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ABSTRACT

This book contains directions for creating learning centers for use in grades 1-3 which use both computer and traditional activities. Information on each center includes goals and objectives, a time requirement, and specific guidelines for management of the activity. Required materials, including software, are indicated, and masters to duplicate for student use are provided. Subject areas include mathematics, social studies, science, language arts, and library skills. (GL)

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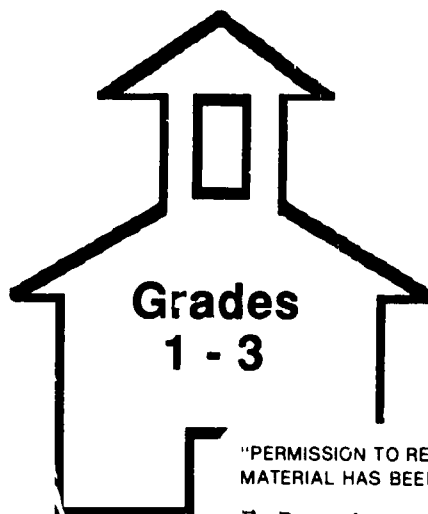
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# Electronic Learning Centers



Grades  
1 - 3

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## NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION

116 West Edenton Street • Education Building  
Raleigh, NC 27603-1712

**Bob Etheridge**  
Superintendent

March 27, 1989

### MEMO

TO: System-level Computer Coordinators

FROM: Computer Services

Computer Services and classroom teachers from Lynn Road Elementary School, Wake County Public Schools, Raleigh, N.C. have spent the last year developing Computer/Learning Centers for use in Grades 1-3. The results of their work have been duplicated in this publication, Electronic Learning Centers, for teachers throughout the state to utilize. The book contains directions for creating learning centers which use computer, as well as traditional activities. Also included is information on software, supplementary materials, and masters to duplicate for student use.

Please make this material available for teachers in your system who teach in grades 1-3 or work with special students. You may make as many copies as necessary for your system.

Attachment

256510

# ELECTRONIC LEARNING CENTERS

The idea of using centers as an instructional technique is nothing new to education. They were big news in the 60's and 70's. Most of the earlier centers were used as Interest Centers and often created problems in the classroom. Students saw little point to the activities and management was a mystery to teachers. Still, these earlier explorations had some merit. They were an attempt to individualize instruction and offer learning choices to students when many teachers were still teaching "the same thing to the same students at the same time in the same way."

In the 80's, when computers came on the educational scene, teachers started looking for ways this technology could be incorporated into classroom instruction. The center concept was rediscovered as an effective way to use computers as tools along with other traditional methods and materials. Centers also provide a good method for getting the most use out of one or two computers in a classroom or media center setting. The development of these electronic centers has been slow because of the lack of equipment and certainly the lack of appropriate software. As conditions improve, so the centers improve.

This publication is especially for those teachers who like centers or who are just looking for activities which use the computer. For those who have never used centers in the classroom, lab, or media center, there are good books on the market which offer suggestions on how to effectively manage students and activities in such a setting. The techniques that work for the more traditional centers are appropriate for the electronic-age centers.

In these sample centers, there are off-computer activities as well as computer tasks. The balance will be determined by the number of computers a teacher has at his/her disposal and the number of students which will use the center. Very young students may need the help of an aide or teacher. Older students may depend on a trained friend to get them started and to answer questions. Students may work on the computer tasks alone, in pairs, in a small group, or in a larger group with a large monitor. All students in the class do not need to do all the activities in a center. Perhaps another group will get an "electronic" center next week, or next month. This is the way it has always been with centers. Keep track of what your students are doing. Don't turn them loose for a long period of time and expect the center to go along on its own. Develop a record keeping system which uses checklists, charts, and/or folders for completed work to insure that each child is completing the activities in the way you have designed.

Try a center--you'll probably like it, or perhaps you'll get some ideas to help you start developing your own center!! As you begin to create, remember, these are not computer centers, they are instructional centers--science, social studies, language arts, math, etc. The activities should be planned to help students reach stated competencies and/or instructional goals.

## DEMONSTRATION SITES

The computer/learning centers which are included in the publication, Electronic Learning Centers, were developed by teachers in Lynn Road Elementary School, Wake County Public Schools, Raleigh, N.C. Dr. Carolyn Earp, principal, has agreed to make the school a demonstration site for interested teachers to visit in order to view these centers being used by students and talk with the teachers about development strategies, management, materials, etc. These visits are to be planned through Lynn Road School. Do not contact Computer Services for arrangements!

**To arrange a visit, please follow these steps:**

- **School visits may be conducted on any Wednesday from March 1 to May 15.**
- **Visiting hours will be from 8:30 - 2:30.**
- **Visits should be scheduled two weeks in advance by calling Dr. Carolyn Earp, principal, or Phyllis Bennett, assistant principal, 919-848-1846.**
- **Dr. Earp has suggested that the visits begin at 8:30 in the media center with Betsye Daniels, media coordinator providing an overview. A question and answer session will be conducted at 2:10. This schedule may be adjusted as needed.**

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*The Division of Media and Technology Services/Computer Services, North Carolina Department of Public Instruction, would like to thank the administration and staff of the Lynn Road School, Wake County Public Schools, Raleigh, North Carolina, for their cooperation in developing most of the centers in this publication, and for allowing their work to be shared with other teachers throughout the state.*

*Dr. Carolyn Earp - Principal*

*Betsye Daniels - Media Coordinator*

*Edna Wylie - teacher*

*Bonnie Love - teacher*

*Marilyn Wenig - teacher*

*Valerie McGaughey - teacher*

*Mary Scott - teacher*

*Fran Haislip - teacher*

*Pam Lewis - teacher*

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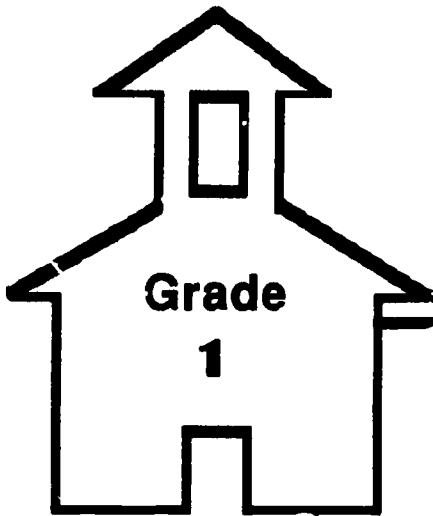
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## **WAYS ANIMALS MOVE**

An integrated center that uses traditional and computer activities in language arts and mathematics to teach science concepts about the different ways in which animals move.

### **SOFTWARE:**

**KIDWRITER.** Spinaker, 1984.

**WORD BANK.** Learning Well, 1985.

### **OTHER MATERIALS:**

Center (See Directions)  
Student Activity Sheets  
(See Samples)

Paper, pencils, magazines,  
glue, crayons, scissors.

### **COMPETENCIES:**

#### **SCIENCE:**

**GOAL 1** The learner will have a basic understanding of life science concepts.

1.1 Know that animals are alike and different

(Also the Process Skill of Classifying)

#### **COMMUNICATION SKILLS/WRITING:**

**GOAL 8** The learner will express imagination by drawing, dictating, or writing stories and booklets.

8.1 Draft a story in pictures and words

**GOAL 9** The learner will participate in publishing selected writing for an identified audience.

9.6 Make illustrated booklets to convey information to other children

9.7 Make illustrated stories and booklets for storytelling

#### **MATHEMATICS:**

**GOAL 1** The learner will identify and use whole numbers, 0-100.



# WAYS ANIMALS MOVE

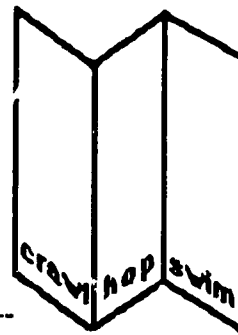
## A Science/Language Arts/Math Center

**Directions:** Rather than setting up one center for this unit, there should be four small centers or areas in the classroom--Discovery Center, Handwriting Center, Math Center, and Creative Writing Center. The animal theme is emphasized in each of these centers, but the curricular area is different. In each area there should be animal pictures, books and other types of instructional media. Each center has a directions sheet which is pasted to a firmer piece of colorful paper, colored, and then laminated. All materials are placed on tables where students can work on the activities. The activities need not be completed in any order.

The unit is introduced by the teacher through class discussion and pictures of animals that move in different ways. After discussion, the class participates in the game, "What Animal Am I?" (See directions)

**DISCOVERY CENTER (Science):** There are two activities in this center. One is a traditional cut and paste activity and the other a computer activity. Students may choose which activity they would like to complete or they may do both. Magazines and other picture sources should be available, as well as scissors, paste, and construction paper. In the traditional activity students find pictures of animals that move in different ways (fly, crawl, swim, run, hop, walk).

The pictures will be categorized by the students according to the type of movement and then pasted on both sides of folded construction paper. The correct label will be written on each fold by the student under the pictures. The teacher should have an example of the folded paper (three equal folds) with the appropriate words written on each fold--walk - crawl - swim - fly - run - hop. Students may be able to fold their own paper or the teacher may need to have the paper pre-folded.



The computer activity uses the program, WORD BANK, to reinforce organizational skills. This program will allow the teacher to personalize word lists and then have students organize the words into one, two, three, or four categories by playing four different games. For this center, the teacher can present animal names that must be organized into three categories that describe animal movement. An example of the "DROP IN THE BOX" (categorize by three game) words might be as follows:

### RUN

cat  
dog  
wolf  
pig  
mouse  
weasel  
deer  
tiger

### FLY

robin  
duck  
pigeon  
pelican  
owl  
wren  
goose  
cardinal

### SWIM

shark  
tadpole  
flounder  
porpoise  
dolphin  
goldfish  
trout  
octopus

(See the introductory game for the names of other animals.) (See Discovery Center sheet.)

**HANDWRITING CENTER (Language Arts):** For this activity students will make a book with the title, "Animals Move in Many Ways." Each page of the book will be about a different way in which animals can move. The students will draw a picture at the top of each page and write a sentence describing the movement of the animal. The teacher will have the books assembled for each student. There should be a colored piece of construction paper for the front and back cover with six pages of primary handwriting writing paper between. The sentences that the student is to write will be copied from an example that the teacher has prepared on primary handwriting paper.

**Cover - Animals Move in Many Ways**

**Page 1 - Many animals climb.**

**Page 2 - Some animals walk and run.**

**Page 3 - Some animals hop.**

**Page 4 - Some animals swim**

**Page 5 - Some animals crawl.**

**Page 6 - Some animals fly**

(See Handwriting Center sheet.)

**MATH CENTER (Mathematics):** A folder at this center will contain a variety of commercially prepared "connect-the-dot" pictures. When completed, the pictures will show different kinds of animals that move in different ways. The student can add color to the picture and write how the animal moves at the bottom or top of the picture.

(See Math Center sheet.)

**CREATIVE WRITING (Language Arts):** Using the computer program, KIDWRITER, the students will make a picture that shows at least one animal in a scene. After completing the picture, students will use the computer program to write a story that tells about the animal in their picture and how the animal moves. The story/picture should be printed when completed. (See Creative Writing Center sheet.)

# **MANAGEMENT**

## **SCHEDULING**

These mini-centers are best introduced during late winter or early spring.

## **GROUPING**

Six students will work on these activities at a time--two at each mini-center.

## **NUMBER OF COMPUTERS NEEDED**

At least one computer with a printer is needed. Two systems would be better.

## **LENGTH OF TIME**

These activities will probably need no more than two weeks of instruction.

## **SPECIAL CONSIDERATIONS**

It may be necessary to eliminate one of the computer activities if only one computer is available. An assistant will probably be necessary to help students with the printer.

# Introductory Game

## What Animal Am I?

**Purpose:** To help students develop classification skills and recognize the differences among the major animal groups.

**Materials:** Index cards, masking tape, magic marker

**Directions:** Prepare a set of animal cards and make sure that each student has a different animal. The animals that appear on the cards will determine the level of difficulty of the activity.

Use a loop of masking tape to attach a card on each student's back. Do not allow the student to see the card.

Separate the students into pairs within small groups. The students should take turns asking each other questions that are related to the animals that are represented by the cards on their backs. The only answers that are allowed are "yes," "no," or "maybe." Once a student has successfully identified himself, he has won. He may continue to answer questions from other students.

If several students are having problems, it may be necessary to stop the activity so that successful students can orally repeat the questions that they used to identify themselves. Once the students have a few good sample questions, continue the activity.

### Sample Animals

#### Common Animals

dog  
cat  
pig  
chicken  
horse  
cow  
skunk  
turkey  
turtle  
shark  
beetle  
clam  
rabbit  
moose  
owl  
fish  
snake  
sheep  
goat  
bear  
bobcat  
frog  
whale  
worm  
snail  
deer

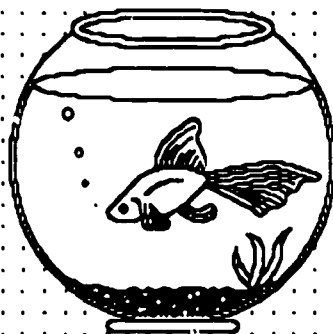
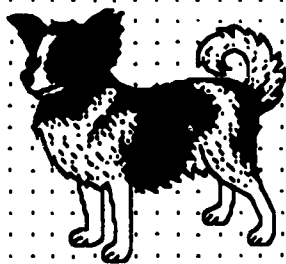
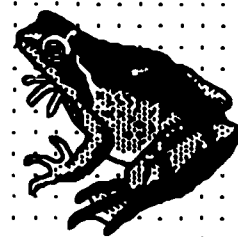
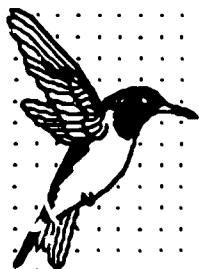
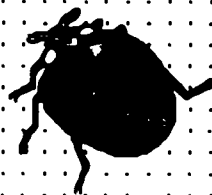
#### Zoo Animals

elephant  
monkey  
wolf  
lion  
tiger  
opossum  
buffalo  
ostrich  
rhinoceros  
porpoise  
penguin  
shark  
lizard  
gorilla  
giraffe  
zebra  
alligator  
bear  
raccoon  
ox  
kangaroo  
hippopotamus  
seal  
pelican  
boa constrictor  
frog

#### Challenge Animals

salamander  
rattlesnake  
cardinal  
grasshopper  
flea  
trout  
jaguar  
koala bear  
gerbil  
cricket  
crab  
mink  
llama  
dolphin  
walrus  
penguin  
eagle  
shrimp  
oyster  
pheasant  
alligator  
hawk  
weasel  
starfish  
flounder  
octopus

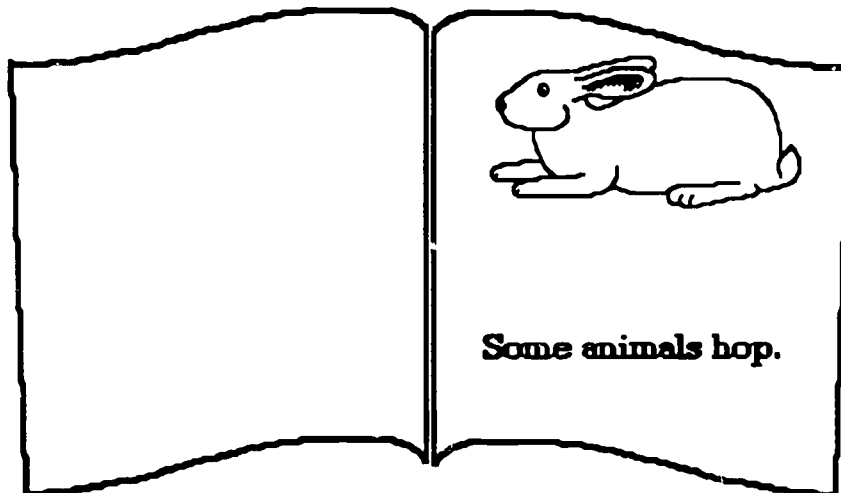
Look in the magazines. Find pictures of animals that walk, run, fly, swim, crawl, or hop. Cut and paste the pictures on your paper with the right word.



# Make an Animal Book

1. Write "Animals Move in Many Ways" on the cover of your book.
2. Draw a picture on the cover of your book. Put your name on the cover.
3. Copy one sentence on each page.
4. Draw a picture of an animal on each page to show ways animals move.
5. Read your book to a friend or your parents.

Show me your best writing.

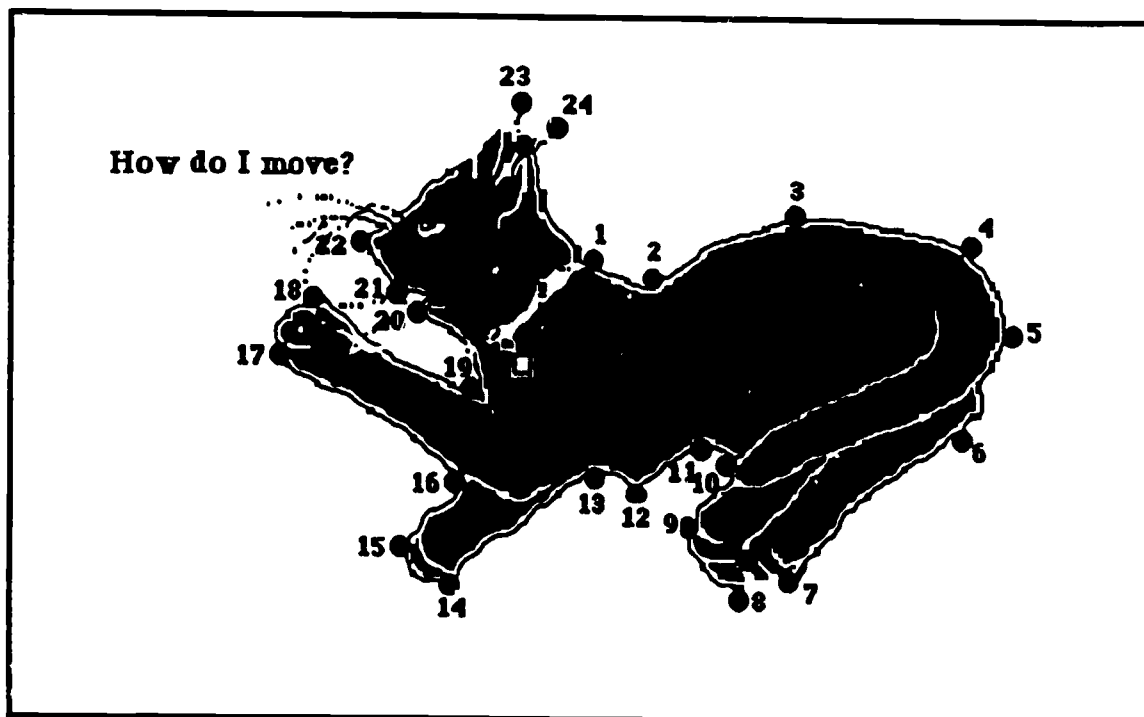


# Make a Picture

1. Choose a picture and connect the dots to find an animal. Begin at number 1.
2. Use one of the words below to tell how your animal moves. Write the word on your picture.

