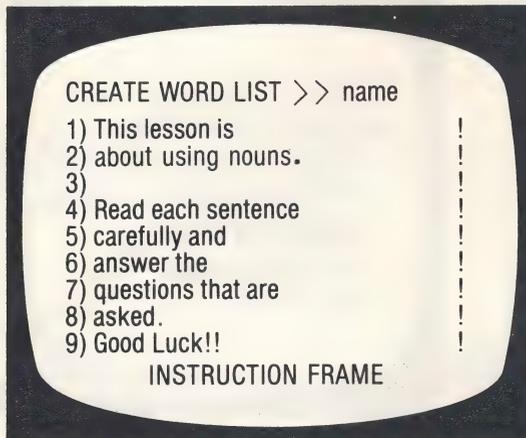
This is another program that is available on the Teacher's MENU. Remember, to access the teacher's MENU, type MENU when the "Type your name." frame appears.



Select 2 - CREATE WORD LIST

First, you will have to give your new lesson a name. Keep it short. The name must start with a letter. 2-3 letters make a good name.

Once you have typed in a name, the following screen will be displayed.



After the Instructions frame, the following frame will be shown.

To make
a blank
in the
stimulus,
type the
'@' symbol.

```
CREATE WORD LIST< >
TYPE '#' TO QUIT AND SAVE LIST
TYPE '@' for '___'

-----
STIM 1:
STIM 2:
STIM 3:
STIM 4:
STIM 5:
STIM 6:
# OF RESPONSES:
RESP:
FRAME #
```

This information will appear as one frame for the student.

You may have 1-4 correct responses. Any of these answer alternatives will be accepted as correct.

These frames are designed to require a response from the student.

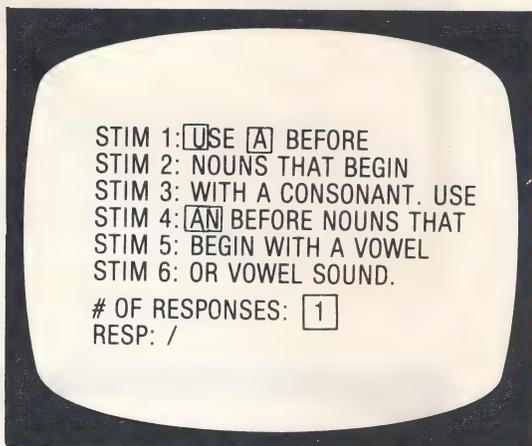
You also have the option of writing a frame which does not require a response.

```
STIM 1: USE 'A' BEFORE
STIM 2: NOUNS THAT BEGIN
STIM 3: WITH A CONSONANT. USE
STIM 4: AN BEFORE NOUNS THAT
STIM 5: BEGIN WITH A VOWEL
STIM 6: OR VOWEL SOUND.
# OF RESPONSES: 1
RESP: /
```

Indicate
there is
only **1**
correct
response.
Make that
response
a /.

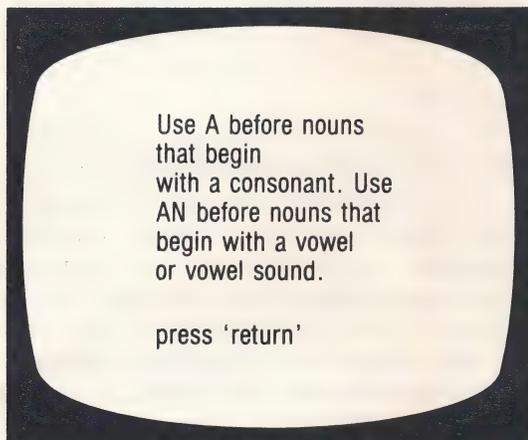
Making Capital Letters

The / mark acts as a que to the computer to allow the student to progress to the next frame by just pressing RETURN.

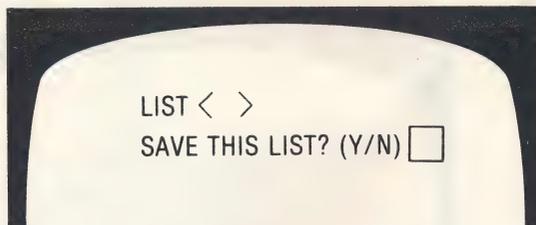


An inverse letter made by pressing ESC immediately before the letter will be shown as a capital letter to the student.

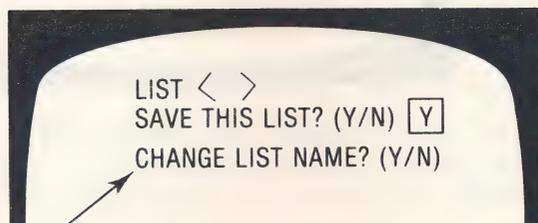
The screen will appear to the student as:



When you have typed the last frame you want in your lesson, type '#' by itself on the first line of the next frame. The computer now branches you to the Design Options (see pages 14-17), after you have answered the following questions:



```
LIST < >  
SAVE THIS LIST? (Y/N) 
```



```
LIST < >  
SAVE THIS LIST? (Y/N)   
CHANGE LIST NAME? (Y/N)
```

This is a new name option if you change your mind about the name you gave the lesson when you began.

TO SUMMARIZE-

You will enter a 9-line instruction frame.

You may enter as many 6-line frames of Instruction (no response required) or questions as you desire for each lesson (over 30 is not recommended).

If you are entering a question frame, you will be asked to enter the number of correct responses (you may have 4).

RESP 1
RESP 2
RESP 3
RESP 4

The question will require only one response, but all responses will be considered correct. For example, in response to a multiple choice question you might want to list both the letter and the answer.

When the student misses an answer, the correct answer options are shown. Because of this, many teachers use the last 2 or 3 responses for a rule or an explanation to the student. When the student misses an answer, the rule or explanation is then shown on the screen.

To type a capital letter in a stimulus line, press **ESC** just before typing the letter. The program does not allow for capital letters in the response.

To type a blank in the stimulus, use the '@' symbol.

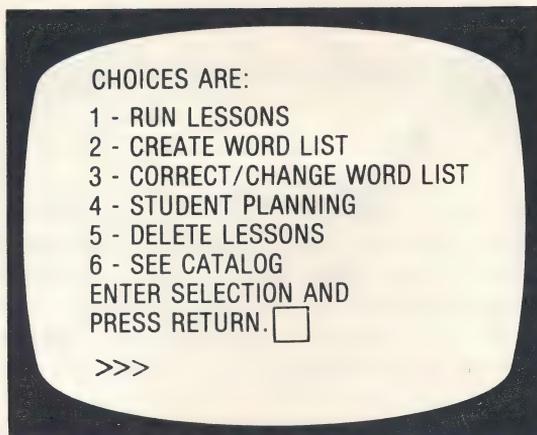
When you have completed the lesson, type '#' to **SAVE** the lesson.

CAUTION

When you are **CREATING** your own lessons, **SPACE BAR** errors can occur. **SPACE BAR** errors are '**evil**' little errors which creep into your programs (and you can't see them). Symptoms-you answer a question by typing 'Yes'. The computer says your answer should be 'Yes'. This is infuriating! What has happened is the space bar was pressed after the answer was typed. Now the computer thinks the answer is 'Yes space bar'. To correct the problem, use **CORRECT/CHANGE** and retype the correct answer without touching the space bar.

TO DELETE A LESSON

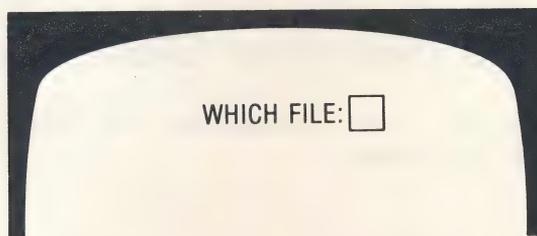
Bring up your MENU.



CHOICES ARE:
1 - RUN LESSONS
2 - CREATE WORD LIST
3 - CORRECT/CHANGE WORD LIST
4 - STUDENT PLANNING
5 - DELETE LESSONS
6 - SEE CATALOG
ENTER SELECTION AND
PRESS RETURN.

>>>

Select 5 - DELETE LESSON



WHICH FILE:

Type the name of the lesson you want deleted. press RETURN.

**CAUTION: BE SURE YOU WANT TO
DELETE A LESSON-ONCE IT'S
GONE, YOU CAN'T GET IT BACK!**

**INSTRUCTIONAL NOTES
and
BEHAVIORAL OBJECTIVES**

The lessons on nouns have been coded to reflect the skills covered and the reading level.

NOUNS	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>
Possessives	PS3	PS4	PS5	
Plurals	PL3	PL4	PL5	
Identification	ID3	ID4	ID5	

PRONOUNS

Identification and Use	PR3	PR4	PR5	PR6
Antecedents		AT4	AT5	

For any given strand, PS;PL;ID, etc., the student should begin at the first level and work through the levels. More specific objectives for each lesson are listed below.

NOUNS-Identification

ID3 The student will identify common nouns.
The student will determine if an identified noun is a person, place or thing.

ID4 The student will identify proper nouns.
The student will identify proper nouns which are not capitalized.

ID5 The student will identify proper nouns.
The student will identify proper nouns which are not capitalized.
Nouns considered are names, specific places, titles, regions, brand names, countries, cities, and states.

NOTE: In the proper noun lessons, the student must type the letter only of the multiple choice questions.

NOUNS-Plurals

- PL3 The student will select a singular or plural noun to fit the context (regular 's' ending).
- PL4 The student will type the correct plural of nouns which require -es, -ies, and ves endings.
- PL5 The student will select or type the plural form of irregular nouns including words such as radius, ox, deer, man, etc.

NOUNS-Possessives

- PS3 The student will select the appropriate possessive form for singular or plural possessive (regular ending).
- PS4 The student will select the appropriate possessive form for singular or plural noun (with some irregular endings).
- PS5 The student will form the possessive or select the correct possessive for singular and plural nouns ending in 's'.

PRONOUNS-Identification and Use

- PR3 Given a sentence, the student will identify the pronoun subject of the sentence (singular or plural).
- PR4 The student will select the correct possessive pronoun to fit the context of the sentence.
- PR5 The student will select the correct object pronoun for use in the context of the sentence.
- PR6 The student will select the correct form of "who" (who, whose, whom) for use in the context of the sentence.

PRONOUN-Antecedent

- AT4 Given 1-2 sentences, the student will select the noun which the pronoun represents.

- AT5 Given 1-2 sentences with a slightly more difficult vocabulary, the student will select the noun which the pronoun represents.

There are many concepts in nouns which have not been included in these lessons.

Use STUDENT PLANNING to find the areas in which your students are having difficulty. Then, use CREATE to develop lessons tailor-made to your students' needs. The ability to CREATE your own lessons is one of the many nice features of the Hartley Software.

With each of these lessons or the new ones you CREATE, you can use the **DESIGN OPTIONS** on the teacher's MENU to determine:

- the number of times a question is asked before the correct answer is shown.

- whether you want the lessons randomly or sequentially.

- the number of times a question is repeated at the end of the lessons.

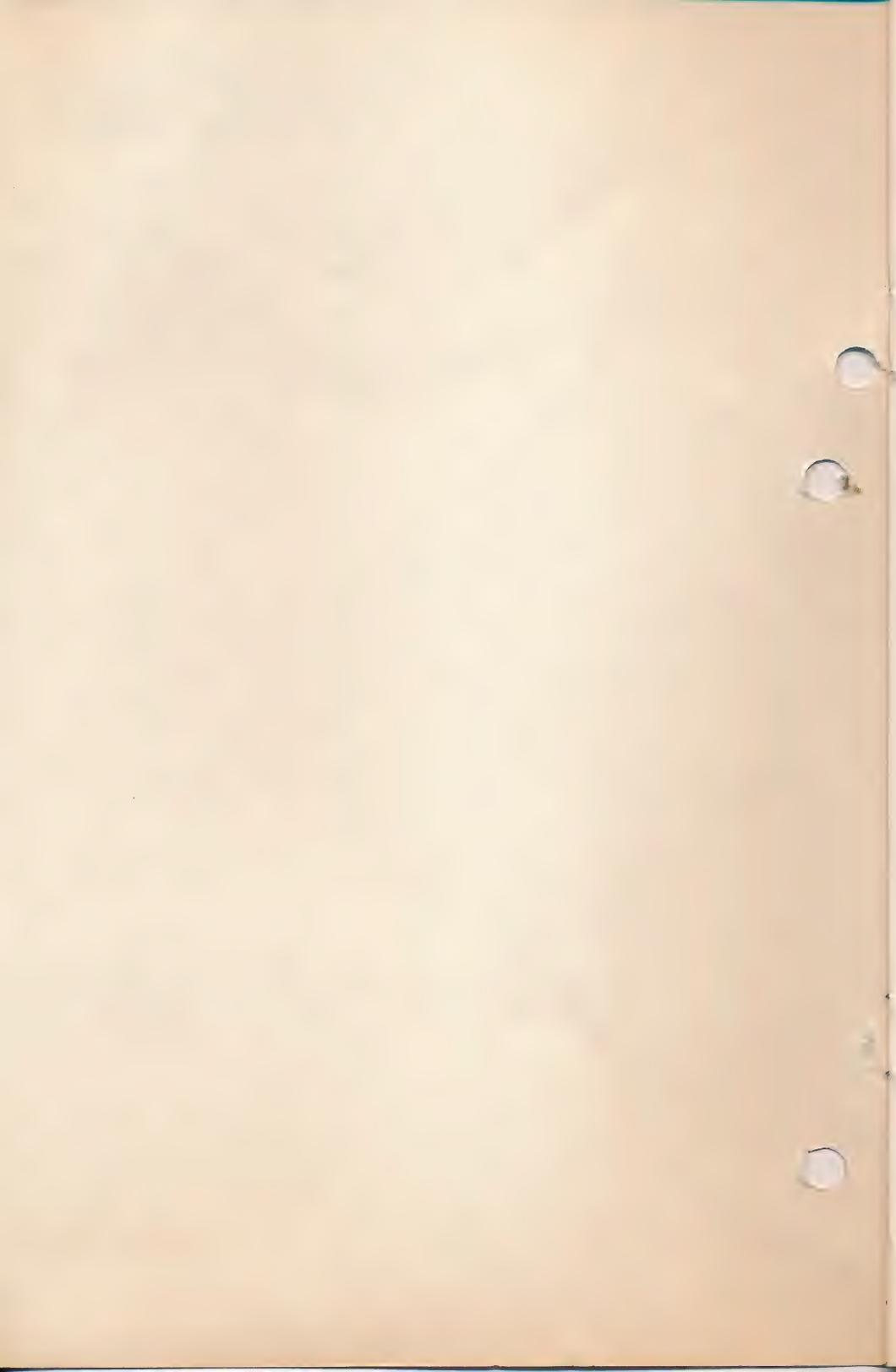
- Student Safeguards; you may want to reset your cutoff criteria for lesson termination dependent on the target students you have.

With each of these lessons or the new ones you CREATE, you can use the DESIGN OPTIONS on the teacher's MENU to determine:

- the number of times a question is asked before the correct answer is shown.
- whether you want the lessons randomly or sequentially.
- the number of times a question is repeated at the end of the lessons.
- Student Safeguards; you may want to reset your cutoff criteria for lesson termination dependent on the target students you have.

Try all the options on the Teacher's MENU. The flexibility to CREATE, MODIFY, CHANGE, make INSTRUCTIONAL DECISIONS is part of the power of the Hartley Software. Good teachers are demanding this type of flexibility in their software. Try it and find out why!

Caution: Don't DELETE a lesson unless you want it DELETED forever and ever!



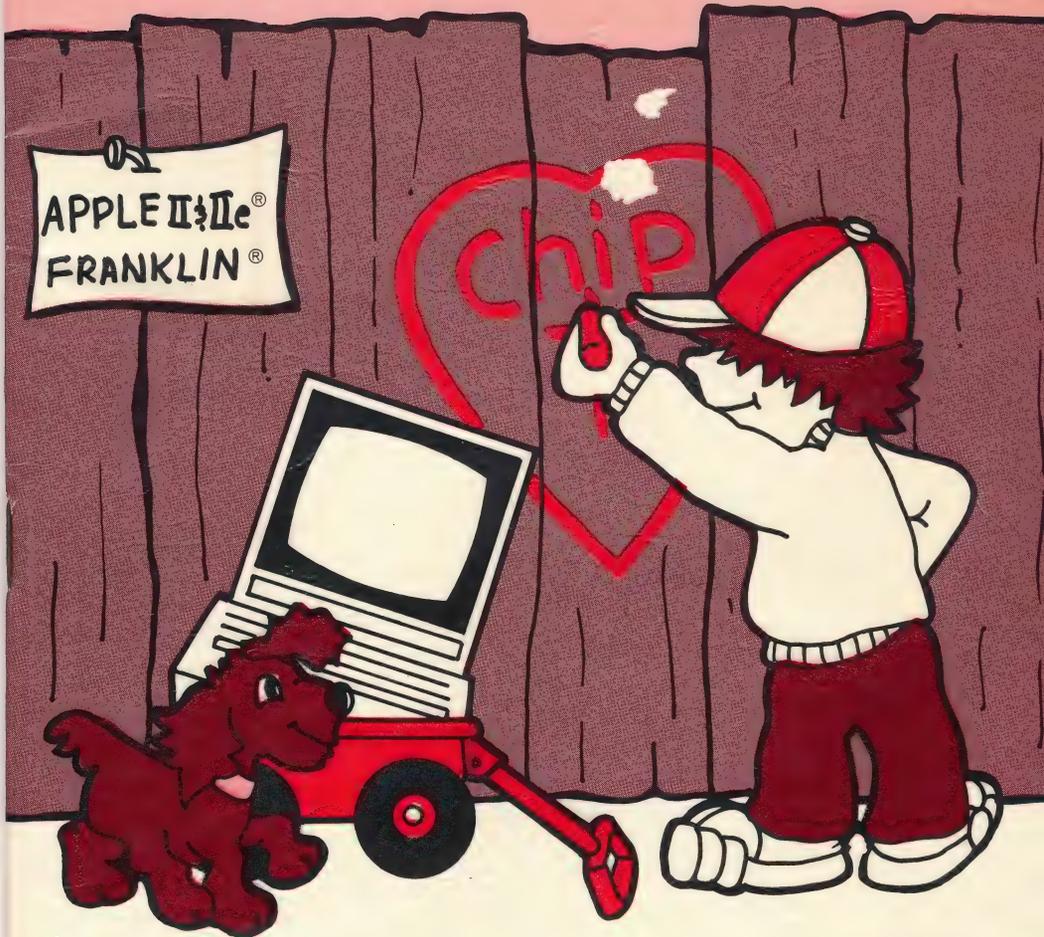
Hartley 

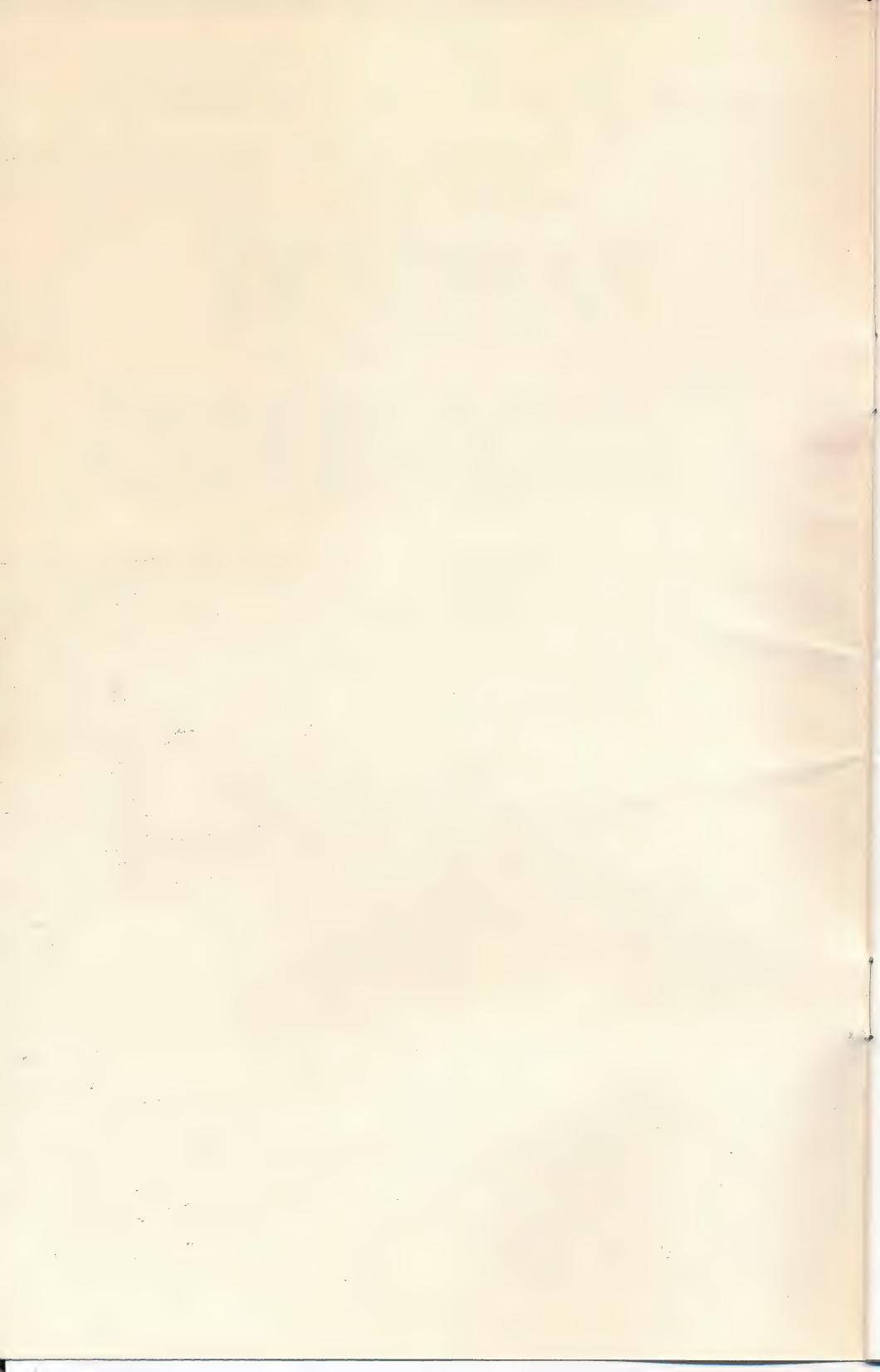
Hartley Courseware, Inc.

Hartley[♥]

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Word Families





Word Families

SPECIAL FEATURES

Holds up to 100 records.

A smiling clown is shown after five successful frames.

Words may be deleted from each file. New words and answers may be added to make the program correspond directly to the basal used in the classroom.

Level: Beginning reading

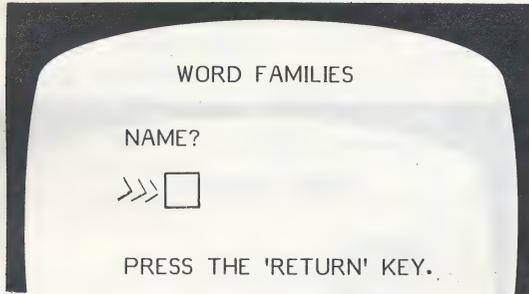
All Hartley courseware requires
a 48K Apple II* or IIe*, or
Franklin ACE 1000 and
one Disk Drive

When running the program on the Apple IIe,
or Franklin you must keep the
CAPS LOCK key down.

© 1982 Hartley Courseware, Inc.
Dimondale, MI 48821

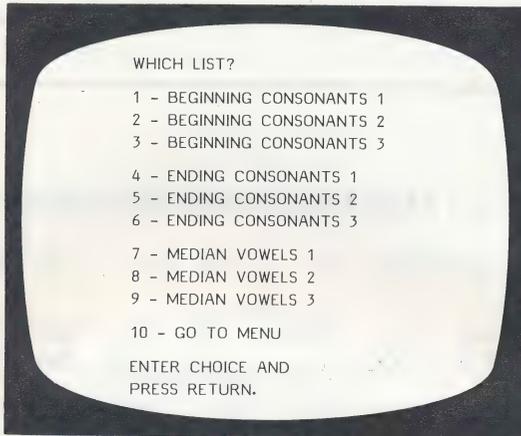
*Apple II & IIe are trademarks of APPLE COMPUTER, INC.

The credits will vanish and this will appear:



If you are running the program, you (or a student) could type in any name and proceed.

The screen clears and a MENU for WORD FAMILIES will be shown. The following options are available.



Type only the number of the option desired. The teacher needs to tell the beginning reader which number to select. Instructions aren't included in the programs since students working at this level are not able to read them. The program is for use by the student under the direction of the teacher.

There are no instructions to the student on this disk.

The following instructions should be given by the teacher as the child looks at the first frame of a lesson.

"Look at the word."

"Say the word."

"What letter is underlined?"

"Now look at the letters below the word."

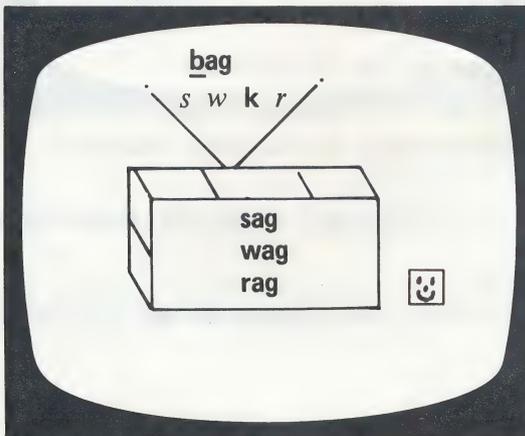
"If you replace the underlined letter with one of the letters below the word, will it make a new word?"

"Type only the letters that you think will make a new word."

"When you have picked all the letters that will make a word, an X appears in the box."

"Press **RETURN** for the next word."

With any selection 1-9, the following type of frame comes up on the screen.



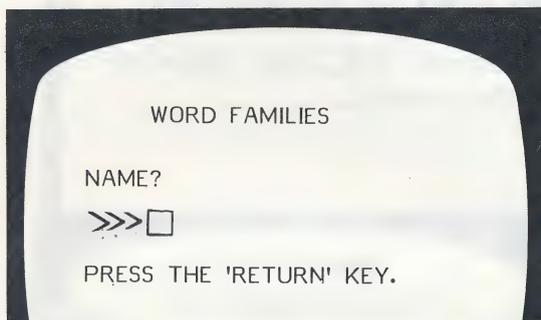
The student types one of four letters to replace the underlined letter and make a new word. If he is correct, the letter disappears and the new word appears on the screen. If he is incorrect, nothing happens on the screen but the incorrect choice is saved in the STUDENT PLANNING file for later review by the teacher.

When all of the correct letters have been used, a ☺ appears in the box. The student must then press **RETURN** for the next presentation.

After every 15 correct responses a clown's face appears on the screen.

After a lesson has been completed or the lesson terminated by pressing **ESC**, the student's results will be displayed in terms of the number correct out of the total number of attempts as well as the incorrect responses. This summary enables the teacher to view the student's results immediately after (s)he completes a lesson.

After the results are displayed, press **RETURN** and the



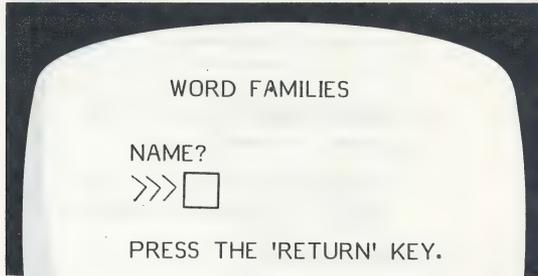
frame will appear ready for another student.

Each lesson is terminated after 30 presentations have been made.

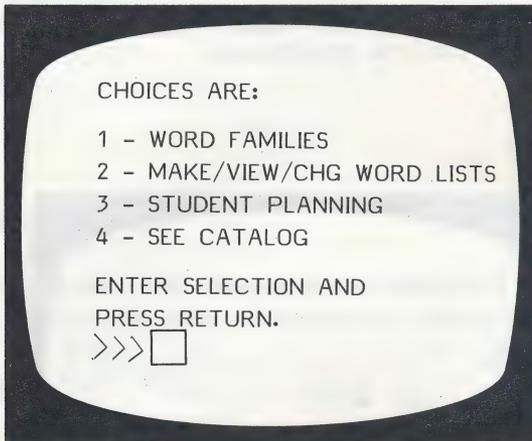
Results are automatically stored in the STUDENT PLANNING file.

