

MINNESOTA EDUCATIONAL COMPUTING CONSORTIUM

2520 Broadway Drive · Saint Paul, Minnesota 55113

December 28, 1981

Mr. Paul Liniak Atari, Inc. 1196 Borregas Avenue Sunnyvale, Califorinia 94086

Dear Paul:

Please find enclosed the latest version of the MECC "standard" commercial software distribution contract. We are now requesting our lawyer to review the contract as you see it. You may want to get a legal review from your end in addition to the standard corporate review regards ATARI's interest.

Also enclosed are copies of the MECC Demonstration Diskette and the related user support booklet. Please do not distribute these materials. They are sent to you specifically for use at the 1982 Consumer Electronics Show and for review by ATARI regards the use of the ATARI name in our written documentation. It is very likely that the materials will be edited and refined prior to final release, at which time I will be sure to send final copies to you.

As I mentioned in our telephone conversation this morning, we have had tremendous difficulty in copying ATARI disks using the standard 810 copying methods. One of your best software people should get in touch with Marge Kosel and see if we can't figure out whether our problem is unique. It is a major problem!

When you get these materials and have a chance to review them, please call me so that we can move forward, particularly regarding the software contract.

Sincerely,

MINNESOTA EDUCATIONAL COMPUTING CONSORTIUM

Kenneth E. Brumbaugh

Full Bulay

Director, Instructional Services

612/376-1105

cc: Marge Kosel, MECC Manager - Courseware Development Ron Barnes, MECC Manager - Business Administration

Encl:

MECC DEMONSTRATION

for the

ATARI COMPUTER

Version 1

© Minnesota Educational Computing Consortium 2520 Broadway Drive St. Paul, Minnesota 55113

January 1, 1982

ATARI is registered trademark of ATARI, INC. The ATARI 400 Computer System is referenced hereinafter in thia manual as the ATARI Computer.

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INTRODUCTION

Once a concept of the future, computers now <u>are</u> in the classroom. Their continued presence seems assured. As computer awareness grows among students, parents, teachers, and administrators, so does the need to know what computers can contribute to education.

The MECC Demonstration module for the ATARI Computer is designed as an aid to making presentations on the use of the ATARI Computer in instruction. A series of brief demonstrations illustrate the applications for the classroom. The full demonstration using the diskette takes about one hour.

Although this booklet and the diskette focus on instructional applications, the use of the computer as a device for teaching programming should not be ignored. A brief sample program utilizing simple statements can demonstrate how computer programming can be used in instruction.

For additional information on MECC activities and materials, see Appendix E.

Handout pages in this booklet may be duplicated for use with participants. These pages have MECC symbol in the lower left hand corner of the page.

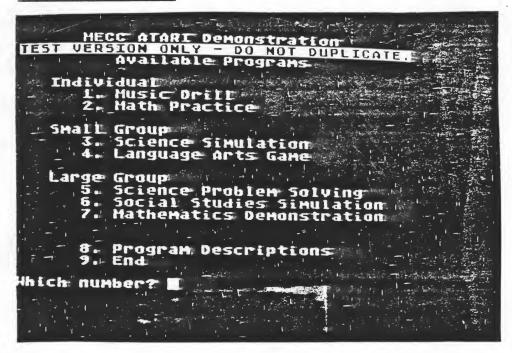
ACKNOWLEDGEMENTS

This manual was written by Marge Kosel, MECC with the assistance of Tom Boe and Don Rawitsch. The diskette was converted by the ATARI conversion team with major contributions from Mike Fish, Todd Bailey, Mike Boucher, Bret Indrelee, Cynthia Schroeder, and Darrell Ricke. This module is a product of MECC Instructional Services.

R ATARI is a registered trademark of ATARI, INC.

GENERAL DESCRIPTION

The MECC Demonstration diskette for the ATARI has the following options:



The diskette is divided into four different ways to organize the class to use computers with students.

- individual when students interact one on one with the computer.
- small groups when students work cooperatively and interact with the computer.
- large group when a classroom of students use the computer with the teacher directing the discussion.
- bystander when students interact with each other to prepare data and the computer is used to process the data.

The options also show different modes of computer use:

- drill and practice
- simulation
- educational game
- problem solving
- demonstration tool.

GENERAL DESCRIPTION (Continued)...

The strategies of classroom use are outlined in transparency masters. The presentor can duplicate these as handouts or make overhead transparencies to accompany the presentation.