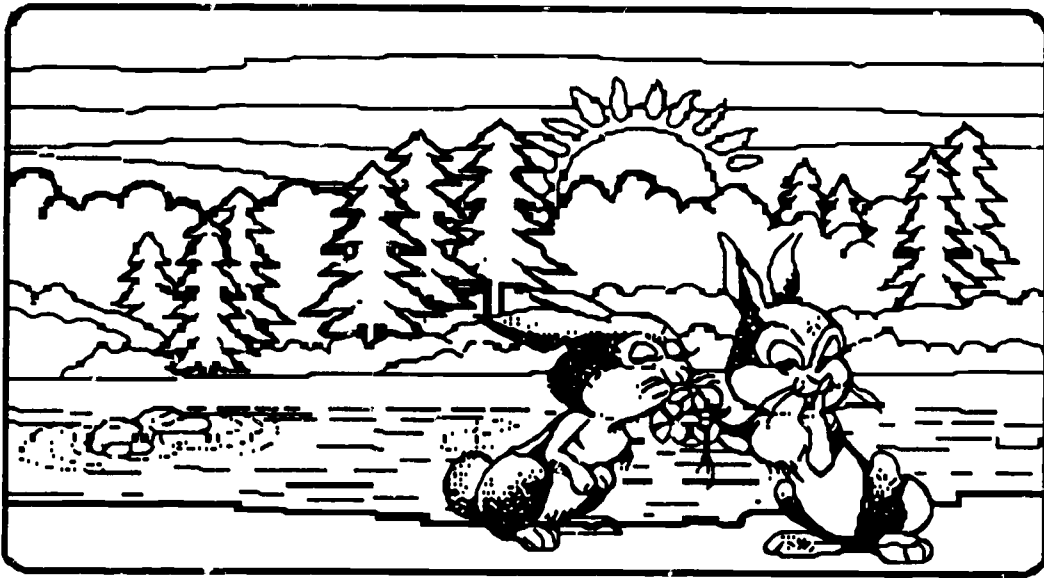
walk      run      crawl      fly      swim      hop

3. Color your picture.



# Write a Story

Creative Writing Center



1. Use the computer to make a picture about one of these animals.

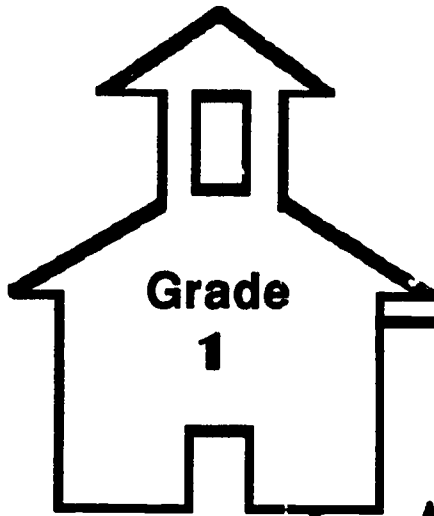
rabbit      cat      dog      fish      bird      duck

2. Use the computer to write a story that tells about the animal and how it moves.

You may want to use some of these words.

boy      walk      hop      swim      fly  
girl      run      crawl      climb





# TIME

Activities for teaching time to the hour and to the half hour.

## SOFTWARE:

TIME AND MONEY. Silver Burdett, 1987.

## OTHER MATERIALS:

Center (See Directions)  
Student Activity Sheets  
(See Samples)  
Games (See Directions)

## COMPETENCIES:

### MATHEMATICS:

**GOAL 4** The learner will exhibit skill in using nonstandard units of measurement.

**4.8** Measure time to the hour and half hour

**4.9** Solve simple time problems

# TIME

## A Mathematics Center

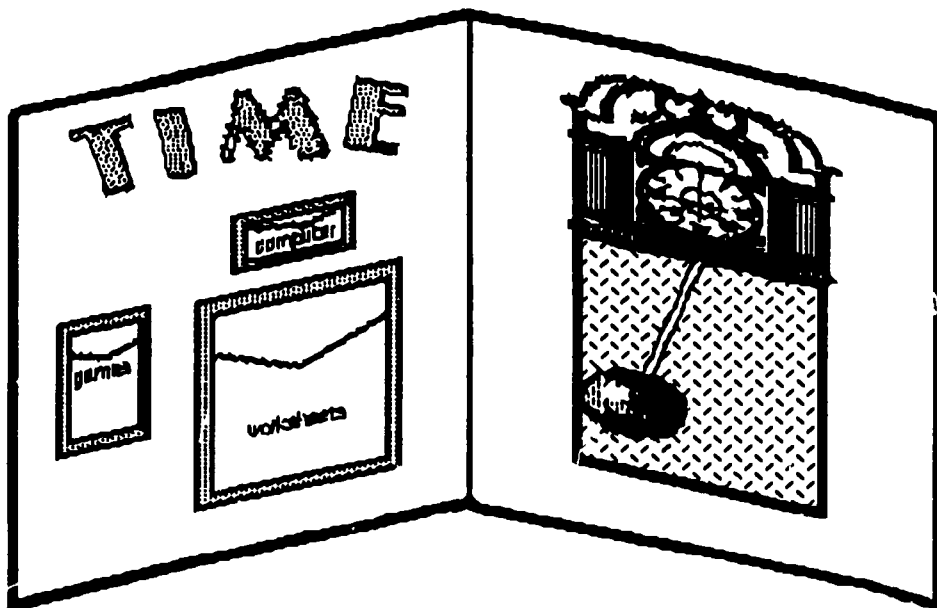
**Directions:** This center may be constructed on posterboard, a bulletin board, or a painting easel. A counter or small desk is appropriate for the display of center activities. Worksheets, computer assignment cards/slips, and game directions are on the center (Game directions may be placed inside activity folders or in plastic bags with the game cards.)

There are three groups of activities for the development and evaluation of time telling skills. These should be introduced after a class discussion of telling time to the hour and half hour. For each activity students are assigned one or two worksheets, one game, and one computer activity. The directions for completing each activity are placed inside a Time Folder.

**TIME FOLDER 1 INTRODUCTION TO TIME:** This activity has two worksheets -- one for practicing time telling skills to the hour and another for the half hour. (See worksheets 1A and 1B.) The folder contains cards for the TIME GAME (See Game Descriptions.) Skills activity #12 for hour and #15 for half hour should be completed from the computer program, TIME AND MONEY, for this activity.

**TIME FOLDER 2 PRACTICE TELLING TIME:** For this activity, students will complete two worksheets in which they will match a given time to a clock face. (See worksheets 2A and 2B). Students will also play the game, CHOOSE THE TIME. Cards on rings for this game should be available in the folder (See Game Descriptions.). The skills to be completed from TIME AND MONEY are skills lessons #16/19 for hour and #17/20 for half hour.

**TIME FOLDER 3 PROBLEM SOLVING WITH TIME:** This activity is completed after students have shown mastery with telling time to the hour and to the half hour. It includes one worksheet with time problems (See worksheet 3), the STORY CARD GAME (See Game Descriptions.), and skills lessons #28/29 from TIME AND MONEY.



# **MANAGEMENT**

## **SCHEDULING**

This center is best introduced during late winter or early spring.

## **GROUPING**

Six students will work at this center at a time -- two with each activity folder.

## **NUMBER OF COMPUTERS NEEDED**

The center needs at least one computer.

## **LENGTH OF TIME**

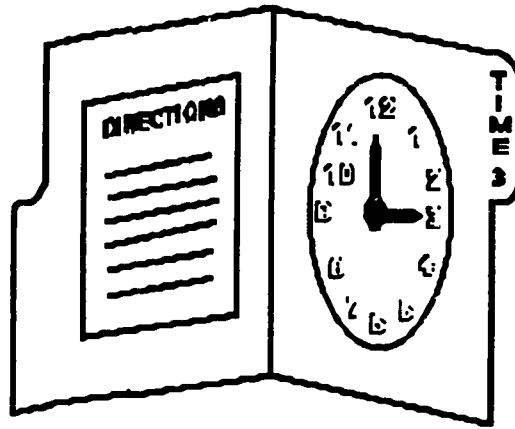
These activities will probably need no more than two weeks of instruction.

## **SPECIAL CONSIDERATIONS**

Students who may have problems completing this center should finish the computer activities before going to the games and worksheets. This will help to reinforce their understanding of each skill before doing the worksheet.

# GAME/ACTIVITY DESCRIPTIONS

**TIME FOLDERS:** Decorate the front of the folders with pictures or drawings of clocks. Label each folder with a title or activity number. On the inside back of the folder, draw a large clock face with movable hands attached with a paper fastener. On the opposite side, write directions for completing the activities (worksheet numbers, computer activities numbers, and game directions.). (See sample directions for each folder.)

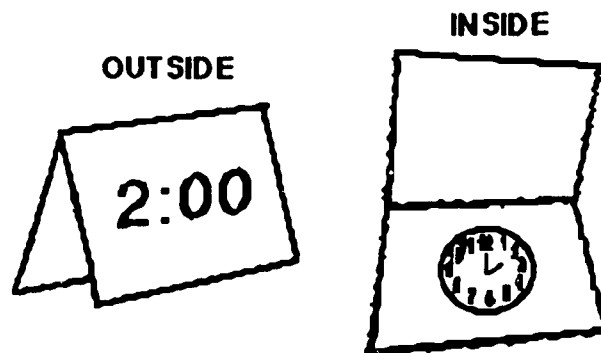


**COMPUTER ASSIGNMENT SLIPS/CARDS:** Assignment Slips from the computer program, TIME AND MONEY, or teacher-made cards are used to give students their directions for computer activities. The slips can be used to give specific directions to individual students. More general directions can be given on teacher-made cards. (See sample cards.) The assignment slips/cards are placed in a pocket on the center.

**WORKSHEETS:** Worksheets are duplicated and placed in a pocket on the center. The worksheet should be clearly marked with the appropriate number.

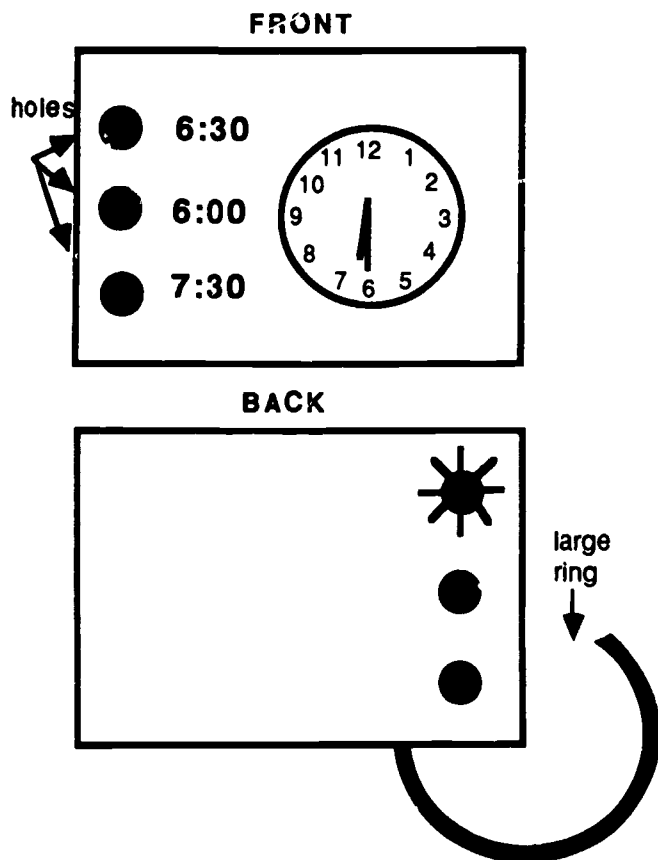
## GAME 1, TIME GAME

On 3x3 squares, write various times. Use one color for hour and another color for half hour. On the back side of the card, draw or stamp a clock face showing the correct time. These could also be made on 3x6 squares that are folded in half. The top half has the time and the inside shows the clock face. The second method will allow the cards to stand alone. Place the cards in a plastic bag.



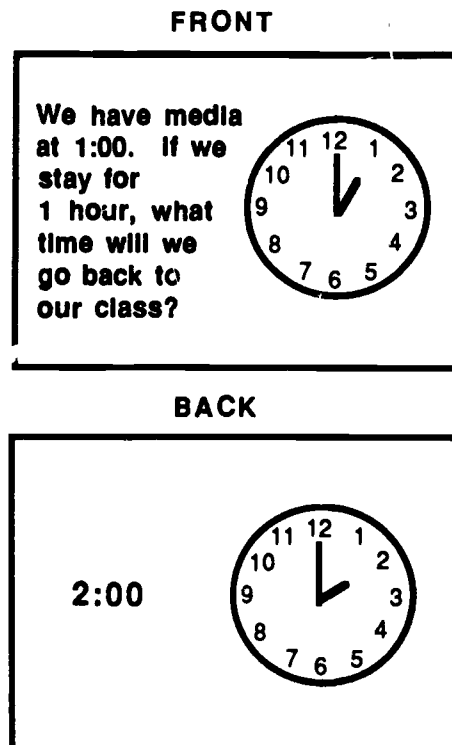
## GAME 2. CHOOSE THE TIME

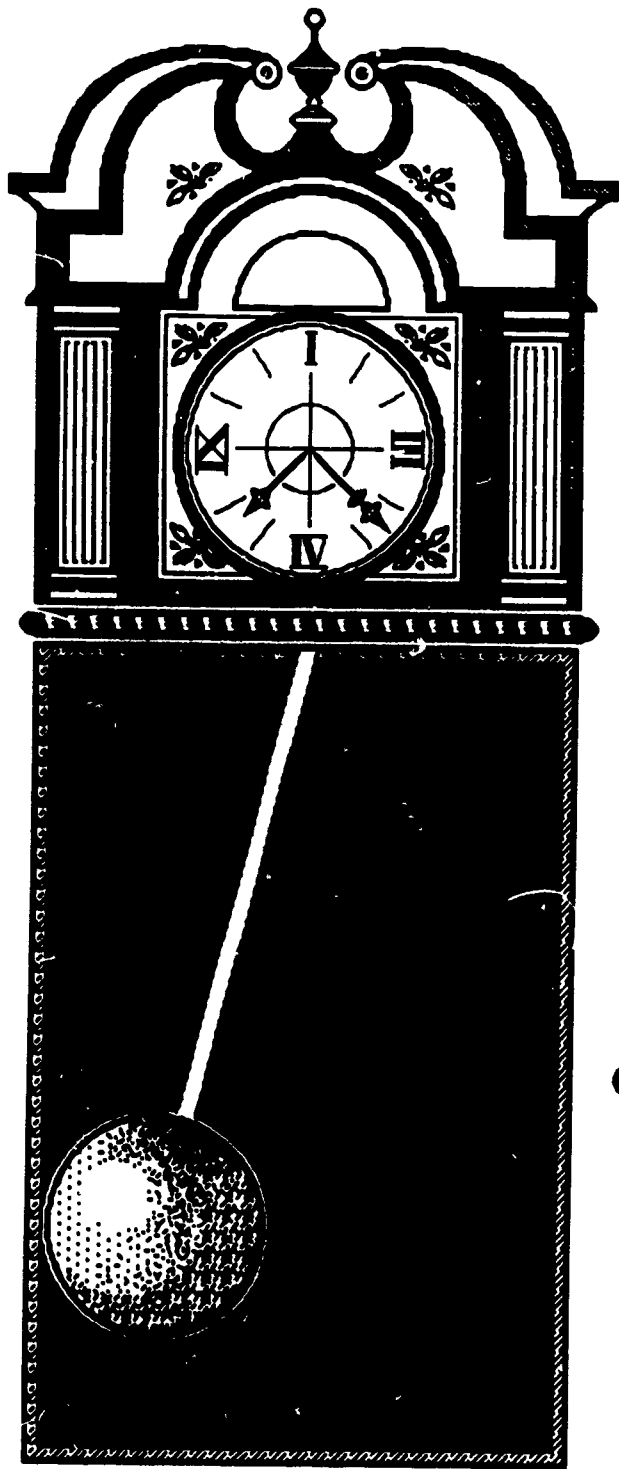
On sturdy 5x7 cards, draw or stamp clock faces with the hands at various hours and half hours. On the left side of the card write three possible times. Beside each time punch a hole with a hole puncher. On the back side of the card, mark the hole that is beside the correct answer. All the cards are put together on a large ring that can be easily opened. When students use the cards, they remove the cards from the ring and place them face up before them. To show an answer, the students restring the cards on the ring, placing the ring through the hole beside the correct answer. When all the cards are strung, they are turned over and the correct answers are checked by looking for the marked holes.



## GAME 3. STORY CARDS

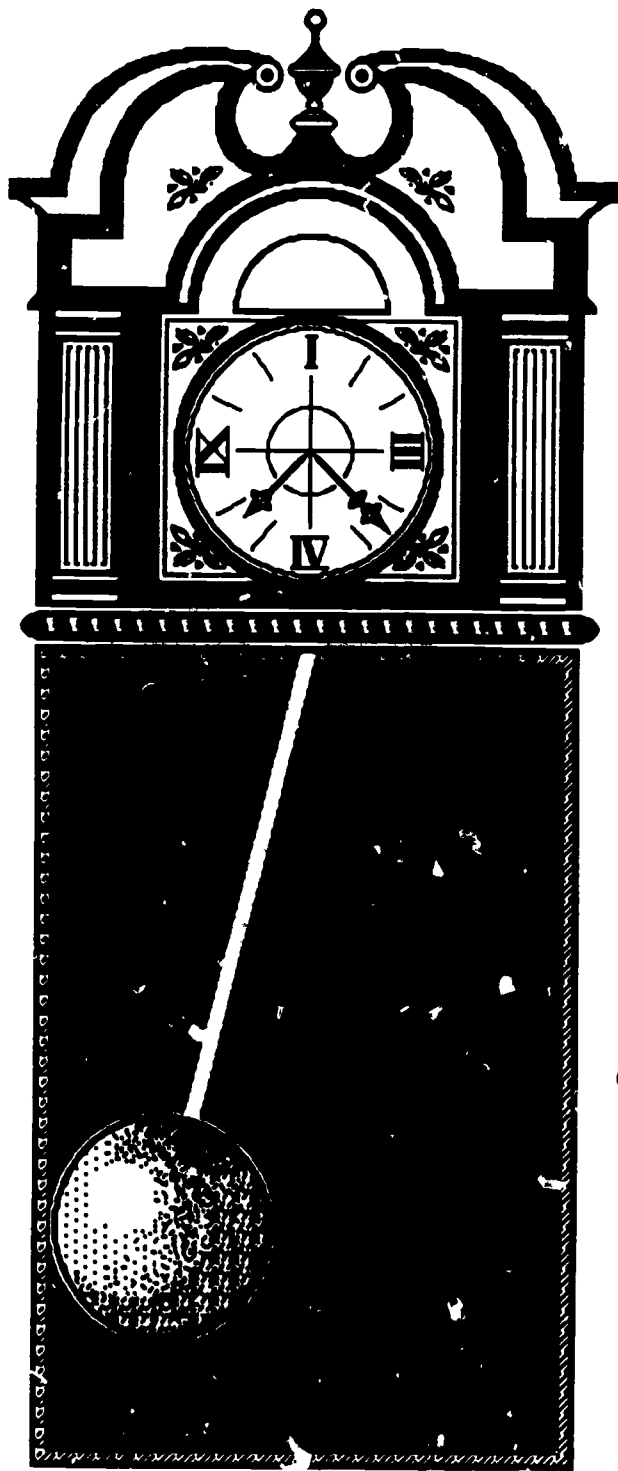
On sturdy 5x7 cards, draw or stamp clock faces with the hands at various hours and half hours. On the left side of each card, write a simple time story problem. On the reverse side of the card, write the correct answer with a clock face to show the correct time. The cards should be placed in a plastic bag or on a large ring to keep them together.





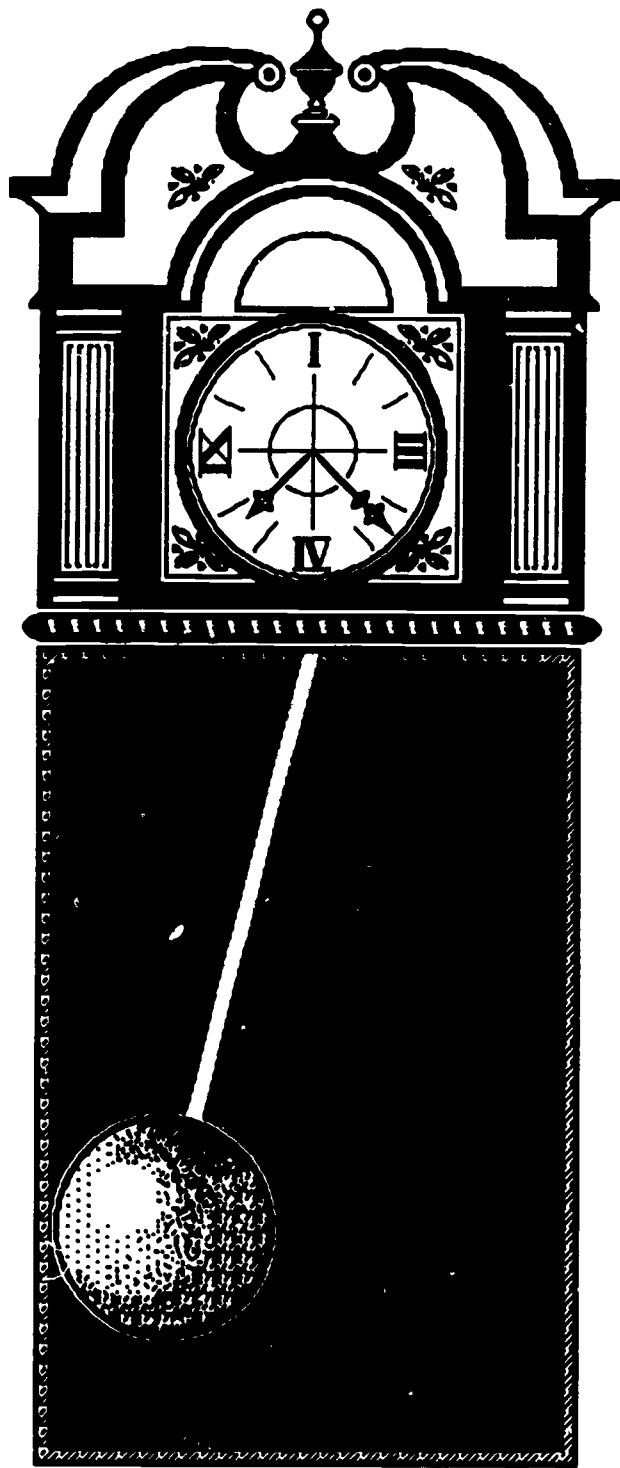
# Time 1

- **Use the story cards to play the Time Game.**
- **Draw the clock hands in worksheet 1A.**
- **Draw the clock hands in worksheet 1B.**
- **Use computer card 1.**



## Time 2

- Use the clock cards to play Choose the Time Game.
- Match the clocks and the time in worksheet 2A.
- Match the clocks and the time in worksheet 2B.
- Use computer card 2.