TEACHER'S MENU

If you wish to access the teacher's files which allow you to "do things", type **MENU** when the following screen is displayed:



The Teacher's MENU will appear:

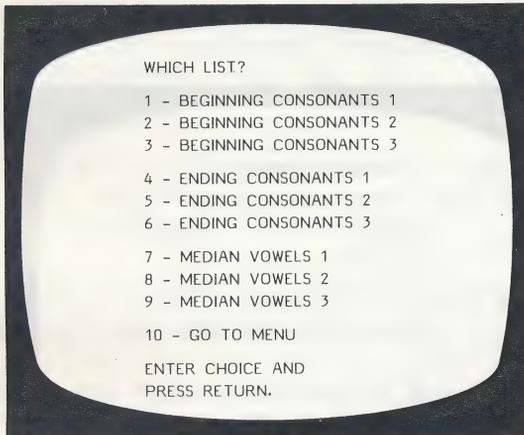


1 - WORD FAMILIES

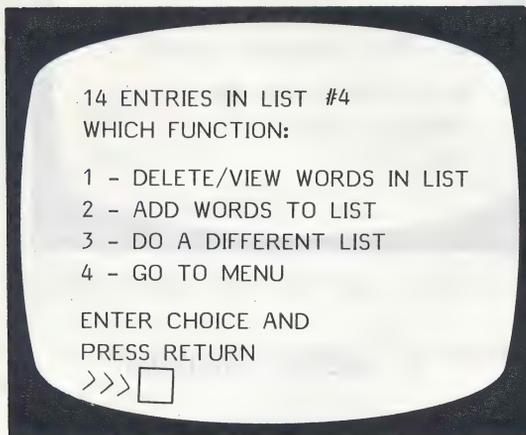
This selection runs the lessons.

2 - MAKE/VIEW/CHG WORD LISTS

If you select 2, the following screen appears:

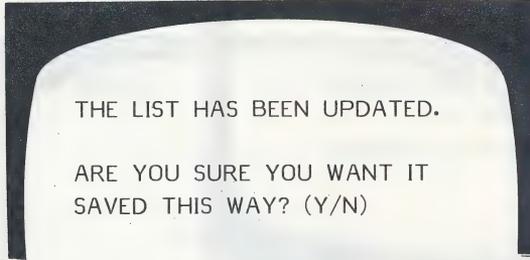


After you have entered the lesson you wish to work with, the following choices are presented:



1 - Delete/View Words in List

This selection presents the words in the lesson one at a time. If you want to delete the word, type **D**; if not, press **RETURN**. You will be asked at the end of the word list:



If you've changed your mind about the deletions, type **N**. If the list is OK as you changed it, type **Y**. **Be sure you want to delete a word. Once it's deleted, it's gone unless you re-enter it!**

2 - Add Words to List

This option allows you to add more words to the existing list. Each list may contain up to 100 words. Words must not be more than five letters in length. This program does **NOT** allow for capital letters.

Type the word you wish to add then press **RETURN**. The cursor moves to each place where an alternative letter is typed. Put an asterisk after all correct answers. The asterisk indicates to the computer that the alternative is correct.

As you type each word, press **ESC** before the letter you want to appear as underlined on the screen.

LIST: ENDING CONSONANT #

#	WORD	CHOICES	---	---
20	<input type="checkbox"/>			

TYPE "END" WHEN FINISHED
TYPE "ESC" BEFORE A LETTER
TO INDICATE IT IS UNDERLINED
TYPE AN ASTERISK "*"
AFTER EACH CORRECT ANSWER.

You may have no more than 3 correct responses for a given stimulus word.

Be sure to press the **ESC** key before typing a letter which is to appear underlined in the displayed word. This letter will then appear in the inverse mode (black on white) in your word list on the screen.

Remember - type an asterisk * after all correct responses; to indicate to the computer which ones are correct and which are wrong.

A word list must contain at least 10 words in order to function properly in the program. Type **END** when you are finished with a list. The list is automatically saved adding your new words to those previously on the list.

3 - Do a Different List

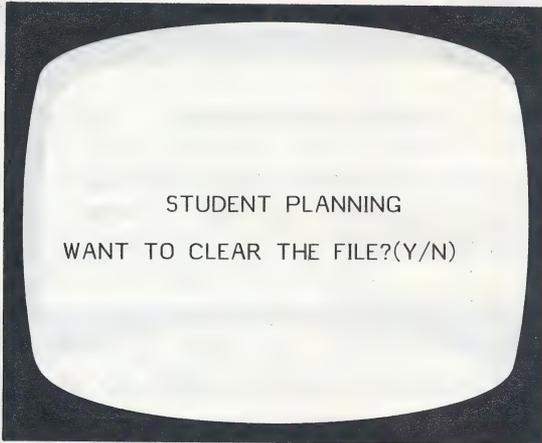
The computer will present the nine original alternatives. You can make additional changes or return to the MENU.

4 - Go to Menu

This option returns you to the main Teacher's MENU as shown on page 4.

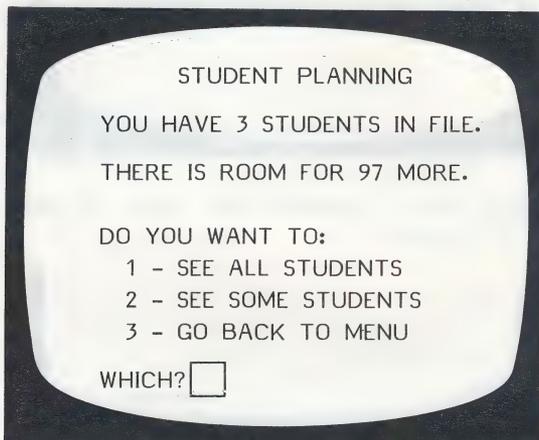
3 - STUDENT PLANNING

As a student works through a lesson, the errors that he/she makes are recorded in the STUDENT PLANNING file. To see this file, select number 3 from the Teacher's MENU.

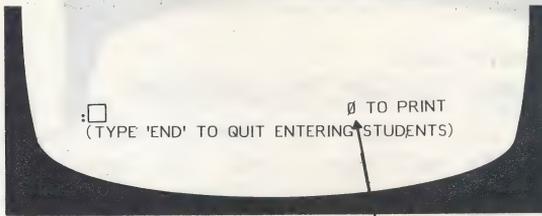


Type **Y** if you want to clear it; type **N** if you want to see it. If there are no records on the file, the computer returns to the MENU.

If **N**, this frame appears:

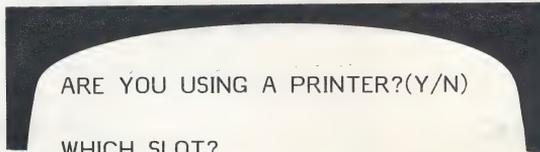


This frame gives you a chance to change your mind. If you want the record of the student, type **Y**.



Continue selecting the students whose records you want to print. The computer will keep a running tally on the number of students you have selected.

When you have entered all of the students' numbers, type **END** in place of another number.



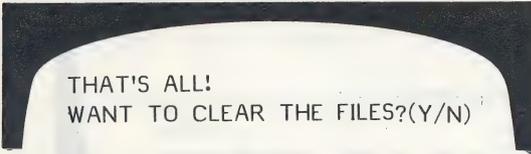
If **Y** →

It will usually be in slot **1** or **2**. If you are not sure, turn off your computer, remove the cover and check.

If you type **Y** you will get a printout of the records. If you type **N**, the records come up on your screen. The records are in the following format.



After all the information is displayed you are asked:



Respond as desired.

The **ESC** key may be pressed at any time to terminate display or printout of student records. A maximum of 100 records can be stored in **STUDENT PLANNING** before the files must be emptied. To empty the response file, answer **Y** to the question at the end of the display/printout.

A printer is nice to have with **STUDENT PLANNING**. This program is designed to accomodate a printer interface in any slot which can be accessed by the **PR#6** command.

4 - SEE CATALOG

This lists the lessons contained in this program.

**INSTRUCTIONAL NOTES
and
BEHAVIORAL OBJECTIVES**

- 1 Given a 3 or 4-letter word with the beginning consonant underlined, the student will select the correct replacement letters for the underlined consonant needed to make new words.
- 2 Same as 1.
- 3 Same as 1.
- 4 Given a 3 or 4-letter word with the medial vowels underlined, the student will select the correct replacement letters for the underlined consonants needed to make new words.
- 5 Same as 4.
- 6 Same as 4.
- 7 Given a 3 or 4-letter word with the ending consonants underlined, the student will select the correct replacement letters for the underlined consonants needed to make new words.
- 8 Same as 7.
- 9 Same as 7.

Word Lists Presently in Files

BEGINNING CONSONANTS 1 - List 1

39 words in list

HAT	R*	B*	D	F*
RAT	Y	P*	S*	C*
CAN	F*	G	M*	P*
RAN	T*	R*	S	F*
FAST	G	L*	M*	P*
BACK	L*	P*	Q	S*
BIN	F*	H	P*	T*
SIT	H*	F*	D	B*
FILL	P*	W*	C	T*
FUN	G*	W	S*	R*
BUG	H*	K	J*	R*
LUCK	D*	W	T*	B*
BED	F*	L*	P	R*
MEN	G	H*	P*	T*
GET	W*	B*	R	Y*
BELL	S*	T*	M	W*
BAND	H*	T	S*	G
BAG	S*	W*	K	R*
WAX	D	T*	L*	B
REST	B*	Z*	K	T*
SEND	B*	M*	G	T*
TENT	F	S*	B*	W*
FISH	B	D*	W*	S
LIST	B	M*	F*	Y
JUST	B*	D*	T	R*
MAP	N*	S*	F	T*
HOP	M*	P*	V	T*
DOT	G*	W	H*	N*
DID	H*	L*	R*	W
DOG	L*	J*	Y	F*
CUT	H*	D	N*	B*
BIG	P*	W*	D*	Y
JAB	B	D*	T*	C*
HAD	L*	M*	N	P*
JOB	S*	W	G*	M*
FIX	M*	B	S*	T
SIP	D*	B	T*	H*
LICK	T*	S*	K*	C
JUMP	B*		W	L*

BEGINNING CONSONANTS 2 - List 2

28 words in list

DAY	G*	M*	T	W*
BAY	P*	S*	V	W*
COLD	H*	J	S*	T*
KIND	W*	H*	T	F*
BAKE	C*	N	L*	M*
RAKE	T*	W*	P	F*
BAR	C*	D	F*	J*
TALL	Z	W*	F*	C*
JAW	F	L*	R*	S*
SEE	R	B*	W*	F*
CAME	F*	S*	J	L*
POKE	B	C*	W*	Y*
LIKE	S	H*	D*	B*
HARD	C*	D	Y*	L*
PART	C*	D*	G	T*
GAVE	S*	W*	J	P*
MARK	P*	W	D*	B
CANE	Z	L*	P*	M*
HORN	B*	D	C*	W*
HOLE	M*	P*	Y	R*
ROPE	W*	D*	H*	P*
MILE	P*	F*	T*	C
NINE	F*	J	P*	L*
BE	W*	M*	D	H*
TRY	B	D*	F*	P*
HIDE	R*	S*	Y	W*
PEEP	W*	B*	D*	N
WEAK	F	B*	L*	P*

BEGINNING CONSONANTS 3 - List 3

26 words in list

WING	S*	Y	R*	K*
PINK	B	S*	W*	R*
BOOK	D	L*	C*	T*
DEAR	F*	H*	K	Y*
DEER	Z	P*	W	B*
COW	J	H*	N*	W*
BOIL	D	S*	F*	C*
SON	T*	W*	Z	V
TOY	L	B*	J*	Z

CARE	D*	B*	M*	J
BANK	S*	R*	K	T*
SANG	H*	G*	T*	V
BUNK	Y	H*	J*	S*
TIGHT	L*	R*	D	F*
POUND	K	H*	F*	R*
TOOL	B	F*	C*	P*
BOOM	Z*	R*	G	D*
MOUSE	F	H*	L*	W
CATCH	R	M*	P*	H*
LAWN	Y*	D*	B	F*
MOON	N*	R	S*	L*
BOOT	T*	R*	H*	D
PULL	F*	B*	D*	R
PUSH	B*	D	R*	V
GOWN	D*	T*	L	B

MEDIAL VOWELS 2 - List 7

32 words in list

SIT	A*	E*	O	U
LIP	E	A*	O*	U
HAT	E	I*	O*	U*
NAP	E	I*	O	U
JET	A	I	O*	U*
LET	A	I*	O*	U
LAD	E*	I*	O	U
MAT	E*	I	O	U
PEP	A	O*	I	U*
DIG	A	E	O*	U*
HAD	E	I*	O	U
HAS	E	I*	O	U
RIB	A	E	O*	U*
RAT	E	I	O*	U*
BAD	E*	I*	O	U*
BAG	E*	I*	Y	U*
CAB	E	I	O*	U*
BAT	E*	I*	O	U*
HAM	E*	I*	O	U*
DAD	E	I*	O	U*
FAN	E	I*	O	U*
MAD	E	I*	O*	U*
NET	A	I	O*	U*
BALL	E*	I*	Y	U*
CAT	E	I	O*	U*

FIX	A	E	Y	O*
FIT	A*	E	O	U
JIG	A*	E	O*	U*
PILL	E	O*	U*	Y
RIP	A*	Y	O	U
RID	A	E*	O*	U
BAN	R	I*	O	U*

MEDIAL VOWELS 2 - List 8

22 words in list

SACK	E	I*	O*	U*
SANG	E	I*	O*	U*
TALL	E*	I*	O*	U
THAN	E*	I*	O	U
CLAP	E	I*	O*	U
BACK	E	I	O	U*
BEST	A	I	O	U*
CAME	E	I	O*	U
CAST	E	I	O*	U
DOLL	A	E*	I*	U*
DRIP	A	E	O*	U
DRAG	E	I	O	U*
FAST	E	I*	O	U
HAND	E	I*	O	U
LAND	E*	I	O	U
LACK	E	I*	O*	U*
LAMP	E	I*	O	U*
LIST	A*	E*	Y	O*
PAST	E*	R	Y	O*
PACK	E*	I*	Y	U*
RACK	E	Y	O*	U
RING	A*	E	O	U*

MEDIAL VOWELS 3 - List 9

30 words in list

STOP	A	E*	I	U
SPOT	A*	E	I*	U
SPOKE	A	E	I*	U
STIP	A*	E*	Y	U
CHIP	A*	E	O*	U
SHOP	A	E	I*	U

SHORT	A	E	I*	U
BLACK	E	I	O*	U
BLOW	A	E*	I	U
BROW	A	E*	I	U
CLAMP	E	I	O*	U*
DIE	A	O*	U*	Y*
DRINK	A*	E	O	U*
DRIFT	A*	E	O	U
DRAWN	E	I	O*	U
FIZZ	A	E	O	U*
HEAD	E*	I	O	U
LEAD	A	I	O*	U
ROAST	E	I	O*	U*
DONE	A	E	I*	U*
ROAD	A	E*	I	U
STAR	E	I*	O	U
BLINK	A*	E	O	U
CRAMP	E	I*	O	U
DRAW	E*	I	O	U
DIME	A*	E	O*	U
BANK	E	I	O	U*
STARE	E	I	O*	U
STAMP	E	I	O*	U*
SLAM	E	I*	O	U*

ENDING CONSONANTS 1 - List 4

14 words in list

HOP	T*	G*	F	V
SAT	B	D*	G*	P*
BAT	D*	G*	B	V
MAT	N*	D*	C	P*
CAT	P*	N*	F	B*
FAN	C	T*	M	D*
RAP	B	G*	N*	T*
LAP	B*	D*	G*	N
PAN	T*	D*	L*	F
HAD	B	G*	S*	T*
COB	D*	G*	L	P*
POD	B	T*	P*	F
ROT	B*	D*	P	M
SLAP	M*	D	L	T*

ENDING CONSONANTS 2 - List 5

18 words in list

FIT	B*	X*	M	N*
RUN	P	B*	G*	V
PIG	T*	B	N*	D
BUT	D*	G*	S*	H
BIG	T*	B*	D*	S
HIT	S*	D*	B	M*
CUT	B*	L	P*	V
BET	G*	B	D*	X
PEG	N*	B	P*	T*
WET	B*	D*	X	G
WIN	B	T*	G*	D
LID	G	T*	P*	S
RIM	B*	D*	X	P*
SIT	X*	B	N*	P*
PLUM	B	G*	T	S*
SLIT	D*	M*	P*	X
HUM	G*	B*	P	T*
SKIP	B	M*	D*	T*

ENDING CONSONANTS 3 - List 6

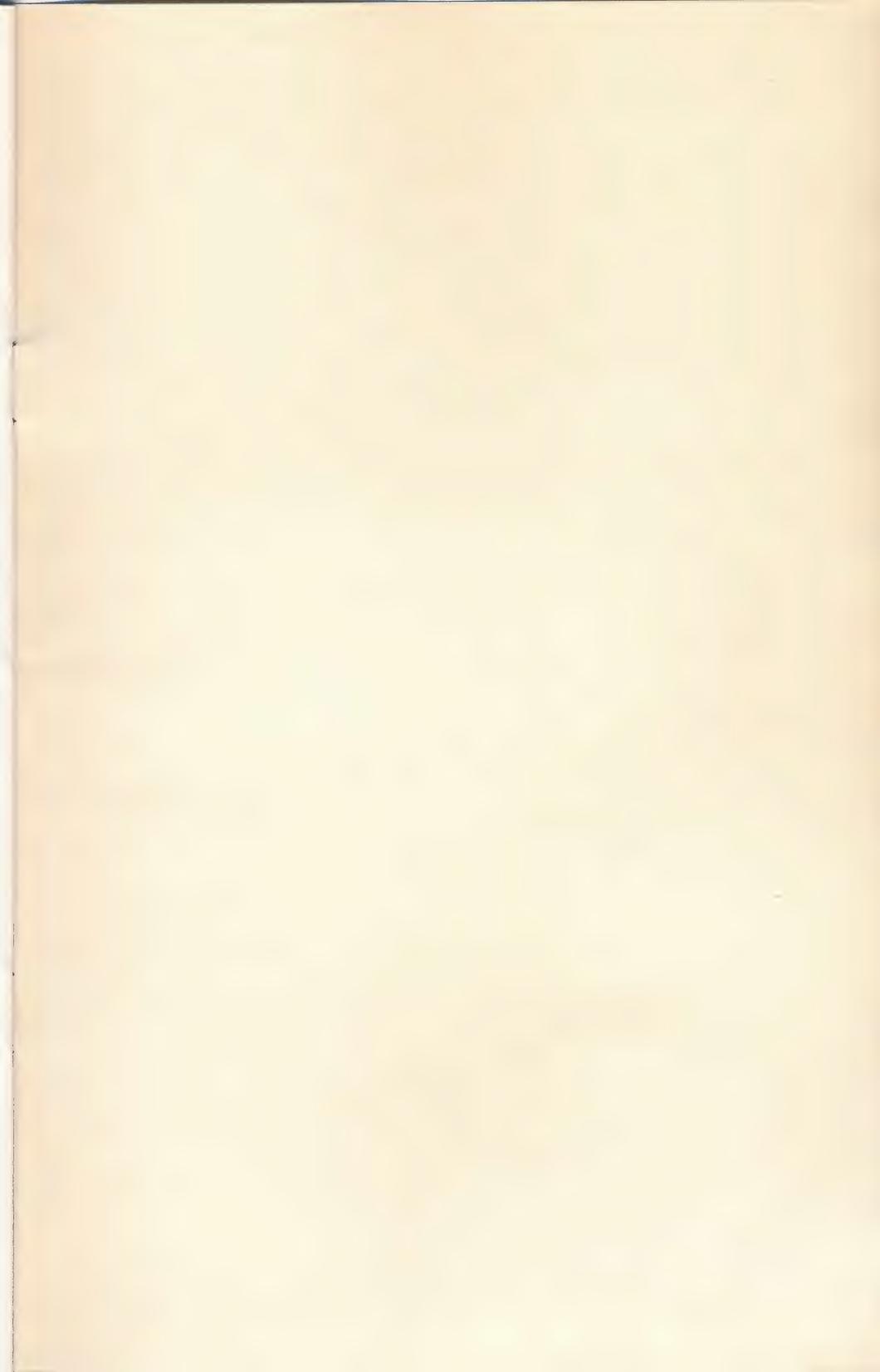
19 words in list

CAKE	B	N*	V*	P*
FADE	B	K*	T*	M*
GAME	T*	F	Z*	V*
LAKE	H	M*	N*	T*
MAKE	B	D*	L*	N*
DIVE	B	M*	K*	N*
FILE	N*	R*	V*	M
WIDE	P*	N*	F*	B
PIPE	Z	L*	N*	X
TIDE	B	M*	L*	R*
HOME	F	P*	L*	S*
ROPE	S*	D*	B*	F
LEAF	B	D*	P*	N*
BEAD	N*	G	M*	T*
MEAL	N*	M	T*	X
FEED	T*	P	K	L*
WEEK	B	G	P*	D*
PAIL	D*	G	N*	T
LIKE	N*	F*	M*	P









Hartley 

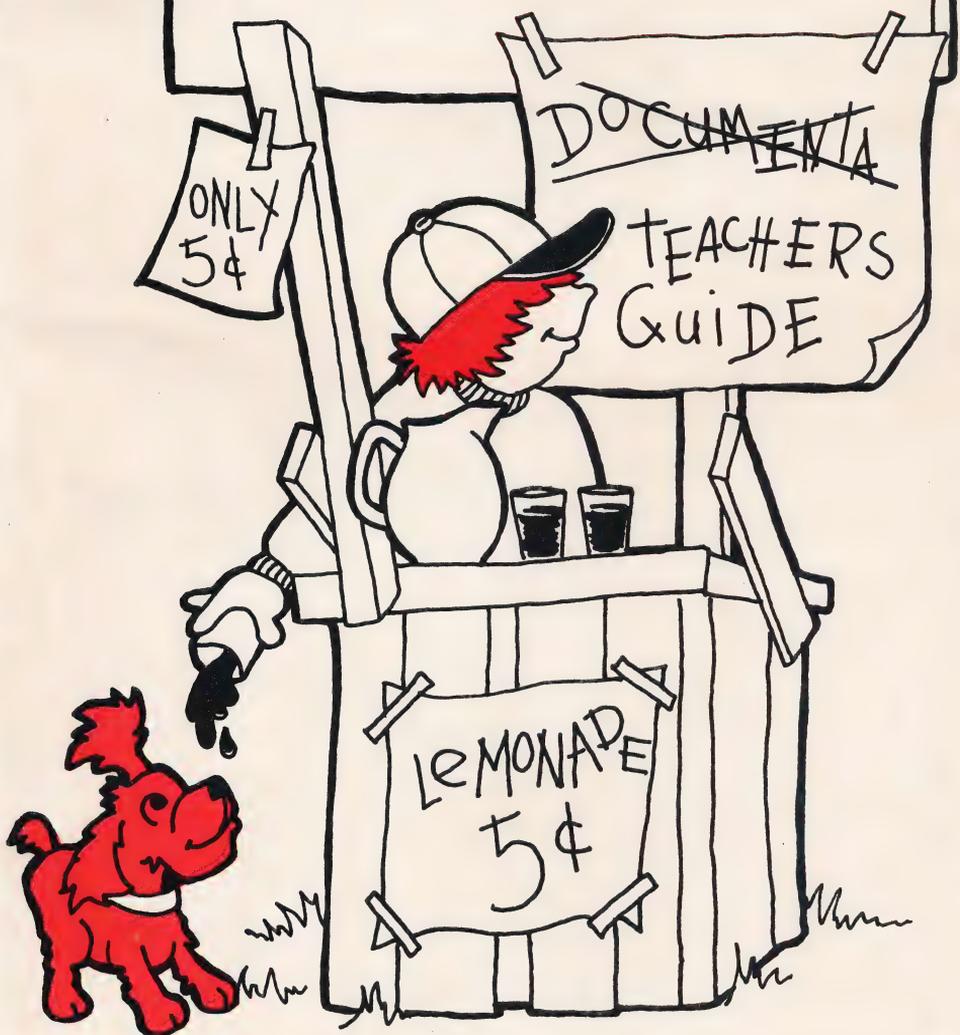
Hartley Courseware, Inc.

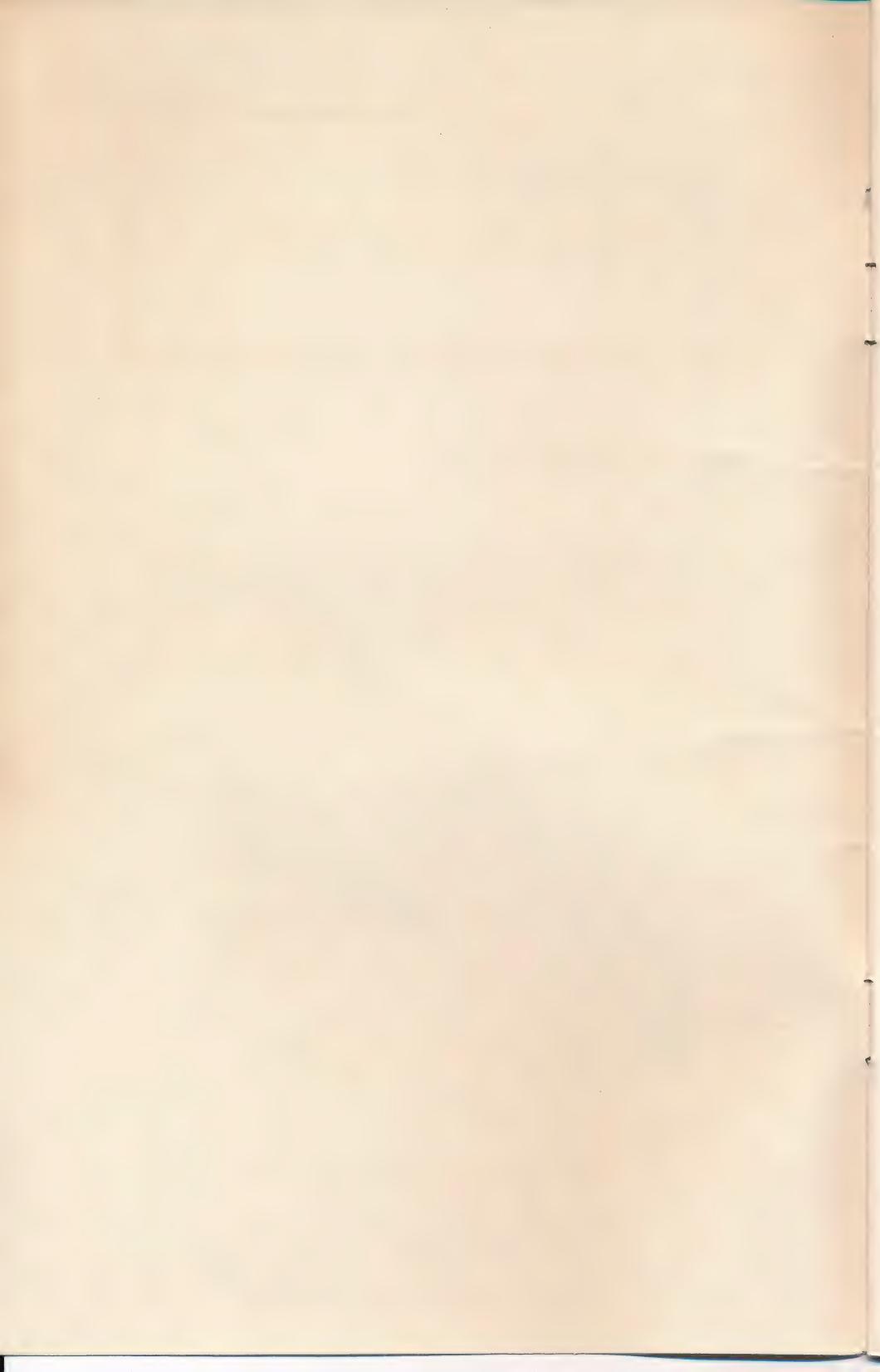
Hartley 

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15-01

CAPITALIZATION





CAPITALIZATION

SPECIAL FEATURES

This two disk program has many special features.

The **PRACTICE DISK** allows the teacher to:
modify or delete any of the sentences.
add new sentences (up to 25 per concept).
capitalize and/or underline any word.

The **TEST DISK** has all of the above features plus

records are kept for up to 50 students who work on the Test Disk.

the teacher can add/delete students as desired.

All Hartley courseware requires
a 48K Apple II* with Applesoft in
ROM and one Disk Drive.