To use the diskette, type the number of the program desired. As each demonstration is completed, the options will return automatically to the screen. Any time during a demonstration the presentor can press the ESCape key to interrupt the program. The question "Do you want to try again?" will be asked. If the presentor answers NO, the list of options will appear again. To use another diskette, use Option 9 END. The diskette will take about one hour to demonstrate.

In the description for each program both Demonstration techniques and Laboratory techniques have been discussed. A demonstration assumes the presentor is doing a presentation on instructional computing in front of a group of teachers. The laboratory material can be used if the participants have access to an ATARI. Two to four participants per machine is recommended.

Some of the programs on the diskette use the color and sound capabilities of the ATARI. The instructor should plan to have a color monitor and may want to have the sound turned up.

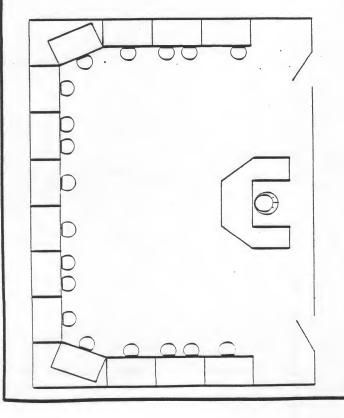
INDIVIDUAL

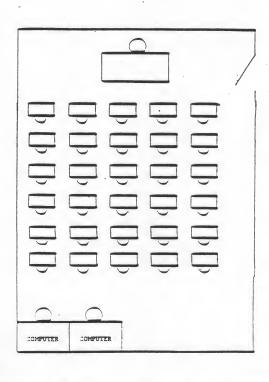
MOST LIKELY MODE OF INSTRUCTION
DRILL
TUTORIAL
PROBLEM SOLVING

MAIN RESULTING BENEFIT

STUDENT CONTROLS CONTENT AND

PACE OF LEARNING



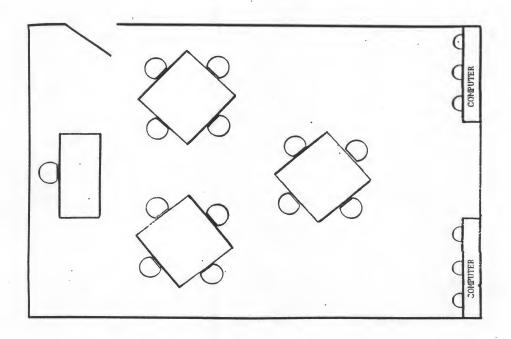


SMALL GROUP

MOST LIKELY MODE OF INSTRUCTION
SIMULATION
EDUCATIONAL GAME

MAIN RESULTING BENEFIT

STUDENT COOPERATION IS
ENCOURAGED



LARGE GROUP

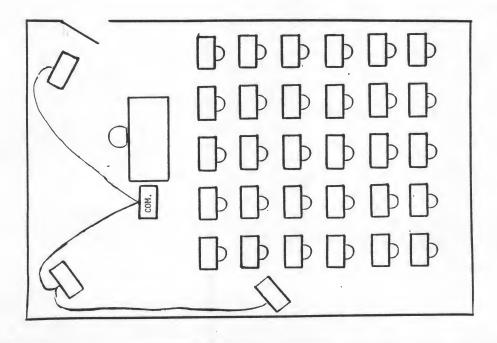
MOST LIKELY MODE OF INSTRUCTION

PROBLEM SOLVING
DEMONSTRATION TOOL

MAIN RESULTING BENEFIT

TEACHER PRESENTATIONS ARE

ENHANCED

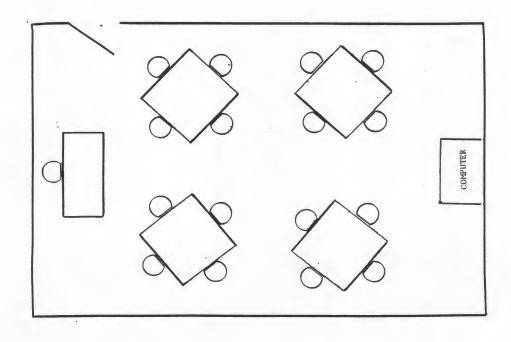


BYSTANDER -

MOST LIKELY MODE OF INSTRUCTION
SIMULATION

MAIN RESULTING BENEFIT

STUDENT INTERACTION



RATIONALE FOR COMPUTER USE

IMMEDIATE REINFORCEMENT
RANDOM PRESENTATION
GRAPHIC ILLUSTRATIONS

CONTROL OF TIME FACTORS

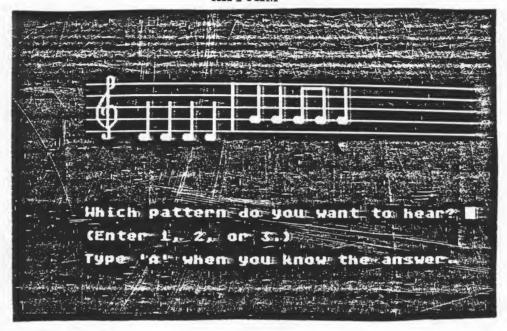
REPLACEMENT OF EXPENSIVE OR DANGEROUS LAB EQUIPMENT