## Time 3

- Use the story cards to play the Story Card Game.
- Draw the clock hands in worksheet 3.
- Use computer card 3.



## **Time Game**

**Move the clock hands inside the folder to make the time shown on the time cards.**

**Check your clock hands by looking inside the time cards.**

## **Choose the Time Game**

**Take the cards off the ring.**

**Put the ring through the hole that shows the correct time on each card.**

**Check your answers by looking on the back of the card.**

**Leave the cards like you found them.**

## **Story Card Game**

**Read the time story on each card.**

**Answer the question. You may use the clock hands inside the folder.**

**Check your answer by looking on the back of the card.**

## **Computer Card 1**

- 1. Use the computer program, Time and Money.**
- 2. Do activity 12.**
- 3. Do activity 15.**

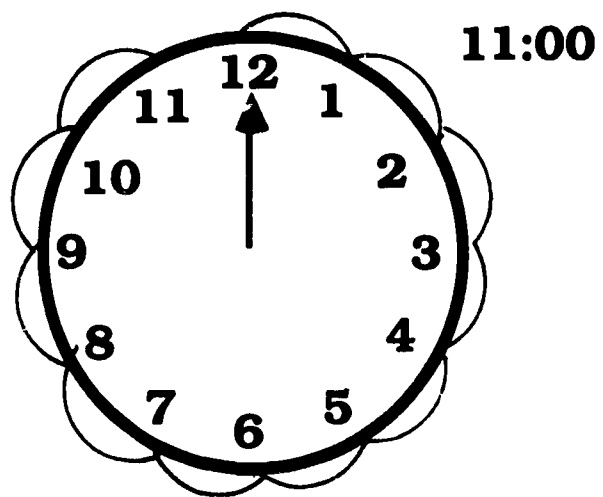
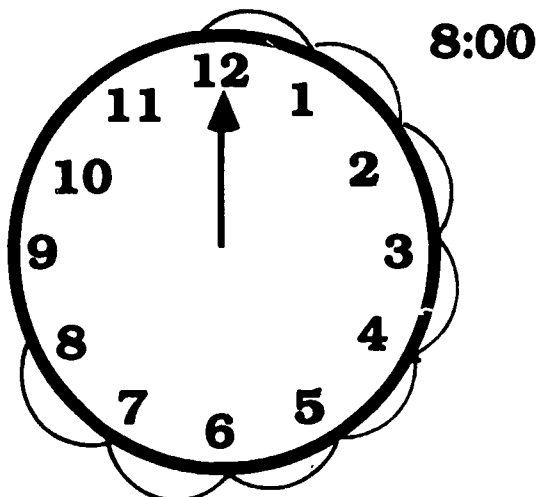
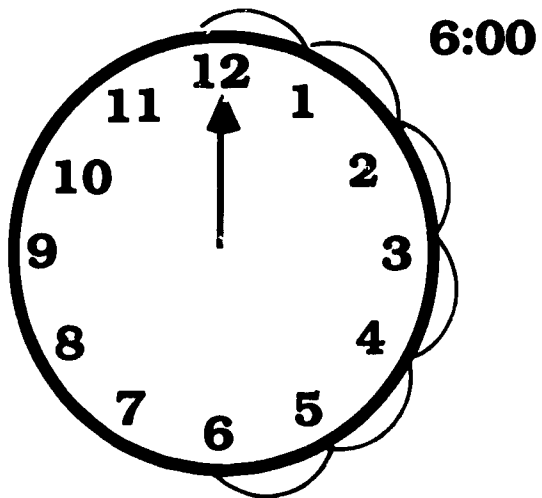
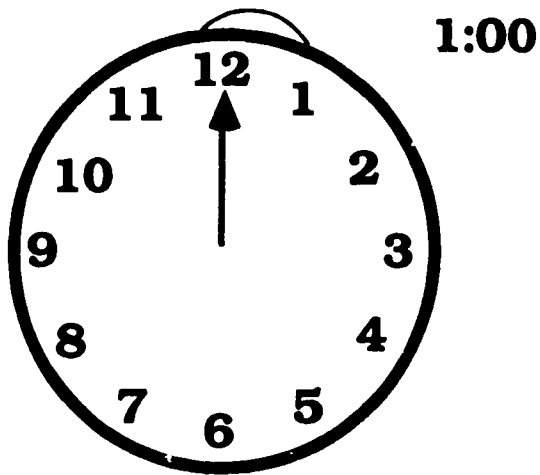
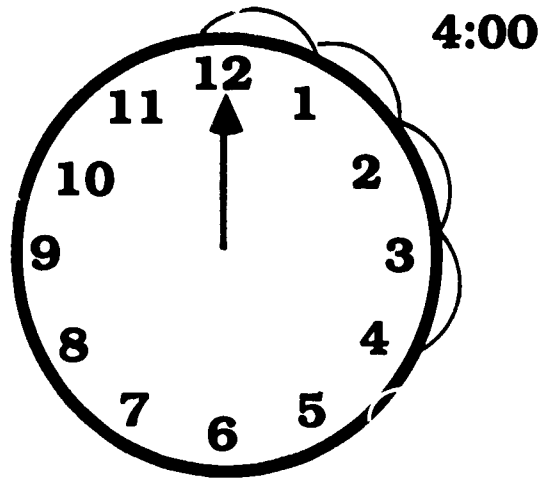
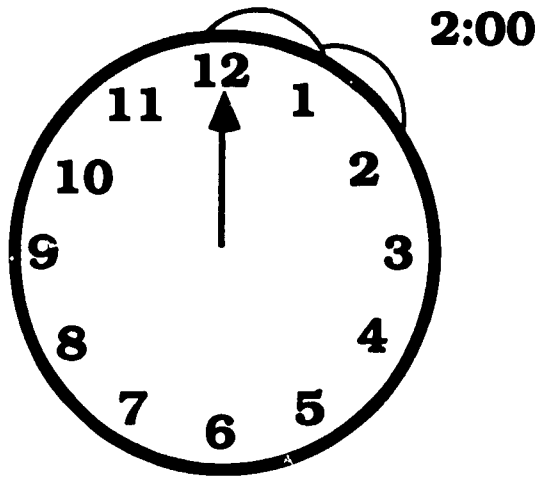
## **Computer Card 2**

- 1. Use the computer program, Time and Money.**
- 2. Do activity 16/19.**
- 3. Do activity 17/20.**

## **Computer Card 3**

- 1. Use the computer program, Time and Money.**
- 2. Do activity 28/29.**

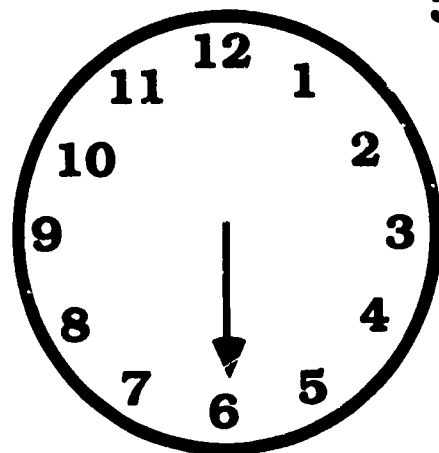
# Draw the hour hand



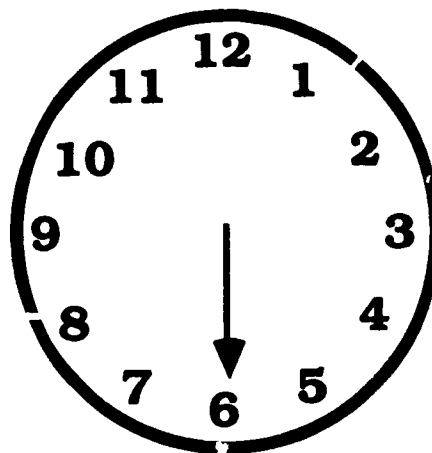
Name \_\_\_\_\_

# Draw the hour hand

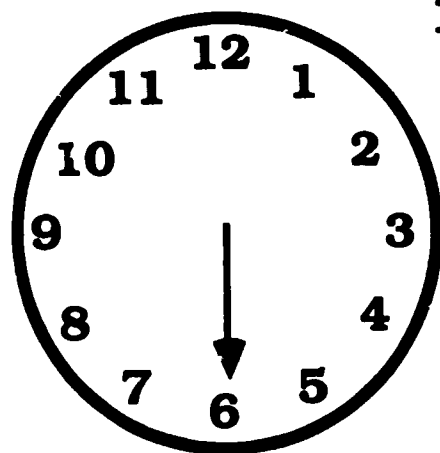
3:30



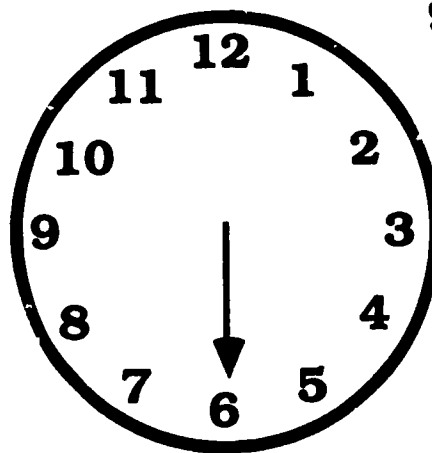
7:30



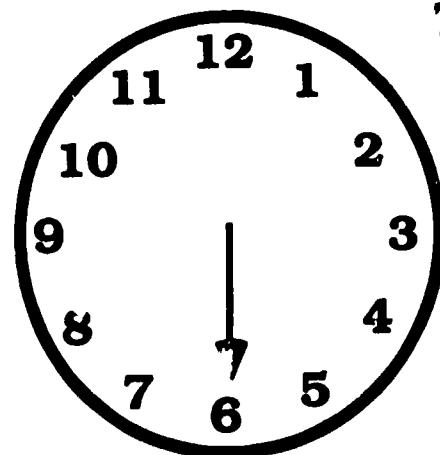
1:30



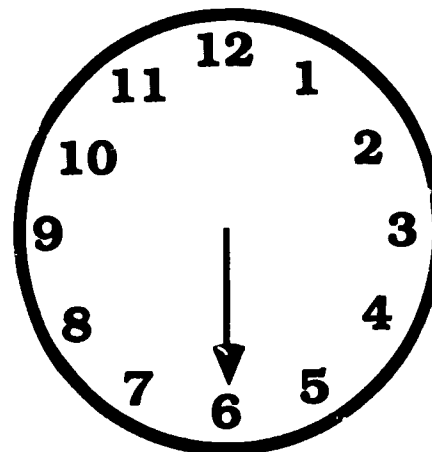
9:30



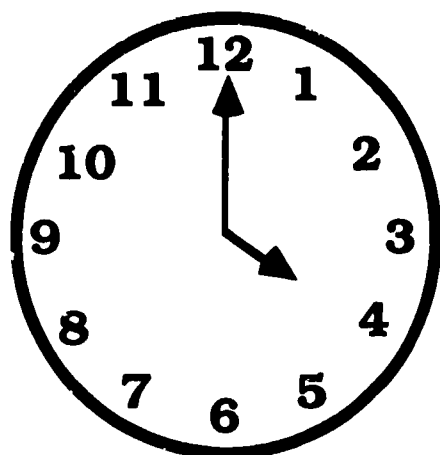
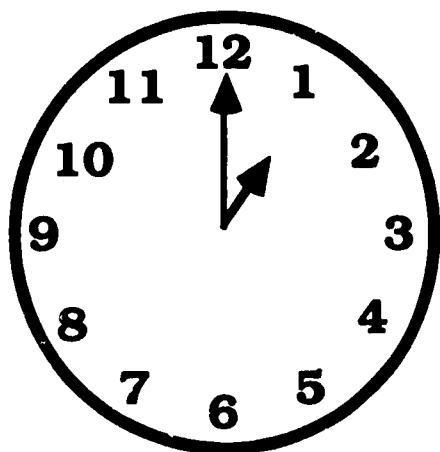
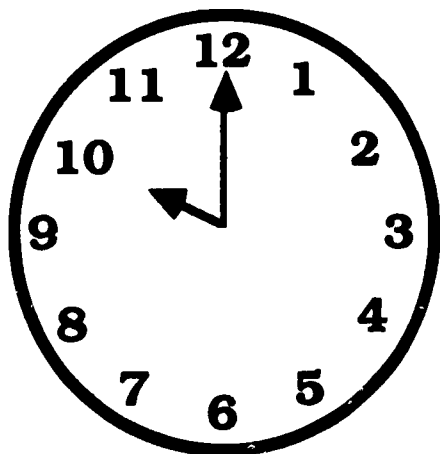
7:30



12:30

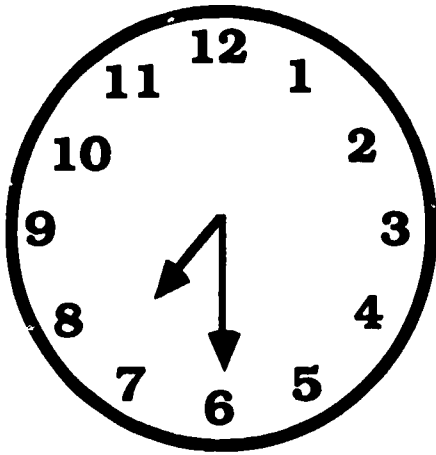


Name \_\_\_\_\_

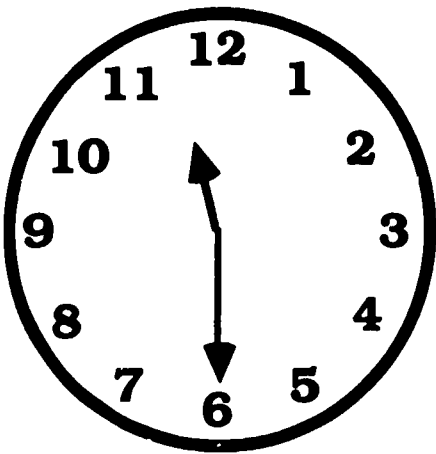
**Match the time****1:00****4:00****10:00**

Name \_\_\_\_\_

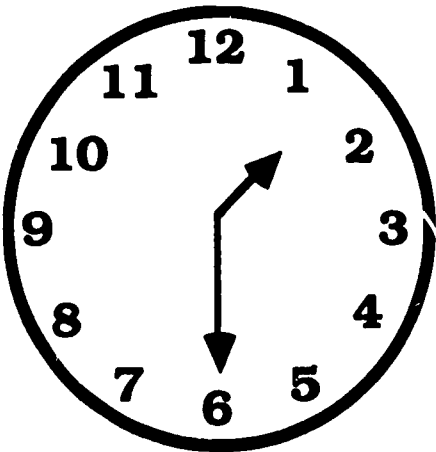
Match the time



**12:30**



**7:30**

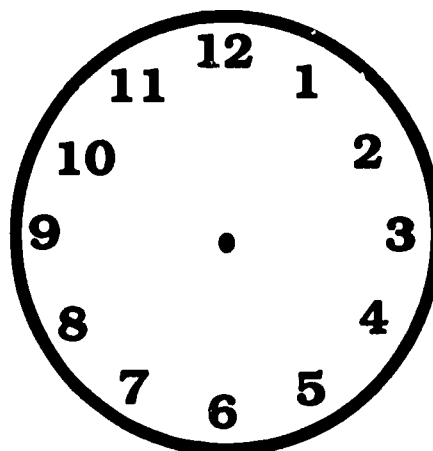
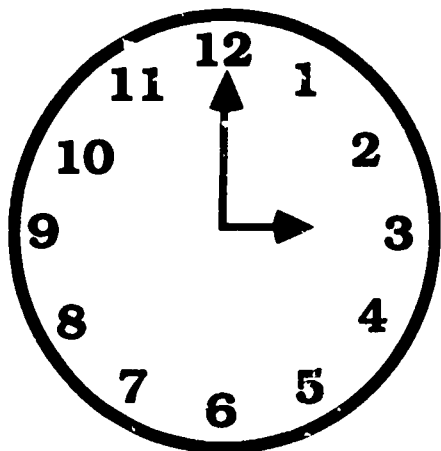


**1:30**

Name \_\_\_\_\_

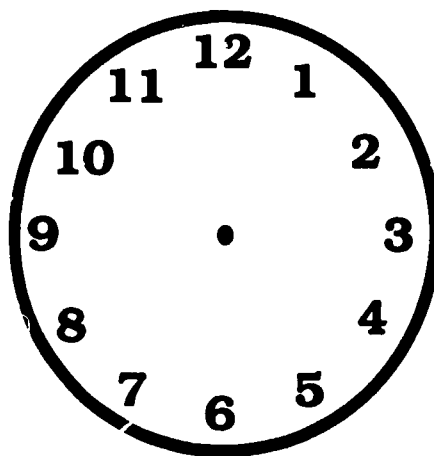
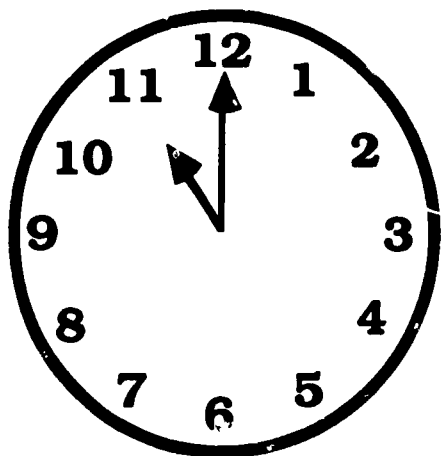
1. Marc begins watching Reading Rainbow at 3:00. If it lasts one hour, what time will it be over?

Draw the hands on the clock.

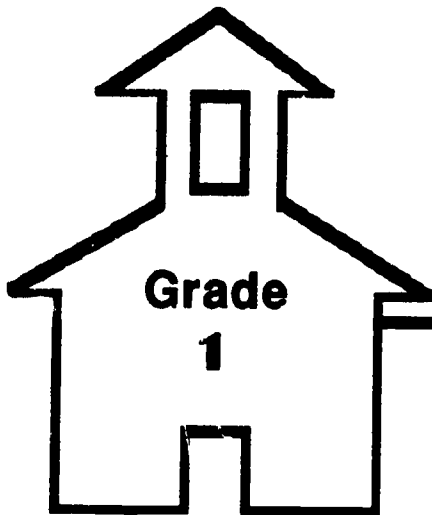


2. We eat lunch at 11:00. We finish in 30 minutes. What time is it?

Draw the hands on the clock.



Name \_\_\_\_\_



# I AM SPECIAL

Traditional and computer activities to develop positive self concepts.