All Courseware will boot on 3.2 or 3.3 DOS.

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BRIEF DESCRIPTION

There are two disks in this package. They run independently of each other. The two disks cover exactly the same objectives.

The **PRACTICE DISK** presents a rule, followed by two examples using the rule and up to 25 sentences requiring the student to apply the rule. The sentences are presented randomly. This format is repeated for each of the lessons on the Practice Disk.

All students should work on the Practice Disk before working on the Test Disk.

The **TEST DISK** presents 10 test sentences to test the skills from corresponding lessons on the Practice Disk. The student's name must be entered on the Test Disk by the teacher before the student can use it. (see page 12)

CAPITALIZATION

Quick Notes for OLD PRO's.....	3
(If you've read this once but need review, or use a lot of our software)	
The PRACTICE DISK.....	4
Starting from Scratch.....	4
The Teacher's MENU.....	7
(MODIFY/ADD/DELETE a sentence)	
Print Sentences on Printer.....	9
The TEST DISK.....	10
The Teacher's MENU.....	10
(ADD/DELETE/DISPLAY students)	
Print/Display Student Records.....	14
Instructional Notes and Behavioral Objectives.....	18

Lessons on These Disks

All lessons on the Test Disk and Practice Disk are selected from a MENU presented to the student after the student types in his/her name.

The lessons and specific objectives for each are listed in the back of this manual.

CREDITS

The upper/lower case alphabet used on this disk was developed by MECC, 2520 Broadway Dr., Lauderdale, MN 55113.

Permission for its use has been granted to Hartley Courseware.

QUICK NOTES FOR OLD PRO'S

The two disks in the CAPITALIZATION package (the Practice Disk and the Test Disk) are used independently.

The Test Disk has the capability of

- STUDENT PLANNING
- MODIFY sentences

You cannot ADD/DELETE sentences on the Test Disk. There must always be 10 per lesson.

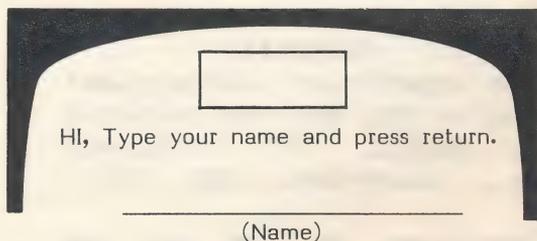
A student name must be entered into the Test Disk before he/she can use it.

The Practice Disk does not have STUDENT PLANNING. Any student may use the disk without previously typing in their name. All sentences may be modified/deleted and new ones added (up to 25 sentences per lesson).

For both disks, the lesson automatically terminates if a student's score falls below 41% after the first four sentences.

The lesson will also terminate if a student correctly completes ten consecutive questions (we don't want him/her to get bored!) To STOP a lesson at any time, press **ESC** when a response is called for.

To get the TEACHER'S MENU, type MENU when the following screen is displayed.



THE PRACTICE DISK

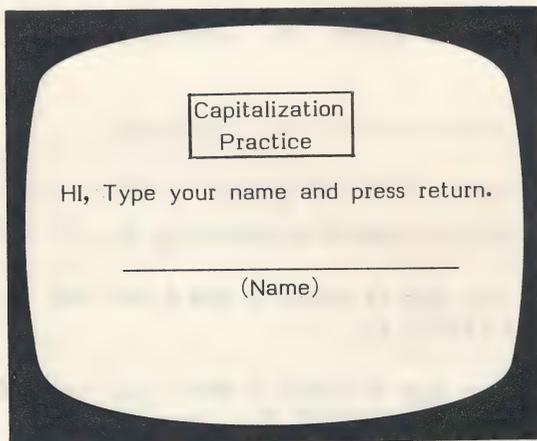
Starting From Scratch

Start with the Practice Disk. Put the disk into Drive #1. Turn on your computer.

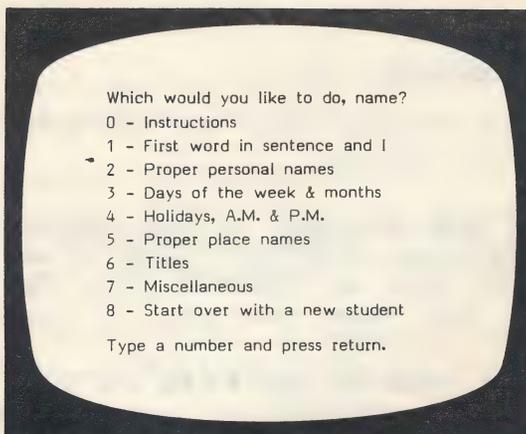
"BOOT" your disk according to your computer manual. Hartley disks will boot on either a 3.2 or 3.3 disk operating system. If you have an Apple II Plus, the disk will automatically boot when you turn on the computer.

If you have an Apple II, type **PR#6** and press **RETURN**. The program will automatically load. **DO NOT TYPE CATALOG.**

First, the credits will be shown on the screen. They will vanish and the screen will show:



After the student types his name and presses **RETURN**, the following MENU will be shown.



Have the student select **0 - INSTRUCTIONS** first.

For each direction given, the student will be asked to 'TRY IT'.

The following directions will be presented.

- A sentence will be given. A line can be moved from word to word by pressing the SPACE BAR.
- When the line is under a word you can CAPITALIZE it by TYPING C.
- When the line is under a word you can ERASE a CAPITAL by TYPING E.
- The student can change the words over and over again.
- When the student thinks the sentence is correct, (s)he presses **RETURN**. If the sentence is not correct, the correct sentence will appear directly below the student's answer.

If the student is correct, a written reinforcer will be given.

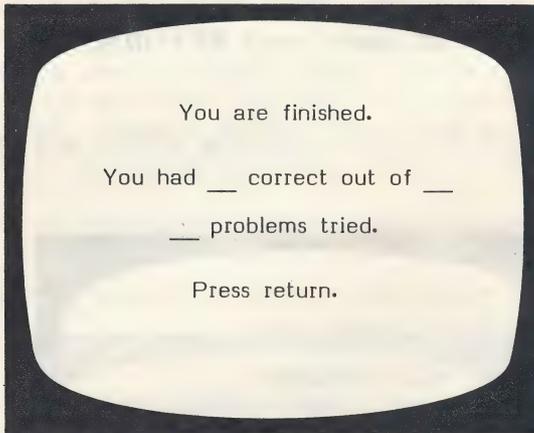
To STOP a lesson at any time, press the **ESC** key when a response is called for.

If the student is not correcting the questions, but only pressing **RETURN**, the lesson will terminate and return to the MENU.

The lesson will also terminate at any time a student has an accumulated score of 41% after completing the first 4 sentences.

The student may press **H** at any time for a review of the directions.

At the end of the lesson, the following message will be displayed.



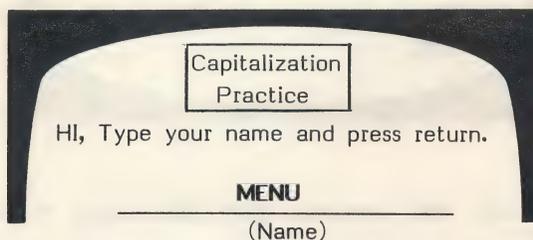
The computer will return the student back to the main MENU. The student may then run another lesson, or

8 - START OVER WITH A NEW STUDENT

THE TEACHER'S MENU

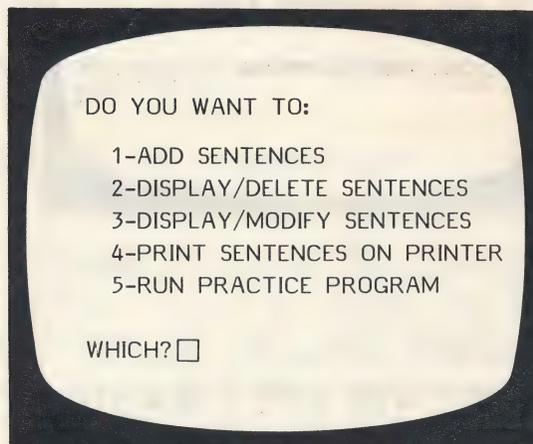
In order to make any changes in the sentences that occur in the lessons, you need to use the Teacher's MENU.

To access the Teacher's MENU in either the Practice Disk or the Test Disk, type the letter **M** when the credits are being displayed or type the word MENU in the frame.



Note: If you type **M**, don't press RETURN.

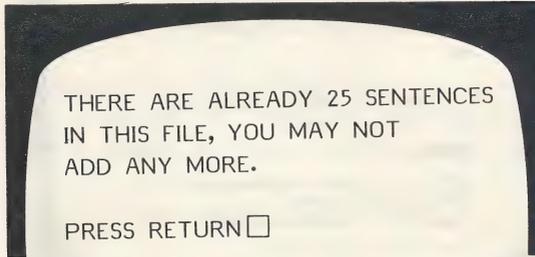
On the Practice Disk the following MENU will be displayed:



The first time you select

1-ADD SENTENCES

the following screen will be displayed.



You will need to delete sentences before you can add new ones. You may simply wish to modify the ones that are already there.

To delete a sentence, select

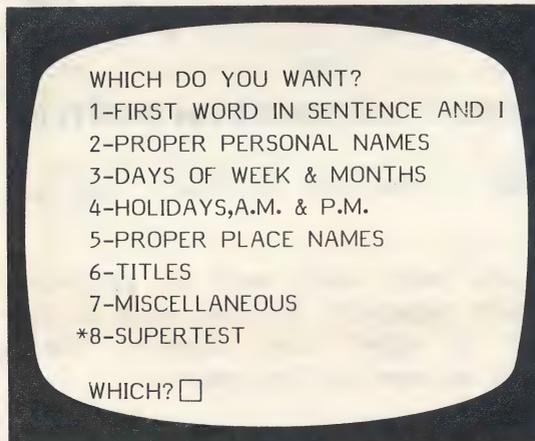
2-DISPLAY/DELETE SENTENCES

The sentences are all shown. You will be asked to enter the numbers of the ones you want to delete.

If you want to modify a sentence, select

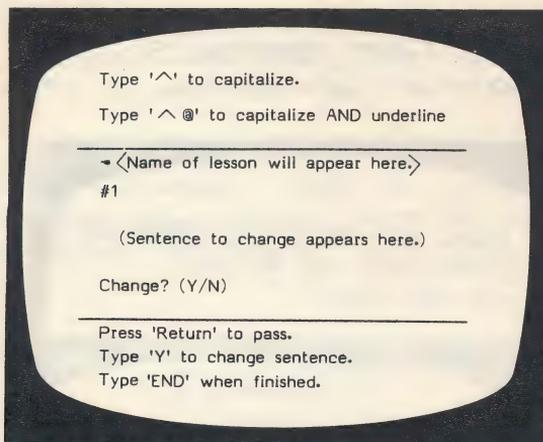
3-DISPLAY/MODIFY SENTENCES

Next, you will need to select the lesson you want to modify.



*Appears on Test Disk only.

The following screen will then be displayed.



As you work through the sentences, follow the directions carefully.

Remember '^' is typed immediately before the word you want capitalized.

'^@' is typed immediately before the word you want capitalized and underlined.

Note: Double quotation (") marks is the only character which is not accepted. Also names with 'double' capitals such as McDonald should be avoided!

When you have made all of the changes you want, type **END**. Be sure **END** is the only word that appears on the line.

4-PRINT SENTENCES ON PRINTER

You will need to indicate in which slot your printer is located.

This option will only work well on printers that have upper/lower case capability. Printers such as the Centronics 779 will print all upper case, however, the appropriate display can still be seen on the monitor.

This feature is very handy if you want to modify the sentences.

THE TEST DISK

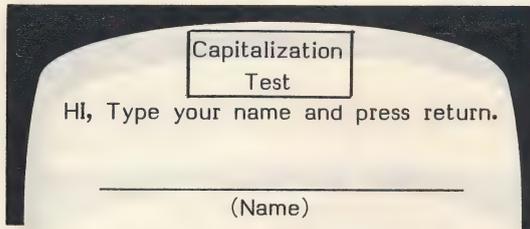
This disk should be used after students have had an opportunity to work on the Practice Disk. Or, you may wish to use the Test Disk as a pre-test for students to determine the areas in which they have difficulty.

If you do use the Test Disk for a pre-test, you will need to have them go through the Instructions and a few sentences from at least one lesson on the Practice Disk. This will familiarize them with the function of the SPACE BAR and the **C** and **E** keys.

In using the Test Disk, the first thing you must do is enter the name of the students into the disk.

THE TEACHER'S MENU

The MENU on the Test Disk can be accessed the same way as the MENU on the Practice Disk. Type MENU when this frame is displayed.



A screenshot of a computer terminal window. At the top, a box contains the text "Capitalization Test". Below this, the text "Hi, Type your name and press return." is displayed. A horizontal line is drawn across the screen, and below it, the text "(Name)" is shown, indicating where the user should enter their name.

You may also type **M** when the credits are being displayed to access the Teacher's MENU--only type **M**, DON'T PRESS RETURN!

The MENU on the Test Disk has the following options:

X STUDENTS IN FILE

DO YOU WANT TO:

- 1-ADD STUDENTS
- 2-DELETE STUDENTS/CLEAR FILES
- 3-PRINT/DISPLAY STUDENT LIST
- 4-PRINT/DISPLAY STUDENT RECORDS
- 5-DISPLAY/MODIFY SENTENCES
- 6-PRINT SENTENCES ON PRINTER
- 7-RUN CAPITALIZATION TEST

WHICH?

If you choose

7-RUN CAPITALIZATION TEST

the following screen will be displayed.

Which would you like to do,name?

- 1 - First word in sentence and I
- 2 - Proper personal names
- 3 - Days of the week & months
- 4 - Holidays, A.M. & P.M.
- 5 - Proper place names
- 6 - Titles
- 7 - Miscellaneous
- 8 - Supertest
- 9 - Start over with a new student

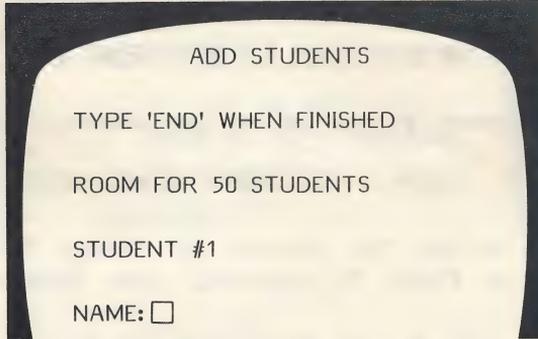
Type a number and press RETURN.

TO ADD/DELETE/DISPLAY STUDENTS

After bringing up the Teacher's MENU, select the desired option.

Type in only the number.

1-ADD STUDENTS



ADD STUDENTS

TYPE 'END' WHEN FINISHED

ROOM FOR 50 STUDENTS

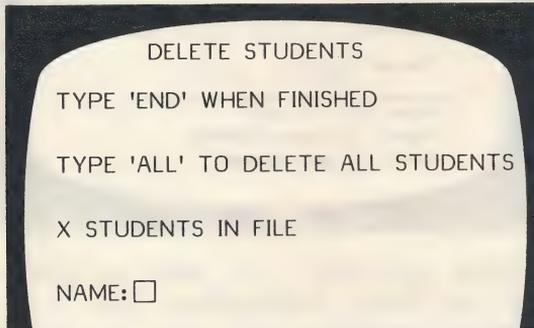
STUDENT #1

NAME:

Type the students' names one at a time. Use only the first name if desirable. The student will need to type in the same name exactly. Type **END** as the last name when you are finished. The Test Disk can hold to 50 names.

2-DELETE STUDENTS/CLEAR FILES

If you want to DELETE some or all of the student names, select 2 from the MENU.



DELETE STUDENTS

TYPE 'END' WHEN FINISHED

TYPE 'ALL' TO DELETE ALL STUDENTS

X STUDENTS IN FILE

NAME:

Type the names of the students you wish to delete.

To display the student names already on the disk, select 3 - PRINT/DISPLAY STUDENT LIST. The student names will be shown.

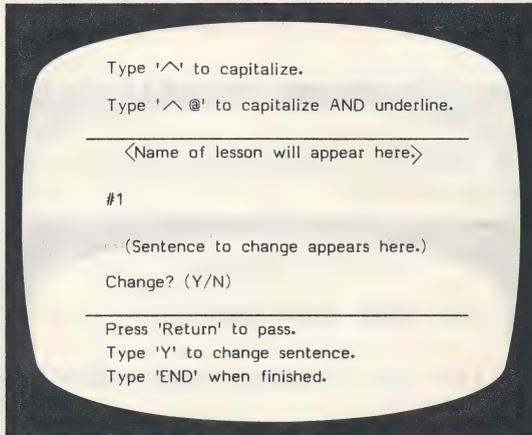
Option 2 will also allow you to CLEAR all student files without removing their names from the disk. DELETE ALL STUDENTS clears the files and removes the student names.

3 - PRINT/DISPLAY STUDENT LIST

This option gives you a list of the students on the disk.

5 - DISPLAY/MODIFY SENTENCES

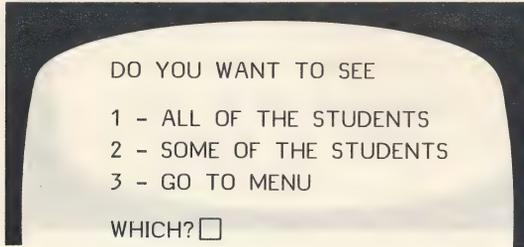
This option allows the teacher to change the sentences on the Test Disk. If selected, the following screen is displayed.



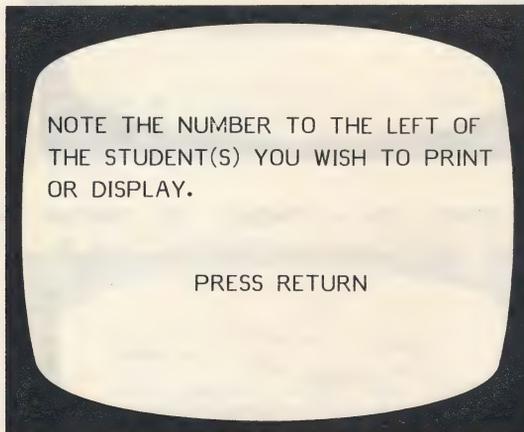
Follow the same procedure you used to modify sentences on the Practice Disk. Remember, the Test Disk only has ten possible questions for each lesson. You cannot ADD or DELETE the sentences on the Test Disk.

4-PRINT/DISPLAY STUDENT RECORDS

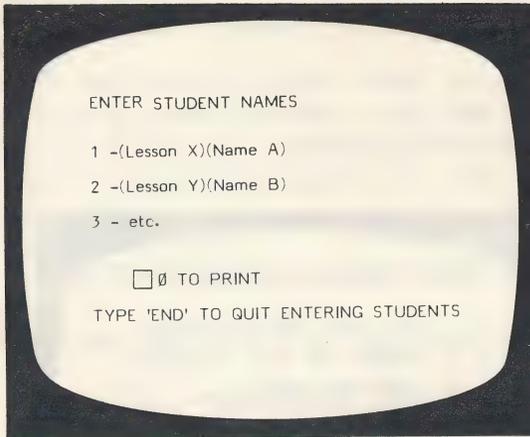
This capability is only found on the Test Disk. Records are kept for all 50 students. When you select **4**, the following screen will appear.



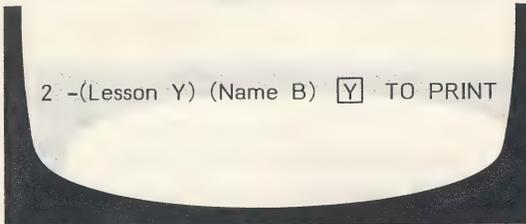
You may look at all records or only a few. If you select **2-SOME OF THE STUDENTS** the following screen will be displayed:



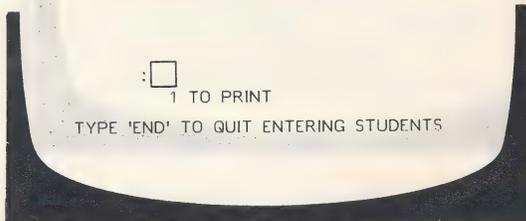
As you select the students whose records you want to view, you will be typing just the number.



Type the number of a student you want to see and press **RETURN**. For example: 2



This frames gives you a chance to change your mind. If you want the record on the student, type **Y**.



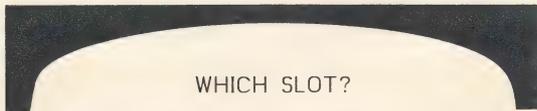
Continue selecting students whose records you want to print. The computer will keep a running tally on the number you have selected.

When you have entered all of the students, type **END** (in place of another number).

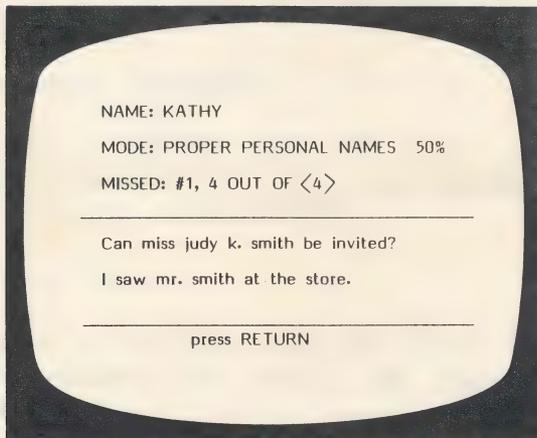


If you type **Y**, the printer will list the records. If you type **N**, the records will come up on your monitor screen.

If **Y**-



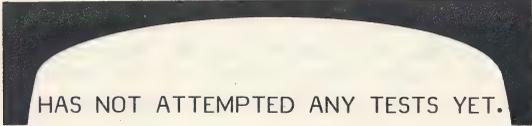
It will usually be a **1** or **2**. If you are not sure, take off the cover and check. The printout will be in the following format.



*Sentences missed will be displayed just as the student entered them.

For each student, information is stored for each test that he/she takes. If a student takes the same test more than once, the most recent results will overwrite the previous results with no indication of how many times (s)he has taken the test previously.

If a student has not attempted any of the tests, you will get the message:



HAS NOT ATTEMPTED ANY TESTS YET.

INSTRUCTIONAL NOTES
and
BEHAVIORAL OBJECTIVES

Lesson 1 - (First Word and I)

- #1 - Given a sentence with all lower case letters, the student will correctly capitalize the beginning word in each sentence.
- #2 - Given a sentence with lower case letters for I, the student will correct it.

Lesson 2 (Proper personal names)

- #3 - Given a sentence with all lower case letters the student will correctly capitalize all proper personal names such as Mrs., Mr., Miss and Ms.

Lesson 3 (Days and Months)

- #4 - Given a sentence with all lower case letters, the student will correctly select and capitalize the names of the days of the week.
- #5 - Given a sentence with all lower case letters, the student will correctly capitalize the names of the months.

Lesson 4 (Holidays, A.M.,P.M.)

- #6 - Given a sentence with all lower case letters, the student will correctly capitalize names of holidays, A.M. and P.M.

Lesson 5 (Proper names)

- #7 - Given a sentence with all lower case letters, the student will select and capitalize proper names.

Lesson 6 (Titles)

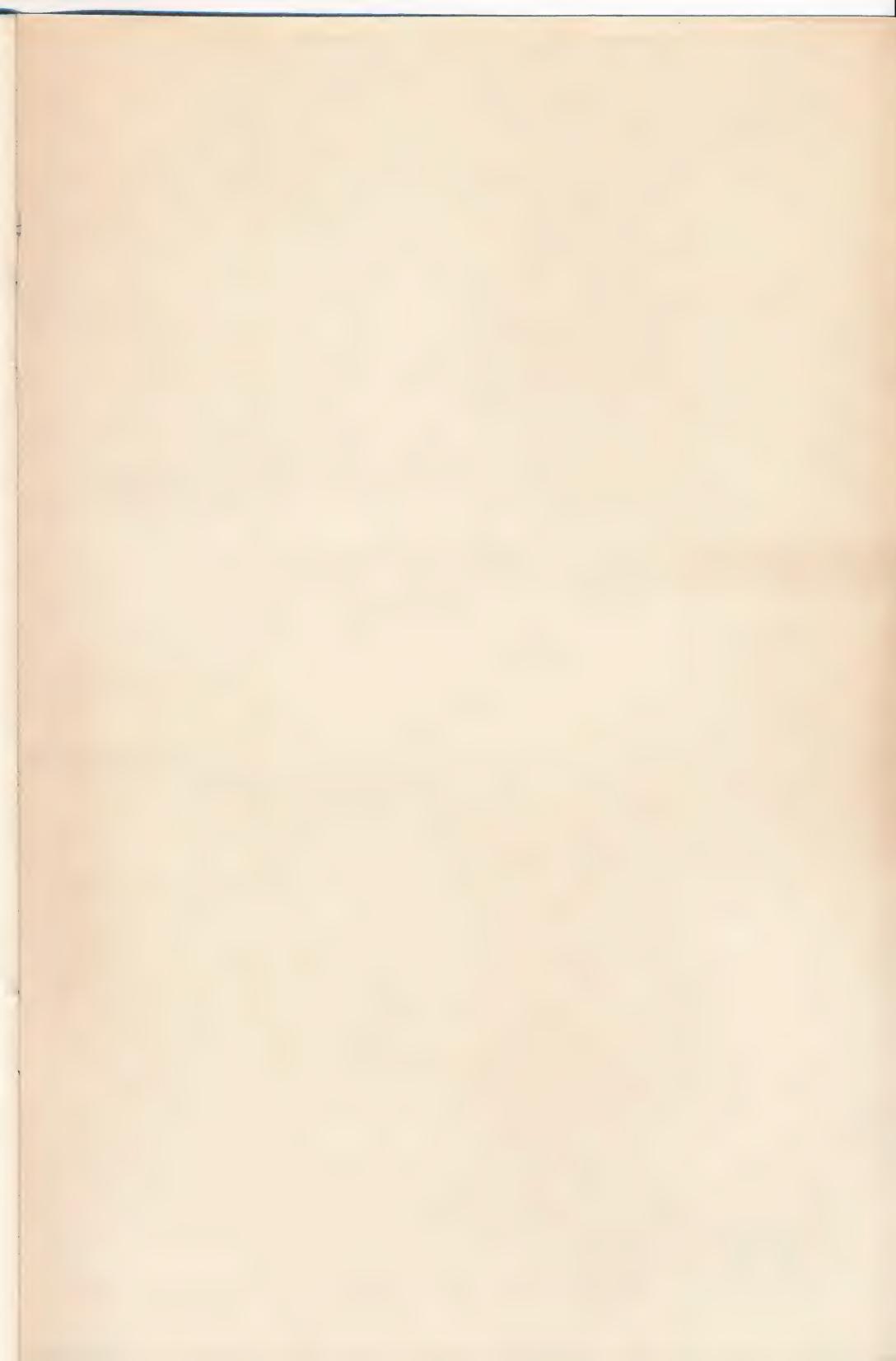
- #8 - Given a sentence with all lower case letters, the student will select and capitalize titles of books, newspapers, magazines, movies, television programs, etc.

Lesson 7 (Miscellaneous)

- #9 - Given a sentence with all lower case letters, the student will capitalize proper nouns, personal titles, and abbreviations of directions.
- #10 - Given a sentence with all lower case letters, the student will capitalize personal titles such as Doctor Jones, but not the doctor.

We hope that you enjoy using this disk as much as our validation schools have. Feel free to change the sentences on the Practice Disk to reflect the vocabulary of your own students.

CAUTION: If you do change the sentences so that they no longer drill on the same objectives, be sure to change the corresponding sentences on the Test Disk and make a note in your documentation for future users.