SPEED IN CALCULATION

RECORD KEEPING

1. INDIVIDUAL - MUSIC DRILL

RHYTHM



MECC DISKETTE SOURCE

MUSIC: Rhythm and Intervals

DEMONSTRATION TECHNIQUES

Discuss how a computer can be used individually with students.

Select Option 1 - Music Drill. For most audiences, simple problems (choice 1) should be selected. The computer will play three rhythms. Have the participants choose the correct rhythm that matches the one shown on the screen. Encourage participation.

The presentor may want to show the Chart of Stored Patterns on page 11 which will show the increased difficulty from Level 1 to Level 3.

LABORATORY TECHNIQUES

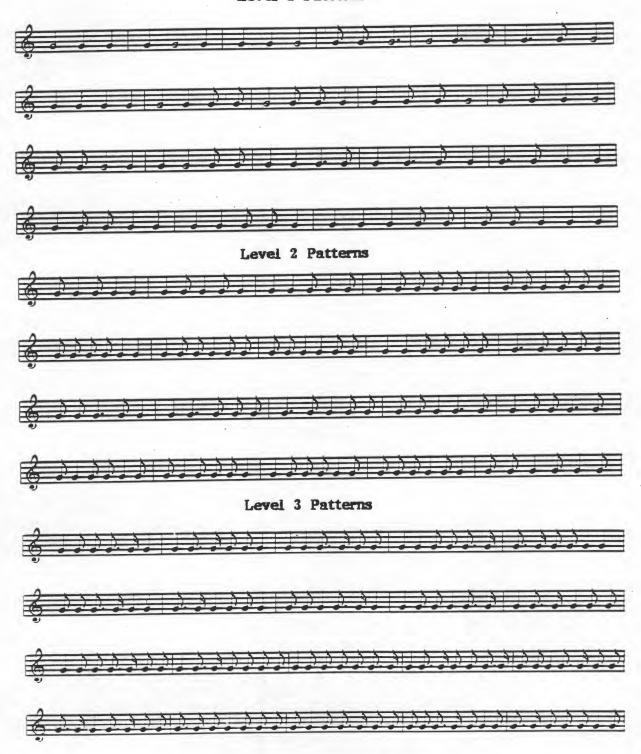
The Rhythm Recording Sheet on page 12 can be used if the presentor has ATARIS for the participants. The instructor should fill in the number of problems to be worked and the mastery level before the sheets are duplicated. A suggested number of problems is four and the level of mastery set at two. Participants record their scores and will experience what students would in trying to achieve mastery.

EDUCATIONAL USES

Music theory is a skill-oriented discipline which requires much practice. Just as baseball players must practice batting and fielding, music theory students must practice reading music and listening to music. Traditionally, this practice is not a solitary activity. A teacher must evaluate the student's efforts and, in the case of ear training, a teacher must also present the music to be heard. This is a tedious and time consuming task for the teacher. The ATARI can present both visual and aural stimuli and provide instant feedback to student responses. In addition, it can produce hundreds of problems of a given type through use of random selection. Thus, the computer can relieve the teacher of tedious drill work while providing the student with individualized activities.

Chart of Stored Patterns

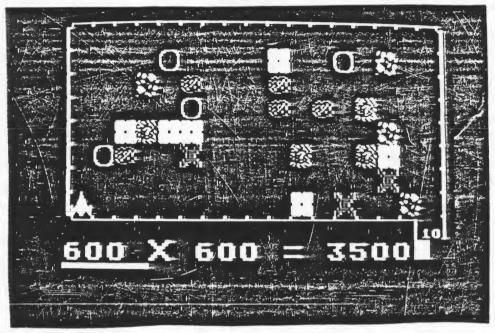
Level 1 Patterns



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		RECORDIN	IG SHEET		
NAME					
NAIVIE					
	Num	ber of proble	ms to do		
		ber needed fo			
•					Master
evel		Scores			Achieve
1					
2					
3					
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			•		