## SOFTWARE:

**MASK PARADE.** Springboard, 1984

**PLAYWRITER SERIES: TALES OF ME.**  
Woodbury, 1985.

**PRINT SHOP.** Broderbund, 1984.

## OTHER MATERIALS:

Center (See Directions)  
Student Activity Sheets  
(See Samples)

## COMPETENCIES:

### SOCIAL STUDIES/KNOWLEDGE:

**GOAL 1** The learner will develop a positive self-concept.

1.1 Assess strengths and weaknesses in a positive way

**GOAL 2** The learner will become more independent.

2.3 Show independence in individual activities

# I AM SPECIAL

## A Social Studies Center

**Directions:** Student activities and directions for this center may be placed on firm cardboard or matteboard. To make the center stand upright more easily, the board may be cut into three pieces and hinged together with tape to form a three-sided display. The five center tasks are a combination of traditional and computer activities that develop positive self concepts by helping the student see that he/she is an unique individual. Place the title, I AM SPECIAL in the upper half of the center section. To make the center more attractive, use only brightly colored pictures. Small cosmetic mirrors randomly added to the center give some added interest.

**ACTIVITY 1 "I Can Be Alone or With Someone":** On the upper left side of the center place a brightly colored piece of construction paper which has a vertical line drawn to divide the paper in half and a second line drawn across the top approximately one to two inches from the top. In the small rectangle on the left formed by the marked lines print the word, Alone. In the right rectangle write the words, With Someone. Paste brightly colored pictures on each side of the paper that show children doing things alone or with another child or adult. Students can use this example to help them complete the activity. Below the construction paper, print the following directions on another piece of construction paper:

### I Can Be Alone or With Someone

- Fold a sheet of drawing paper to make two equal parts.
- At the top of one part write the word Alone.
- At the top of the other part write With Someone.
- Cut out or draw pictures that show things you like to do.
- Put each picture in the part that shows how you like to do that thing.

**ACTIVITY 2 "I Can Read A Story About Me"** The computer program used for this activity asks simple questions about the child's birth. The answers are used to print a prewritten story. There are several programs of this type available. To make the activity faster and easier for the student, the teacher should develop a worksheet based on the questions posed by the program (See the example). The student can write his/her answers before using the computer. Young students will need to take the sheet home to get answers. Some may need an adult to type in the responses. If the reading level is too difficult for the child, it would be a good story to take home for a parent to share. On the lower left side of the center paste a colorful picture of a baby which has been drawn, cut from a magazine, or cut from a coloring book. Beside the picture, place the following directions which have been written on construction paper:

### I Can Read A Story About Me

- Take a worksheet home. Ask someone to help you answer the questions.
- Use your answers with Tales of Me to write a story about you.
- Print your story. Add a baby picture of you or draw what how you think you looked.
- Read your story.



**ACTIVITY 3 "I Can Feel Many Ways"**: In the middle of the center section, place a mirror large enough for a student to easily see his/her face. With construction paper or marker, add the outline of a child's head around the mirror. Make a spinner that has divisions labeled: happy - proud - ashamed - afraid - lonely - sad - angry - shy. Under the mirror place the following directions printed on construction paper:

#### **I Can Feel Many Ways**

- Spin a "feeling" word.
- Look in the mirror.
- Make your face show how you look when you feel like that word.

**ACTIVITY 4 "I Can Send A Birthday Card To Me"**: Paste a construction paper birthday cake in the upper right corner. With the cake, place the following directions written on construction paper:

#### **I Can Send a Birthday Card To Me**

- Use Print Shop to make a special birthday card to yourself.
- Color your card.

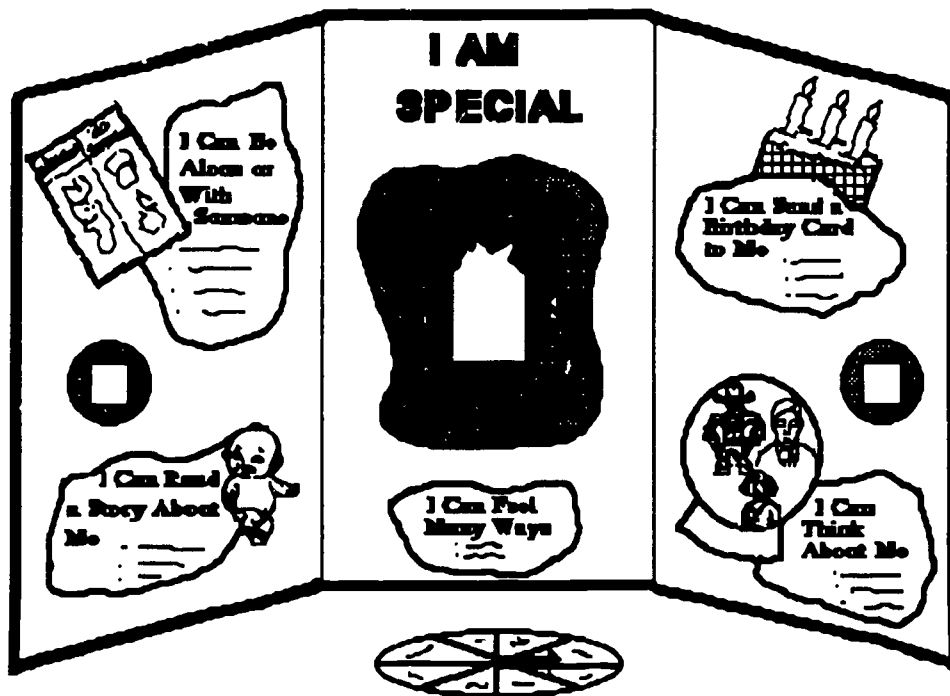
**ACTIVITY 5 "I Can Think About Me"**: MASK PARADE is the computer program that is used for this activity. With this program, the student will be able to combine different facial features to create a unique face. In the lower right corner of the center, paste construction paper that has been cut in the shape of a fortune teller's crystal ball. In the ball, paste pictures cut from magazine that show men and women from different occupations. (Some will be in business dress and others may have more unusual attire.) Under the crystal ball place the following directions written on construction paper:

#### **I Can Think About Me**

How do you think you might look when you are grown?

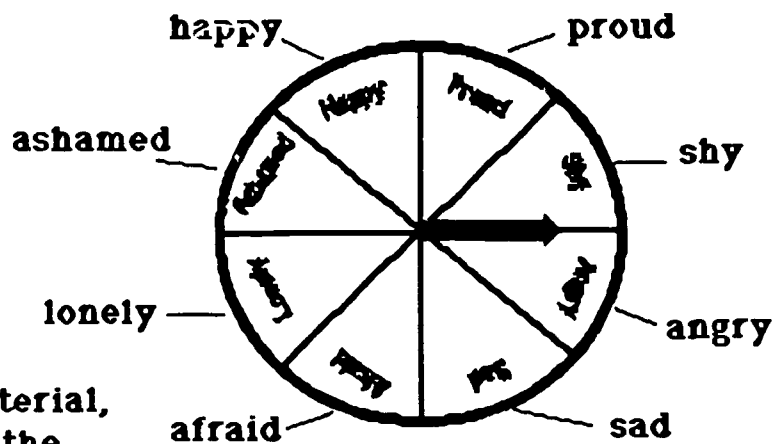
Use Mask Parade to make your future face.

As a follow-up activity, all printed faces might be posted and the students could try to guess whose future face each was.



## SPINNER DIRECTIONS

From a sturdy material, cut a circle about the size of a pizza. Divide the circle into eight sections. Print a "feeling" word in each section. Attach a spinner in the center with a brass fastener. Be sure the spinner will move freely.



# **MANAGEMENT**

## **SCHEDULING**

There is no special order in which the activities should be done.

## **GROUPING**

For the computer activities, students may work independently or with a partner, depending on the number of computers available. The two traditional activities are good independent activities.

## **NUMBER OF COMPUTERS NEEDED**

1-3 computers with printers or a shared printer are needed.

## **LENGTH OF TIME**

It will take at least two weeks for students to complete these activities.

## **SPECIAL CONSIDERATIONS**

Unless students have had a great deal of experience with computers, they will probably need an adult present to help with the printing.

# TALES OF ME

Take this sheet home and have someone help you fill in the blanks. You will use the words to help you write a story. The story will be about you. You will be called the HERO of the story. You can dedicate your story to anyone you choose. Maybe you would like to dedicate it to your parents.

I dedicate my story to \_\_\_\_\_

My first name \_\_\_\_\_

My last name \_\_\_\_\_

My age \_\_\_\_\_ years old

I was born on \_\_\_\_\_

The time I was born was \_\_\_\_\_:\_\_\_\_\_ AM or PM

My eyes were \_\_\_\_\_

My hair was \_\_\_\_\_

I weighed \_\_\_\_\_ pounds \_\_\_\_\_ ounces

My height was \_\_\_\_\_ inches

I was born in  hospital  home  ambulance  taxicab  \_\_\_\_\_

The town and state I was born in \_\_\_\_\_, \_\_\_\_\_

When I was a baby I (Choose one)

1. ate a lot

People said I

1. was a human food processor
2. had a bottomless pit
3. had a hollow leg
4. \_\_\_\_\_

My favorite food was \_\_\_\_\_

2. slept all the time

When I woke up I usually wanted

1. something to eat
2. a new diaper
3. \_\_\_\_\_

3. cried all the time

My parents thought I would grow up to be

1. a politician
2. a circus barker
3. radio disc jockey
4. \_\_\_\_\_

4. behaved like an ordinary kid

My Mom and Dad had to change my diapers a lot. They didn't mind because \_\_\_\_\_  
\_\_\_\_\_

I learned to talk  1 very early  2 about the normal time  3 very late

I was \_\_\_\_\_ old when I learned to say a few words.

My first words were \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

I was \_\_\_\_\_ old when I could walk and talk pretty much like a normal person.

By that time an important thing had happened in my life. I had (Choose one)

1. a nickname

My nickname was

- |                                          |                                     |
|------------------------------------------|-------------------------------------|
| <input type="checkbox"/> 1. Cutie Pie    | <input type="checkbox"/> 3. Shortie |
| <input type="checkbox"/> 2. Chubby-Wubby | <input type="checkbox"/> 4. _____   |

I was called that nickname because \_\_\_\_\_

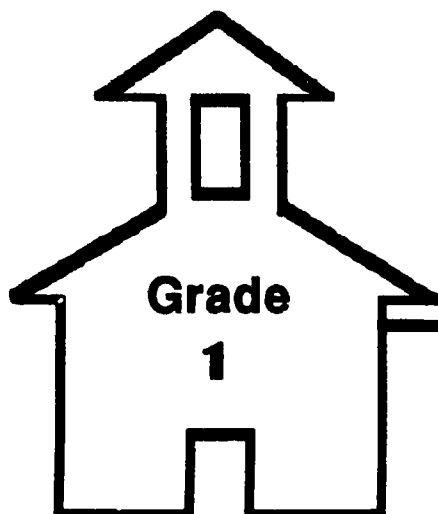
- I  1 liked my nickname  
 2 didn't mind it  
 3 couldn't stand it  
because \_\_\_\_\_

2. a favorite possession

My favorite possession was a

- |                                            |                                     |
|--------------------------------------------|-------------------------------------|
| <input type="checkbox"/> 1. rattle         | <input type="checkbox"/> 3. blanket |
| <input type="checkbox"/> 2. stuffed animal | <input type="checkbox"/> 4. bottle  |

The reason why this was a favorite was because \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# SHORT VOWEL PARADE

Computer and traditional activities to teach and review short vowel skills in reading, listening and handwriting.

## SOFTWARE:

PHONICS PRIME TIME: VOWELS I.  
MECC, 1986.

WORD MUNCHERS. MECC, 1985.

## OTHER MATERIALS:

Center (See Directions)

Student Activity  
(See Sample)

Books, tapes, filmstrips

## COMPETENCIES:

### COMMUNICATION SKILLS/READING LITERATURE:

- GOAL 20 The learner will make some phonic generalizations.  
20.1 Recognize and use long and short vowel sounds

### COMMUNICATION SKILLS/LISTENING:

- GOAL 3 The learner will listen and respond to the language of others.  
3.1 Carry out a simple direction  
3.2 Carry out two or three related directions

### COMMUNICATION SKILLS/HANDWRITING:

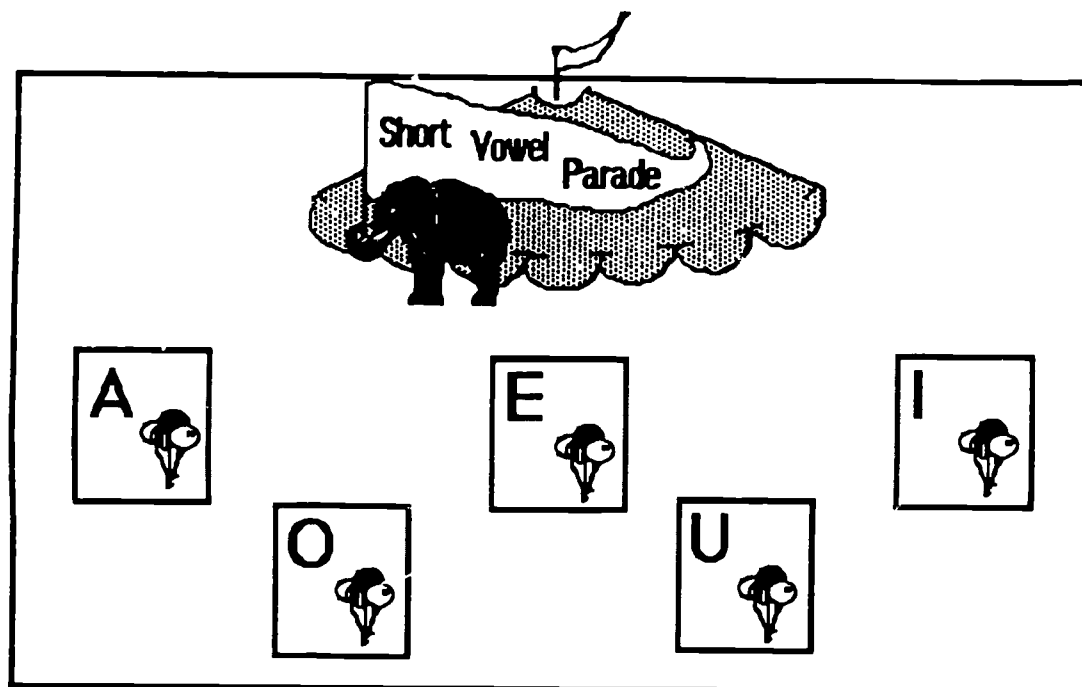
- GOAL 4 The learner will use conventional letter formation, letter size, spacing, and alignment in own printed message.

# SHORT VOWEL PARADE

## A Language Arts Skills Center

**Directions:** This center is made of sturdy posterboard which can easily be mounted on a portable bulletin board or can rest in a chalkboard ledge. A circus theme is followed with appropriate illustrations of animals, clowns, circus tent, etc. The colors should be bright and intense to attract attention and convey the circus flavor. Five pockets are mounted on the board to hold the vowel activity sheets -- one pocket for each vowel. Activities may be placed in containers near the center. The activity sheets can be commercially produced products or those that the teacher has made. Each pocket contains five activities, one for each day. The activities in the center are used for a five-week period. One week is used for each vowel.

A sixth week is used for vowel review and includes the use of computer software, games, tapes, filmstrips, and books. During this review week, an area should be identified in the classroom where the materials will be placed and used. Two computer programs are suggested. PHONICS PRIME TIME: VOWELS I is the easier program. The vocabulary and the mechanics for playing the game in WORD MUNCHERS may be too difficult for some students. The teacher should review the programs and choose the one that is most appropriate for his/her class. Other supplementary materials for this study may be found in the classroom or media center. In addition to commercially prepared activities, the teacher can use games and worksheets that have been personally prepared. (See example.)



# MANAGEMENT

## SCHEDULING

Since this unit includes easy vocabulary words, it should be used at the beginning of the school year.

## GROUPING

The activities are introduced during large group instruction. Students work on the activities in small groups.

## NUMBER OF COMPUTERS NEEDED

One computer will be needed.

## LENGTH OF TIME

This unit is used for a six weeks period.

## SPECIAL CONSIDERATIONS

All students in the classroom use the activities in this center.

## REVIEW ACTIVITY

The circus clown lost his balloons in the parade.

1. Empty the balloons from the box.
2. Read what the clown says.
3. Find the balloons with the correct words.
4. Hang the balloons on the clown's finger.

Find the balloons with the short vowel sounds.

Please help find the balloons.

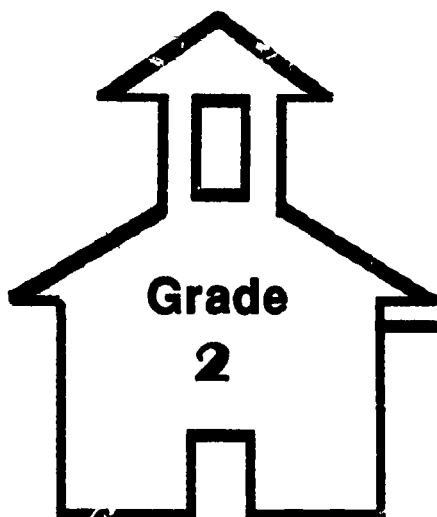
pet fg

pet

The string to hole in balloon shape.

Prepare the activity on a piece of sturdy material or a bulletin board. Use a cup hook or a large display pin for the clown's finger. Reinforce the back side of the display at the point where the hook or pin is attached.





## ANDY ALIEN

Traditional, manipulative, and computer activities to develop and reinforce money skills involving quarters, dimes, nickels, and pennies.

### SOFTWARE:

TIME AND MONEY. Silver Burdett, 1987.

### OTHER MATERIALS:

Center (See Directions)  
Student Activity Sheets  
(See Samples)  
Packets of paper coins  
Coin Puzzles. Developmental  
Learning Materials.

### COMPETENCIES:

#### MATHEMATICS:

**GOAL 5** The learner will understand and use standard units of metric and customary measurement.

**5.10** Use all coins with value to \$1.00

**5.13** Solve simple cost problems

# ANDY ALIEN

## A Mathematics Center

**Directions:** The student directions and illustrations for this center may be placed on a piece of posterboard, a bulletin board, or a paint easel. In order for the poster board to stand alone, it should have a picture frame stand attached to the back. In the center is a large picture of an "unearthly" (but friendly) being. Above and below him and to each side are messages which say: "I'm Andy Alien."; "Help Me Learn About Quarters."; "Earth Money Is New To Me."; "Earthlings Are Nice!" Worksheets and task cards are in pockets on the center. There are 11 activities which develop and reinforce money skills. Four Q1 worksheet activities involve money in amounts less than or equal to \$.50. Four Q2 worksheet activities involve amounts less than or equal to \$1.00. The coin puzzle and two computer activities should be done after the Q1 and Q2 activities.

Before using the activities described in this center, students should have the following prerequisite skills:

1. recognize head and tail sides of quarters, dimes, nickels, and pennies
2. have had practice counting real or paper coins
3. have 85-90% mastery in using dimes, nickels, and pennies
4. be able to add 2-digit numbers with regrouping
5. be able to subtract 2-digit numbers without regrouping

**Q1 ACTIVITIES:** These worksheets are placed in the appropriate pocket on the display:

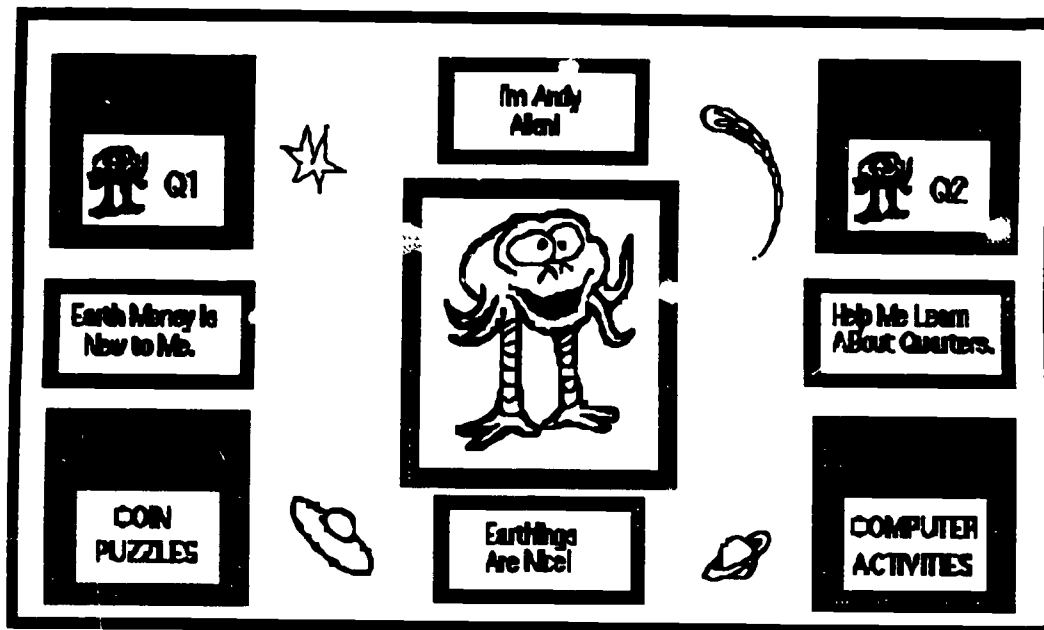
**Q1A:** Students are required to look at pictures on both sides of quarters, dimes, nickels, and pennies. These are arranged in sets that must be counted.