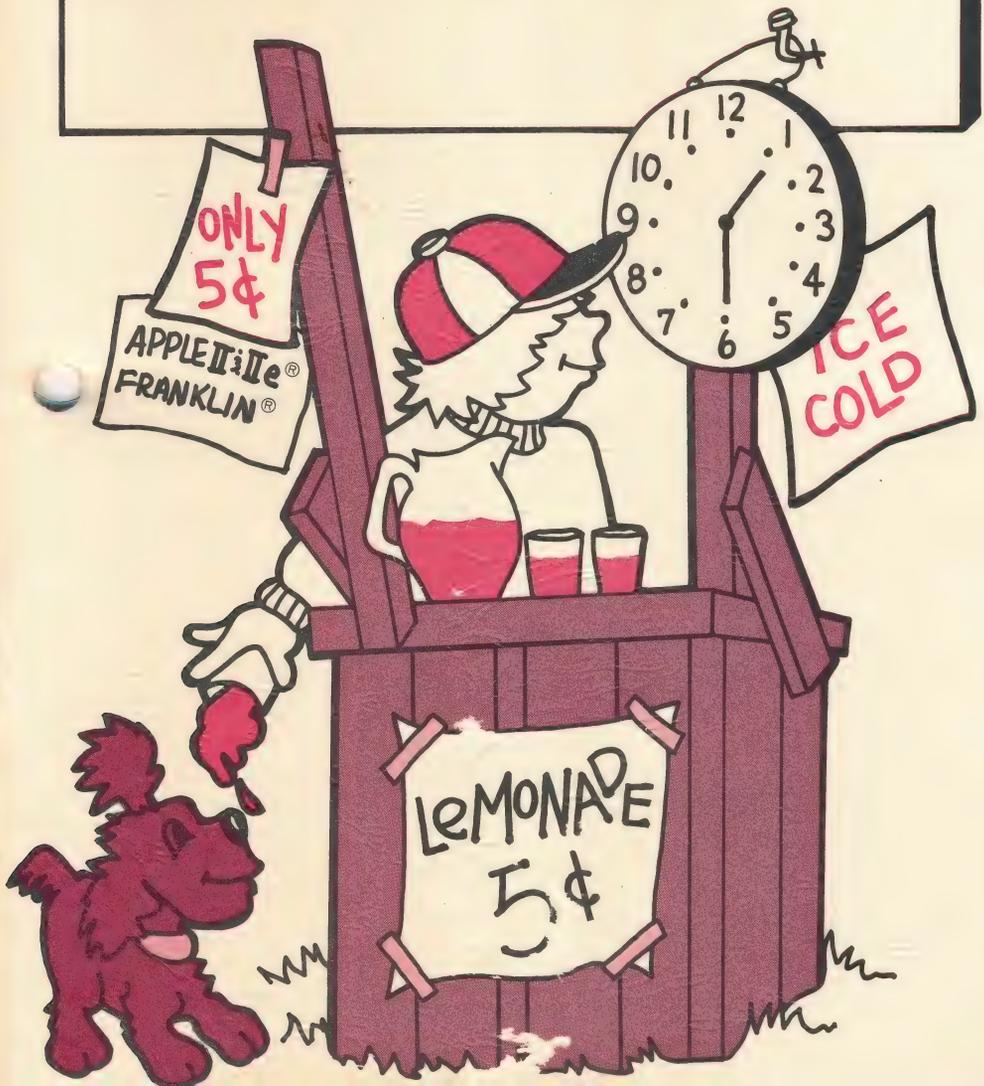
Hartley 

Hartley Courseware, Inc.

Hartley

DEMO ONLY
NOT FOR RESALE

Clock





Clock

SPECIAL FEATURES

Interactive graphics allow the student to move the hands of the clock by pressing the **B** and **F** keys.

STUDENT PLANNING records all student errors on the teacher's file for later review. The file will hold **40 records**. It may be cleared at any time, making room for additional records.

Design Options allow teachers to add or delete prompts for the student.

Appropriate for grades 2-5.

**All Hartley courseware requires
a 48K Apple II* or IIe*
and one Disk Drive.**

All courseware will boot on 3.2 or 3.3 DOS.

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Dimondale, MI 48821**

*Apple II & IIe are trademarks of APPLE COMPUTER, INC.

TEACHER'S GUIDE

Quick Notes for OLD PRO's.....2 (If you've read this once but need a quick review.)	2
Starting from Scratch.....3 If you've never used one of our programs.	3
Using the Different Options.....5	5
The Teacher's MENU.....9	9
Behavioral Objectives.....15	15

PURPOSE

This program was designed to provide the practice a student needs to convert between digital time and clock time. As a consequence of the popularity of digital clocks and watches, many children cannot read a regular (analog) clock! Three modes of practice are available. The fourth (tutorial) mode was added at the request of many teachers. Its purpose is to help the beginning user understand that there is a relationship between digital and analog time.

CREDITS

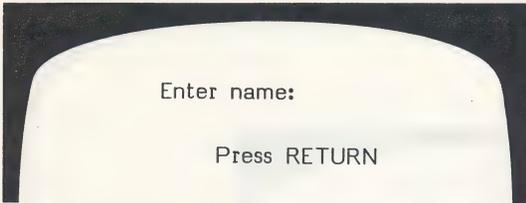
The upper/lower case alphabet used on this disk was developed by MECC, 2520 Broadway Dr., Lauderdale, MN 55113. Permission for its use has been granted to Hartley Courseware, Inc.

Test site schools available upon request.

CLOCK

Quick Notes for OLD PRO'S

For STUDENT PLANNING type MENU when:



appears on the screen.

Stopping the program: type **ESC** when a response is called for.

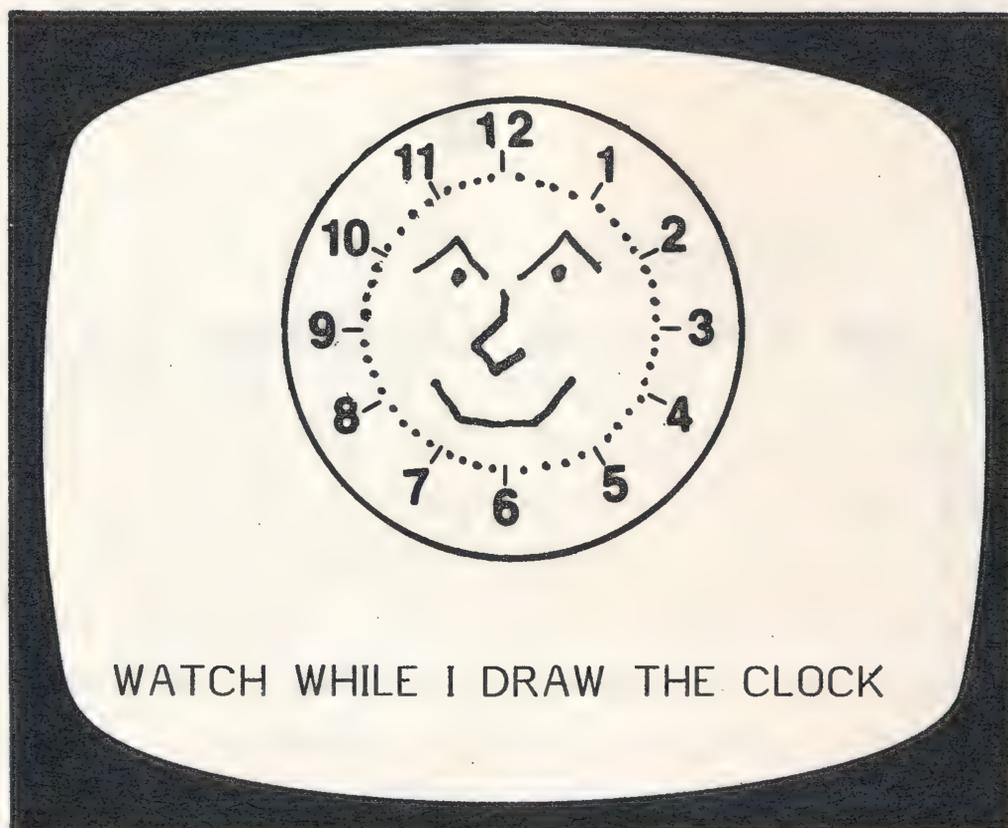
STARTING FROM SCRATCH

Put the disk in Drive #1; close the small door. Turn on your computer. If you have an Apple II Plus, the disk will boot automatically when you turn on the computer.

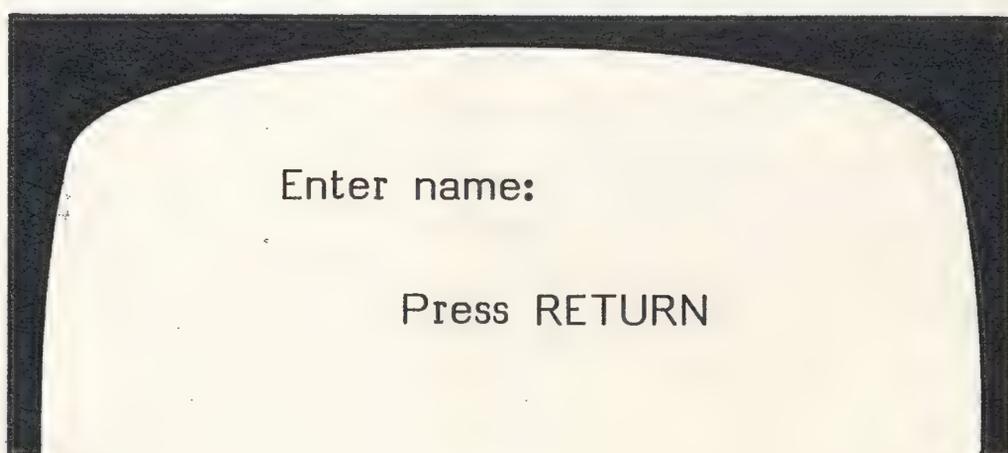
If you have an Apple II - Type PR#6 press RETURN.

The program will load into your computer and run automatically - don't type CATALOG!

The credits will vanish and the screen will say:



After the clock is drawn, the screen will clear and



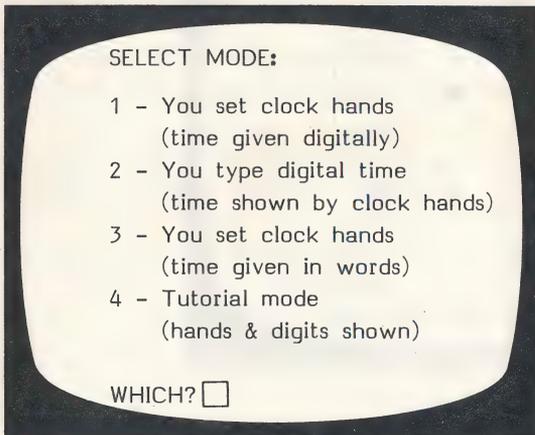
will appear.

The student should type his/her name. If the teacher wishes to see the student records, then type MENU when the name request appears. For further information, see the STUDENT PLANNING section of this manual.

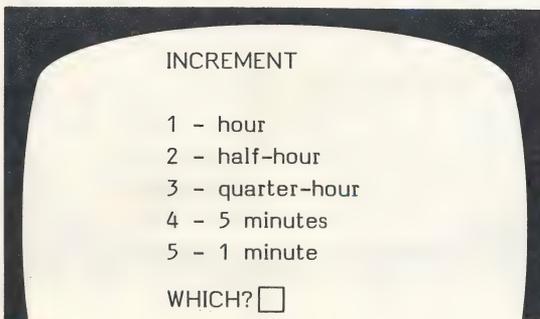
After the student's name is entered-

JOE press **RETURN**

The screen will clear and the following options will be displayed:



The student or teacher should select a mode and type the number (only the number), followed by **RETURN**. The screen will clear and you will be asked to select the increment.



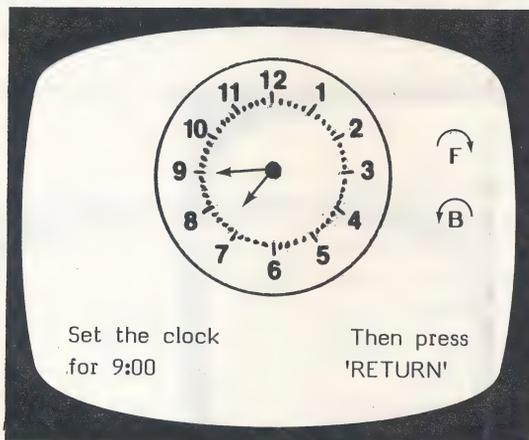
The problems will vary based on the increment and the hands on the screen will move according to the increment selected.

USING THE DIFFERENT OPTIONS.

If you select

1 - You set clock hands (time is given digitally)

After selecting the time increment, a clock face appears.



Press the **F** to move the hands **forward**.
Press the **B** to move the hands **backwards**.

TRY IT!

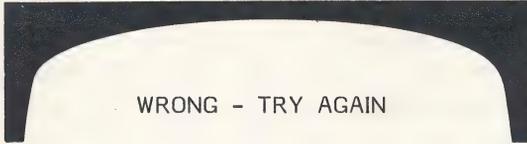
In the lower left portion of the screen a message such as- "Set the clock to show 8:00 and press 'return'." will appear.

Set the hands to the desired positions by using the **F** and **B** keys. (Sometimes it is easier to hold the **F** or **B** key down and depress the **REPEAT** key than to press the **F** or **B** key repeatedly.) When the student thinks the hands are set correctly he/she should press **RETURN**.

The computer will give positive feedback if the student is correct.

Press **RETURN** for the next problem.

If the answer is wrong, the following message will appear:



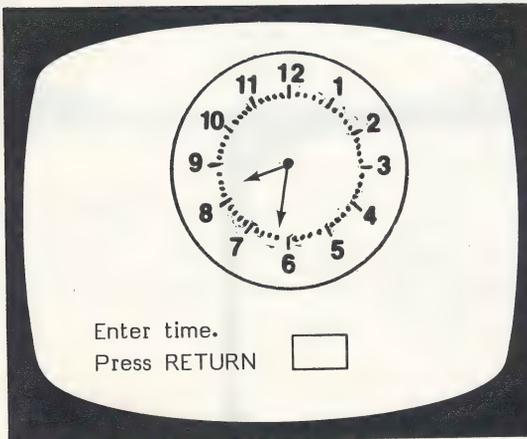
The same problem will be repeated. If it is missed a third time, the computer will "show" the student the answer by setting the hands to the correct position. Unless the lesson is stopped, 20 problems will be shown. The computer will display the student's results. Press **RETURN** to begin another student lesson.

Pressing the **ESC** key will exit the program at any point and display the results of the student's entries.

Results are automatically stored in the **STUDENT PLAN-NING** file for later teacher use.

If you select

2 - You type digital time
(time is shown by clock hands)



The clock will be drawn with the hands set and the student will be asked to type in the digital expression of the time shown. This answer must include the colon correctly placed. The entry "1215" for "12:15" will be counted as an incorrect response.

As in Option 1, a correct response will result in a positive message to be displayed on the screen and an incorrect response will cause a "Wrong - try again." message to be displayed. After a correct response, press **RETURN** for the next problem. After an incorrect response, the same problem will be repeated. If the student misses the problem twice in a row, the computer will display the correct answer.

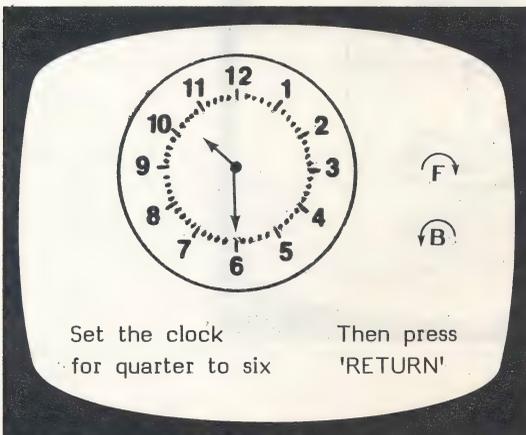
Pressing the **ESC** key will exit the program at any point and display the results of the student's entries.

Results are automatically stored in the **STUDENT PLAN-
NING** file for later teacher use.

If you select

3 - You set clock hands
(time is given in words)

the computer will automatically select the quarter hour increment.



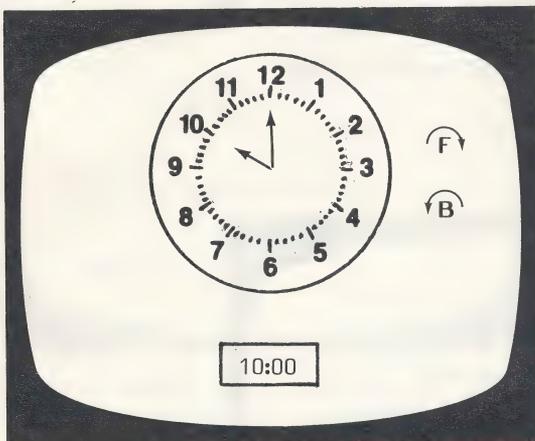
This option will run just like Options #1 and 2. After two incorrect attempts, the answer will be given.

Exiting the program by pressing **ESC** and storage of responses in the STUDENT PLANNING file are the same as for Options #1 and 2.

If you select

4 - Tutorial mode
(hands and digits shown)

After you select the increment the following screen will be shown:



As the student presses the **F** or **B** key, the computer will show both the digital time and clock time. The student may end the lesson at any time by pressing **ESC**.

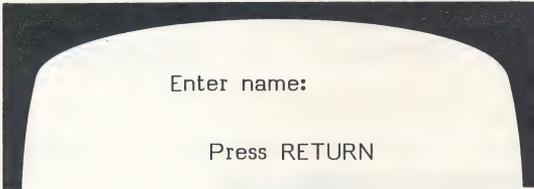
THE TEACHER'S MENU

The lessons on this disk are for the student.

There are also programs for the teacher.

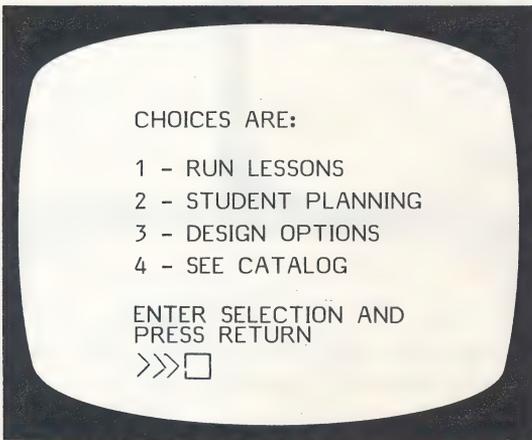
The teacher's programs may be accessed by using the name MENU.

When the following screen is shown:



type the word MENU, press RETURN.

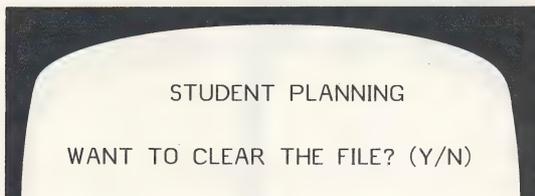
The following MENU will be shown.



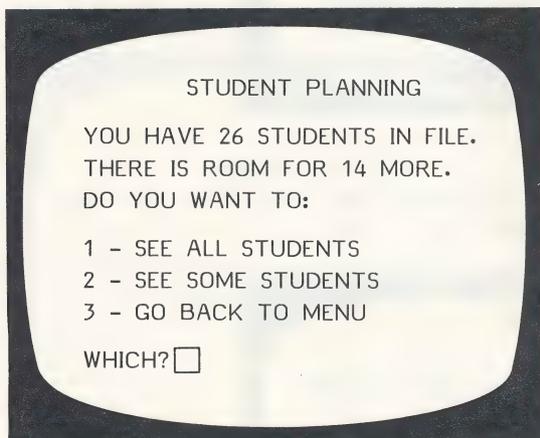
The following pages will describe how to use the programs on the teacher's MENU.

Select

2 - STUDENT PLANNING press **RETURN**

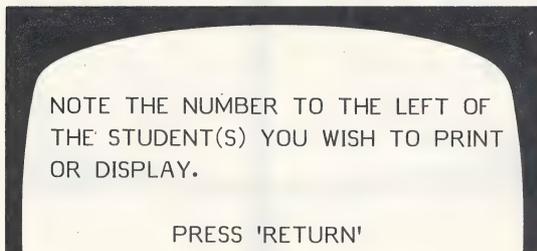


Type **N** if you want to see it; **Y** if you want to completely erase all student results. Press **RETURN**.

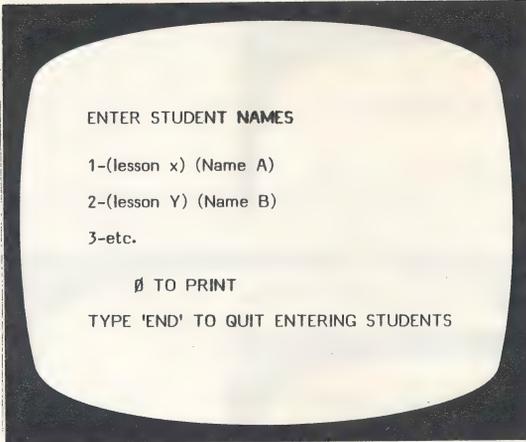


If you want to see only some of the students select

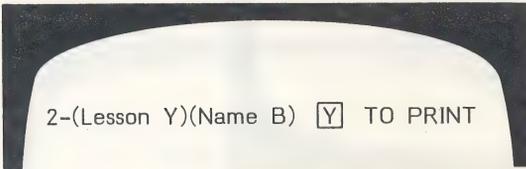
2 - SEE SOME STUDENTS Press **RETURN**.



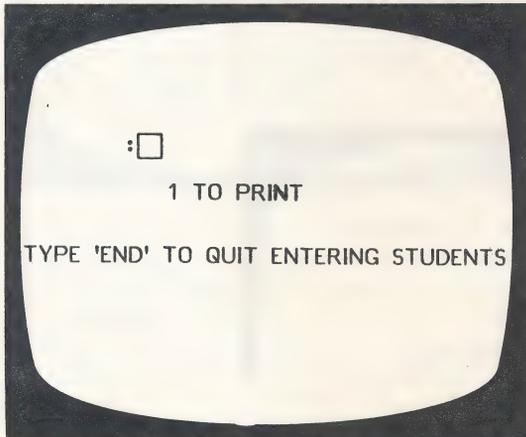
As you select the students whose records you want to view, you will be typing just the number.



Type the number of a student you want to see and press RETURN. For Example: 2

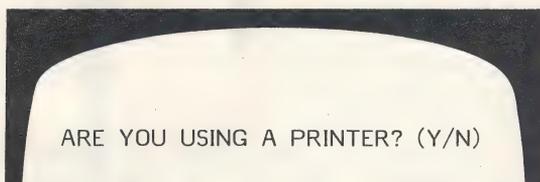


This frame gives you a chance to change your mind. If you want the record on the student, type Y.

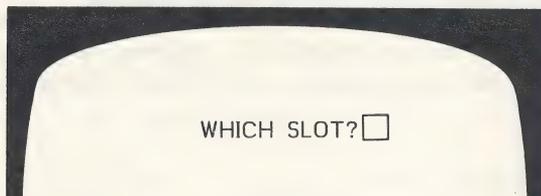


Continue selecting students whose records you want to print. The computer will keep a running tally on the number you have selected.

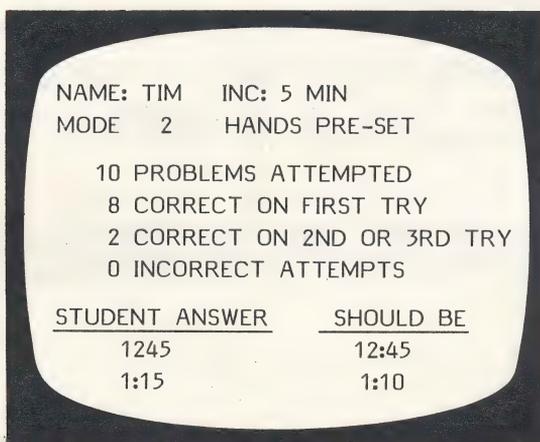
When you have entered all of the students, type **END** (in place of another number).



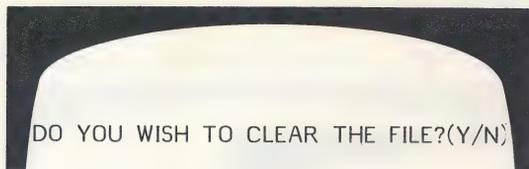
If you type **Y**, the printer will list the records. If you type **N**, the records will come up on your monitor screen.



It will usually be a **1** or **2**. If you are not sure, take off the cover and check. The printout will be in the following format:



After all information is displayed you will be asked:



Respond as desired.

The **ESC** key may be pressed at any time to terminate display or printout of student results. A maximum of 40 records can be stored in STUDENT PLANNING before the files must be emptied. To empty the response file answer **Y** to the question at the end of the display/printout.

A printer is nice to have with STUDENT PLANNING. This program is designed to accomodate a printer interface in any slot which can be accessed by the "PR#" command.

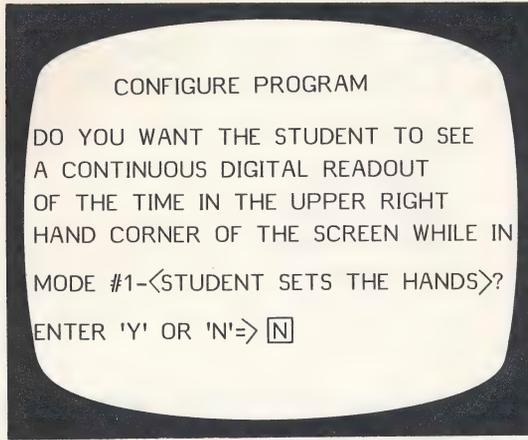
If you select

3 - DESIGN OPTIONS

This option allows the teacher to determine whether or not the digital time is displayed on the screen during the three different modes of drill.

If a child is just beginning to tell time, you may want the digital time shown in all of the various modes as a prompt. This is particularly true for Mode #1 and Mode #3.

In Mode #2, where the child must type the correct digital time, having it shown may be more of a prompt than you want to give.



This line changes to

Mode #2 - <student enters digital time> ?

and then to-

Mode #3 - <word problems - set hands>

A summary of choices is then shown and the teacher has the option to change the selections.

The disk is shipped with the following options:

Mode #1 - digital NOT shown

Mode #2 - digital NOT shown

Mode #3 - digital shown continuously

BEHAVIORAL OBJECTIVES

Mode #1

Given digital time, the student will move the hands of a clock to represent the time to the nearest

- hour
- half-hour
- quarter-hour
- five minutes
- 1 minute

Mode #2

Given a diagram of a clock with hands showing "clock time", the student will be able to write the corresponding digital time to the nearest

- hour
- half-hour
- quarter-hour
- five minutes
- 1 minute

Mode #3

Given written expressions of time in 15 minute increments, the student can set the clock hands to the correct positions.

- hour (ten o'clock)
- half-hour (half past seven)
- quarter-hour (three fifteen)

Mode #4

Given a diagram of a clock with hands showing "clock time" and the corresponding digital time, the student will practice moving the hands and watching the synchronized presentation of both indications of time.

- hour
- half-hour
- quarter-hour
- five minutes
- 1 minute



Hartley 

Hartley Courseware, Inc.

Hartley[♥]

DEMO ONLY
NOT FOR RESALE

Money! Money!





Money! Money!

SPECIAL FEATURES

STUDENT PLANNING records student errors on the teacher's file for later review. This file holds up to **30 students** before you have to erase the file.

Select any student, or group of students, to view work.

Print out or view on screen exact record of errors.

Easily modify any file.

CREATE new lesson.

DELETE any file as desired.

Special graphics allows the teacher to Create lessons mixing text and pictures.

Skill Level 1-5 Reading Level 1-3

**All Hartley courseware requires
a 48K Apple II* or II*
and one Disk Drive**

**On the Apple IIe, or the Franklin ACE 1000
you must keep CAPS LOCK down.**

**1982 © Hartley Courseware, Inc.
Dimondale, MI 48821**

*Apple II & IIe are trademarks of APPLE COMPUTER, INC.

PURPOSE

This disk was developed to give the student extra practice in working with money. It was designed to provide the teacher with a "mini authoring" system to use for the development of additional electronic worksheets.

There are 15 lessons which vary in difficulty from 1st to 5th grade. There is also room to write additional lessons at the level your students need.

Before using this program with a young child, be sure you provide them with either real coins or good facsimiles. In our test school, young children easily made the transfer between the graphic representation of coins and the 'real thing'. The teachers who developed this program emphasized the importance of ensuring this association was made.

The overall objectives of this program are to help the student in:

- (a) counting money.
- (b) determining if (s)he has ENOUGH money to buy an item.
- (c) determining the BEST amount to give for an item.
- (d) counting CHANGE to see if it is correct.

Prerequisite Skills

-The vocabulary needed is listed for each lesson. The child will need a second grade reading level to work independently.

-'Counting up' needs to be taught. The child will not need to 'regroup' to handle the change making lessons.