2. INDIVIDUAL - MATH DRILL

BASE TEN



MECC SOURCE DISKETTE

Basic Mathematics

DEMONSTRATION TECHNIQUES

The objective of this drill is to practice mental multiplication of numbers that are multiples of ten. After the participant answers the problem correctly a spaceship moves from the lower left hand corner of the screen to Base Ten. There is always a clear path around the outside. When demonstrating, the presentor may want to try a path through the obstacles. A black hole produces an interesting response. There will be a 90 percent chance the ship will be transported to another point on the screen and a 10 percent chance of being destroyed. In most situations the action that will happen is based on a probability. The Red X will always destroy the ship. The movement of the ship is determined by the speed at which the student answers the problems. If students don't answer in time or get the problem wrong, they will get a second chance. If correct the second time, they will remain in the same place. If wrong, they will move backward and two turns will be added to their score.

If the presentor presses the ESCape key during operation of this demonstration, instead of going to the end of the program, the scoring sheet will appear. This happens only on this MECC Demonstration.

The presentor may also want to demonstrate a teacher option which allows the teacher to delete the names listed on the score sheet. When the list of options appears, instead of choosing 1-9, hold the CONTROL (CTRL) key down, press the A key (CONTROL A). Follow the instructions to delete the names listed in BASE TEN. Discuss with the participants how they would use this option.

LABORATORY TECHNIQUES

If the presentor has ATARI computers for participants, have the participants play the game. If they make it to BASE TEN, the presentor could make a transparency of the Base Ten worksheet and put the scores for all the teams together.

EDUCATIONAL USES

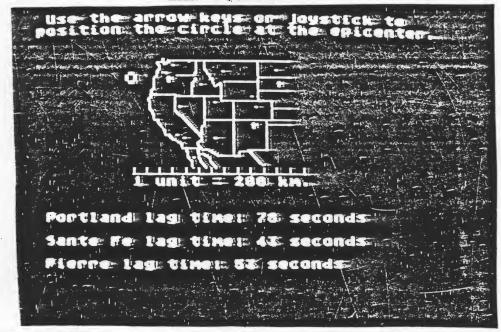
BASE TEN demonstrates the use of graphics and a game-like format to reinforce multiplication skills by students. The ability to randomly generate numbers and the obstacles in the galaxy makes the drill different each time the students use the program. The students also have to know the directions: North, South, East, West.

Although the program is listed as an individual student drill, it could also be used with small groups of students.

	BASE TEN -	ī
COMMANDER		
FIRST OFFICER		
PILOT		
LIEUTENANT		
ENGINEER		
NAVIGATOR		
CREW MEMBER	· · · · · · · · · · · · · · · · · · ·	· .
CREW MEMBER		
CREW MEMBER		
CREW MEMBER		

3. SMALL GROUP - SCIENCE SIMULATION

EARTHQUAKES



MECC SOURCE DISKETTE

Earth Science

DEMONSTRATION TECHNIQUES

EARTHQUAKES on this MECC Demonstration module is only one section of the total program. The concepts are introduced as a tutorial and the student does this simulation of an earthquake. At this point, it assumes the student already knows:

- ... Primary Wave similar to sound waves which result from the back and forth movement of the rock. The first wave recorded by the seismograph.
- ... Secondary Wave similar to water waves which result from the up and down movement of the rock. These waves move slower and arrive sometime after the primary wave.
- ... Lag Time the time interval between the arrival of the primary wave and the secondary wave.
- ... Epicenter the place on the surface of the earth directly above where the quake has taken place.
- Formula used to calculate kilometers to a quake. The differences in the wave would account for about 100 kilometers in about eight seconds. Thus, the lag time divided by 8, times 100 would be the number of kilometers from the quake.

Readings from three stations will be reported. Three stations are necessary to locate the epicenter of the quake. A map of the western United States will appear. Based on the data provided, the objective is to locate the epicenter of the quake using the arrow keys or the joystick. When the quake is located, press the RETURN key and the computer will do the calculations and locate the quake.

LABORATORY TECHNIQUES

If used in a laboratory situation, give the participants an overview of the terms necessary and the methods needed to locate a quake. Have them locate the quake. Record their results on the Earthquakes worksheet.