**Q1B:** This activity requires reading as well as counting money. Students are given coins to add such as "One dime and three nickels."

**Q1C:** In this activity students are presented story problems involving money. They must read, use regrouping in addition, and use 2-digit subtraction without regrouping. Packets of paper coins and scratch paper should be available.

**Q1D:** This is a problem solving activity in which students must choose the smallest number of coins to total certain amounts of money.

**Q2 ACTIVITIES:** The four worksheets in this group (Q2A, Q2B, Q2C, Q2D) are identical to those described above except they involve money in amounts more than \$.50 but less than \$1.00.



**COIN PUZZLES. (Developmental Learning Materials):** This puzzle activity involves matching sets of coins with given amounts of money. The puzzle cards have red and blue sides. The red sides are easier with the largest coin puzzle amount equal to \$.50. The activities involve some quarters, but mainly deal with dimes, nickels, and pennies. The blue sides involve half dollars, quarters, dimes, nickels, and pennies and include amounts up to \$2.00. Students should have mastered all of the red puzzles before they attempt the blue puzzles.

**COMPUTER ACTIVITIES 1 and 2:** Two task cards are in this section of the money center. One card directs the students to Skill Activity #49 in *TIME AND MONEY II: MONEY* and the second card to Skill Activity #64. Both of these activities give practice in counting quarters, dimes, nickels, and pennies. Students can choose to do 5, 10, or 15 examples. If students are paired, they should do at least 10 or 15 examples. After completing the skills activities, students may choose to play a game which involves counting quarters, dimes, nickels, and pennies.

# MANAGEMENT

## SCHEDULING

The best time to use this money unit is during the second semester.

## GROUPING

For the computer activities, pair students in order for them to learn from each other. They should take turns working the problems. The traditional and manipulative activities are to be done independently. (The coin puzzle may be done in pairs.)

## NUMBER OF COMPUTERS NEEDED

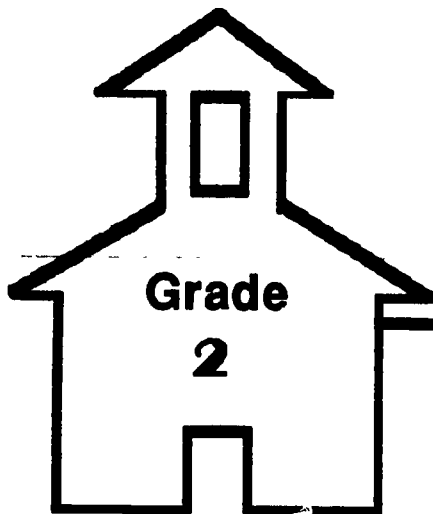
One to five computers are needed for these activities. Five would be ideal!

## LENGTH OF TIME

It will take approximately two weeks to complete this center, depending on the ability level of the students.

## SPECIAL CONSIDERATIONS FOR SPECIAL STUDENTS:

1. Some students will need more work on dimes, nickels, and pennies before attempting the Q1 and Q2 activities.
2. As these special students progress and are ready for "Andy Alien," give them a partner for the worksheets as well as for the computer and puzzle activities.



# TIC-TAC-TRACK ANIMALS BY . . .

An integrated center that uses traditional and computer activities in science, mathematics, and language arts to reinforce and supplement animal science concepts.

## SOFTWARES:

**ANIMAL SURVIVAL.** Jostens, 1985.  
**CREATURES OF THE NIGHT.** Troll, 1984.  
**CROSSWORD MAGIC.** L&S, 1984.  
**EASY GRAPH.** Grollier, 1984.  
**FANTASTIC ANIMALS.** Bantam, 19??  
(no longer available)  
**KIDWRITER.** Spinnaker, 1984.  
**MAGIC SPELLS.** Learning, 1981.  
**MEMORY MATCH.** Hartley, 1983  
**WORD BANK.** Learning Well, 1985.  
**WORD PUZZLES FOR CREATIVE  
TEACHING.** Friend-Lee, 1985

## OTHER MATERIALS:

Ufonics Voice System.  
Jostens. (Equipment)  
for use with **ANIMAL  
SURVIVAL**  
Center (See Directions)  
Student Task Cards and  
Activity Sheets  
(See Examples)

## COMPETENCIES:

### SCIENCE:

**GOAL 1** The learner will have a basic understanding of life science concepts.

- 1.1 Know the basic needs and characteristics of animals
- 1.2 Know how living organisms adapt to their environment

(Also the Process Skill of Classifying)

### COMMUNICATION SKILLS/WRITING:

**GOAL 8** The learner will express imagination through drawing and writing stories . . .

### COMMUNICATION SKILLS/READING/LITERATURE:

**GOAL 3** The learner will read for a variety of purposes.

**GOAL 4** The learner will demonstrate an understanding of a main idea and details.

**GOAL 11** The learner will develop vocabulary to aid in comprehension.

### MATHEMATICS:

**GOAL 7** The learner will demonstrate an understanding of probability and statistics.

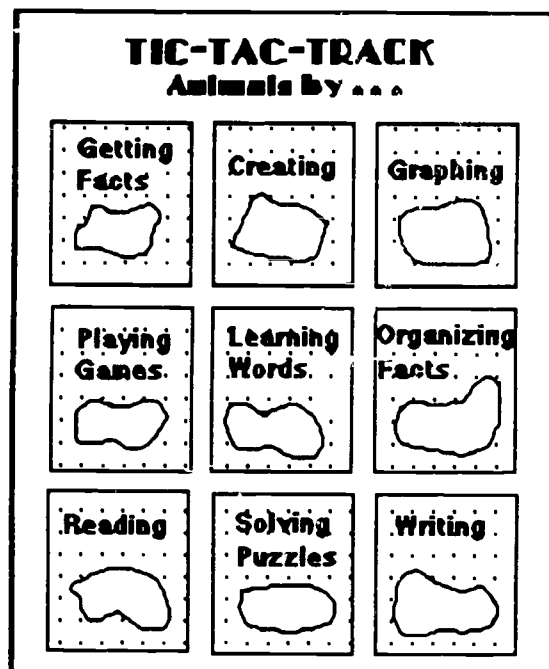
# **TIC-TAC-TRACK ANIMALS BY . . .**

## **An Integrated Science, Mathematics, and Language Arts Center**

**Directions:** This center consists of eighteen activities in various curricular areas which enrich and expand a science unit on animals--Getting Facts; Creating; Graphing; Playing Games; Learning Words; Organizing Facts; Reading; Solving Puzzles; and Writing. Nine of the activities are of the traditional variety, which do not use a computer. The other nine each use a different computer program to reach the same objectives as the traditional activities. The activities are used after the teacher has introduced basic concepts to the students.

The directions for the activities are displayed in nine colorful pocket folders, which have been attached to a firm piece of cardboard or matteboard. On the back of the board a stand should be fastened that will allow the display to stand upright. (The pockets might also be attached to a bulletin board or set up as nine individual holders on a table.) Paste a bright picture on each cover that suggests a study of animals. Some animal tracks could be added to the front of each folder to carry out the theme of "tracks." Pictures can be cut from a child's inexpensive paperback book purchased from a department store. Good pictures can also be found in coloring books, discarded library books, or discarded texts. If you are an artist, you can draw your own. Add an appropriate title such as Tic-Tac-Track Animals by . . .

Prepare task cards which are to be placed inside the pocket folders. Sample task cards have been included for each activity. (The available computer programs and supplementary materials will determine the words for individual use.) Each folder should have a traditional (non-computer) activity and a computer activity. Use one color for the computer tasks and another color for the traditional tasks throughout the nine folders. Depending on the number of computers you have and the available software, there are several options for having students use the center. In a lab setting, with nine different programs and nine computers, each student or each pair of students can choose a computer activity, get the necessary software and follow the directions. With fewer computers, students may choose to do one computer activity and eight traditional activities. If you don't have the software, use only the traditional task cards until you can get the program you need. When you get the program, remove the traditional card and replace it with the computer card. You may let students play "Tic-Tac-Toe" by choosing three activities in a row. A management card, much like the traditional "Tic-Tac-Toe" card, can be devised to help students keep track of their progress.



### ACTIVITY 1 Getting Facts

**Traditional:** Use the supplementary materials you have in your school media center as resources to enrich your study of animals.

**Computer:** If students have problems reading or following directions on the computer, you might want to use a program like ANIMAL SURVIVAL, which features a voice synthesizer. If not, other programs are available which contain information about animals.

### ACTIVITY 2 Creating

**Traditional:** Let students use their imagination to create a fanciful animal. Past<sup>s</sup>, paper, crayons, magazines, scraps of various materials, etc. should be available.

**Computer:** The program, FANTASTIC ANIMALS, is no longer available. However, some schools may be lucky enough to have it in their collection. If this is not the case, there are other similar programs on the market. Students can also use a graphics program to draw animals.

### ACTIVITY 3 Graphing

**Traditional:** Teacher must prepare a graph with questions on an animal related subject such as jumping distances, heights, life spans, etc. (See sample worksheet.)

**Computer:** EASY GRAPH is perhaps the easiest graphing program available. There are others that could be used. Instead of giving the students the information for their graphs, they could do some research with simple reference tools to find their own data. (See sample worksheet.)

### ACTIVITY 4 Playing Games

**Traditional:** This activity uses a simple gameboard with animal-related game cards. A teacher-made board is quite adequate. Sometimes these boards are available to copy from an instructional idea publication. Each game card has the correct answer on the backside. (Example questions--"From what animal do we get bacon?" "What animal can go a long time without water?")

**Computer:** The computer program, MEMORY MATCH, will allow the teacher to add pairs of animal-related words for students to match. These could simply be the names of common animals that students should know).

### ACTIVITY 5 Learning Words

**Traditional:** Teacher may use computer generated word puzzles on subjects such as animal babies, groups of animals, animals of forests and grasslands, etc. It will be helpful to students if books related to the puzzles are handy for reference. (See sample worksheet.)

**Computer:** MAGIC SPELLS is a spelling program which will allow the teacher to add any desired words. Words can be used which are from the science, reading or supplementary reading texts.

### ACTIVITY 6 Organizing Facts

**Traditional:** Students use animals from a list prepared by the teacher and write each name under the titles of either BIRD, MAMMAL, or FISH. (See sample worksheet.)

**Computer:** Teacher may add desired animal words to program, WORD BANK. Program will allow words to be organized in four ways, three ways, two ways, or one way. Example activities--(4) Show where these animals live . . . . GRASSLAND, FOREST, POLAR REGION, DESERT (3) Show what these animals eat . . . . PLANTS, ANIMALS, BOTH (2) Show when these animals move about and eat . . . . NIGHT, DAY (1) Show which of these animals are mammals . . . . MAMMALS.

### ACTIVITY 7 Reading

**Traditional:** Any animal book from the school media center can be used for this activity. The teacher prepares a worksheet to test recall of facts. A sample worksheet has been included for CREATURES OF THE NIGHT.

**Computer:** CREATURES OF THE NIGHT computer program has several short games which test comprehension after the students read /listen to the story.

### ACTIVITY 8 Solving Puzzles

**Traditional:** The puzzles in this activity can be whatever the teacher has on hand--word puzzles, picture puzzles, jigsaw puzzles, etc. A good puzzle would be pictures from a child's magazine used for a camouflage quiz about animals. (See sample worksheet.)

**Computer:** Students can make simple computer generated puzzles using words from their study of animals.

### ACTIVITY 9 Writing

**Traditional:** The teacher prepares story starters on cards cut in the shape of a human footprint. (Example starter--You wake up to find animal tracks on your front lawn. What made them? How did they get there?)

**Computer:** Use the same story starters as were used in the traditional activity. Although KIDWRITER will allow the student to make a picture and then write a paragraph about the picture, any appropriate word processing program can be used for this activity.



# MANAGEMENT

## SCHEDULING

This unit can be used at any time during the year. If students have had little experience with computers, it might be better used during the second half of the year.

## GROUPING

These activities can be used with any size group. The size will depend on the number of computers that are available. Students can work together on all the activities--both traditional and computer.

## NUMBER OF COMPUTERS NEEDED

If all nine computer activities are to be completed, this center would need to be in a lab. The number of computers that are needed will depend on the computer programs that are available. A printer will also be needed.

## LENGTH OF TIME

Three to four weeks should be allowed for a group of students to complete all the activities. However, if only one or two computer activities are used, the time will be considerably shorter.

## SPECIAL CONSIDERATIONS

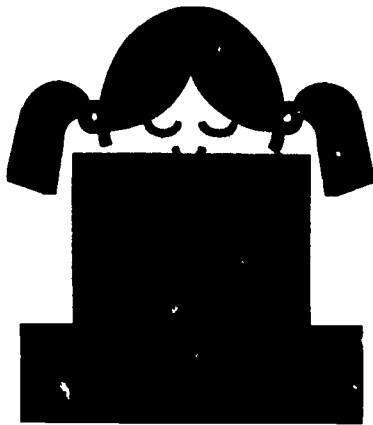
An adult will probably need to supervise those computer programs which require printing. If students cannot complete the computer activities independently, a large monitor can be used for large group use.



# GETTING FACTS

Use video tapes, books, pictures, and filmstrips to learn more about animals.

Write a sentence that tells one new thing you learn about animals.

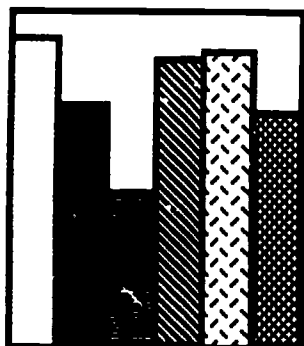


# GETTING FACTS

Use the computer program, Animal Survival, to learn more about animals and where they live.

Write a sentence that tells one new thing you learn about animals.

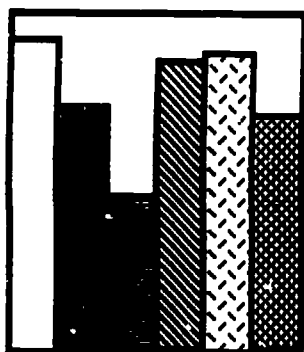
# GRAPHING



Look at the graph your teacher has made. Use it to answer the questions on the GRAPH WORKSHEET.

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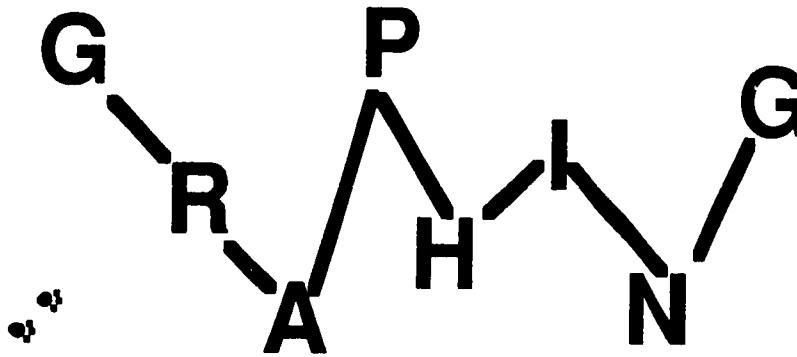
# GRAPHING



Choose six animals and their fastest speed from the list. Use the program, Easy Graph, to make a graph that shows the speed of these animals.

Print your graph.

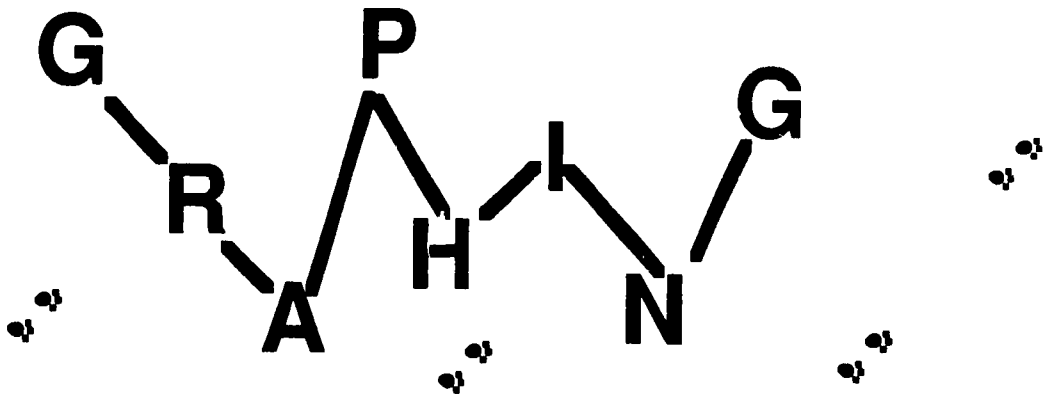
On your graph, color the fastest animal RED. Color the slowest animal BLUE.



- Choose six animals from the chart below.
- Use Easy Graph to make a graph that compares the speed of six animals.
- On your graph, color the fastest animal RED.
- On your graph, color the slowest animal BLUE.

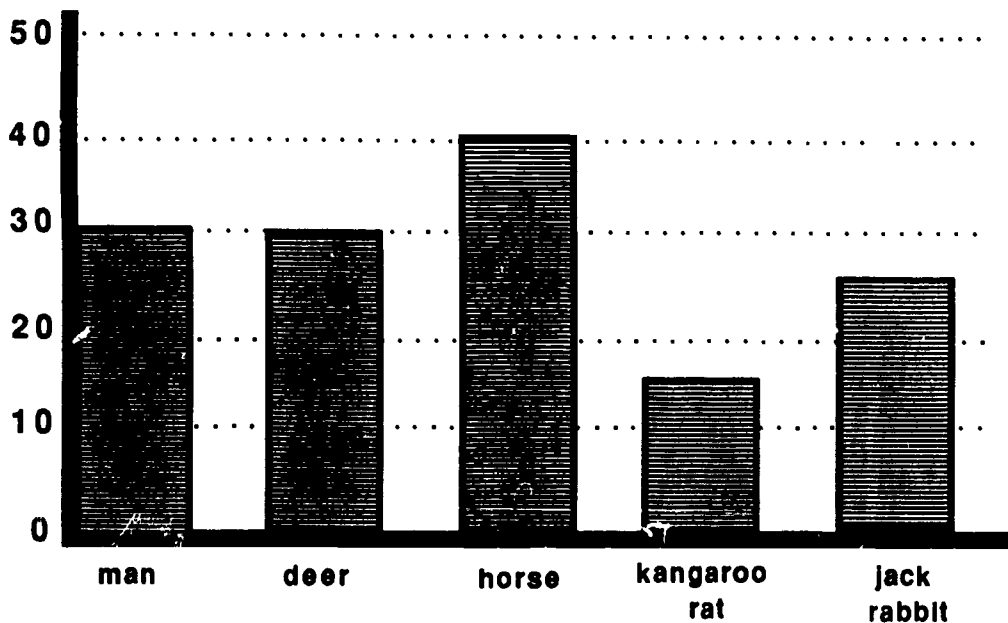
## Animal Speeds

|          | <u>miles per hour</u> |              | <u>miles per hour</u> |
|----------|-----------------------|--------------|-----------------------|
| man      | 27                    | grizzly bear | 30                    |
| cheetah  | 70                    | cat          | 30                    |
| chicken  | 9                     | lion         | 50                    |
| coyote   | 43                    | pig          | 11                    |
| elephant | 25                    | squirrel     | 12                    |
| elk      | 45                    | zebra        | 40                    |
| giraffe  | 32                    |              |                       |

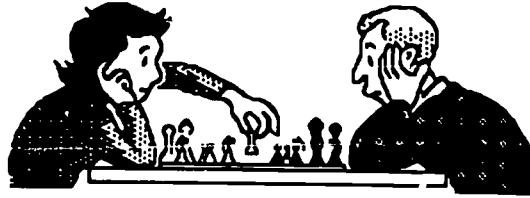


The graph below shows the distance some animals can jump.  
Use the graph to answer the questions.