TEACHER'S GUIDE

Purpose.....	i
Quick Notes for OLD PRO'S..... (if you've used our programs before, but need a quick review)	2
Starting From Scratch..... (if you've never used one our programs before)	3
The Teacher's MENU.....	7
Create, Change, or Delete a Lesson.....	8
Special Symbols for Pictures.....	10
Change an Existing Lesson.....	12
Delete a Lesson.....	18
Check Student Results (Student Planning).....	18
Behavioral Objectives and Suggestions.....	22

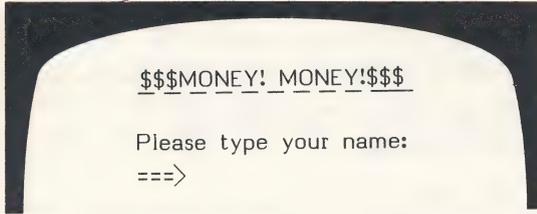
CREDITS

Large characters developed
by and used with permission
of MECC, 2520 Broadway Dr.
Lauderdale, MN 55113.

Field test schools are available upon request.

Quick Notes for OLD PRO'S

To access the Teacher's MENU, type MENU when



is displayed.

Exit any lesson by typing **ESC** when a response is called for.

Capitalize a letter when **CREATING** a lesson by holding the **SHIFT** key and typing **⇧**. The next letter you type will be capitalized.

Type 'END' when you have completed a **CREATE** lesson.

Lessons on This Disk

A complete list of the objectives for each lesson are in the back of this booklet.

M1	M6	M11
M2	M7	M12
M3	M8	M13
M4	M9	M14
M5	M10	M15

STARTING FROM SCRATCH

This disk will boot on a 3.3 Disk Operating System.

When running this program on the **Apple IIe**, or the **Franklin ACE 1000**, you must keep the **CAPS LOCK** key down.

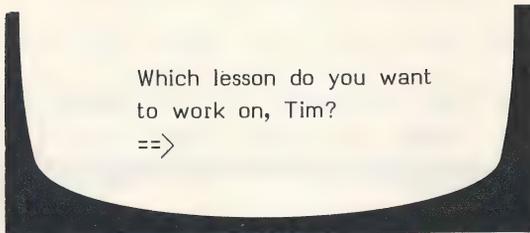
Put the disk in Drive #1; close the door. Turn on your computer. If you have an Apple II Plus, or Apple IIe, the disk will boot automatically when you turn on the computer.

If you have an Apple II - type **PR#6** and press **RETURN**. The program will load into your computer and run automatically - don't type CATALOG!

The credits will vanish and this screen will appear:



If you are running the program, you (or a student) could type in any name and press **RETURN**. On the bottom of the screen the following message will appear.



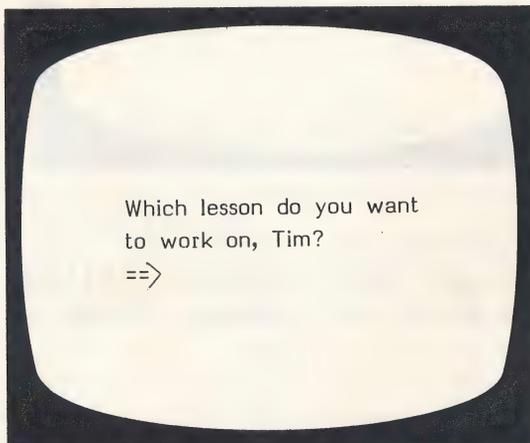
The lessons on this disk are listed on page 2 of this Teacher's Guide. A complete description of the skills taught in each lesson are listed on the last pages of this guide.

If you have lost this book, or have created lessons and didn't record their names, type:

? and RETURN

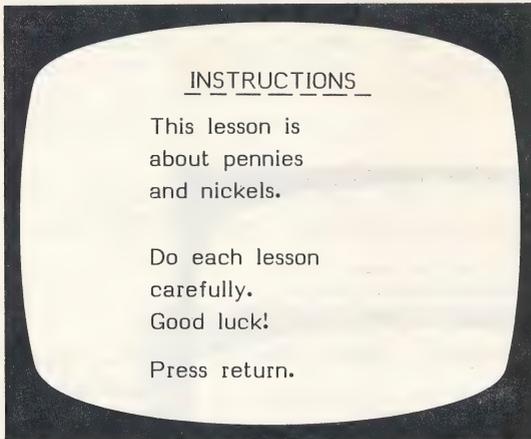
This will display the CATALOG which shows all the lessons on the diskette (you can only run text (T) files without the *).

Continue to press **RETURN**. After all lessons on the CATALOG have been shown, the computer will return to:



Now type the name of the lesson; M1, M5, M14, etc.

After the lesson is selected, the Instructions frame will be shown.



The vocabulary for the beginning lessons is listed in the first frame of the lessons.

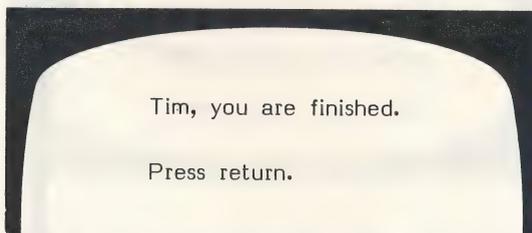
WORDS TO LEARN
penny pennies
cent cents
nickel nickels
count

The next frame will display the first frame of the lesson. Questions will be asked which will require the student to use the information given.

Students will be given one chance to answer before the correct answer is shown. This may be changed by using the MODIFY option on the Teacher's MENU.

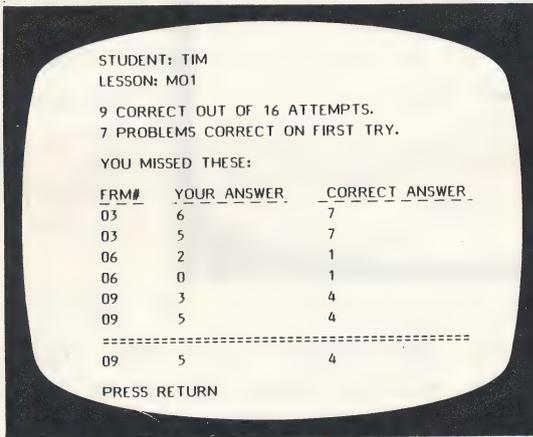
Unless the lesson is stopped by pressing **ESC** when a response is called for, all items in the lesson will be presented. Lessons vary from 10-20 frames.

When the student completes the lesson or presses **ESC**, the following frame appears.



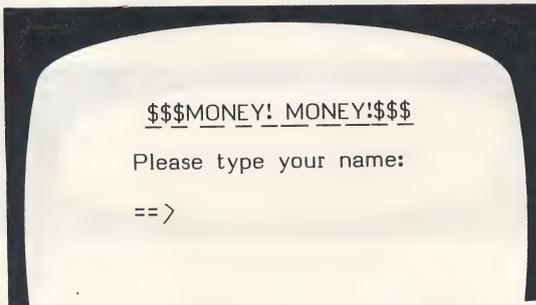
The next frame displays the student's results on that lesson.

The name, lesson, number of problems attempted, number of problems correct on first try, EXACTLY what the student entered as an answer and what the answer should have been are given. All of this is stored on the STUDENT PLANNING file which can be accessed at a later time by the teacher.



This frame available via STUDENT PLANNING.

After pressing **RETURN**, there is a "See you later." message to the student and the computer is ready for the next student.

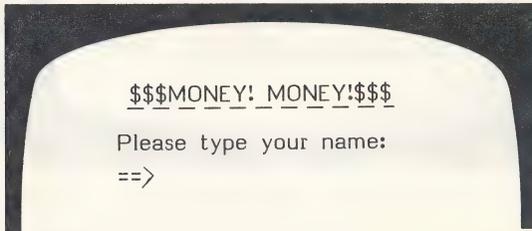


THE TEACHER'S MENU

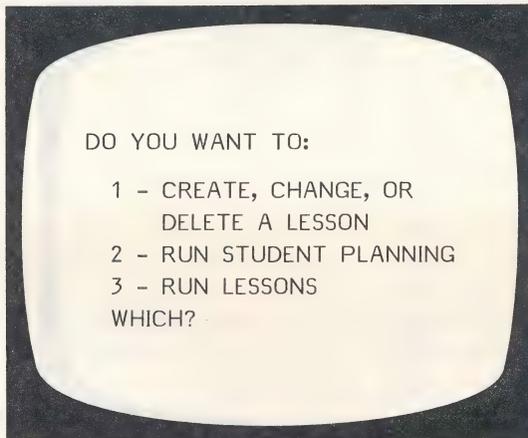
The lessons we have shown so far are for the student.

There are also programs for the teacher. These programs allow the teacher to change the student lessons or review student performance.

The teacher's programs may be accessed by using the name **MENU** when the following screen is shown:



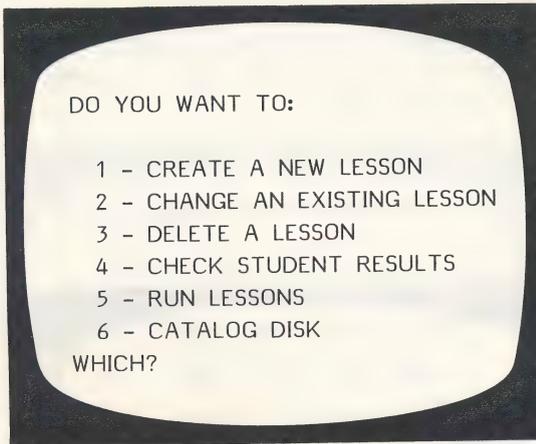
Type the word **MENU** and press **RETURN**. The following MENU will be shown.



The following pages will describe exactly how to use each of these programs on the Teacher's MENU.

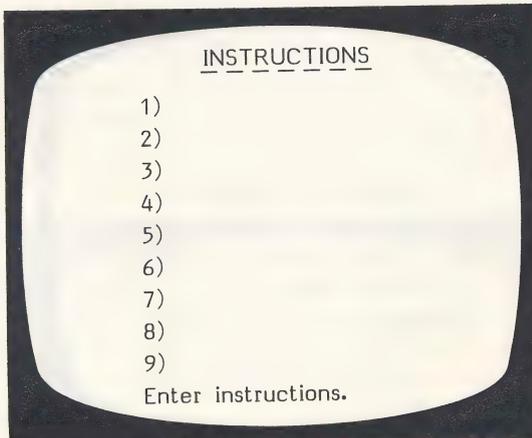
1 - CREATE, CHANGE, OR DELETE A LESSON

Selection of this option will display the following MENU.



1 - CREATE A NEW LESSON

When you select this option for CREATING a new lesson, the following frame will appear.



You may enter 9 lines of instructions. **Note:** To capitalize a letter, press the SHIFT key and \uparrow together immediately before the letter you wish capitalized.

After you have entered the instructions, the lesson frame will appear.

#1

Answer: _____

← Either words
or pictures -
4 lines.

← 5 lines -
words only;
no pictures.

← Only 1 answer.

Above the line you may put either words or pictures; a total of 4 lines.

Below the line you may only enter words - **no graphics**.

There can only be one answer per question. We would prefer to have multiple answers, however we would have had to give up other capabilities to do so.

To CREATE or CHANGE your lessons, use the following symbols to produce the graphics desired to present your problem to the student.

The slash mark (/) followed by the appropriate number or letter will produce the coin or bill shown.

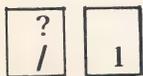
The ; produces the ¢ sign.

The \$ the \$ sign.

The @ symbol (SHIFT key and the @P) will make a blank.

Special Symbols for Pictures

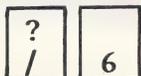
Press these
two keys



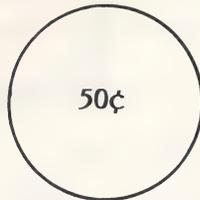
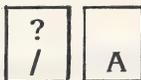
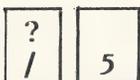
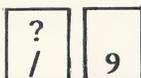
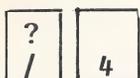
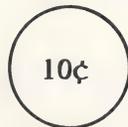
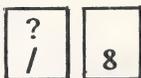
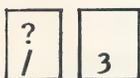
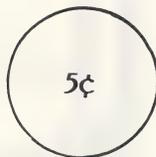
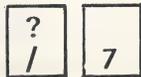
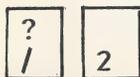
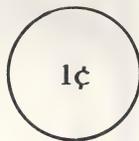
To make this:



Press these
two keys

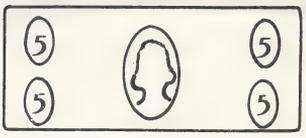
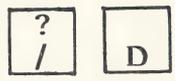
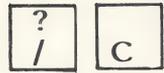


To make this:



Press these
two keys

To make this:



 = ¢

 = \$

 = _____

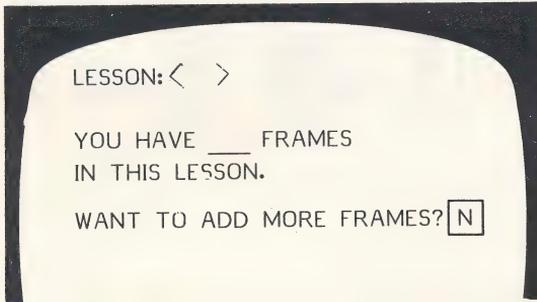
To erase - put the cursor on the line, using the ← to space back - press space bar to erase the line.

Remember - the part of the screen above the middle line is for words and pictures. The bottom half below the middle line is for words only - no pictures. Also, there can be only 1 answer.

When you have written all the questions you wish, type **END**.

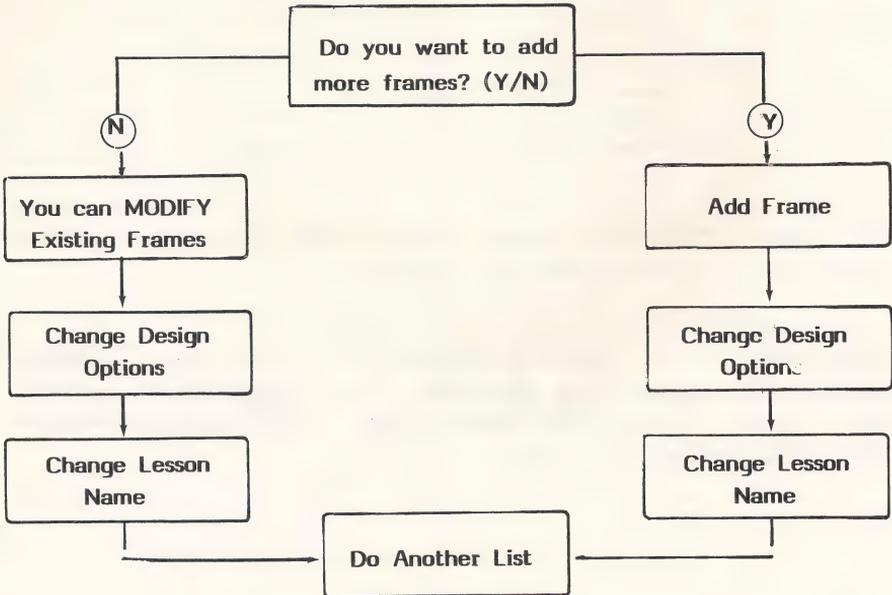
If you do not want to ask a question, but want an instructional frame, type **/** as the answer. This will be a cue to the computer that there will be no answer. The frame will be shown to the student with the directions to press **RETURN**.

2 - CHANGE AN EXISTING LESSON



This frame allows you to add more frames.

This decision point will branch you in two directions.



If you want to increase the number of items, type **Y**. You will then go immediately to the program which allows you to add items.

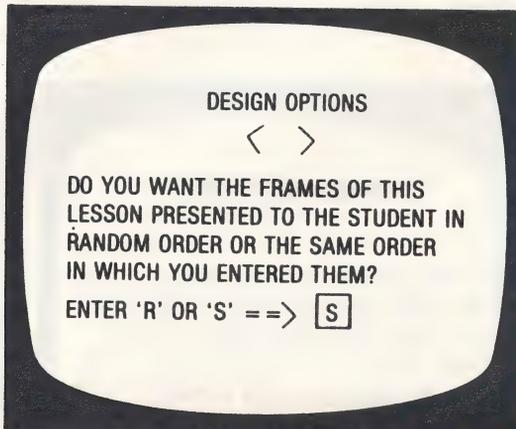
If **YES**



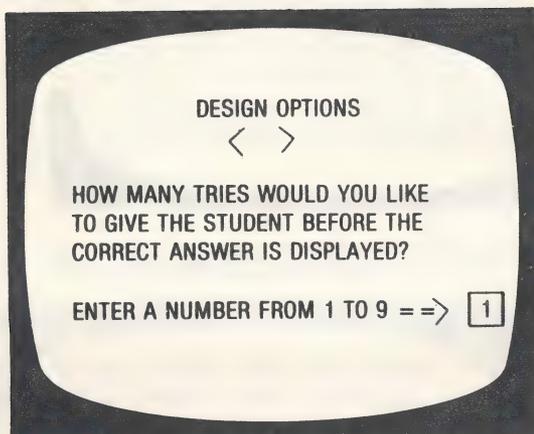
The instructions frame will appear for you to change if desired.

New frames are added in the same way you would create new lesson frames. For more information see the section on **CREATE a New Lesson** on page 8.

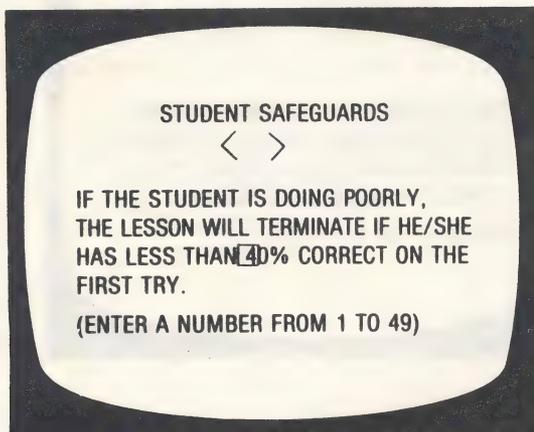
After new frames are added the computer will branch you to the Design Options for that lesson.



Be careful about changing this on existing lessons. Some are graduated in difficulty. For new lessons you Create, this is a nice flexibility.



If it's a "fill-in-the-blank" answer, you may want to change this. On a 2-response, multiple choice you obviously would not.



The next question relates to this decision.

STUDENT SAFEGUARDS

< >

**EVEN IF THE STUDENT IS DOING
POORLY, AT LEAST FRAMES
WILL BE PRESENTED BEFORE THE
LESSON IS TERMINATED.**

(ENTER A NUMBER FROM 1 TO 20)

You will need to skip at least some frames. If you don't, the lesson will terminate on the first frame if there is an error (0% will be below any % that you set in the previous step).

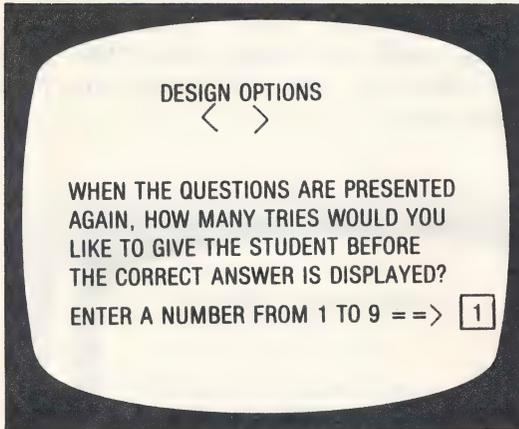
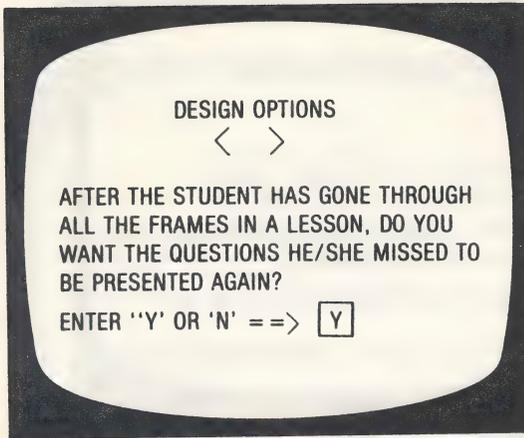
STUDENT SAFEGUARDS

< >

**IF A STUDENT IS DOING WELL, THE
LESSON WILL TERMINATE AFTER
CONSECUTIVE CORRECT ANSWERS
ON THE FIRST TRY.**

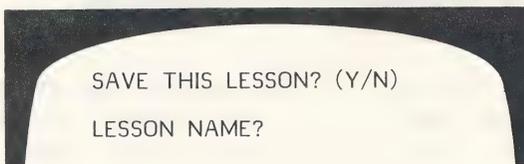
(ENTER A NUMBER FROM 1 TO 20)

If there are a variety of skills taught or reviewed in one lesson, you may want the student to complete all the work no matter how well he/she does on the first 10. If so, change to 20.



The student safeguards do not apply to these questions. The authors assumed the teacher would want all missed items reviewed.

You will then be asked if you want to:



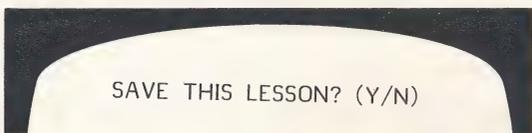
You will then return to the MENU.

Now, we are going back to page 12 and take the **NO** option. If you answer NO to the question: Do You Want to Add More Frames? (Y/N), the computer displays for correction each frame beginning with the Instructions.

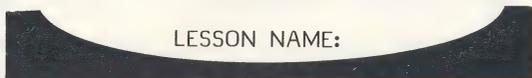
Each frame will be presented. If you don't want to change the line the cursor is on press **RETURN**. If you do, type the new line. See Create, page 8.

Use the ← key to move the cursor back over previous lines. When the entire list has been reviewed, the computer will branch you to the Design Options. These are the same Options as previously described.

You do not need to go through all of the lessons. If you are finished making your corrections, type **END**. The computer will go to the Design Options. After the Design Options:



Type **Y** if you want the corrections to replace the lines that were in the original list. Type **N** if you have changed your mind about the corrections or did not make any. If you type **Y**, the final question will be:

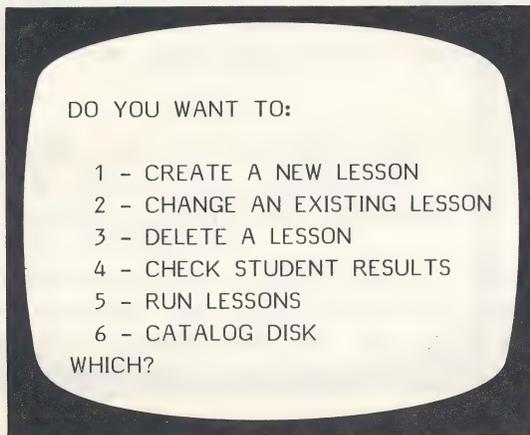


This allows you to keep both the 'old' lessons and the 'new' lesson. You'll find this advantageous if you are creating a lot of lessons or trying some experimental work with your CAI lessons.

The design decisions you have made may vary from lesson to lesson depending on the content and the teacher's preference.

You may make different decisions for each lesson. Your decisions will only affect that lesson. If you want all lessons to be presented randomly (for example) you will need to make that decision for each lesson.

When you are finished with one lesson:



3 - DELETE A LESSON

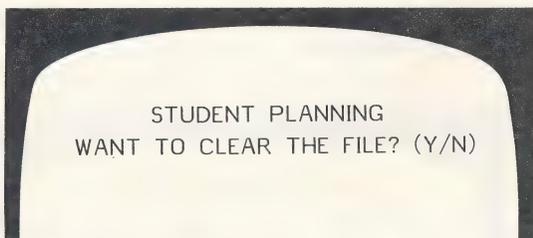
Type the name of the lesson you want deleted; press **RETURN**.

CAUTION: Be sure you want to delete a lesson. Once it's gone, you can't get it back!!

2 - STUDENT PLANNING

(4 - CHECK STUDENT RESULTS)

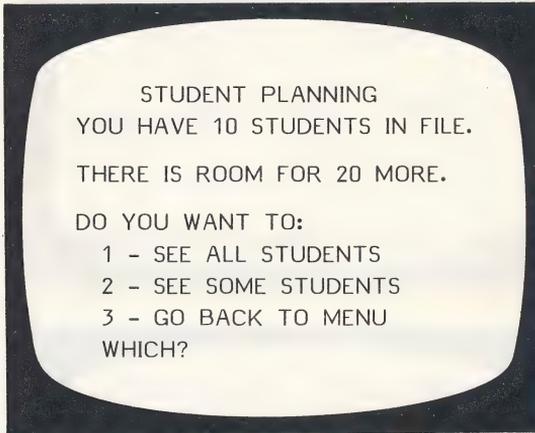
The student records may be accessed by selecting either of these two options from the Teacher's MENU.



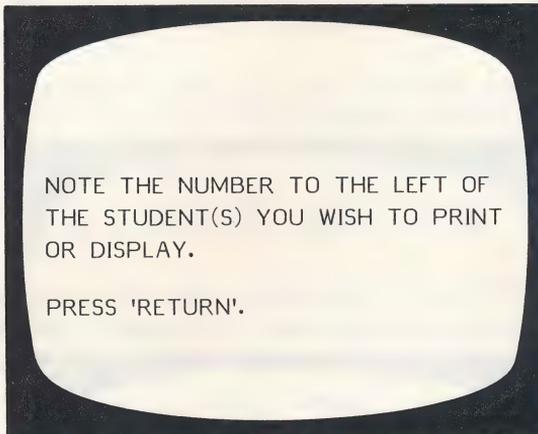
Type **N** if you want to see it; **Y** if you want to completely erase all student results. Press **RETURN**.

If you want to see only some of the students, select:

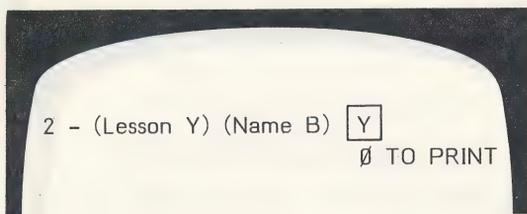
2 - SEE SOME STUDENTS press **RETURN**



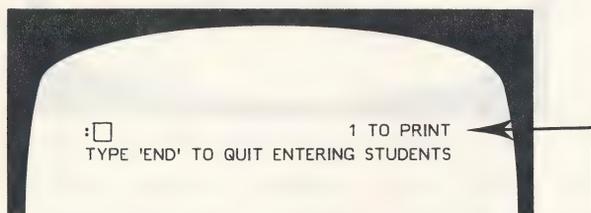
As you select the students whose records you want to view, you will be typing just the number.



Type the number of a student you want to see and press **RETURN**. For Example: 2

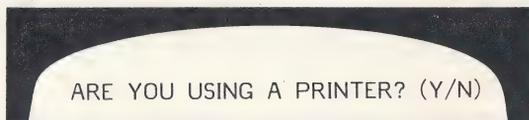


This frame gives you a chance to change your mind. If you want the record on the student, type **Y**.

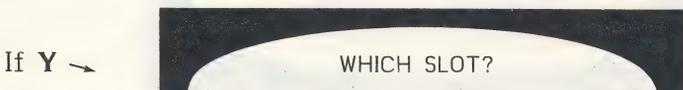


Continue selecting students whose records you want to print. The computer will keep a running tally on the number you have selected.

When you have entered all of the students, type **END** (in place of another number).

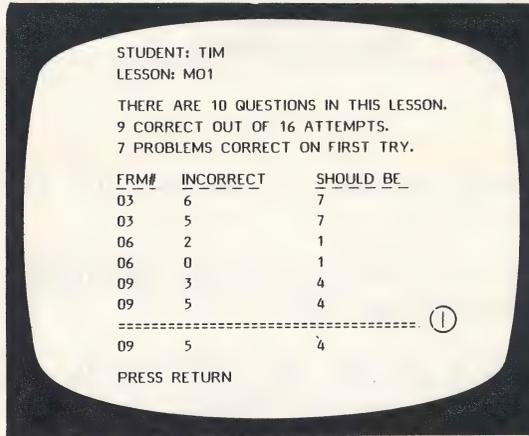


If you type **Y**, the printer will list the records. If you type **N**, the records will come up on your monitor screen.



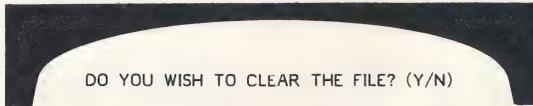
If **Y** →

It will usually be **1** or **2**. If you are not sure, take off the cover and check. The printout will be in the following format.



① The line separates the items missed on the lesson from those missed when questions were presented after the lesson was completed.