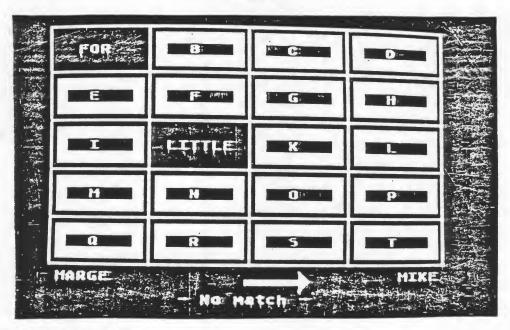
EDUCATIONAL USES

The program randomly locates earthquakes throughout the western United States. Many techniques can be used to introduce the concept of earthquakes to a middle school science classroom, e.g., reading a textbook, seeing a film, having a seismologist talk to the group. The method used in the computer application is one of simulated real-life experience. As with most computer situations, it is necessary to provide related non-computer activities both as preparation before and follow-up after the computer simulation. The support booklet provides suggestions for integrating the program with the general curriculum.

EARTH QUAKES NAME: Use the worksheet with a compass to determine epicenter requested by computer. Station: Lag-time: Station: Lag-time: Station: Lag-time: 1 UNIT 100 KM. Station: + Lag-time: Station: Lag-time: Station: Lag-time:

4. SMALL GROUP - LANGUAGE ARTS GAME

WORDS



MECC SOURCE DISKETTE

PRIMARY: Reading

DEMONSTRATION TECHNIQUES

The presentor may change the words used in the program by typing a CONTROL A at the list of options and answering the questions. Let the participants play the game by choosing two to play the different players' roles.

LABORATORY TECHNIQUES

The presentor may want to change the words used to fit the interests of the audience. Let the group play the game. Have them complete the worksheet when done.

EDUCATIONAL USES

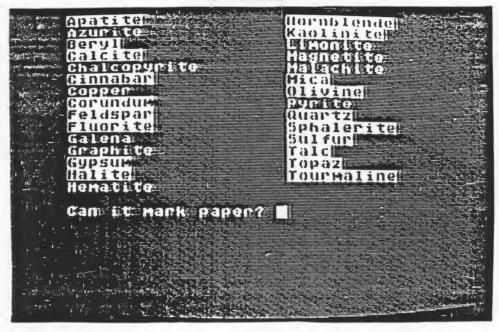
The WORDS program can be used in different subject areas. Teachers may put in their own list of words and expose the students to those words in this game format.

W	0	R	D	S

Word	Match
·	

5. LARGE GROUP - SCIENCE PROBLEM SOLVING

MINERALS



MECC DISKETTE SOURCE

Earth Science

DEMONSTRATION TECHNIQUES

The presentor may want to have an actual sample of some of the minerals listed in the program to use for demonstration. If the minerals are not available, graphite (pencil lead) is a good choice. Answer the questions and perform the tests necessary to find the mineral in question. The presentor should emphasize the sorting capabilities of the computer and the limitations based on the number of minerals included in the list. Discuss with the group the previous knowledge assumed on the part of the student.

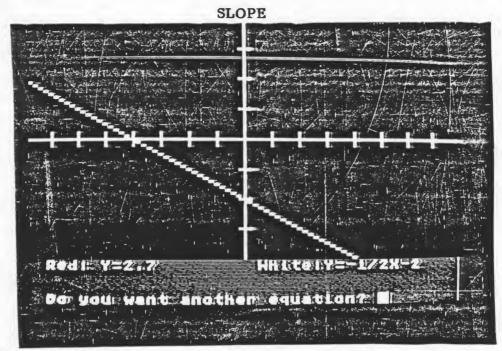
LABORATORY TECHNIQUES

If used in a laboratory situation, each group should have one mineral or rock to test. The groups could exchange their minerals.

EDUCATIONAL USES

The program shows the computer's ability to take large amounts of data and sort and classify it. Using the flowchart provided in the <u>Earth Science</u> support booklet, students can follow the computer's classification system. Have students take a mineral they don't know and make a list of its properties by answering questions until they locate it.

6. LARGE GROUP - MATHEMATICS DEMONSTRATION



MECC SOURCE DISKETTE

Graphing

DEMONSTRATION TECHNIQUES

Discuss the role of problem solving in a classroom. Also mention that students can be taught to program the computer; this receives a major emphasis in many schools. Depending on the audience, the presentor may elect to discuss this program.

Use one of the following sets of equations:

$$Y = 1/2X + 2$$

 $Y = 2X + 2$ or $Y = 1/2X + 2$
 $Y = 1/3X + 2$ or $Y = 1/2X + 4$
 $Y = 5X + 2$ $Y = 1/2X - 2$
 $Y = -1/2X + 2$

Study the difference in the equations. Observe the differences in the graphs.

In the first set of equations notice the number multiplied times the X varies. In correlating the graph with the equation, the observation can be made that the larger the number, the steeper (more vertical) the graph. Thus, the number multiplied by the X determines the slope of the equation.