1. Which animals can jump the greatest distance?
2. Estimate how far the horse can jump beyond the jack rabbit.
3. Which animals can jump further than man?
4. Estimate how many kangaroo rat jumps it takes to make one deer jump.
5. Which animal has the smallest jump?



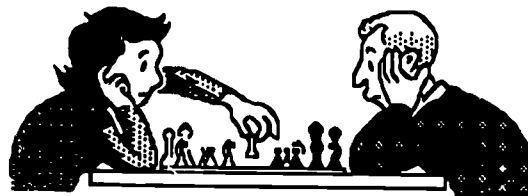
# PLAYING GAMES



Choose a partner and play the game, "Trollicking Footprints."

---

# PLAYING GAMES



Choose a partner and play the game, "Animals," Easy Level, on the program, Memory Match.

# LEARNING WORDS



How many animal words do you know? Try to complete at least one **ANIMAL WORDS WORKSHEET**.

---

# LEARNING WORDS



How many animal words can you spell? Use the spelling program, **Magic Spells**, to test yourself.

ANIMAL BABIES

- \_\_\_\_\_ KIT  
 \_\_\_\_\_ BIDDY  
 \_\_\_\_\_ BABY  
 \_\_\_\_\_ GOSLING  
 \_\_\_\_\_ CALF  
 \_\_\_\_\_ PUPPY  
 \_\_\_\_\_ CUB  
 \_\_\_\_\_ FRY  
 \_\_\_\_\_ FLEDGING  
 \_\_\_\_\_ JOEY  
 \_\_\_\_\_ FAWN  
 \_\_\_\_\_ KITTEN  
 \_\_\_\_\_ BUNNY  
 \_\_\_\_\_ LAMB  
 \_\_\_\_\_ PIGLET  
 \_\_\_\_\_ PUP  
 \_\_\_\_\_ KID  
 \_\_\_\_\_ DUCKLING  
 \_\_\_\_\_ COLT



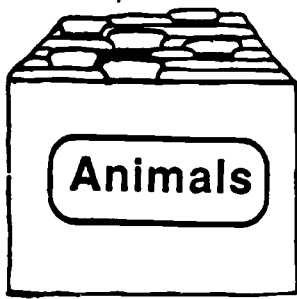
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )

MATCH EACH WORD BELOW TO THE CORRECT ANIMAL BABY ABOVE:

- |         |          |        |
|---------|----------|--------|
| LION    | KANGAROO | RABBIT |
| HORSE   | ELEPHANT | DEER   |
| GOOSE   | CAT      | FOX    |
| DOG     | GOAT     | FISH   |
| SEAL    | SHEEP    | DUCK   |
| PIG     | BIRD     | HUMAN  |
| CHICKEN |          |        |

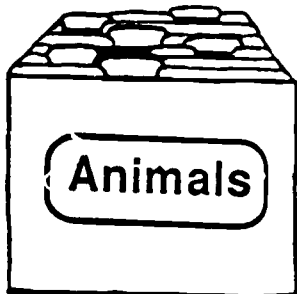
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )





# ORGANIZING FACTS

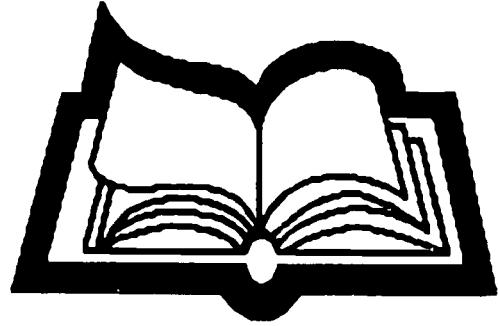
Complete the **FACTS WORKSHEET**. Show what each animal is by writing its name under the correct title. You may look at books, filmstrips, or pictures to find out about animals you do not know.



# ORGANIZING FACTS

Use the program, Word Bank, to see if you know how to organize facts about animals. Play at least one of the games.

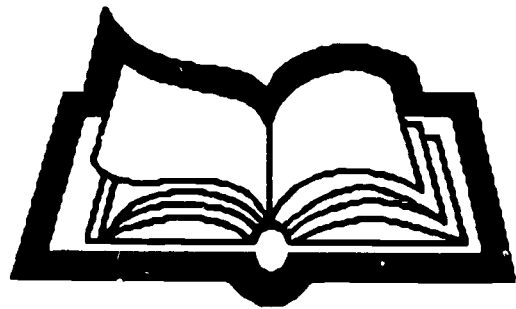
# READING



Do you know what happens to animals at night? Read or listen to the recording of Creatures of the Night. Complete the **READING WORKSHEET** to find out how well you can remember the story.

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# READING



Do you know what happens to animals at night? Read or listen to the recording of Creatures of the Night. Use the computer program to find out how well you can remember the story.

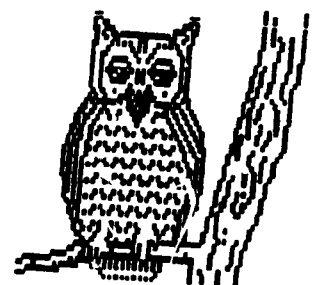
# CREATURES OF THE NIGHT

*Draw a line from the animal to the food it likes to eat.*

|                              |                                  |
|------------------------------|----------------------------------|
| porcupine                    | tender bark of evergreen trees   |
| skunk                        | moths                            |
| moth                         | seeds, grain, plant stems, roots |
| mice                         | ground squirrels                 |
| snakes, coyotes, foxes, owls | worms, scorpions, grasshoppers   |
| spiders, frogs, lizards      | favorite food is caterpillars    |
| grasshopper mice             | nectar from flowers              |

*Draw a line from the animal to its special help.*

|              |                            |
|--------------|----------------------------|
| raccoon      | webbed feet, flat tail     |
| moth         | bright colors              |
| bat          | pretend to be dead         |
| pocket mouse | long, stiff quills         |
| owl          | foul smell                 |
| opposum      | paws like hands            |
| skunk        | uses wings like a broom    |
| beaver       | neck pockets to store food |
| porcupine    | big eyes, sharp talons     |



# SOLVING PUZZLES



Solve at least **ONE** animal puzzle.

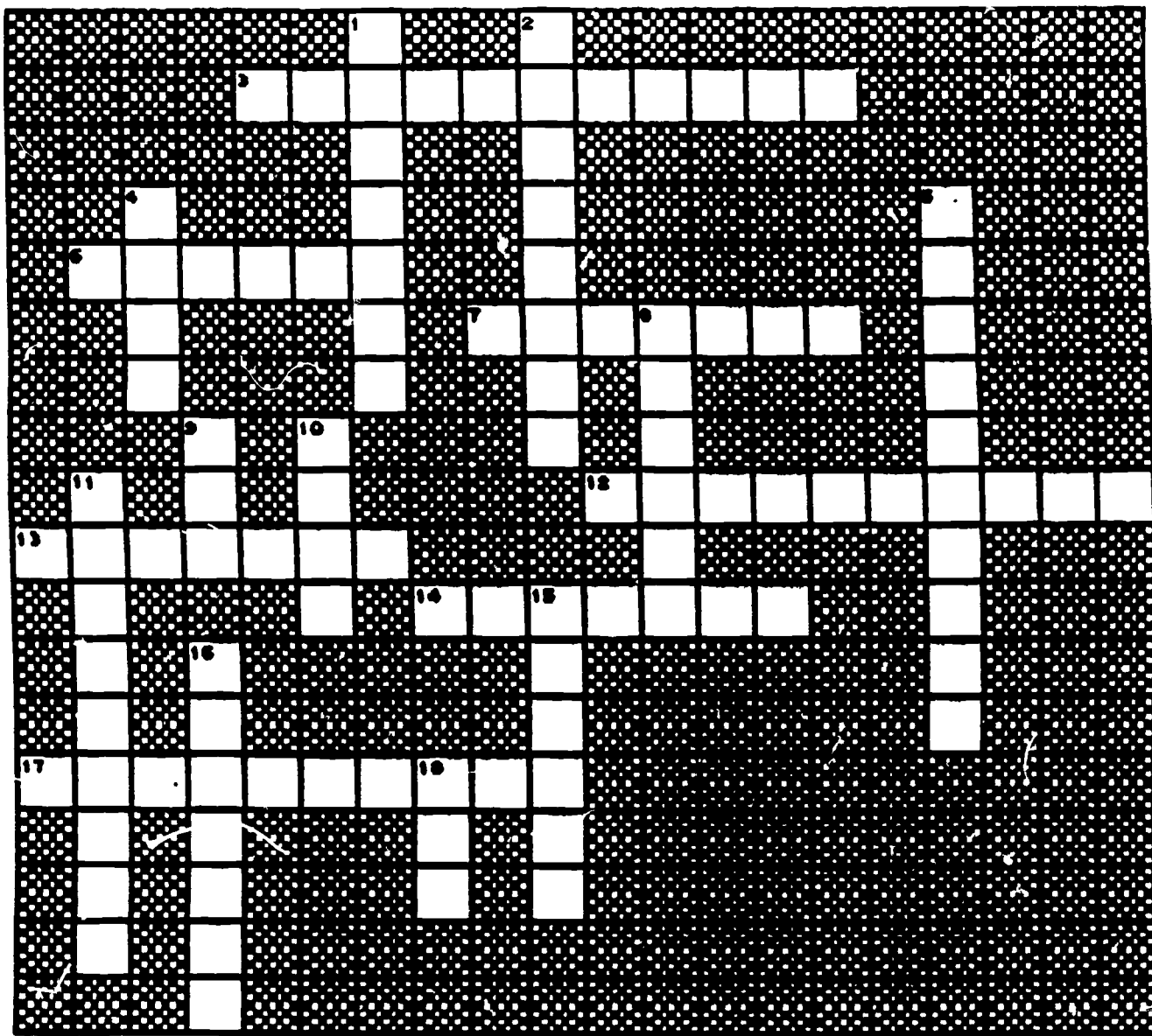
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# SOLVING PUZZLES



Use Crossword Magic or Word Puzzles to make a puzzle using the words you have learned about animals. Give it to a friend to solve.

FOREST AND GRASSLAND



ACROSS CLUES

3. A SMALL, GREEN ANIMAL THAT EATS GRASS.
6. LOOKS LIKE A WOLF AND HOWLS
7. AMERICAN BISON
12. THEIR NESTS HAVE GRASSY ROOFS AND SOMETIMES TUNNELS
13. A PLACE THAT PROTECTS OR COVERS
14. A PLACE WHERE A PLANT OR ANIMAL LIVES
17. LOOKS LIKE A LIZARD

DOWN CLUES

1. A MOUSE THAT LIVES IN A NEST LIKE A BIRD'S
2. A NOISY, CHATTERING ANIMAL
4. A GROUP OF PRAIRIE DOG HOMES
5. LARGE, GRASSY AREAS
8. A PLACE WITH MANY TREES
9. A BIRD WITH LARGE EYES THAT HUNTS AT NIGHT
10. LARGE ANIMALS THAT EAT MOSSES AND REST IN LEAFY PLACES
11. LIKE TO EAT BARK BEETLES
15. A TUNNEL UNDER THE GROUND
16. \_\_\_\_\_ DOGS LOOK LIKE SQUIRRELS
18. AN ANIMAL SHELTER



# WRITING

Choose a story-starter card. Use it as an idea to write a story about animals.



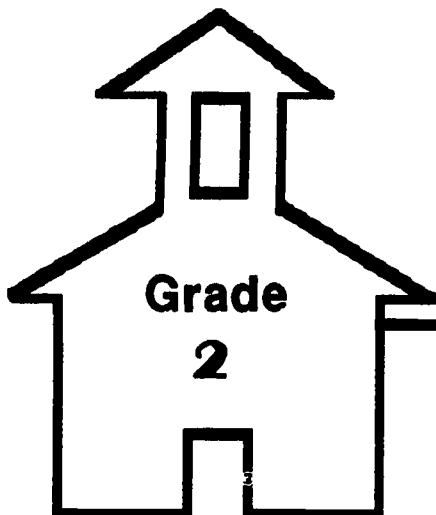
# WRITING

Choose a story-starter card. Use it as an idea to write a story about animals. Use Kidwriter and make a picture to go with your story. Print your story.

**Pretend you are a lost pet. Tell how you feel and what happens to you.**

**A magic fairy has just told you that you can become any animal you choose for a day. What would you choose? Why?**

**Cut an animal picture from a magazine. Write a story about it. Paste the picture on your story paper.**



Grade  
2

## LOOK AT US

Activities using mathematics graphing skills to teach social studies concepts.

### SOFTWARE:

EASY GRAPH. Groller, 1984.

### OTHER MATERIALS:

Center (See Directions)  
Student Activity Sheets  
(See Samples)

### COMPETENCIES:

#### MATHEMATICS:

**GOAL 7** The learner will demonstrate an understanding of probability and statistics.

7.1 Estimate the probable outcome of a survey

7.2 Sort and classify information

7.3 Tally information

7.4 Represent information

#### SOCIAL STUDIES/KNOWLEDGE:

**GOAL 5** The learner will know how individuals, families and communities are alike and different.



# LOOK AT US

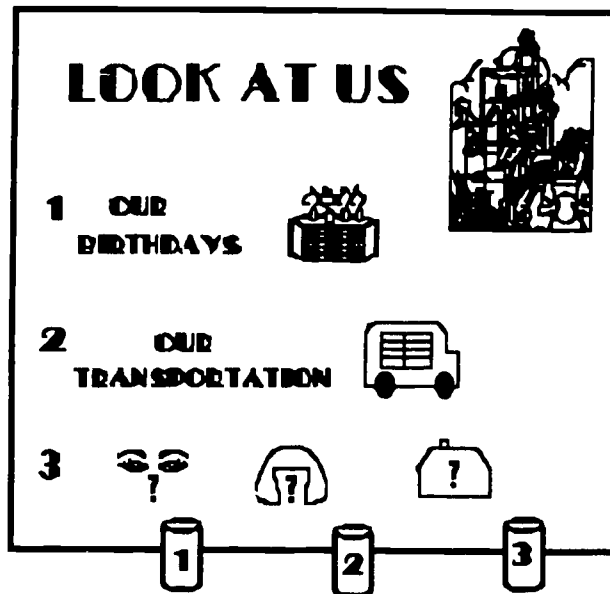
## A Mathematics/Social Studies Center

**Directions:** The student directions and illustrations for this center may be placed on a firm surface such as a piece of posterboard, a bulletin board, the side of a filing cabinet, or a paint easel. There are three activities which develop and/or evaluate graphing skills. A brightly colored picture of children pasted beside the title would add color and interest. An actual picture of the class would be a better illustration. For each activity, students must complete an activity sheet. The activities are based on a student survey which must be conducted before the work in the center begins. The survey used in this center is included with these directions, but a teacher can easily write a personalized survey with topics of their own choosing. The survey must be simple for the students to read and answer and easy for them to tally. After the survey is completed, the teacher should tally the first two items. Students will tally the last three items in the survey.

**ACTIVITY 1 OUR BIRTHDAYS:** The teacher should create a graph which shows the distribution of class birthdays throughout the year. To make the center more attractive, the graph could be pasted on a piece of construction paper cut in the shape of a birthday cake. To attract students, the blocks inside the graph could be filled with symbols that represent each of the twelve months. For example: beach umbrellas or exploding firecrackers for July; pumpkins or witches' hats for October. This activity will evaluate student skills in reading and interpreting information shown on a graph. (See activity sheet.)

**ACTIVITY 2 OUR TRANSPORTATION:** In the second activity, the teacher should tally the transportation question and give the totals for each category. The chart could be placed on a piece of construction paper in the shape of a school bus to add interest. This activity will evaluate the student skills in using raw data to create a simple graph. The graph is composed of large blocks which the student must fill with color. (See activity sheet.)

**ACTIVITY 3 OUR EYES, OUR HAIR, OUR HOUSES:** For the last activity, the students must choose which of the three last items in the survey they will work with. Three containers are needed to hold the strips of paper cut from the survey. Frozen juice cans, covered with contact paper, would be a good size. The teacher places the appropriate strips from the survey in the containers. After each student makes a selection, the container is emptied and the choices for each category are totaled. The last step requires the student to make a computer generated graph using the totals from their tally. (See activity sheet.)



## MANAGEMENT

### SCHEDULING

The three activities should be done as they are numbered. They should be done only after students have been introduced to the mathematical skills they will be using to complete the activities.

### GROUPING

Students could work successfully in small groups, with a partner, or independently.

### NUMBER OF COMPUTERS NEEDED

At least one computer with a printer--depending on the number of students.

### LENGTH OF TIME

The activities in this center can be introduced separately over a long period of time as the various graphing skills are introduced. If the entire center is used as a review to graphing skills, it will take at least two weeks to complete. This will depend on the number of students.

### SPECIAL CONSIDERATIONS FOR SPECIAL STUDENTS

All work could be done together in small groups with adult assistance.

# SURVEY FORM

Directions: Answer each question by checking the correct box.

1. In what month were you born?

- |          |                          |       |                          |           |                          |          |                          |
|----------|--------------------------|-------|--------------------------|-----------|--------------------------|----------|--------------------------|
| January  | <input type="checkbox"/> | April | <input type="checkbox"/> | July      | <input type="checkbox"/> | October  | <input type="checkbox"/> |
| February | <input type="checkbox"/> | May   | <input type="checkbox"/> | August    | <input type="checkbox"/> | November | <input type="checkbox"/> |
| March    | <input type="checkbox"/> | June  | <input type="checkbox"/> | September | <input type="checkbox"/> | December | <input type="checkbox"/> |
- .....

2. How do you come to school every day?

- |      |                          |      |                          |
|------|--------------------------|------|--------------------------|
| walk | <input type="checkbox"/> | bus  | <input type="checkbox"/> |
| car  | <input type="checkbox"/> | bike | <input type="checkbox"/> |
- .....

3. What is the color of your hair?

- |       |                          |       |                          |
|-------|--------------------------|-------|--------------------------|
| black | <input type="checkbox"/> | blond | <input type="checkbox"/> |
| brown | <input type="checkbox"/> | red   | <input type="checkbox"/> |
- .....

4. What is the color of your eyes?

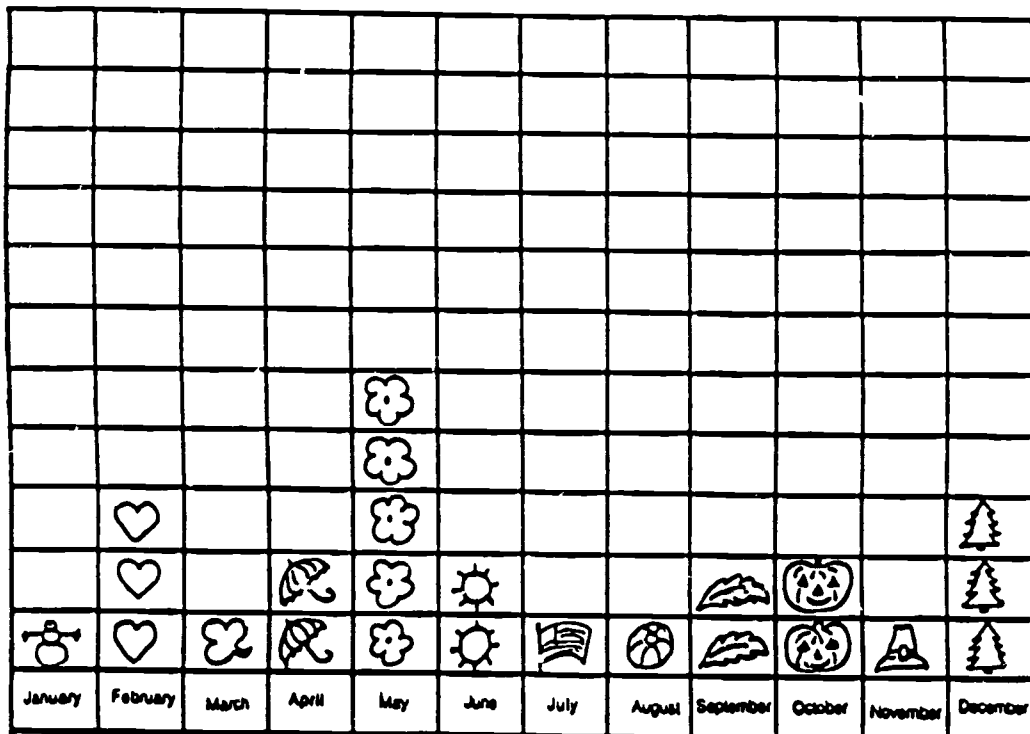
- |       |                          |       |                          |       |                          |
|-------|--------------------------|-------|--------------------------|-------|--------------------------|
| blue  | <input type="checkbox"/> | green | <input type="checkbox"/> | hazel | <input type="checkbox"/> |
| brown | <input type="checkbox"/> | grey  | <input type="checkbox"/> |       |                          |
- .....