After all the information is displayed you will be asked:



Respond as desired.

The **ESC** key may be pressed at any time to terminate display or printout of student results. A maximum of 30 records can be stored in STUDENT PLANNING before the files must be emptied. To empty the response file answer **Y** to the question at the end of the display/printout.

A printer is nice to have with STUDENT PLANNING. This program is designed to accomodate a printer interface in any slot which can be accessed by the "PR#6" command.

BEHAVIORAL OBJECTIVES and SUGGESTIONS

Level 2

M1 Given a picture of pennies, the student will count them.

Given a picture of pennies, the student will determine their value in cents.

Given a picture of (1-3) nickels, the student will determine their value in cents.

Level 2-3

M2 Given pictures of nickels, the student will count by 5's to determine their value in cents.

Given pictures of coins (pennies and nickels mixed), the student will determine their value in cents.

M3 Given pictures of dimes, the student will count by 10's to determine their value in cents.

Given an amount of cents (less than 50¢) and two sets of coins (nickels, dimes, and pennies), the student will select the set that has the given value.

Given a selection of coins (pennies, nickels, and dimes), the student will determine their value in cents.

Level 3-4

M4 Word Problems

Given a set of coins (pennies, nickels, dimes) and the cost of an item, the student will answer yes/no to the question, "Do you have enough money?"

M4 (con't)

Given the price of an item and 2 sets of coins (pennies, nickels, dimes), the student will select the set that should be used to pay for the item.

M5 Word Problems

Given the cost of an item (under 50¢) and the coins (penny, nickel, dime), given to the clerk, the student will state the amount of cents returned in change.

Given the cost of an item (under 50¢) and the amount of money (in cents) given to the clerk, the student will say if the display of coins returned by the clerk is correct.

Given the cost of an item (under \$1.00) and the amount of money (in cents) given to the clerk, the student will choose between two sets of change (pennies, nickels, dimes).

M6 Given pictures of quarters, the student will determine the value in cents.

Given pictures of two sets of coins, the student will select the set that represents a given value.

Given a set of coins (quarters, nickels, dimes, pennies), the student will determine their value in cents (less than 50¢).

Level 4-5

M7 Word Problems

Given a set of coins and the cost of an item (up to 99¢), the student will determine if he can 'buy' the item with the coins.

Given two sets of coins (quarters, dimes, nickels, pennies) and the cost of an item, the student will determine which would be the best set to use to pay for the item.

Given the cost of an item and the amount paid, the student will determine the appropriate change.

M8 Given a selection of coins (half-dollars, quarters, dimes, nickels, pennies), the student will determine their value in cents.

M9 Word Problems

Given a set of coins (half-dollar, quarters, dimes, nickels and pennies), the price of an item, the student will determine if there is enough money to pay for the item.

Given 2 sets of coins (halves, quarters, nickels, dimes, and pennies) and the cost of an item, the student will determine which set would be the best to use to pay for the item.

Given the price of an item, what was paid, and 2 sets of change (halves, quarters, dimes, nickels, and pennies), the student will select the correct set of change.

M10 Given pictures of coins (halves, quarters, dimes, nickels, and pennies), the student will determine their values and write it in decimal form.

Level 5-6

M11 Given pictures of dollars and 1 or 2 coins, the student will write the amount in decimal form.

M12 Given 1, 2, and 5 dollar bills mixed with coins, the student will write the value in decimal form. (\$X.XX)

M13 Word Problems

Given an amount of money and the cost of an item, the student will determine if the money is enough.

Level 6

M14 Word Problems

Given the price of an item and the amount paid, the student will determine if the change shown is correct. (Change shown in bills and coins.)

M15 Extras for Experts—Word Problems

This lesson has a selection of difficult word problems which require the student to count money (bills and coins) and calculate change.

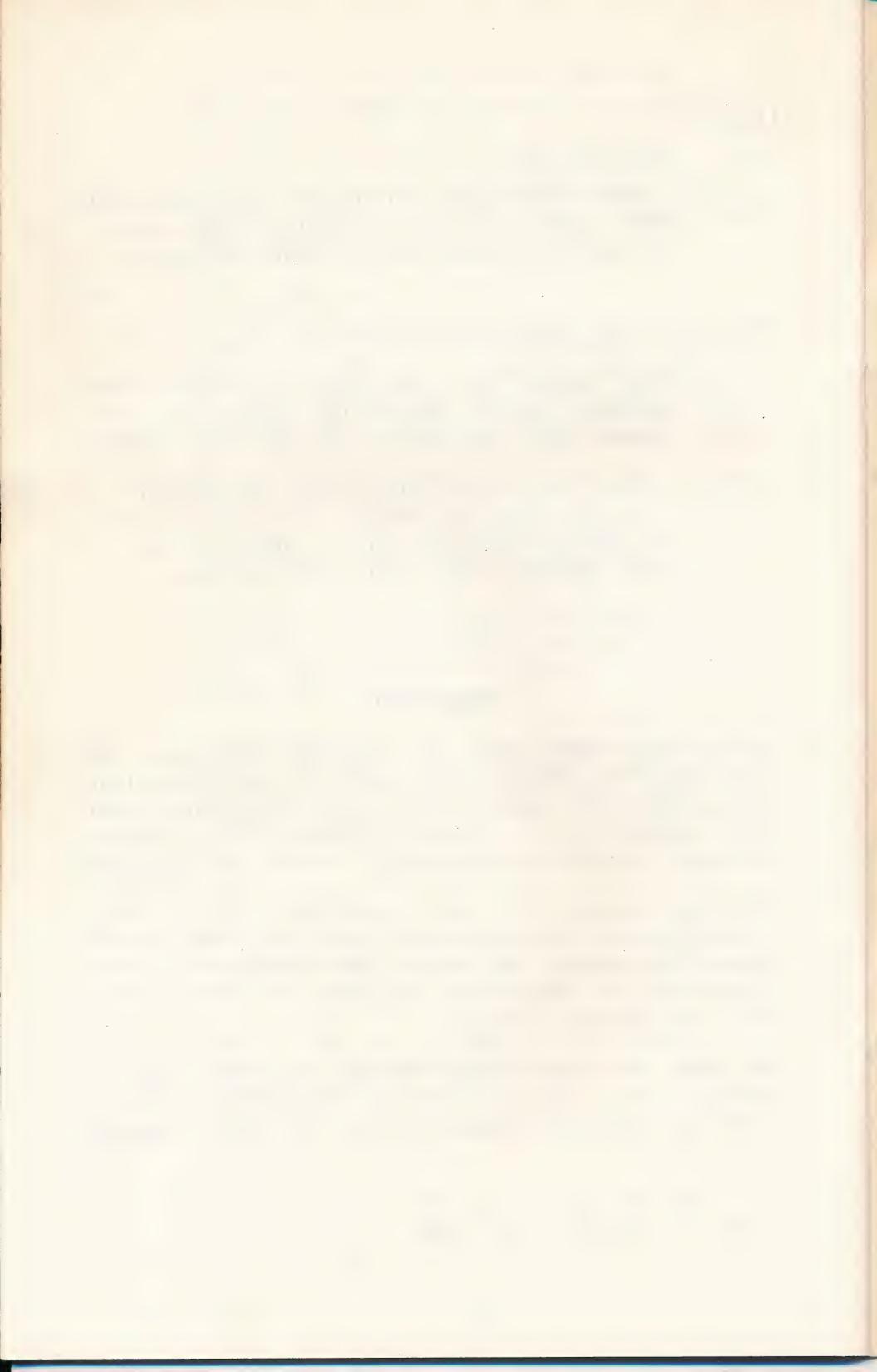
Given the price and the change, the student must determine the amount given, and whether or not the change is correct. In some cases, this requires a two or three-step process.

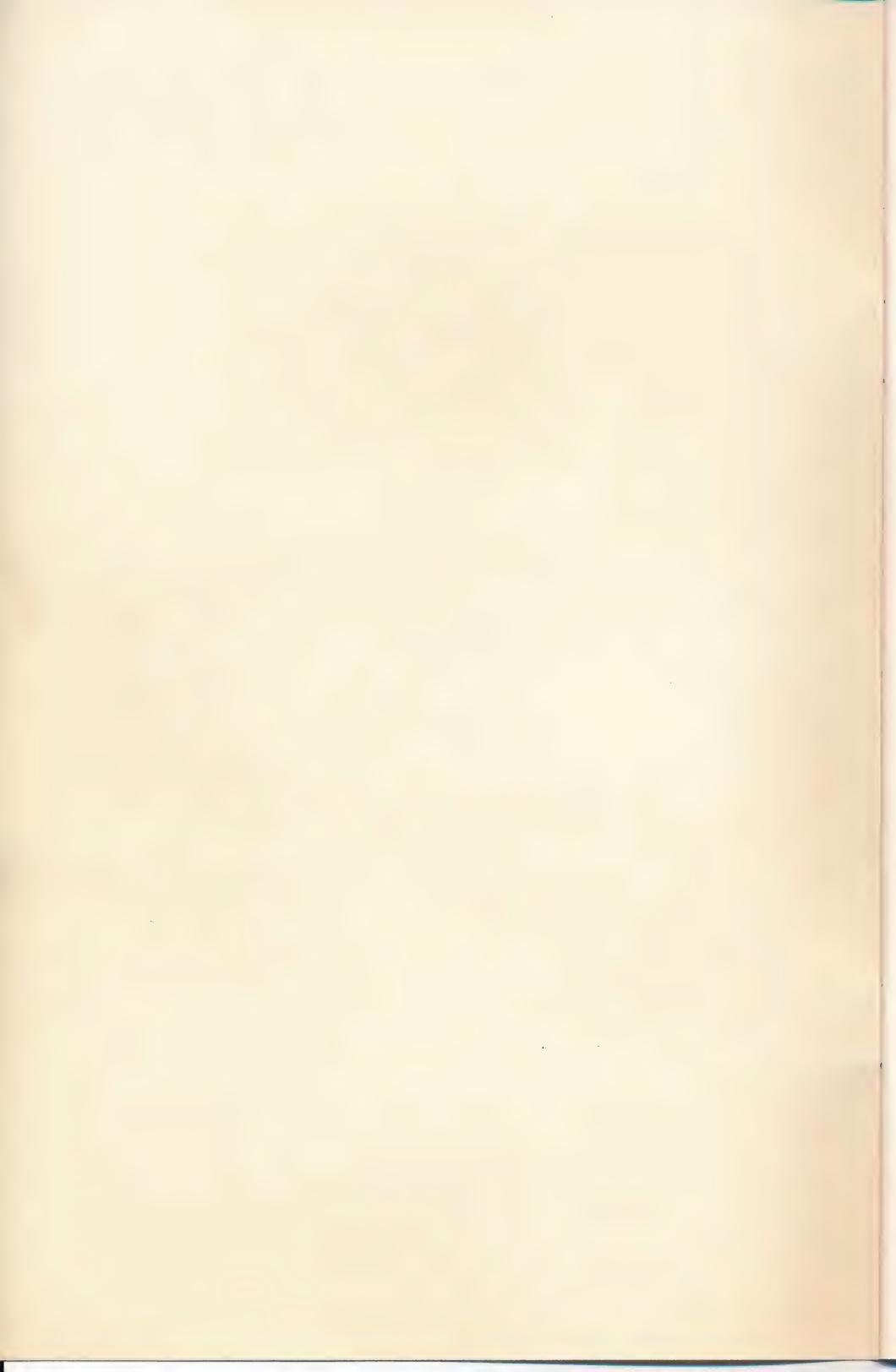
Suggestions

Having the opportunity to actually manipulate and count real (or nearly real) coins is very important. If you have any 'paper' coins in your classroom, make them available to the student to ensure the association between the simulated coins and the real coins is made.

Counting change is a very important activity. Start with the amount the item costs. Count up to the amount given. "Counting up" to find the right change is included on the disk, but the students will need additional experience with this important activity.

We hope you enjoy using this disk. PLEASE, practice making a few of your own lessons. The CREATE capability is one of the outstanding features of the Hartley programs.





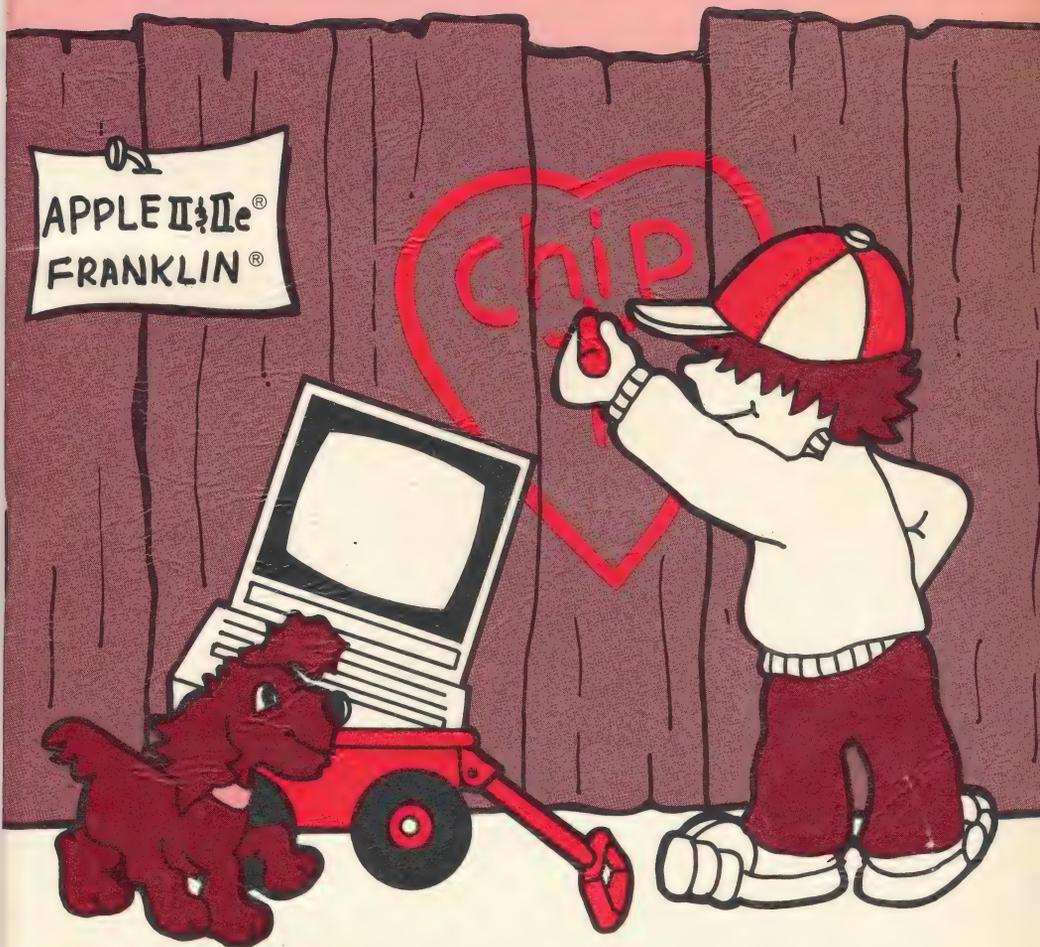
Hartley 

Hartley Courseware, Inc.

Hartley[♥]

DEMO ONLY
NOT FOR RESALE

Who-What- Where-When- Why





Who-What- Where-When- Why

SPECIAL FEATURES

Large easy-to-read upper/lower case letters

STUDENT PLANNING stores student records for later review by the teacher. This file holds up to **50 records** before you need to erase the file.

The lessons may be easily **MODIFIED** by the teacher.

Appropriate for 1-4 level students.

All Hartley courseware requires
a 48K Apple II* or IIe*
and one Disk Drive

All courseware will boot on 3.2 or 3.3 DOS.

1983 © Hartley Courseware, Inc.
Dimondale, MI 48821

*Apple II & IIe are trademarks of APPLE COMPUTER, INC.

TEACHER'S GUIDE

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PURPOSE

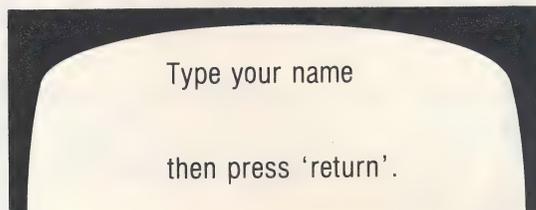
The purpose of this program is to provide an easy way for students to practice discrimination between commonly confused words and the concepts they represent.

The teacher may continually modify the lessons if desired or write new lessons depending on the needs of the students.

Names of schools used as test sites
are available upon request.

QUICK NOTES FOR OLD PRO'S

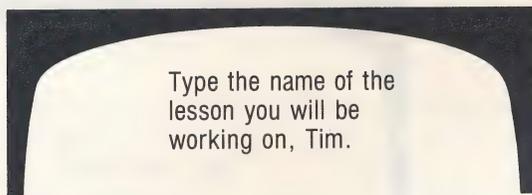
To get the teacher's MENU, type MENU when



appears on the screen.

To stop the program, press **ESC** when a student response is called for.

To see the CATALOG: type ? when



then press 'return'.

appears on the screen.

Lessons on This Disk

See page 28 for a description of the content of each lesson.

WW1	WW8
WW2	WW9
WW3	WW10
WW4	WW11
WW5	WW12
WW6	WW13
WW7	WW14

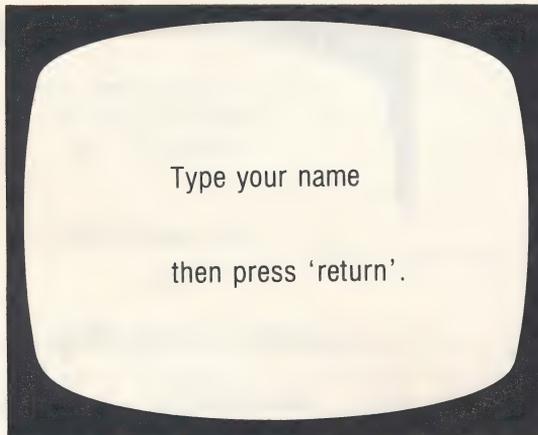
STARTING FROM SCRATCH

This disk will 'boot' on either a 3.2 or 3.3 Disk Operating System.

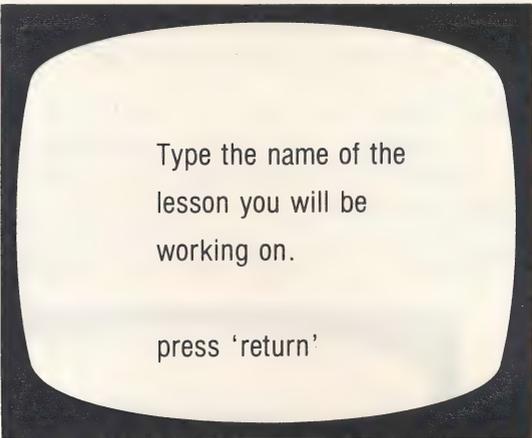
Put the disk in Drive #1; close the door. Turn on your computer. If you have an Apple II Plus, or Apple IIe, the disk will boot automatically when you turn on the computer.

If you have an Apple II - type **PR#6** and press **RETURN**. The program will load into your computer and run automatically - don't type CATALOG!

The credits will vanish and this will appear:



If you are running the program, you (or a student) could type in any name and press **RETURN**.



Type the name of the
lesson you will be
working on.

press 'return'

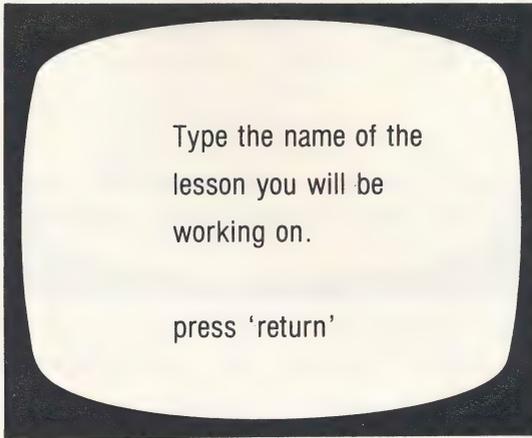
The lessons on this disk are listed on page 2 of this Teacher's Guide. A complete description of the skills taught in each lesson are listed on the last pages of this guide.

If you don't have a guide, or want a quick review, type:

? press **RETURN**

This will display the CATALOG which shows all the lessons on the diskette (you can only run text (T) files).

Continue to press **RETURN**. After all lessons on the CATALOG have been shown, the computer will return to:



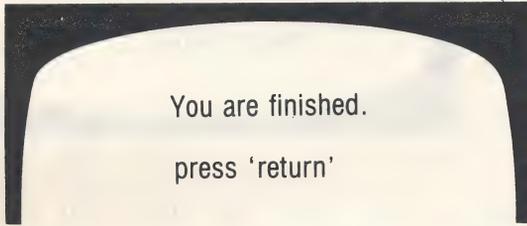
Type the name of the
lesson you will be
working on.

press 'return'

Now, type in the name of the lesson; WW1, WW13, or whatever.

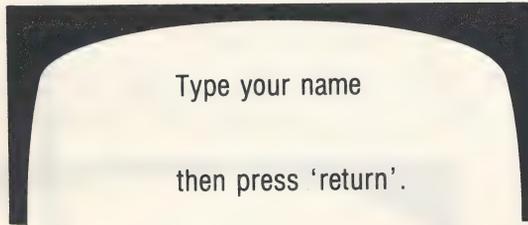
The **ESC** key may be used to exit the program when a response or answer has been requested. Unless the lessons is stopped by pressing **ESC**, all items in the lesson will be presented.

When the lesson is completed, the screen will show:



The next frame will display the student's results in terms of the number of items correct out of the total responses together with the correct response for each item missed. After viewing the displayed results, the student should press **RETURN** for a "BYE-BYE" message and then,

press **RETURN** to return to the



Students' results will be automatically stored in **STUDENT PLANNING** for later review by the teacher.

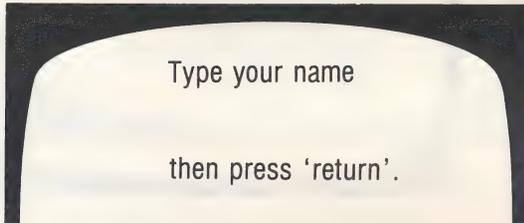
THE TEACHER'S MENU

The lessons on this disk are for the student.

There are also programs for the teacher. These programs allow the teacher to "do things" to the student lessons on the disk.

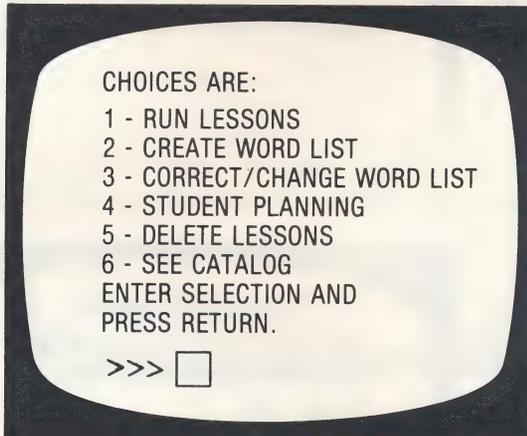
The teacher's programs may be accessed by using the name MENU.

When the following screen is shown:



type the word MENU, press **RETURN**.

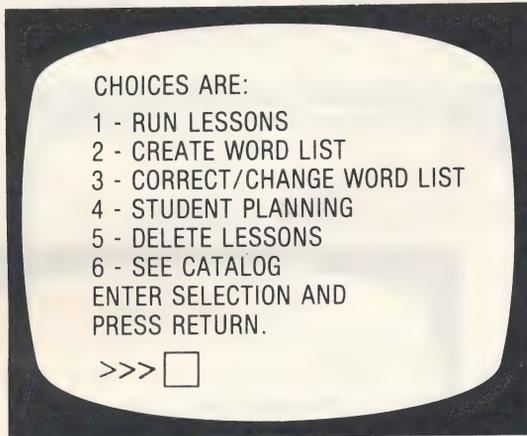
The following MENU will be shown:



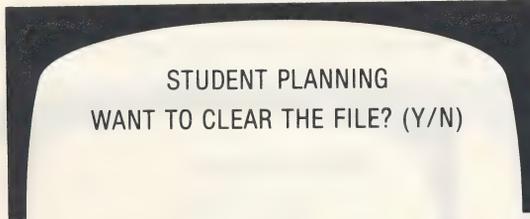
The following pages will describe exactly how to use each of these programs on the teacher's MENU.

USING STUDENT PLANNING

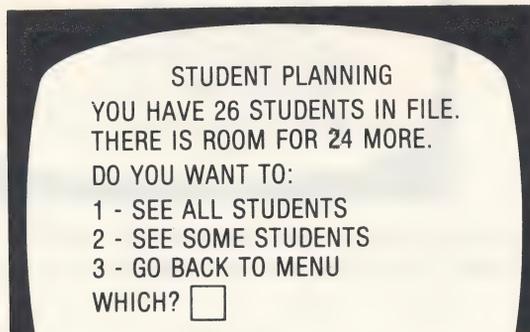
As a student works through a lesson, the errors that he/she makes are recorded into the STUDENT PLANNING file. To see the file, bring up the MENU.



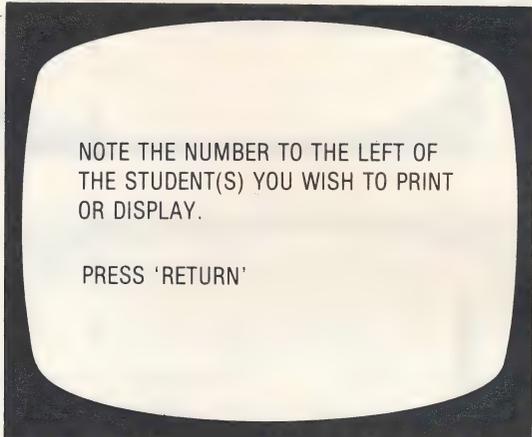
Select **4 - STUDENT PLANNING** press **RETURN**



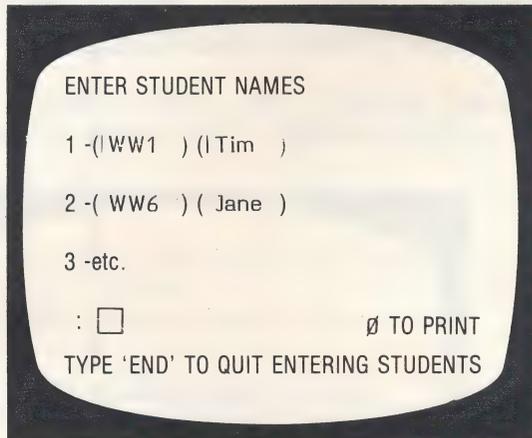
Type **N** if you want to see it; **Y** if you want to completely erase all student results. press **RETURN**.



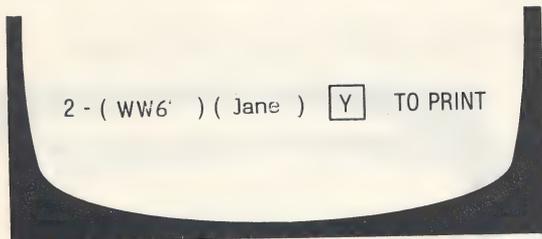
If you want to see only some of the students select
2-SEE SOME STUDENTS press RETURN



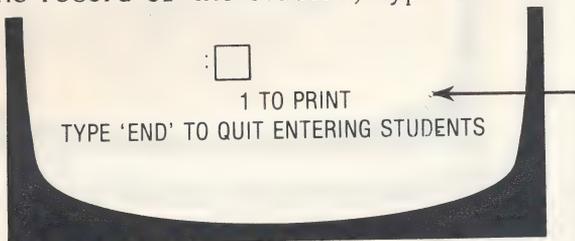
As you select the students whose records you want
to view, you will be typing just the number.



Type the number of a student you want to see and press **RETURN**. For Example: 2

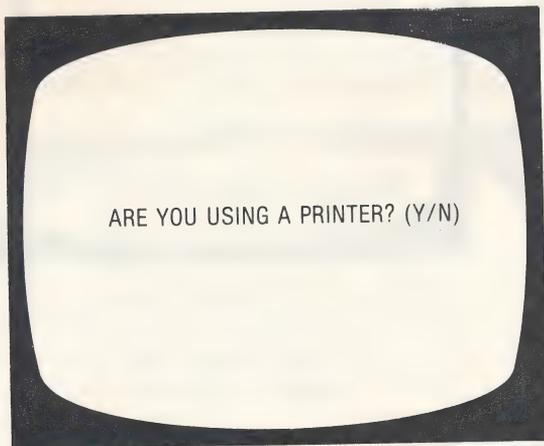


This frame gives you a chance to change your mind. If you want the record of the student, type **Y**.