See if the participants can draw some conclusions about the effect the number being added to the X has on the equation. Discuss how the program would be used in an instructional setting.

LABORATORY TECHNIQUES

Use one of the Slope worksheets and have participants learn about the slope of a line.

EDUCATIONAL USES

An entire unit of study in Algebra I or Algebra II can be built using this program. Following the study of slope and intercept, topics such as parallel and perpendicular lines, investigations of triangles, quadrilaterals distance, or simultaneous equations concepts can be introduced.

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			-	14.	-

Name							•					
Class												
-												
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y = 2X	+ 2					1						
y = 3X												
•					\square						7	
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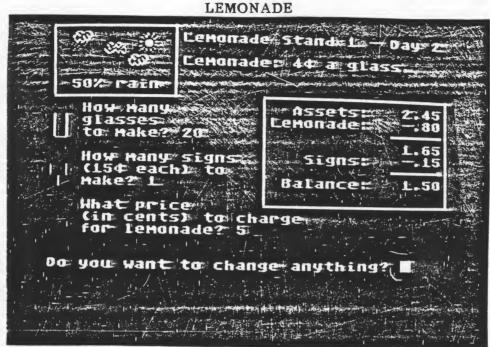
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y = X + 1									+	
y = -1/4X + 1				口						
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					s at	oove.				
General form of equa	tion:	y = mx	c + b							
General form of equa	tion:	y = mx	c + b					ha	ve?	
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General form of equa	tion:	y = mx	c + b					hav	ve?	
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Write equations the make this figure.				
make this figure. 1. 2.				
make this figure. 1. 2. 3.				
make this figure. 1. 2.				

Verify your answers with the SLOPE program.

7. BYSTANDER - SOCIAL STUDIES SIMULATION



MECC SOURCE DISKETTE

The Market Place

DEMONSTRATION TECHNIQUES

The presentor can divide the group into two teams. Demonstrate LEMONADE for two to three rounds. The program on this MECC Demonstration module has been changed to introduce more random events. The presentor should discuss how the computer could be in another room and the simulation still could be used. Discuss with the participants, since this program is graphic, a large group presentation may also be appropriate.

LABORATORY TECHNIQUES

Have the groups run the program and use the worksheet to record their results.

EDUCATIONAL USES

This program, like EARTHQUAKES, simulates an experience for the students. With random events, each time the students use the program, the best selling price is different and the random events are different.

Day				
Glasses Made				
Signs				
Prices				
Glasses Sold	•			
Income	·			:
Expenses		·		
Profit Today		-		
Assets				



GETTING TO KNOW YOUR ATARI COMPUTER

Equipment

ATARI COMPUTER CONSOLE:

The computer and

keyboard.

BASIC LANGUAGE CARTRIDGE:

A cartridge (containing the BASIC computer language) which is inserted in the console above the keyboard.



TELEVISION:

A television set used to display information.

DISK DRIVE:

A box unit that selects the program or data of your choice, displays the available list of programs on the diskette, and saves or deletes programs on the diskette.



DISKETTE:

A 5½ inch 'record' that contains a series of computer programs.

ATARI Computer Keyboard



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SYSTEM RESET

OPTION

SELECT

START

The ATARI Computer keyboard looks much like the keyboard of a regular typewriter. Some special keys are noted below:

RETURN Key - When you are finished typing a response to a program's question or you are finished typing a line in a program of your own creation, you send the information to the computer by pressing the **RETURN** key.

BACK S (Backspace) Key - Each time you press the BACKSPACE key the cursor backs up one space and erases the letters it passes over. This allows you to easily repair simple typographical errors.

BREAK Key - Pressing this key will stop the execution of a program. The program will remain in the computer memory, however, and may be run again. If BREAK doesn't work to stop the program, try RESET (see below).

SYSTEM RESET RESET Key - Found at the top of the row of keys to the right of the keyboard. Similar in operation to the BREAK key. Program execution will stop. In addition, the screen will clear. The program will still be in memory and may be run again.

- ESC (Escape) Key While using MECC diskettes, pressing the ESCAPE key in response to a question will stop program execution. The user is asked if he wishes to run the program again. If not, the diskette menu is displayed and another program may then be chosen. ESCAPE is also used in BASIC programming for many text formatting functions.
- CLEAR Key Pressing the CLEAR key (while holding down the SHIFT key) will clear all text from the screen.
- SHIFT Key Used like the shift key of a typewriter. When typing in lower case (small letters), holding down the SHIFT key while pressing a letter will cause a capital letter to be printed. When two characters are displayed on the same key such as:

holding down the SHIFT key while typing will cause the upper character to be printed.