5. In what kind of home do you live?

- |           |                          |              |                          |
|-----------|--------------------------|--------------|--------------------------|
| apartment | <input type="checkbox"/> | condo        | <input type="checkbox"/> |
| duplex    | <input type="checkbox"/> | single house | <input type="checkbox"/> |

# 1

## LOOK AT US - OUR BIRTHDAYS



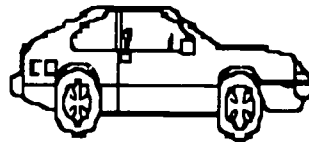
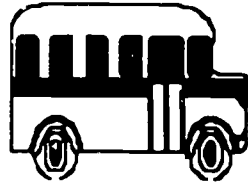
The graph shows when the students in our class have birthdays.  
Answer the questions by looking at the graph.

- How many students are in our class? \_\_\_\_\_
- How many students have birthdays in July? \_\_\_\_\_
- Which months have three birthdays? \_\_\_\_\_
- Which month has the most birthdays? \_\_\_\_\_
- What is the difference between the birthdays in May and the birthdays in March? \_\_\_\_\_
- How many students have birthdays during the summer months of July and August? \_\_\_\_\_

# 2

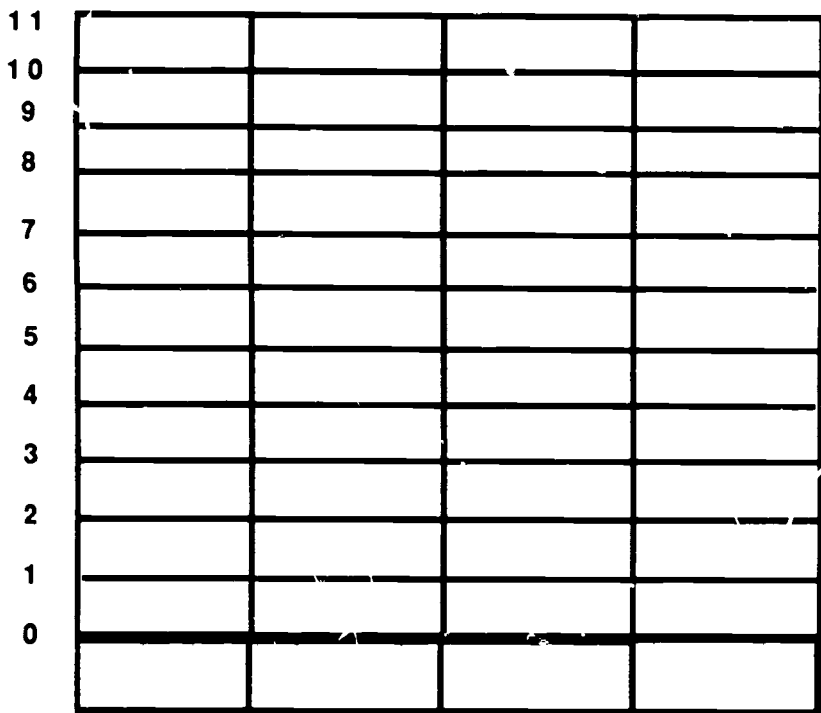
## LOOK AT US - OUR TRANSPORTATION

| Transportation | Number |
|----------------|--------|
| walk           | 4      |
| car            | 10     |
| bus            | 8      |
| bike           | 2      |



Use the transportation numbers to make a graph that shows how our class comes to school every day.

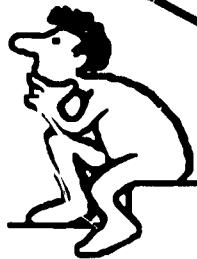
- Make each kind of transportation a different color.
- Write the transportation names in the shaded boxes.



**Transportation Names**

3

LOOK AT US



OUR HAIR

OUR EYES

OUR HOMES

1. What color eyes do you think most students have?

\_\_\_\_\_

2. What color hair do you think most students have?

\_\_\_\_\_

3. What kind of homes do you think most students live in?

\_\_\_\_\_

Find out more about one of your guesses.

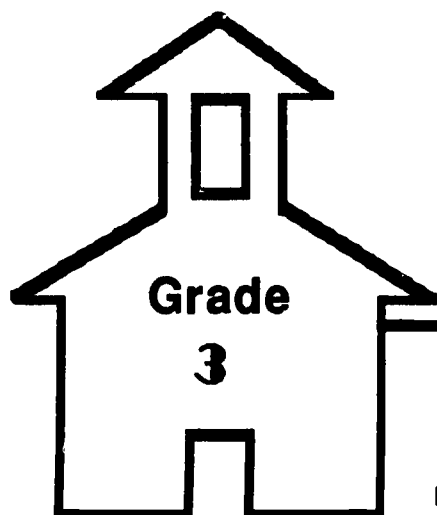
Choose one question. Find the can with the same number. Look at all the slips of paper in the can. Find all the checked boxes that are alike. Put those that are alike in a set. Count the number in each set. In the table, write the name of the set and the number in the set. Beside the x, write the title on your can.

| x | number |
|---|--------|
|   |        |
|   |        |
|   |        |
|   |        |
|   |        |
|   |        |
|   |        |
|   |        |

Use Easy Graph to show your numbers on a graph.

Was your guess right?

\_\_\_\_\_



## THE DAILY NEWS

Language Arts and Social Studies activities to develop the necessary writing skills for publishing a class newspaper and to make students aware of the history of written communications.

### SOFTWARE:

MAGIC SLATE. Sunburst, 1985

**OTHER MATERIALS:**  
Center (See Directions)  
Student Activity Sheets  
(See Samples)  
Cobblestone Magazine,  
January, 1985.  
News and Observer,  
Selected Issues of  
the Minipage.  
(See Appendix)

### COMPETENCIES:

#### COMMUNICATION SKILLS/WRITING:

**GOAL 5** The learner will develop and maintain one's own identity through writing about self and family.

- 5.1 Record personal experiences and events
- 5.2 Revise selected pieces of own writing to enhance meaning
- 5.3 Edit selected pieces of own writing for capitalization, punctuation, usage, spelling, and letter formation.

**GOAL 9** The learner will publish selected writing for an identified audience.

- 9.4 Make a diary or journal-type book for self or others to maintain her/his own identity

#### SOCIAL STUDIES/KNOWLEDGE:

**GOAL 14** The learner will have a sense of time and chronology.  
14.2 Demonstrate understanding of the chronological sequence of events

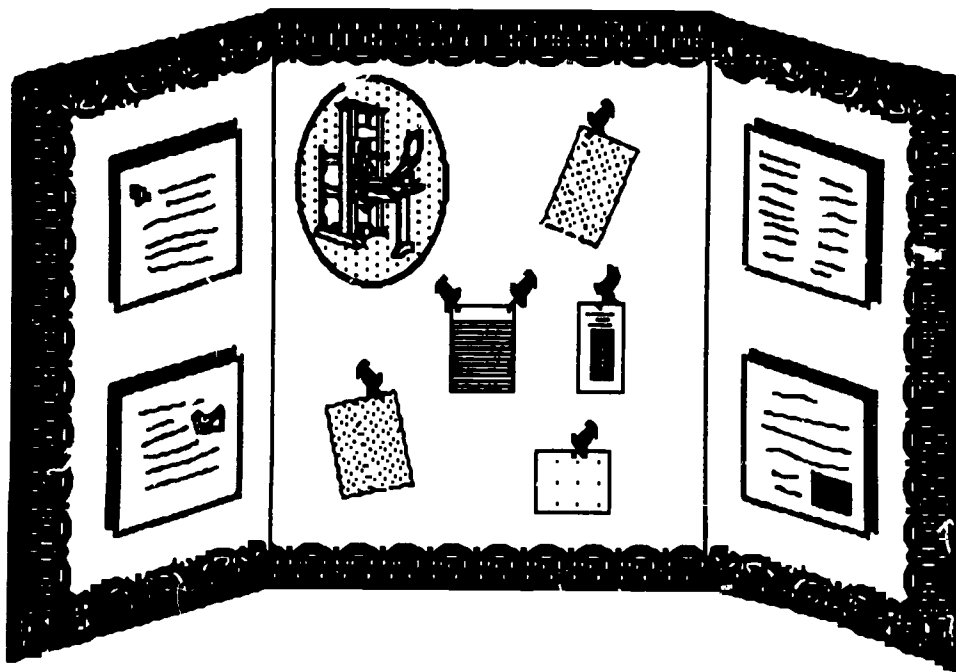
**GOAL 15** The learner will develop an understanding of change.  
15.2 Understand personal change

**GOAL 17** The learner will know about some famous people in history.  
17.3 Identify famous people outside political life

# THE DAILY NEWS

## A Language Arts/Social Studies Center

**Directions:** This center consists of three sections of a sturdy material which are hinged together to allow the display to stand alone. It is important to choose a durable material since the center will probably be used throughout a large part of the school year. The same arrangement of activities can also be placed on a bulletin board. The entire display may be attractively framed with a border cut from a newspaper. The two outer sections have interesting reading materials attached or in pockets that contain information on the history of printed communications. These can be articles from periodicals or newspapers, books, educational materials, etc. (See suggestions in Management section.) The center section is open to allow students to post articles (with thumb tacks, pins, tape, etc.) they have written for inclusion in the weekly class newspaper. An attractive picture having to do with the history of printing would add interest.





# MANAGEMENT

## SCHEDULING

Preparation for the newspaper activity should start early in the school year. For at least one month, students should have opportunities each day to verbally share adventures and personal feelings with classmates. Steps for effective verbal communication should be discussed and encouraged. By the second month this communication can become a writing experience. Each student can begin to keep a journal of daily events and their feelings in a personalized, laminated folder. As students arrive at school, they may write several sentences in their journals. In order to make students more aware of the sequence of events in their daily lives and their personal feelings about those events, make worksheets available that will help them record and organize their days. (See sample following this section.) During this period, begin discussions about the development of written communication. Preparing a time line would be a good activity. When students become comfortable in using MAGIC SLATE, they can create their journal writing on the computer. Later, students can contribute articles to the class newspaper by posting printouts of their writing on the newspaper center.

## GROUPING

Each student works independently. Initially, they can transfer comments from their journals to the word processor. Later, as they become more comfortable with the computer software, each student can compose at the computer keyboard.

## NUMBER OF COMPUTERS NEEDED

A lab setting or 5-10 computers with printers is needed.

## LENGTH OF TIME

Introductory activities should be started early in the year. By the end of the first semester, students should be using MAGIC SLATE. As soon as they can produce simple pieces of writing, these should be combined and made into a simple newspaper which is sent home to parents. The activity can continue throughout the year.

## SPECIAL SUGGESTIONS

Post a copy of the most frequently used word processing commands near the computers where it will be easily seen by all students. Make the rules for capitalization and punctuation available for students either as a manual or as a wall poster. This reference should be accessible wherever students are writing.

# BIBLIOGRAPHY

## For the teachers:

Bruce, Bertram; Sarah Michaels; and Karen Watson-Gegeo. "How Computers Can Change the Writing Process." Language Arts, February, 1985.

Hipple, Marjorie L. "Journal Writing in Kindergarten." Language Arts, March 1985.

Willinsky, John. "To Publish and Publish, and Publish." Language Arts, October, 1985.

## For the student:

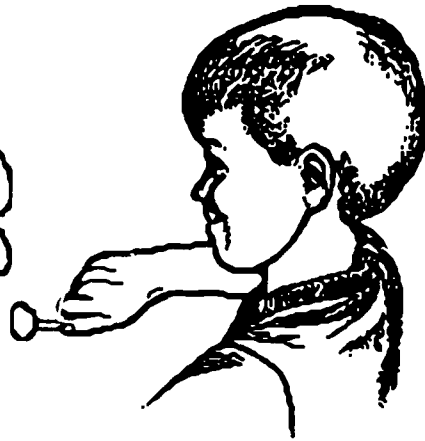
Cobblestone Magazine. January, 1985. (Entire issue devoted to the history of printing.)

Debnam, Betty. "An Award Winning Author." The News and Observer, March 30, 1987, Minipage.






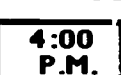
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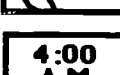
Debnam, Betty. "A History of United States Newspapers." The News and Observer, March 1, 1986, Minipage.

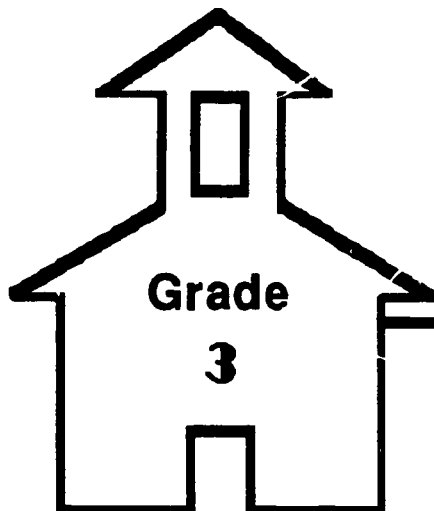
# What's Happening?



Write what happens to you at each of the times below. Draw a face in the box to show how you were feeling.

|                                                                                                      |                         |
|------------------------------------------------------------------------------------------------------|-------------------------|
| 7:00<br>A.M.<br>    | <hr/> <hr/> <hr/> <hr/> |
| 8:30<br>A.M.<br>   | <hr/> <hr/> <hr/> <hr/> |
| 10:00<br>A.M.<br> | <hr/> <hr/> <hr/> <hr/> |
| 12:00<br>NOON<br> | <hr/> <hr/> <hr/> <hr/> |
| 2:00<br>P.M.<br>  | <hr/> <hr/> <hr/> <hr/> |
| 4:00<br>P.M.<br>  | <hr/> <hr/> <hr/> <hr/> |

|                                                                                                          |                         |
|----------------------------------------------------------------------------------------------------------|-------------------------|
| 6:00<br>P.M.<br>        | <hr/> <hr/> <hr/> <hr/> |
| 8:00<br>P.M.<br>       | <hr/> <hr/> <hr/> <hr/> |
| 10:00<br>P.M.<br>     | <hr/> <hr/> <hr/> <hr/> |
| 12:00<br>MIDNIGHT<br> | <hr/> <hr/> <hr/> <hr/> |
| 2:00<br>A.M.<br>      | <hr/> <hr/> <hr/> <hr/> |
| 4:00<br>A.M.<br>      | <hr/> <hr/> <hr/> <hr/> |



# Map Directions

Traditional and computer activities to teach map directional skills.

## SOFTWARE:

DISCOVERY. Nystrom, 1985.

## OTHER MATERIALS:

Center (See Directions;  
Student Activity Sheets  
(See Samples)  
Crayons/colored pencils

## COMPETENCIES:

### SOCIAL STUDIES/KNOWLEDGE:

**GOAL 20** The learner will know and use basic geographic terminology.

**20.3** Use cardinal and intermediate directions

**20.3.1** State the four cardinal directions

**20.3.2** Locate north, south, east, and west on a map

**20.3.3** Respond correctly to a question such as:

"What does NE stand for when you see such things as NE, NW, SE, and SW?"

**20.3.4** Respond correctly to the question:

"If you stand facing south, north is

- a. to your left
- b. to your right
- c. to your back

# MAP DIRECTIONS

## A Social Studies Center

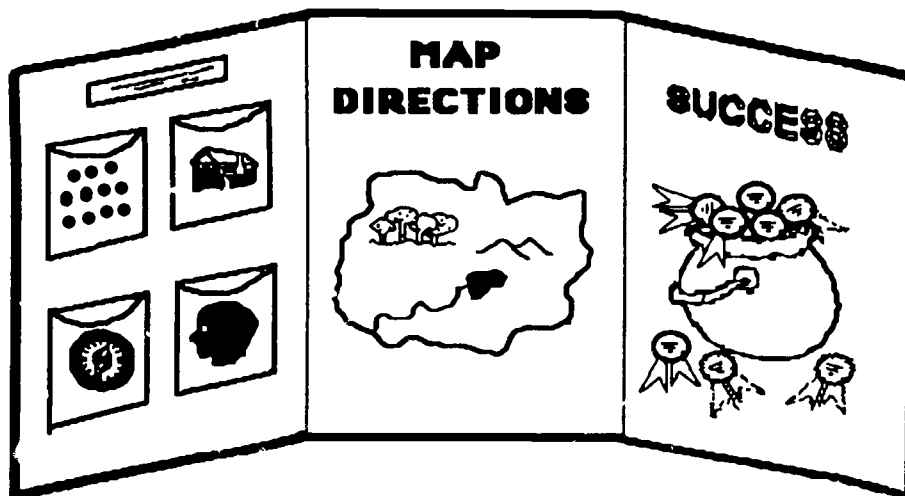
**Directions:** This center is displayed on sturdy material that is cut into three sections and then hinged together. On the left section are four activity envelopes. Each envelope contains a student activity worksheet with directions. In the middle section, a colorful map is displayed. To make the center more appealing to students use a map that would attract their attention such as a treasure map. A "Pot of Gold" filled with rewards for successfully completing the center is on the right. The rewards could be tokens, a certificate, a badge, a special privilege, or anything that would have meaning to a class. The following activities are to be used after students have completed Lessons 1-3 from the computer program, DISCOVERY. They are used as reviews and/or reinforcement for the skills introduced by the program. Worksheets included with DISCOVERY will also be useful.

**ACTIVITY 1 MAP DIRECTION SENTENCES:** By following map directions given in the worksheet (NE, SE, E, etc.), students are able to choose letters from a maze that will correctly create sentences. The sentences are map concepts that students should have by the end of the study -- "Maps are flat."; "Globes are spheres."; "Maps have views from above."

**ACTIVITY 2 WHO AM I?:** This worksheet is like a city map with sixteen houses arranged in rows of four. On each house is the name of a boy or girl. By correctly following map directions ("I live south of Pat."; "I live two blocks north of Ken."), the student can correctly guess the identities of the mystery students.

**ACTIVITY 3 DIRECTIONS:** On this worksheet, students have eight different opportunities to add a missing compass direction when the other seven are shown. Finally, they must finish all the directions when only one is shown.

**ACTIVITY 4 FACING DIRECTIONS:** This worksheet asks questions designed to help students learn compass directions when standing. They must answer questions such as, "If you face west, what direction is to your right?"



# MANAGEMENT

## SCHEDULING

In order for students to maximize their understanding of geographical concepts throughout the year, it would be best if this map study is taught early in the school year. Directional skills are basic concepts that must be mastered before students can proceed with other map skills. Prior to the use of the activities in this center, students should have a good understanding of maps, globes, and symbols. Lessons 1-2 in DISCOVERY could be used to evaluate students on these skills and help determine their readiness for map directions. The following concepts are prerequisite for success with this center:

1. A globe is a model of the earth.
2. A map is a special picture that has a view from above.
3. Map symbols stand for real places and real things.
4. A map key allows one to understand symbols located on the map.

## GROUPING

Instruction may be done with small or large groups. However, this center would best serve its purpose if students work independently.

## NUMBER OF COMPUTERS NEEDED

One student per computer is desirable. In the event that this is not possible, no more than two students should work on a single computer.

## LENGTH OF TIME

The average length of time for completing this activity is one week. This will vary depending on the availability of computers.

## SPECIAL CONSIDERATIONS FOR SPECIAL STUDENTS

Students who have difficulty with any part of this activity might require a "buddy" with whom they work in order to feel successful.

## SUGGESTED LESSON PLANS

- I. Review maps and symbols.  
(DISCOVERY, Lessons 1-2 and accompanying worksheet - Copymaster 1)
- II. Complete Lesson 3 of DISCOVERY. (map directions)
- III. Complete worksheets in center display.  
("Facing Directions" may be acted out)
- IV. Check worksheets for correctness, and reteach as necessary.
- V. Evaluate, using Copymaster 2 worksheet in DISCOVERY.
- VI. After distance charts and grids have been mastered, students might enjoy "Dragon Seeker," a simulation game on map skills included in DISCOVERY.