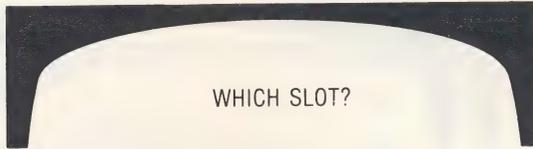


Continue selecting students whose records you want to print. The computer will keep a running tally on the number of students you have selected.

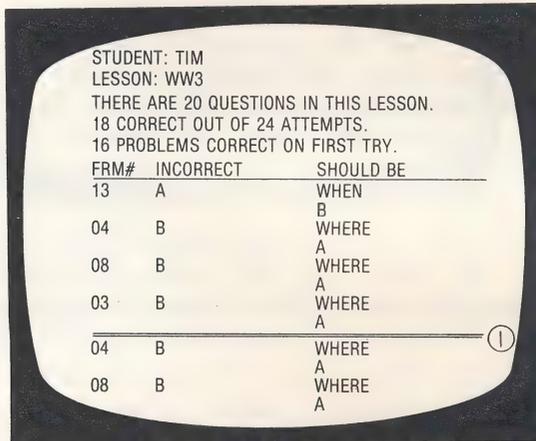
When you have entered all of the students, type **END** (in place of another number). This frame will appear:



If you type **N**, the records will come up on your monitor screen. If you type **Y**, the printer will list the records.



It will usually be **1** or **2**. If you are not sure, take off the cover and check. The printout will be in the following format:

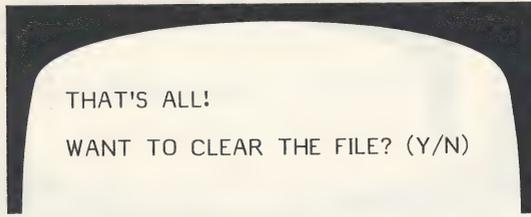


① This line separates the items missed on the first time through the lesson from those questions missed when they were presented for a second try.

The information on student planning will vary considerably depending on the number of tries the teacher gives the student before the correct answer is shown.

One idiosyncrasy: After all items are presented, the teacher has the option of having the missed items presented. If the student gets the question right the first time (on this second presentation), it is counted as "correct on first try".

After all information is displayed you will be asked:



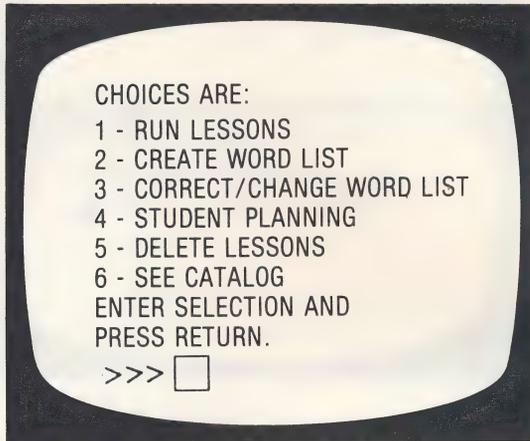
Respond as desired.

The **ESC** key may be pressed at any time to terminate display or printout of student results. A maximum of **50** records can be stored in **STUDENT PLANNING** before the files must be emptied. To empty the response file answer **Y** to the question at the end of the display/printout.

A printer is nice to have with **STUDENT PLANNING**. This program is designed to accommodate a printer interface in any slot which can be accessed by the '**PR#**' command.

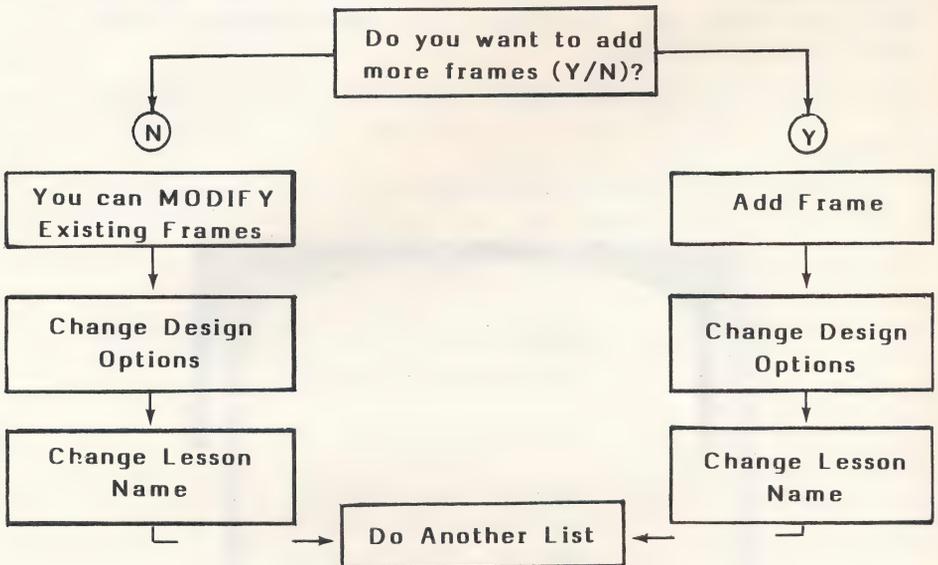
CORRECT/CHANGE WORD LIST

Your screen is now showing the Teacher's MENU:



Select 3 - CORRECT/CHANGE WORD LIST

The YES/NO sequence of correcting or changing word lists:



You can MODIFY or ADD frames. To do both you must cycle through both the Y and N option.

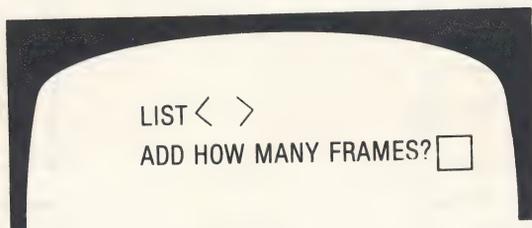
First, you will need to identify the lesson you wish to consider.



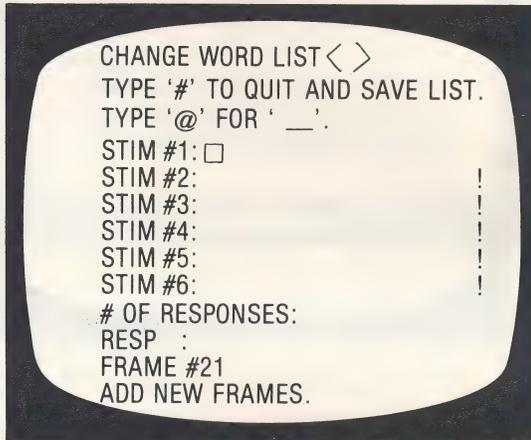
The **DEFAULT** value is the value the computer will accept if you simply press **RETURN** and do not change the number or letter.

If you want to increase the number of items, type **Y**. You will then go immediately to the program which allows you to add items.

If **YES**



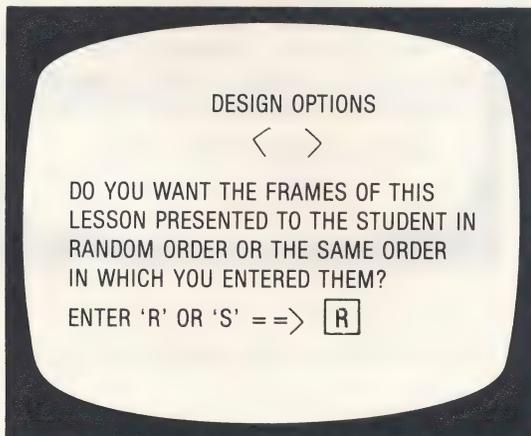
This frame will then appear.



For more information see the section on CREATE a New Lesson, p. 22.

The exclamation marks are indicators of maximum length per line (approx. 25 spaces).

After new frames are added the computer will branch you to the Design Options for that lesson.



Be careful about changing this on existing lessons. Some are graduated in difficulty. For new lessons you Create, this is a nice flexibility.

DESIGN OPTIONS
< >

HOW MANY TRIES WOULD YOU LIKE
TO GIVE THE STUDENT BEFORE THE
CORRECT ANSWER IS DISPLAYED?

ENTER A NUMBER FROM 1 TO 9 ==>

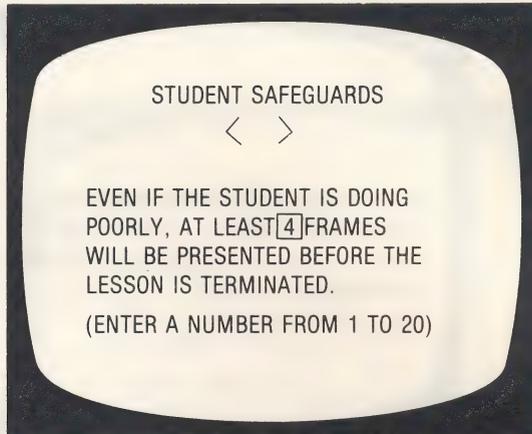
If it's a "fill-in-the-blank" answer, you may want to change this. On a 2-response, multiple choice you obviously would not.

STUDENT SAFEGUARDS
< >

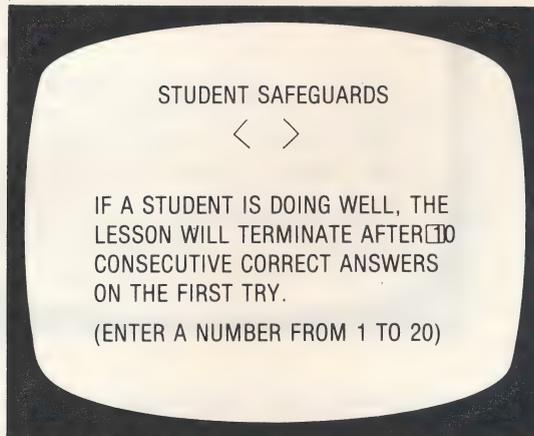
IF THE STUDENT IS DOING POORLY,
THE LESSON WILL TERMINATE IF HE/SHE
HAS LESS THAN 40% CORRECT ON THE
FIRST TRY.

(ENTER A NUMBER FROM 1 TO 49)

The next question relates to this decision.



You will need to skip at least some frames. If you don't the lesson will terminate on the first frame if there is an error (0% will be below any % that you set in the previous step).



If there is a variety of skills taught or reviewed in one lesson, you may want the student to complete all the work no matter how well he/she does on the first 10. If so, change to 20.

DESIGN OPTIONS

< >

AFTER THE STUDENT HAS GONE THROUGH ALL THE FRAMES IN A LESSON, DO YOU WANT THE QUESTIONS HE/SHE MISSED TO BE PRESENTED AGAIN?

ENTER 'Y' OR 'N' ==>

DESIGN OPTIONS

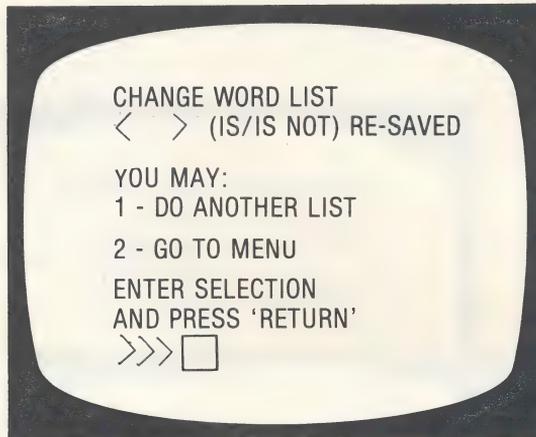
< >

WHEN THE QUESTIONS ARE PRESENTED AGAIN, HOW MANY TRIES WOULD YOU LIKE TO GIVE THE STUDENT BEFORE THE CORRECT ANSWER IS DISPLAYED?

ENTER A NUMBER FROM 1 TO 9 ==>

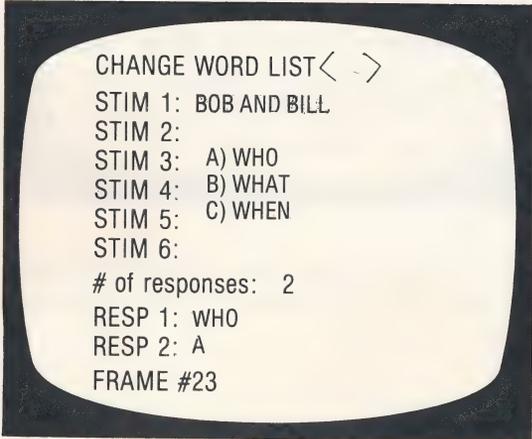
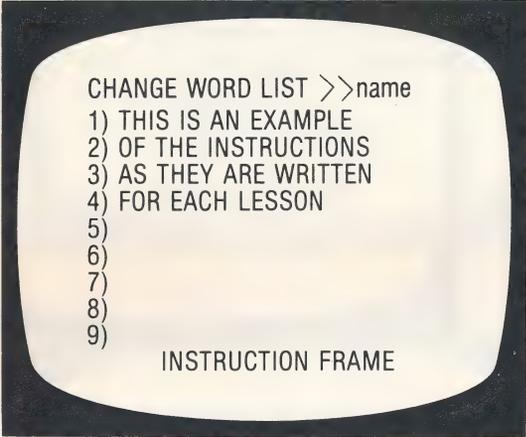
The student safeguards do not apply to these questions. The authors assumed the teacher would want all missed items reviewed.

You will then be asked if you want to Save this List and Change the List Name. If you answer **YES**, this frame will appear.



These design options have been included to allow the teacher to specify the criterion the computer uses to branch the student to the end of a lesson. A new lesson is NOT automatically prescribed. It is the philosophy of the teachers who designed this program that the computer should provide the teacher with the information necessary to prescribe based on his/her knowledge of overall student performance.

Now, we are going back to page 12 and take the **NO** option. If you answer **NO** to the question: Do You Want to Add More Frames? (Y/N) the computer displays Instructional frames and Lesson Frames for correction:



Hypothetical example of frame to change.

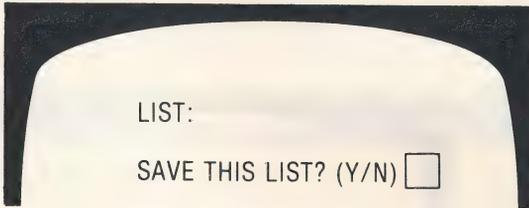
Each line will be displayed with the cursor on it.

If you don't want to change that line, press **RETURN**.

If you do, type the new stimulus or response.

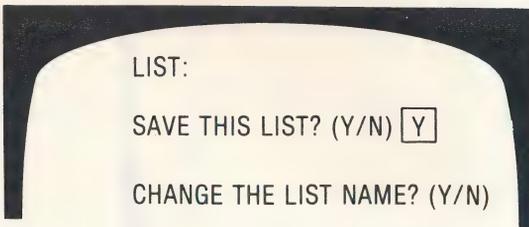
Use the ← key to move the cursor back over previous lines. When the entire list has been reviewed, the computer will branch you to the Design Options. These are the same as shown on pages 14-17.

After the Design Options:



LIST:
SAVE THIS LIST? (Y/N)

Type **Y** if you want the corrections to replace the lines that were in the original list. Type **N** if you have changed your mind about the corrections or did not make any. If you type **Y**, the final question will be:



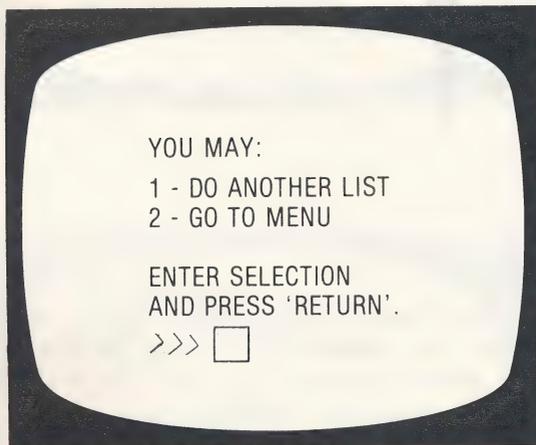
LIST:
SAVE THIS LIST? (Y/N)
CHANGE THE LIST NAME? (Y/N)

This allows you to keep both the 'old' lesson and the 'new' lesson. You'll find this advantageous if you are creating a lot of lessons or trying some experimental work with your CAI lessons.

The design decisions you make may vary from lesson to lesson depending on the content and your preference.

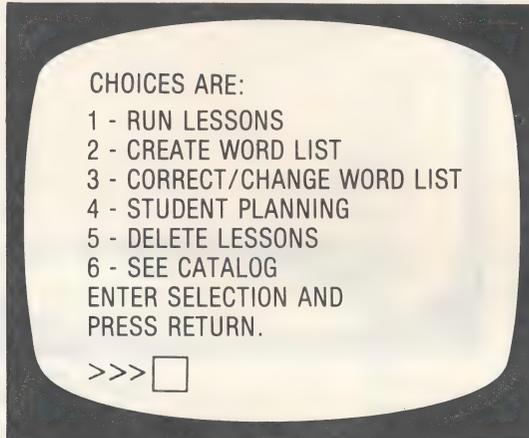
You may make different decisions for each lesson. Your decisions will only affect that lesson. If you want all lessons to be presented randomly (for example) you will need to make that modification on each lesson.

When you are finished with one lesson:



CREATE A NEW LESSON

This is another program that is available on the Teacher's MENU. Remember, to access the teacher's MENU, type MENU when the "Type your name." frame appears.

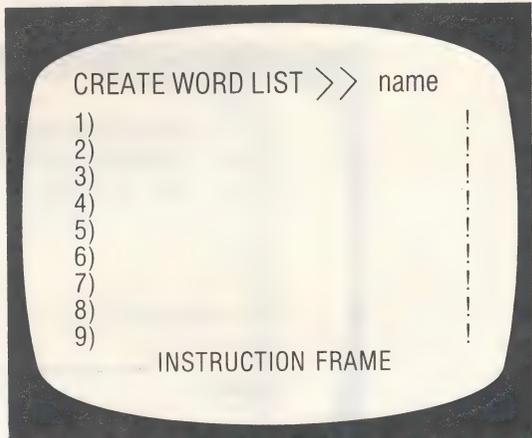


Select 2 - CREATE WORD LIST

First, you will have to give your new lesson a name. Keep it short. The name must start with a letter. Two to three letters make a good name. Once you have typed in the name, the following screen appears. (To capitalize a word, press **ESC** just before the word to be capitalized.)

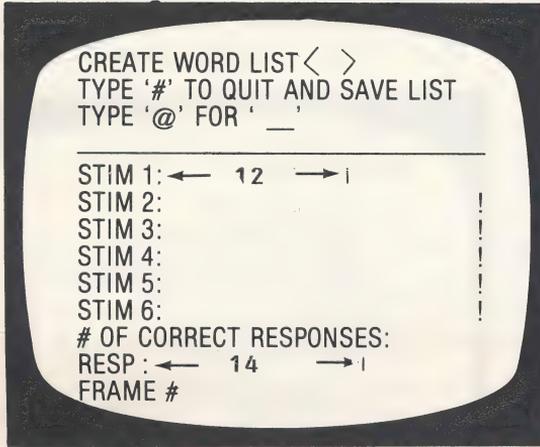
Type the instructions now as you want them to appear.

The student may access these instructions anytime a response is called for by pressing 'H' (for help). The computer will then return the student to the frame on which they were working.



After the Instructions frame, the following frame will be shown.

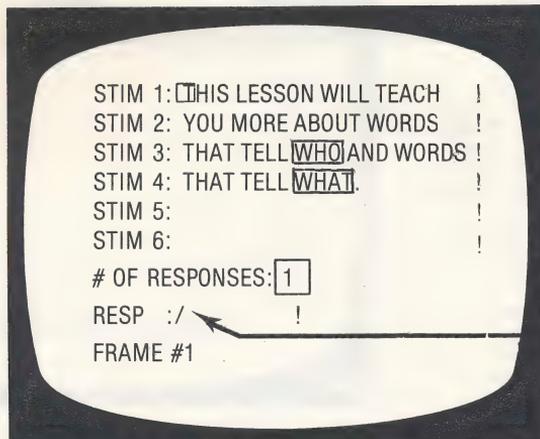
To make
a blank
in the
stimulus,
type the
'@' symbol.



The first line of the stimulus and the first line of the response have been shortened. The computer uses these two lines to generate the feedback frame to the student.

You may have 1-4 correct responses. Any of these answer alternatives will be accepted as correct. The first answer will be the one used in the feedback to the student.

These frames are designed to require a response from the student. You also have the option of writing a frame which does not require a response.

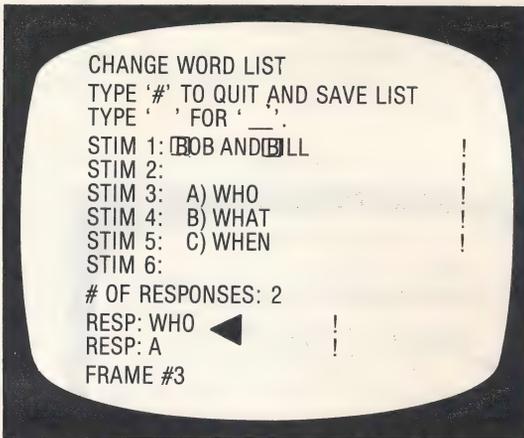


Indicate
there is
only
correct
response.
Make that
response
a /.

The / mark acts as a que to the computer to allow the student to progress to the next frame by just pressing RETURN.

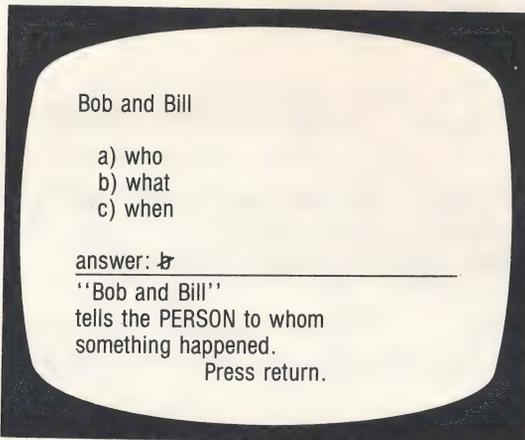
Making capital letters. To capitalize a letter press ESC just before typing the letter to be capitalized.

When creating a lesson, the first stimulus line and the first response line are used to provide special feedback to the student:

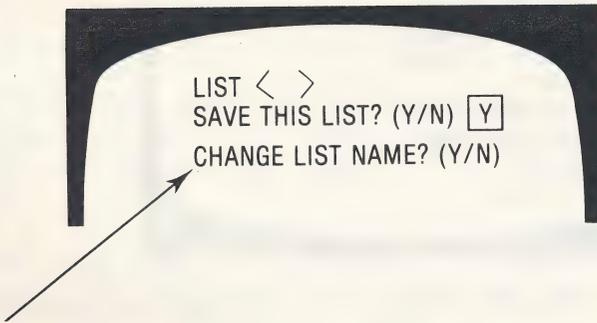
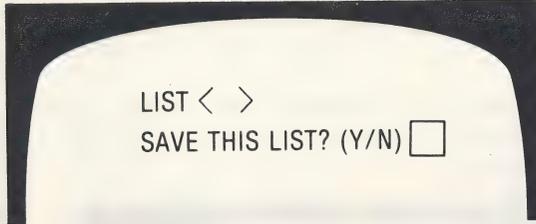


◀ Be sure to put the "word" as the first answer alternative. This is a clue for the computer to generate the appropriate response if a question is missed.

When a student misses the question, a frame like this will appear:



When you have typed the last frame you want in your lesson, type '#' by itself on the first line of the next frame and press return. The computer now branches you to the Design Options (see pages 14-17), after you have answered the following questions.



This is a new name option if you change your mind about the name you gave the lesson when you began.

TO SUMMARIZE-

You may enter up to 9 lines on the instruction frame.

You may enter as many 6-line frames of Instruction (no response required) or questions as you desire for each lesson (over 30 is not recommended).

If you are entering a question frame, you will be asked to enter the number of correct responses (you may have 4).

RESP 1
RESP 2
RESP 3
RESP 4

The question will require only one response, but all responses will be considered correct. For example, in response to a multiple choice question you might want to list both the letter and the answer.

When the student misses an answer, the correct answer alternatives are shown. Many teachers use the last 2 or 3 responses (when creating lessons), for a rule or an explanation to the student when the answer is missed.

To type a capital letter in a stimulus line, press **ESC** just before typing the letter. The program does not allow for capital letters in the response.

To type a blank in the stimulus, use the '@' symbol.

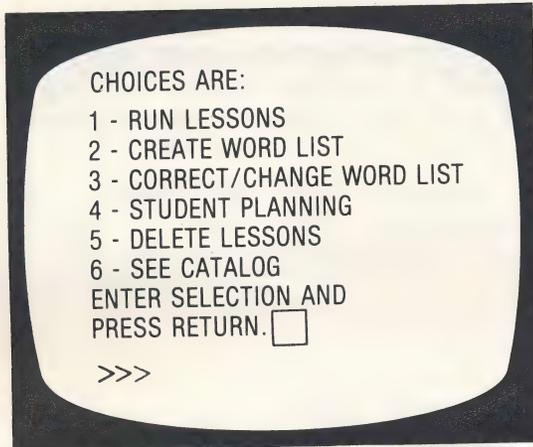
When you have completed the lesson, type '#' and press return to **SAVE** the lesson.

CAUTION

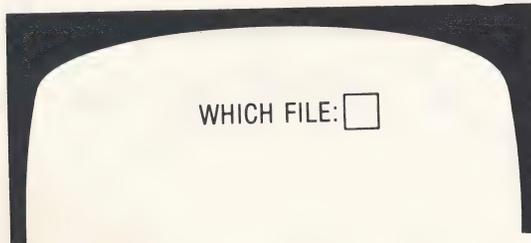
When you are creating your own lessons, **SPACE BAR ERRORS** can occur. Space bar errors are '**evil**' little errors that creep into your programs (and you can't see them). Symptoms-you answer a question by typing 'Yes'. The computer says your answer should be 'Yes'. This is infuriating! What has happened is the space bar was pressed after the answer was typed. Now the computer thinks the answer is 'Yes space bar'. To correct the problem, use **CORRECT/CHANGE** and retype the correct answer without touching the space bar.

TO DELETE A LESSON

Bring up your MENU.



Select 5 - DELETE LESSON



Type the name of the lesson you want deleted. press
RETURN.

**CAUTION: BE SURE YOU WANT TO
DELETE A LESSON-ONCE IT'S
GONE, YOU CAN GET IT BACK
ONLY BY RE-ENTERING
EACH FRAME!**

INSTRUCTIONAL SKILL STATEMENTS

First Level Vocabulary

WW1 Given a phrase such as "down the hall", the student must determine if the phrase tells when something happened or where it happened.

WW2 ...who, what.

Second Level Vocabulary

WW3 ...when, where.

Third Level Vocabulary

WW4 ...to whom something happened or what happened.

WW5 ...who, when.

2-3 Level Vocabulary

WW6 ...when, where.

WW7 ...what, when.

WW8 ...where, what.

WW9 ...when, why.

WW10 ...when, what, how.

3-4 Level Vocabulary

WW11 ...who, what, when, where, why, how.

WW12 ...who, what, when, where, why, how.

5-6 Level Vocabulary

WW13 ...who, what, when, where, why, how.

WW14 ...who, what, when, where, why, how.



SUGGESTIONS FOR USE

You may tailor-make this program to the vocabulary, names, places and events that are used in your own reading series. Using the childrens' own names is also very motivating.

The program was initially tested by Chapter I children. The beginning lessons require only two word discriminations. This was increased in later lessons. Many teachers do not prefer the multiple choice format. If your students are familiar with the keyboard, you may want to change this to a fill-in-the-blank format.