- CAPS/LOWR (Capitals/Lower case) Key After this key is pressed, the ATARI begins "typing" in lowercase letters. In order to capitalize individual letters, the shift key may be held down as with an ordinary typewriter. To switch back to all capitals, hold down the SHIFT key and press the CAPS/LOWR key again.
- CTRL (Control) Key The CONTROL key, like the SHIFT key, is always used in conjunction with some other key. The CONTROL key is held down while another key is pressed. When this is done with one of the lettered keys (A for instance) a graphics character, useful for creating drawings or designs, is printed. The CONTROL key is particularly useful for the editing functions. (See MECC ATARI NEW USERS GUIDE).
- ATARI Key Pressing the ATARI key will cause all text which follows to be printed in inverse dark letters inside a light colored box. Pressing this key again will return the text which follows to its normal appearance.

Keys That Can Cause Confusion

- 0 (ZERO) is on the top row of keys. The letter O may not be used interchangeably with this number.
- 1 (ONE) is on the top row of keys. A lowercase L (1) is almost identical in appearance to a one. Typing a lower case L for a 1 is a common error among practiced typists.

USING A MECC ATARI DISKETTE

- 1. Make certain that the ATARI Computer, BASIC language cartridge, disk drive, and TV are plugged in and connected to each other properly. (See the MECC ATARI NEW USERS GUIDE for detailed instructions.)
- 2. Turn on the television.
- 3. Turn on the disk drive. Two lights will come on (PWR ON and BUSY). After about 10 seconds the BUSY light will go off and the whirling sound will stop.

The disk drive must be turned on before the computer is turned on.

- 4. Press the rectangular release button below the disk drive door and the door will open. <u>Insert a diskette</u> in the disk drive. (Exposed oval part is inserted first with the diskette label up.)
- 5. Close the door on the disk drive.
- 6. Be sure the disk drive is turned on.

Turn on the ATARI Computer. The power switch is located on the right side near the power cord. The disk "BUSY" light will turn on. You will hear a whirling sound from the disk drive again.

If the disk "BUSY" light does not go off in about 10 seconds, turn the ATARI Computer off and make sure the diskette is placed correctly in the disk drive. Then repeat step 6.

If no display appears on your TV screen at this point, the computer may be set for the wrong TV channel. On an ATARI 400 Computer the channel select switch is on the rear of the computer. Switch it to the opposite position.

- 7. A MECC "logo" will appear on the screen with the diskette name. Following this, a "menu" will appear. The menu gives a list of programs on the diskette. To run a program, type the number shown in front of the program name, then press the RETURN key.
- 8. Follow the directions given in the program. Remember to press the RETURN key after each answer.
- 9. To return to the menu while running a program, press the ESC (ESCAPE) key on the upper left hand corner of the keyboard in response to any question.

The screen will then ask whether the current program is to be run again or not. If not, the menu is automatically displayed.

10. To use a different diskette, remove the current diskette, turn off the ATARI Computer, insert the new diskette, and turn on the ATARI Computer.

Turning Off The Computer

- 1. Take the diskette out of the disk drive and store it in its protective envelope.
- 2. Turn off the ATARI Computer, the disk drive, and TV.

Note: Diskettes are sensitive to dust, heat, cold, and magnetic fields. Handle them with care. (See the MECC ATARI NEW USERS GUIDE for information on diskette care.)

DEFINITIONS OF TERMS

BACKGROUND INFORMATION - Information which explains or enriches content or provides technical information on the program.

COURSEWARE - A collection of computer programs together with accompanying support materials.

DOCUMENTATION - Written material for the teacher to use with the computer program (Also called a support booklet).

DRILL AND PRACTICE - A type of computer program which acts as drillmaster by providing repetitive practice on a skill or set of facts.

EDUCATIONAL GAME - A type of computer program with an instructional purpose presented in a game format.

GRADE LEVEL - The grade level at which the program fits into the curriculum.

HANDOUTS - Pages of the support booklet which are to be duplicated for student or teacher use.

LESSON PLAN - A day-by-day guide to implement classroom use of the program including ideas on organization, class projects, and follow-up activities.

MODULE - The package which contains both the microcomputer programs and the support booklet.

OBJECTIVES - The results to be achieved by using the program and materials as outlined.

PROBLEM SOLVER - A type of computer program which processes data for a student defined problem.

PROGRAM - The routines and operations which instruct the computer.

READING LEVEL - The readability of the text that appears on the computer screen.

SAMPLE RUNS - Pages of the support booklet with examples of computer screen output and accompanying explanations to outline the flow of the program.

SELO - Some Essential Learner Outcomes prepared by the Minnesota State Department of Education. When applicable these are included with the objectives in MECC support booklets.

SIMULATION - A type of computer program which approximates a real-world environment for examination.

SUPPORT BOOKLET - Written material which provides the information a teacher may need to use the program in a classroom situation (also called documentation).

TEACHER AID - A type of computer program to assist a teacher with classroom management tasks.

TUTORIAL - A type of computer program which provides new information as well as repetitive drill and practice in teaching a concept.

MECC DEMONSTRATION

CREDITS

RHYTHM

The RHYTHM program was developed by Linda Borry, MECC as part of a series of eighteen programs on music theory. Cynthia Schroeder and Todd Bailey transferred the idea to the ATARI.

BASE TEN

The idea for the BASE TEN game was developed for the ATARI by Marge Kosel and Mike Fish. The programming was done by Mike Fish, MECC.

EARTHQUAKES

The QUAKES program was created for the timeshare system by Curt Hoppe and John Lillifors, East Grand Forks School District under a MECC minigrant. The program was transerred to the ATARI by Bret Indrelee.

WORDS

WORDS was created by Marge Kosel and Mike Fish for the Apple and rewritten to include matching words for the ATARI by Mike Fish.

MINERALS

The orginial program was written by Steve Woodward, Alexandria, Minnesota, and contributed to the MECC Timeshare Library. Mike Boucher and Elmer Mattila converted it to the ATARI.

SLOPE

SLOPE was designed and programmed for the Apple by Marge Kosel. Darrell Ricke wrote the ATARI version.

LEMONADE

LEMONADE was created by Bob Jamison, MECC. The ATARI version was programmed by Mike Boucher and Mike Fish.

MECC INSTRUCTIONAL SERVICES ACTIVITIES

PURPOSE:

The primary purpose of the Minnesota Educational Computing Consortium (MECC) is to assist users and educational member systems in the coordination and utilization of computing resources through cooperative planning and decision making, and to provide current computing methods and materials.

SERVICES:

All MECC activities in the area of instructional computing are the responsibility of the Director of Instructional Services (Telephone: 612/376-1105). Questions related to MECC policy, procedures, or regulations should be directed to this office. The MECC Instructional Services Division is organized as follows:

Instructional Systems Development - This group is responsible for the production, coordination, refinement, and distribution of MECC instructional computing courseware products, computer programs, and their related user support material. Questions on operations within this area should be directed to the Manager, Instructional Systems Development (Telephone: 612/376-1103).

Technical Services - This group is responsible for operation and operating systems maintenance of the MECC Timeshare System (MTS), a 400+ port, all purpose, multiple language computer, which serves all Minnesota public higher education institutions and 340 school districts. Microcomputer programming and system utilities are handled by this group. Questions on operations within this area should be directed to the Manager, Technical Services (Telephone: 612/376-1141).

<u>User Services</u> - This group is responsible for timeshare and microcomputer user communications and training, the distribution of computing equipment, and the establishment and maintenance of the MTS telecommunications network. A staff of instructional computing coordinators are located throughout Minnesota for the purpose of promoting and facilitating computer usage. All questions on operations in this area should be directed to the Manager, User Services (Telephone: 612/376-1101).

GENERAL INFORMA-TION: The above information is to assist individuals who wish to contact the MECC office with specific questions. All written requests for information should be addressed to the appropriate office at MECC, 2520 BROADWAY DRIVE, ST. PAUL, MN 55113. THE FOLLOWING TWO ITEMS ADDRESS MANY ROUTINE QUESTIONS:

MECC PUBLICATIONS AND PROGRAMS PRICE LIST

No Cost. Distributed upon request. Suggest obtaining on a quarterly basis. Contact: MECC Publication's Office (Telephone: 612/376-1118).

MECC USERS Newsletters

No Cost. Distributed regularly during school year to individuals on mailing list. Contact: User Services Office (Telephone: 612/376-1117).

All requests for visitations to MECC must be scheduled in advance by calling 612/376-1130.

EVALUATION SHEET

MECC encourages your comments on this manual and the accompanying diskette. User suggestions will be considered carefully and incorporated in future documentation whenever practical.

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Please detach and mail to MECC.

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Minnesota Educational Computing Consortium Manager, Instructional Systems Development 2520 Broadway Drive St. Paul, Minnesota 55113

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