'Bob and Bill' tells

_____.

(who or what)

For more difficult lessons you may use longer sentences and/or prepositional phrases. For example:

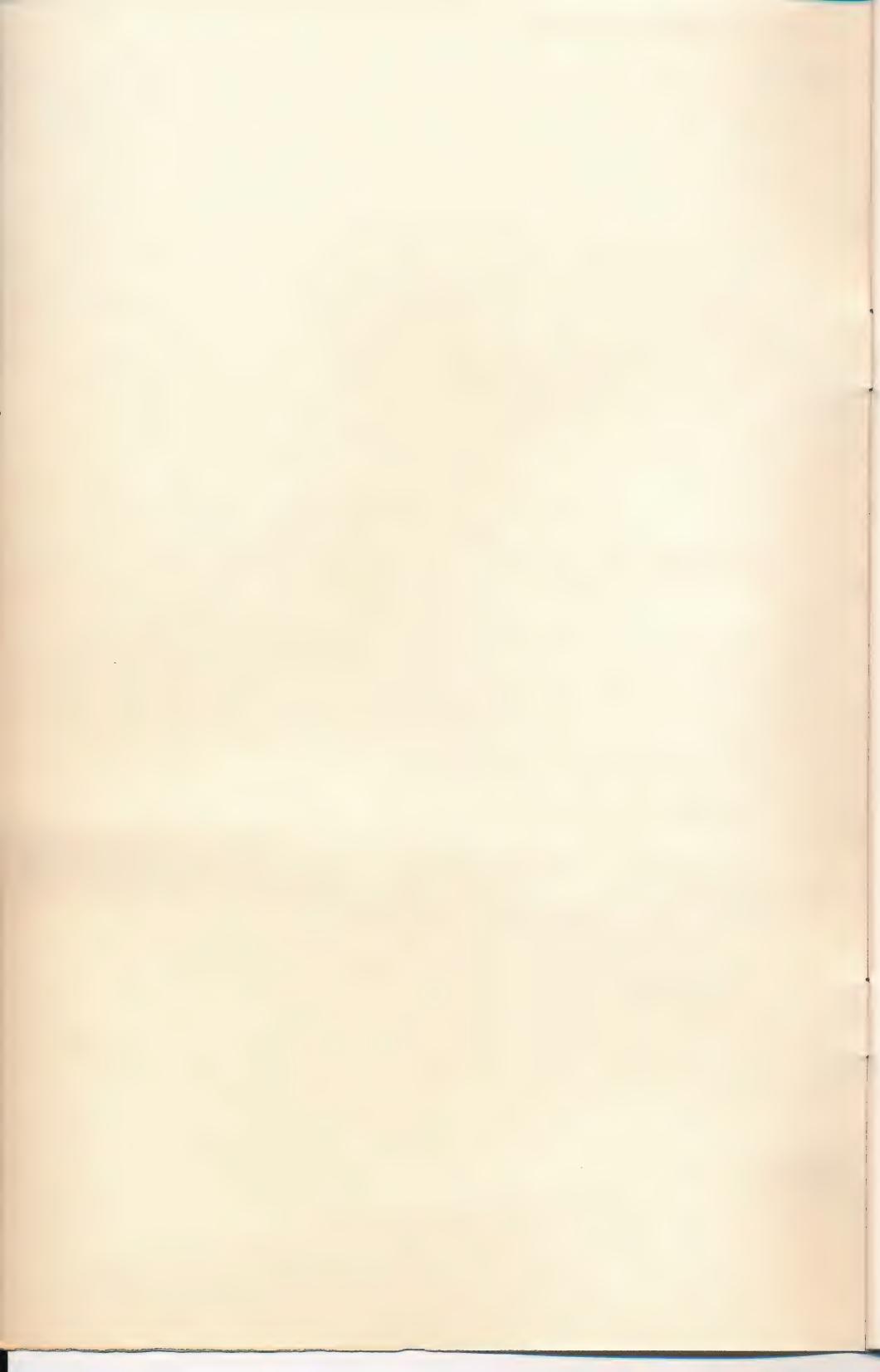
Mary, when she was at home, worked very hard.

Mary tells

- a. who
- b. where

However you decide to modify the presentation, be sure the word who, what, when, where, or why is the first answer alternative. The computer looks for one of these words to give the appropriate feedback.



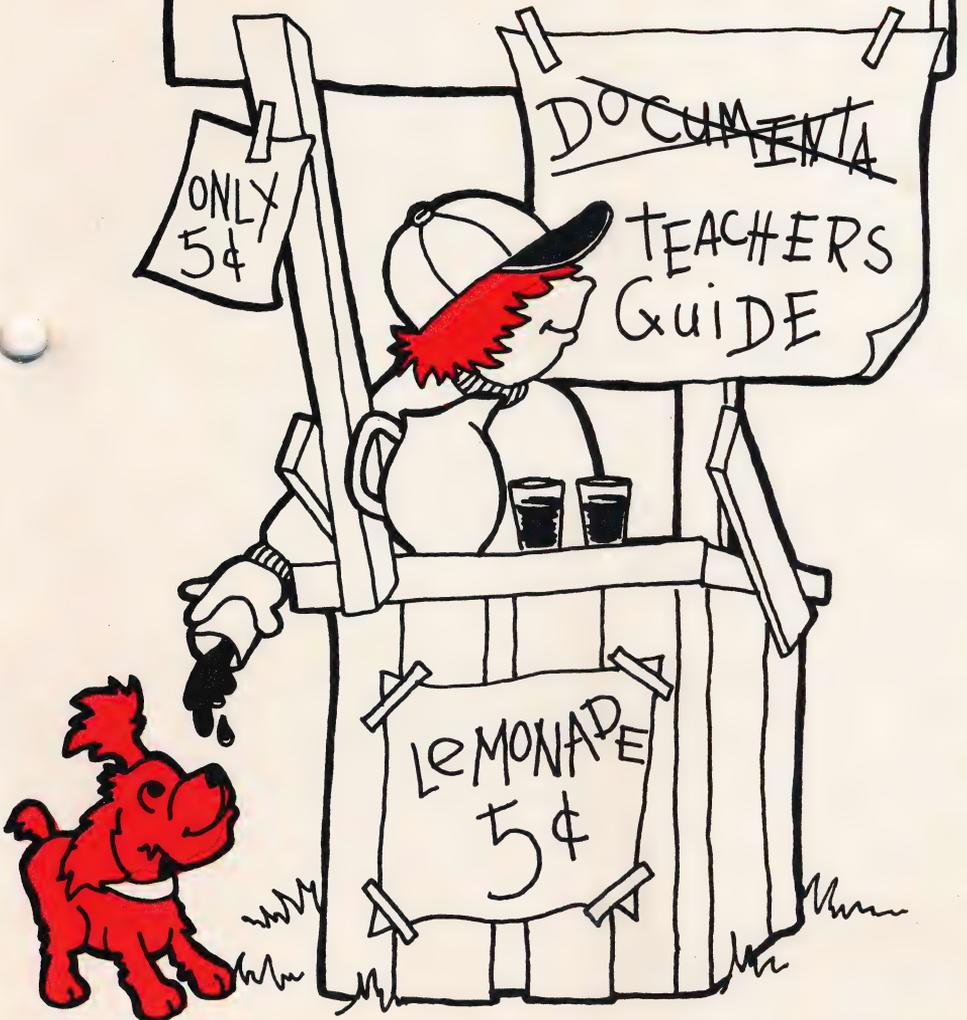


Hartley 

Hartley Courseware, Inc.

40-01

FACT SHEETS





FACT SHEETS

All Hartley courseware requires
a 48K Apple II* with Applesoft in
ROM and one Disk Drive.

All Courseware will boot on 3.2 or 3.3 DOS.

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FACT SHEETS



This disk was developed by teachers who believe timed tests on basic facts are a small, but important part of a student's training.

If you are one of those people, and are tired of making up new fact sheets and answers every week, this disk is for YOU! It will save you hours of time and is so simple to operate you may want to have your students create their own worksheets.



*****NOTE*****

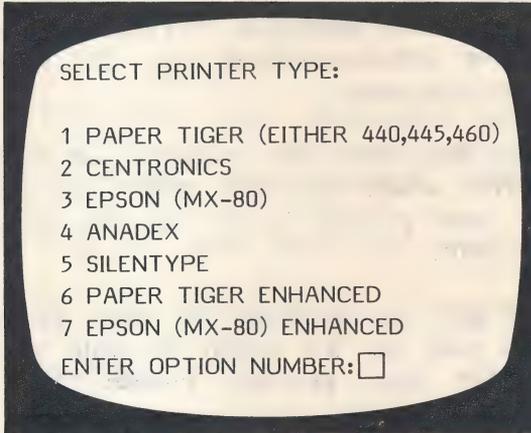
Math facts is a very simple program to run. The only difficulty you may encounter is with your printer. The information that goes from the computer to the printer is NOT standard. For example, 'CTRL A' may enlarge the print in one printer, but change the type style or line feed for another one.

In an effort to deal with this problem, we have included a printer MENU, where you can select the printer type you have. If your printer is not on the list, you will need to experiment.

If you cannot get the program to work to your satisfaction, please call us. We might be able to customize the program for your printer. Phone: (616) 942-8987 or (517) 646-6458.

PROGRAM OPERATION

'Boot' your disk. The following MENU will be shown:



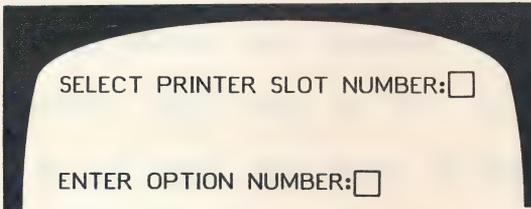
A screenshot of a terminal window with a black background and a white rounded rectangle containing the following text:

SELECT PRINTER TYPE:

- 1 PAPER TIGER (EITHER 440,445,460)
- 2 CENTRONICS
- 3 EPSON (MX-80)
- 4 ANADEx
- 5 SILENTYPE
- 6 PAPER TIGER ENHANCED
- 7 EPSON (MX-80) ENHANCED

ENTER OPTION NUMBER:

Enter the number and press **RETURN**.

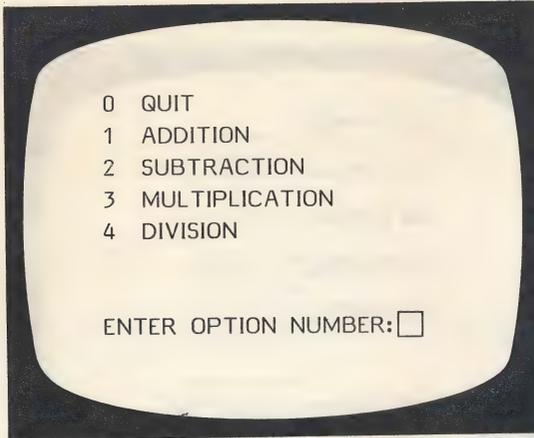


A screenshot of a terminal window with a black background and a white rounded rectangle containing the following text:

SELECT PRINTER SLOT NUMBER:

ENTER OPTION NUMBER:

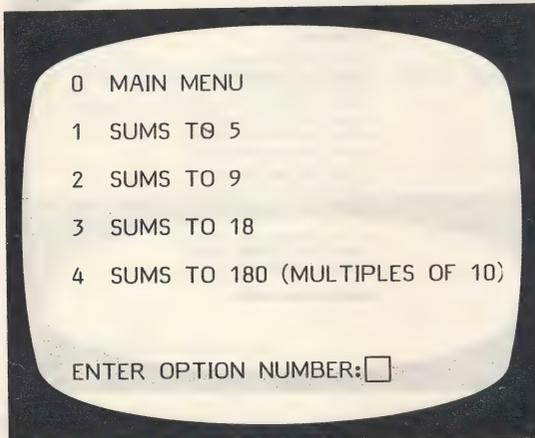
Enter the slot number. If you're not sure, **TURN OFF YOUR COMPUTER**--take off the cover and see which slot the printer cable is in. (Remember, the first slot on the left hand side is '0'.)



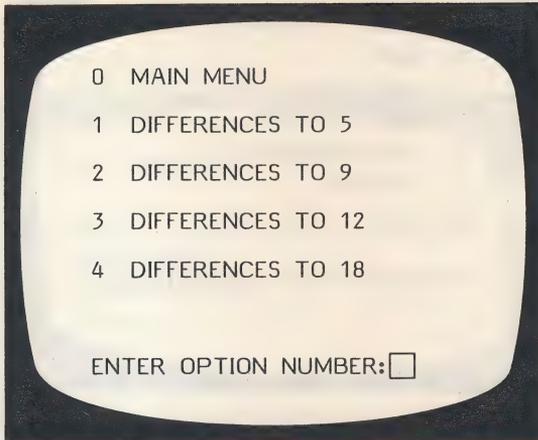
Enter the content area you wish for your fact sheet.

The following MENUS are available.

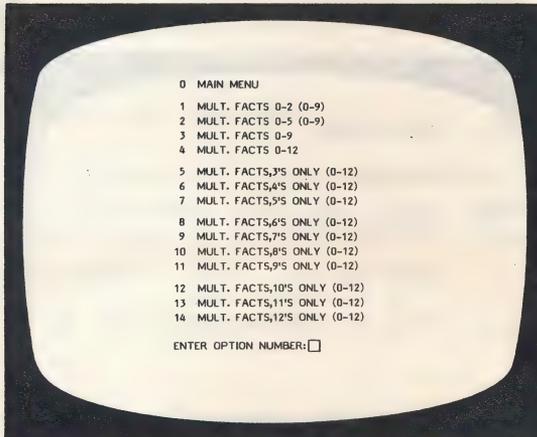
ADDITION



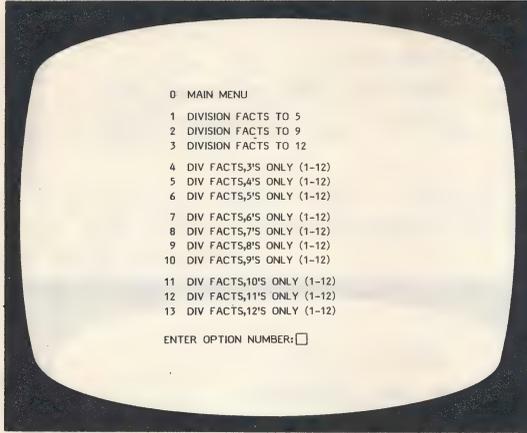
SUBTRACTION



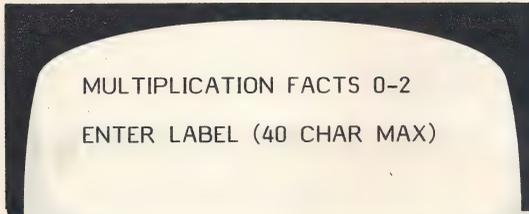
MULTIPLICATION



DIVISION

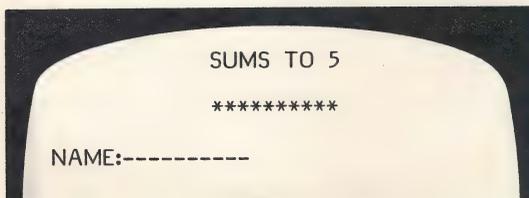


From your MENU pick the skill you wish. Type the number, press **RETURN**.



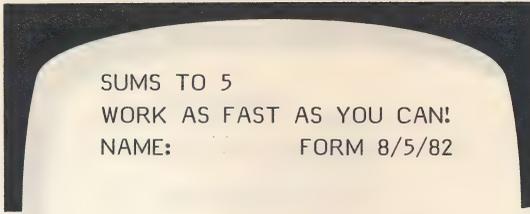
You have 2 lines to enter your own worksheet identification or a note to the child.

Examples:



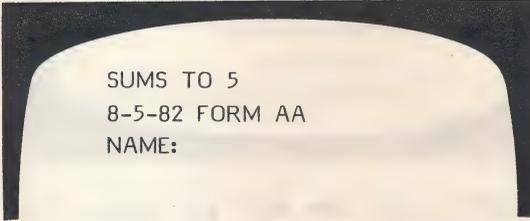
The skill will automatically be printed across the top.

OR,

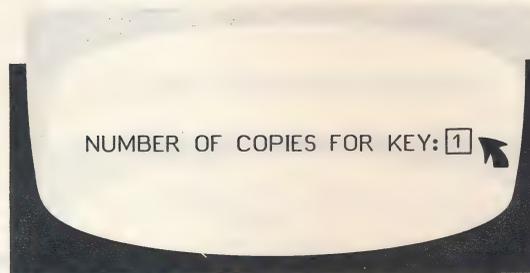


SUMS TO 5
WORK AS FAST AS YOU CAN!
NAME: FORM 8/5/82

OR,

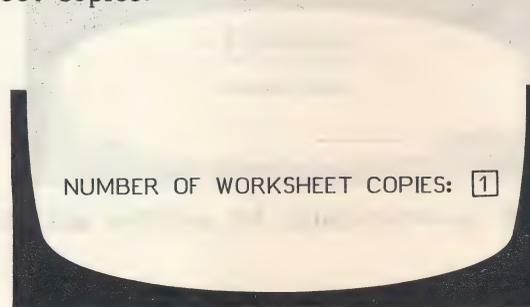


SUMS TO 5
8-5-82 FORM AA
NAME:



NUMBER OF COPIES FOR KEY: 

 Default value is . If you press **RETURN**, you will get 1 answer key. The same applies for the number of worksheet copies.



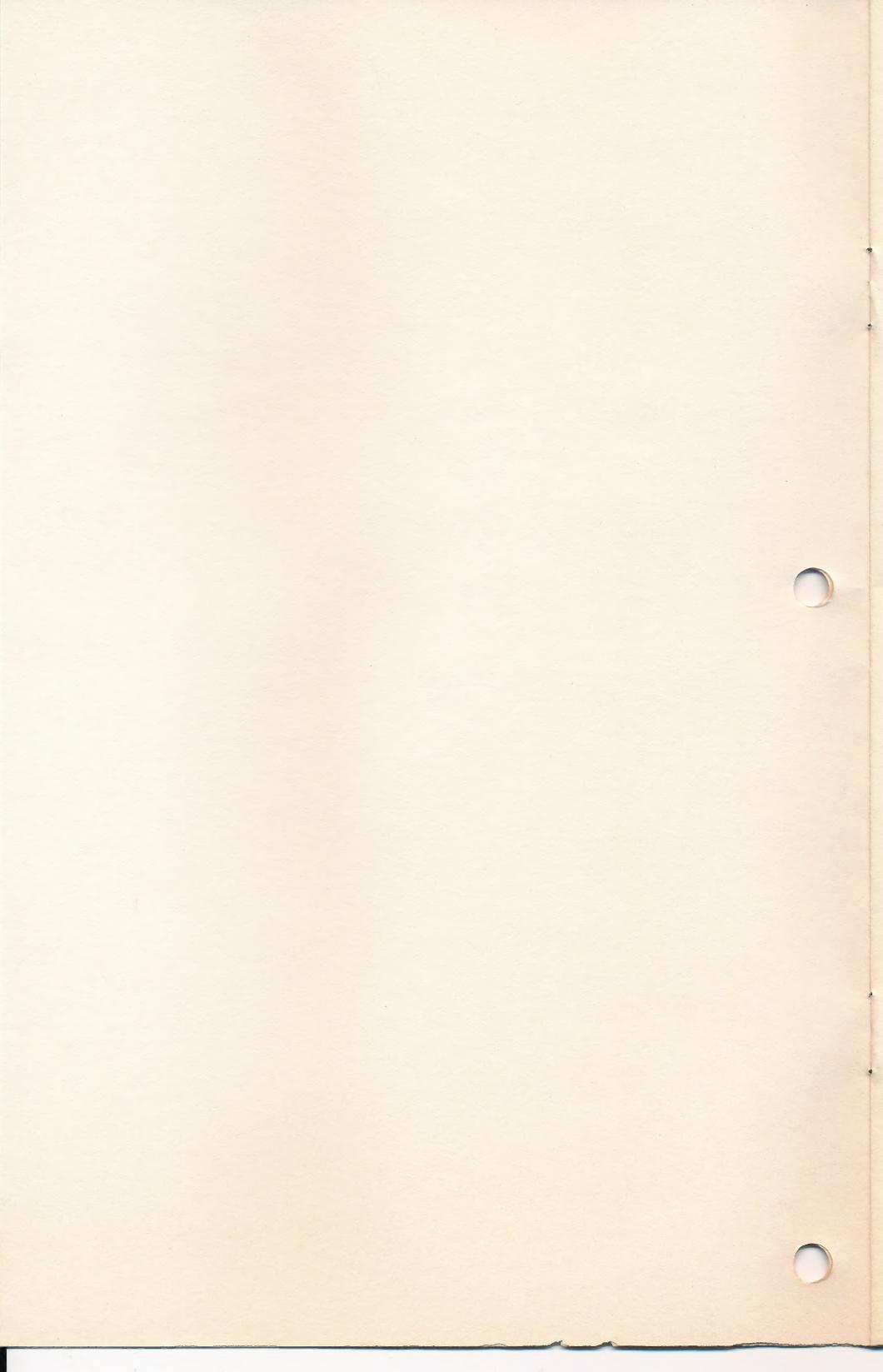
NUMBER OF WORKSHEET COPIES:

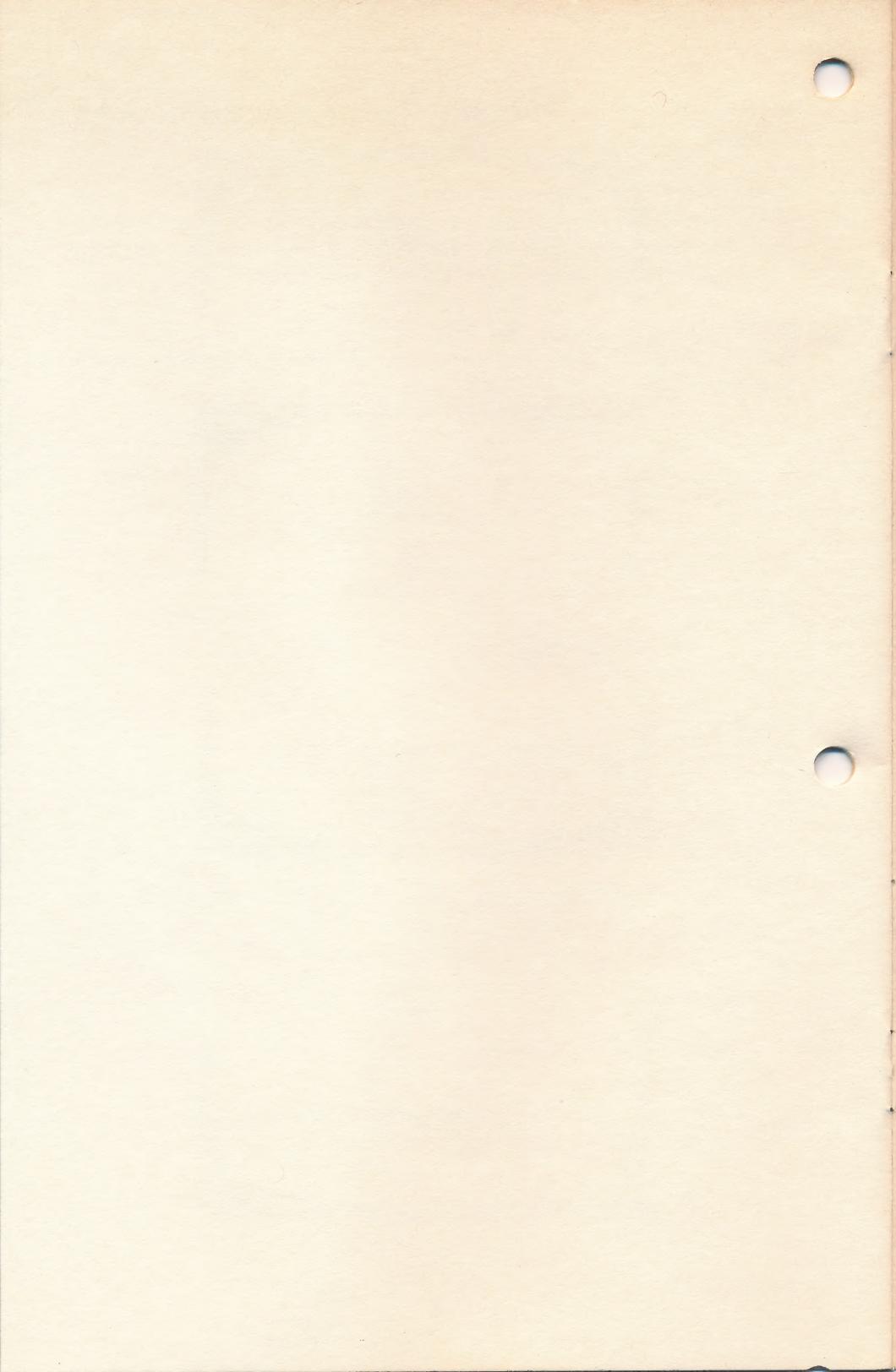
When you press **RETURN**, your printer should begin to work.

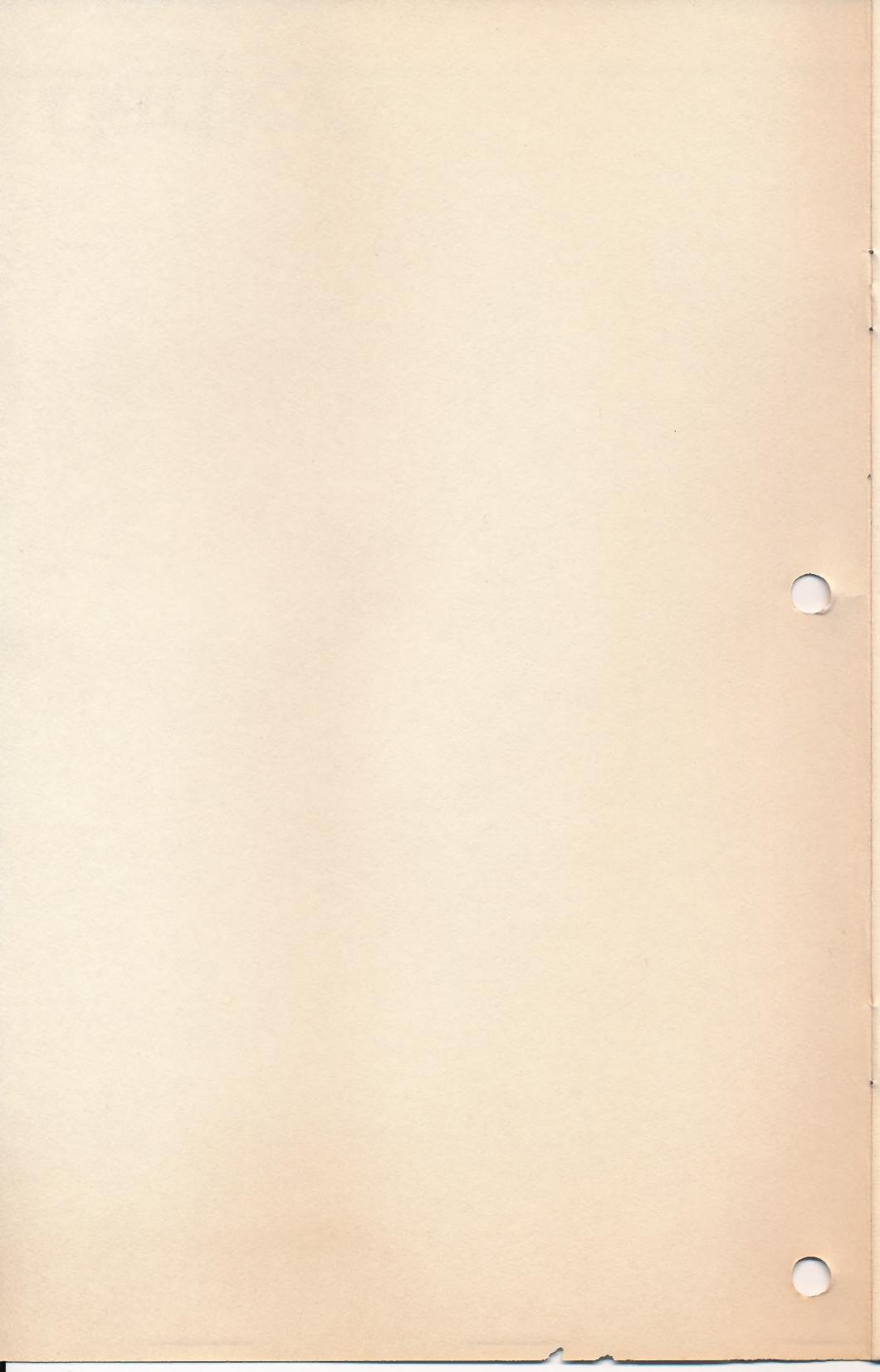
Worksheets are generated randomly. If you run the program 10 times and pick the same objectives each time, you will have 10 different worksheets (and ten corresponding answer keys)--so be sure to identify each.

If you want to go all the way back to the printer selection frame, reBOOT the disk or press **RESET** or **CTRL RESET** and then type **RUN HELLO**.









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