# MAP DIRECTION SENTENCES

Start with the indicated number and follow the directions until the sentence is complete.

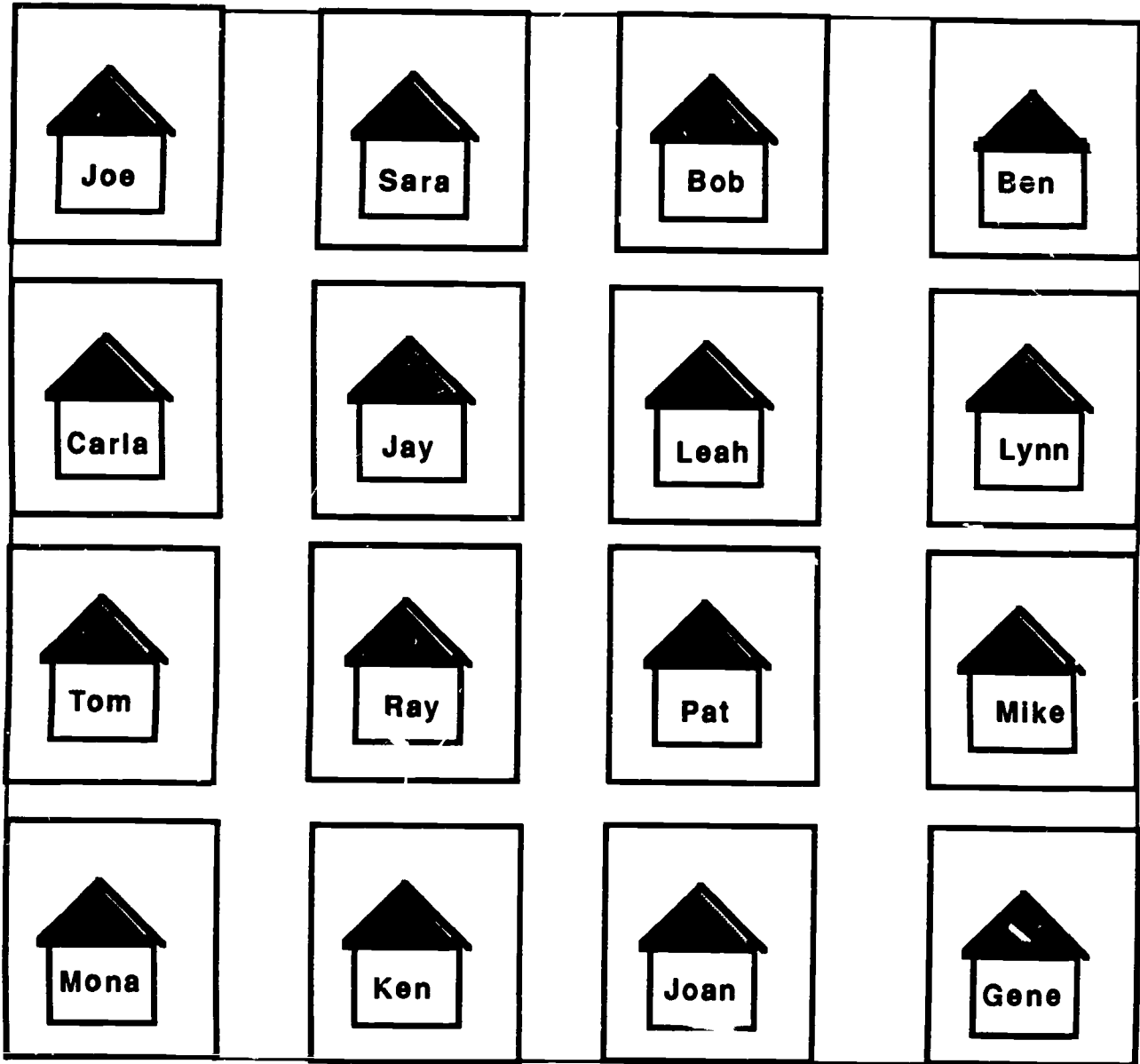
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|-------------------|---|---|---|---|---|---|---|-------------------|
| <sup>1</sup><br>M | P | S | A | V | I | T | R | A                 |
| A                 | A | H | R | E | A | T | A | P                 |
| A                 | B | M | W | S | F | L | S | E                 |
| O                 | S | O | F | H | P | A | O | B                 |
| V                 | E | R | E | S | E | R | L | <sup>2</sup><br>G |

1.     —     —     —     —     —     —     —     —     —     —  
 (1)   S   NE   E     E   S   E     SE   E   NE   W

2.     —     —     —     —     —     —     —     —     —     —     —     —  
 (2)   W   N   E   N   W     SW   S   W     W   NE   W   SW   W   W   N

3.     —     —     —     —     —     —     —     —     —     —     —     —     —     —     —     —     —     —  
 (3)   SE   N   E     S   NE   E   S     N   E   SW   SW   E     SW   SW   N   N     NW   S   SW   S   E

# WHO AM I?



- I live 2 blocks east of Ray.
- I live directly southwest of Ben.
- I live south of Pat.
- I live northeast of Carla.
- I live southeast of Tom.
- I live 2 blocks north of Ken.
- I live 3 blocks west of Mike.
- I live 3 blocks south of Joe.
- I live directly northwest of Gene.
- I live directly northeast of Ken.

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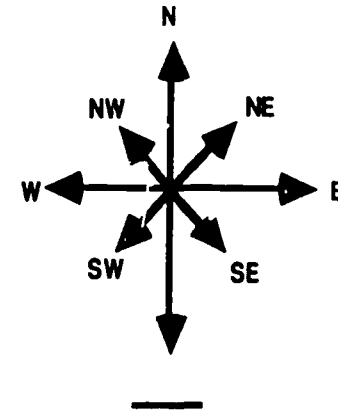
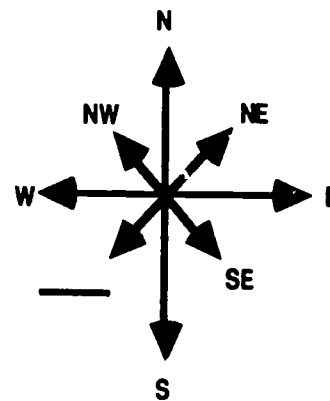
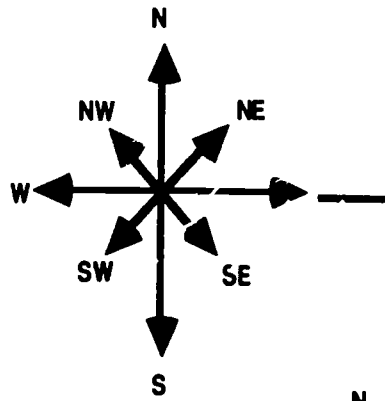
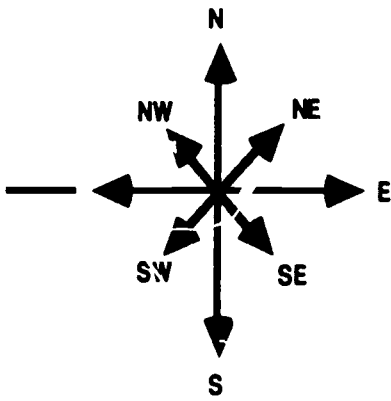
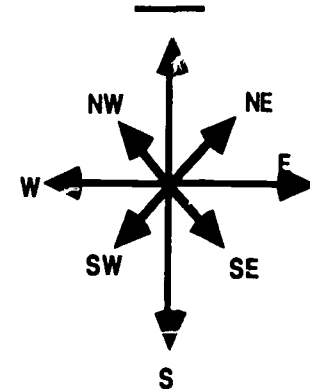
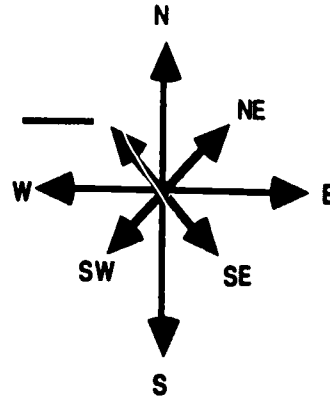
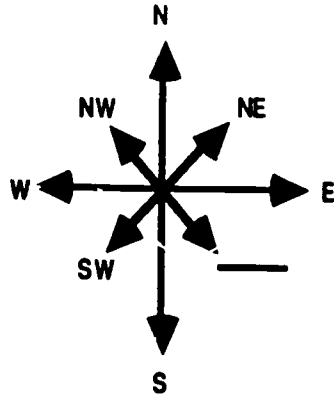
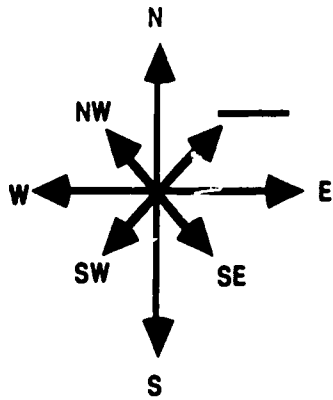
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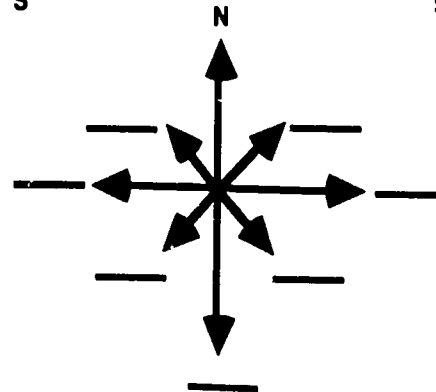
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# DIRECTIONS

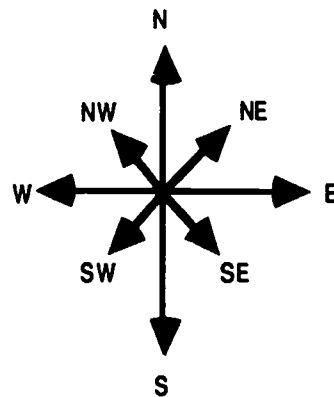


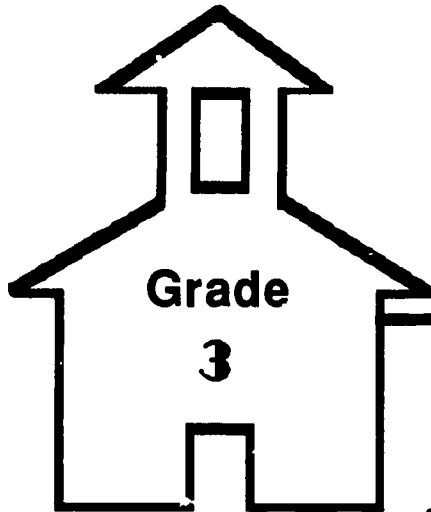
Fill in each blank.



# FACING DIRECTIONS

1. If you face north, what direction is to your back?
2. If you face south, what direction is to your back?
3. If you face southeast, what direction is to your left?
4. If you face northeast, what direction is to your back?
5. If you face east, what direction is to your back?
6. If you face east, what direction is to your right?
7. If you face southwest, what direction is to your back?
8. If you face west, what direction is to your left?
9. If you face west, what direction is to your right?
10. If you face west, what direction is to your back?
11. If you face northwest, what direction is to your back?
12. If you face south, what direction is on your right?
13. If you face south, what direction is on your left?
14. If you face north, what direction is on your right?





# Machines Help Us Do Work

Activities to introduce and develop concepts about the six simple machines: the wheel and axle, the inclined plane, the pulley, the screw, the lever, and the wedge.

## SOFTWARE:

DISCOVERING SIMPLE MACHINES.  
United Learning, 1985.

HOW THINGS WORK. World Book, 1986.  
See other suggestions in  
Bibliography

## OTHER MATERIALS:

Task Cards (See Directions)  
Student Activity Sheets  
(See Samples)  
Materials for experiments  
(See directions for  
each task card)

## COMPETENCIES:

### SCIENCE

**GOAL 2:** The learner will have an understanding of basic physical science concepts.

**2.6** Have knowledge of how machines help us do work

**2.6.1** Demonstrate how to lift a heavy object using a lever

**2.6.2** Demonstrate how a ramp can be used to raise a heavy object

**2.6.3** Demonstrate how a pulley can help do work

**2.6.4** List common examples of machines that help us do work

# MACHINES HELP US DO WORK

## A Science Center

**Directions:** This unit for simple machines was developed to help students gain a basic understanding of the six simple machines (wheel and axle; inclined plane; pulley, screw; wedge; lever) and some of their uses. Seven lessons are described with sample activities that include hands-on experiments, the use of computers, and some writing.

The activities and directions are placed on colorful task cards or the task cards may be cut apart and placed on posters with appropriate illustrations (parts may be eliminated or added). If using cards, they may be placed on a table with the materials that will be needed for the experiments. If using posters, they may be attached to a bulletin board, wall, etc. The classroom teacher should introduce the concepts through teacher/student demonstration and/or classroom discussion before placing the task cards/posters in the center. Paper and pencils should be available for each activity.

### ACTIVITY 1: Using a lever to lift a heavy object.

#### Materials Needed:

TASK CARD 1

illustrations showing levers at work

wooden block for fulcrum

long board approximately 36"

stack of books

*How Things Work* (computer program)

If necessary, define fulcrum, lever, and force and how objects on a lever which are not the same weight can be moved so the lever can be balanced. Demonstrate the task card experiment. Discuss the varying amounts of force needed, the placement of the books, and the conclusions.

### ACTIVITY 2: How a ramp (inclined plane) can be used to raise a heavy load.

#### Materials Needed:

TASK CARD 2

illustrations of inclined planes at work

yardstick

books (at least 5)

board

heavy rubber bands and string to tie around one book

*How Things Work* (computer program)

Define inclined plane and discuss jobs which use this machine to make work easier. Demonstrate the experiments and explain the task card directions.

ACTIVITY 3: How a pulley can help do work.

Materials Needed:

TASK CARD 3

illustrations of pulleys at work

pulley from science kit (or make your own with the following)

2 small boxes

spool

clothes hanger

ruler or yardstick

string

4 unifix cubes or coins

coat hook or rod for hanger

*How Things Work* (computer program)

Define pulley and discuss students' own experiences using a pulley or seeing one used. Explain the task card and conduct the experiment. Answer the task card questions in class if students are having difficulties.

ACTIVITY 4: How a wedge can help us do work.

Materials Needed:

TASK CARD 4

illustrations of wedges at work

lots of nails

file

hammer and boards

Define wedge and emphasize that wedges do not always look as we would expect. Read and explain the task card or demonstrate the experiment.

ACTIVITY 5: How wheels and axles help us do work.

Materials Needed:

TASK CARD 5

illustrations of wheels and axles at work

tool catalogs

wheel and axle from a science kit (or use a pencil sharpener)

egg beater

a toy which shows the

door knob

wheel and axle concept

*How Things Work* (computer program)

**NOTE: TEACHER SHOULD DEMONSTRATE THE PENCIL SHARPENER. STUDENTS SHOULD USE IT ONLY WITH SUPERVISION.**

Explain the wheel and axle concept using pictures. If possible have a door knob or pencil sharpener to use for demonstration. Discuss or identify other tools or areas in the students' lives where wheels and axles are used.

## ACTIVITY 6: How the screw helps us do work.

### Materials Needed:

TASK CARD 6

illustrations of screws at work

screws

screw driver, optional

boards, optional

pencils

Discuss the definition and purpose of using screws. Students should complete the activity on the worksheet before attempting to answer the task card questions.

## ACTIVITY 7: Quiz/Review

### Materials Needed:

TASK CARD 7

*Discovering Simple Machines* (computer program)

Any computer program which will generate word puzzles

For review, students should work in pairs and complete parts 1 and 2 of the computer program. Part 3 is optional and time consuming. An alternative would be for the teacher to create several computer-generated vocabulary puzzles to be used as a review. Part 4 could be worked individually and used for a grade.

# MANAGEMENT

## SCHEDULING

Each task card/poster should be introduced and completed before students move to another card.

## GROUPING

For the manipulative and computer activities, pair students in order for them to learn from each other. They should take turns working the problems. The writing activities may be done independently.

## NUMBER OF COMPUTERS NEEDED

One to four computers.

## LENGTH OF TIME

The time to complete these activities will vary. If the unit is entirely teacher directed/demonstrated, the lessons can be completed within one week. If the teacher demonstrates/explains and students experiment, the activities will extend beyond one week.

## SPECIAL CONSIDERATIONS FOR SPECIAL STUDENTS:

It may be necessary to make vocabulary changes on the task cards/posters in order to better meet the instructional levels of students.

## BIBLIOGRAPHY OF ADDITIONAL INSTRUCTIONAL MATERIALS

Hellman, Hal. The Lever and the Pulley. M. Evans & Company, c1971. (illustrations)

Schaffer, Frank. "Make Machines Simple." Schooldays, April, May, June, 1987, pp. 17-26.

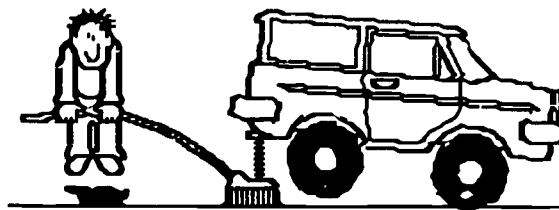
Crossword Magic. L & S Computerware, c1984. (computer program)

Discovering Simple Machines. United Learning, c1985. (computer program and filmstrip)

Puzzles and Posters. MECC, c1984. (computer program)

## TASK CARD 1

# A Simple Lever



**Become a scientist and try an experiment.**

**Write your name and task card number on your paper.**

**Get your paper and pencil ready to record your findings.**

You will need:    the long board  
                          the wooden block  
                          the stack of books

1. Place the fulcrum (this is the wooden block) on the floor.
2. Place the middle of the lever (this is the long board) on the fulcrum.
3. Carefully place the stack of books (this is the load) on one end of the lever (the long board). Now push down on the other end of the lever. Remember how hard you pushed.
4. Next, move the fulcrum closer to the end of the lever with the load. Push down on the other end of the lever. Remember how hard you pushed.

To record (write down on your paper) your findings, copy and complete:

The closer the fulcrum was to the load, the \_\_\_\_\_ (less, more) force or push I needed to lift the load. The lever made it easier to move heavy things.

Next, make a drawing or illustration of yourself doing this task.

**For more information, go to the computer. Use the program, How Things Work, and look at "Lever and Fulcrum."**



## The Inclined Plane



We cannot do all the jobs we need to do without help. We use different kinds of machines to make our work easier.

Look at the pictures of how machines are helping us make our work easier.

Let's look at one kind of machine. It is called an inclined (in klind) plane.

When you use a slanted board to move something, you are using a simple machine. Did you know that when you run uphill, you are using an inclined plane?

**Become a scientist and try an experiment.**

**Get your paper and pencil ready to record your findings.**

**Write your name and task card number on your paper.**

You will need: the yardstick  
some books (at least 5)  
the long board  
a rubber band  
some string

1. Tie a string around a book and attach a rubber band to the string.
2. Lift the book by holding the rubber band.
3. Measure the length of the rubber band with the yardstick.

To record your findings, copy and complete:

To lift the book, the rubber band measured \_\_\_\_\_ inches.

4. Now raise one end of the board by resting it on two books.
5. Pull the tied book up the board by holding the rubber band.
6. Measure the length of the rubber band.

To record your findings, copy and complete:

To pull the book up the inclined plane with the two-book slant, the rubber band length was \_\_\_\_\_ inches.

7. Next, add two more books under the board for a four-book slant.
8. Once again, hold the rubber band and pull the book up the board.
9. Measure the length of the rubber band.

To record your findings, copy and complete:

To pull the book up the inclined plane with the four-book slant, the rubber band length was \_\_\_\_\_ inches.

10. Scientist, what is your conclusion about using inclined planes?  
Do they help? If so, how?

In a complete sentence, tell how inclined planes do or do not make your work easier.

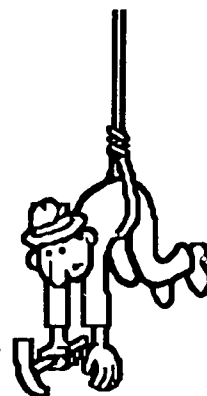
**For more information, go to the computer. Use the program, How Things Work, and look at "Inclined Plane."**

### TASK CARD 3

## A Pulley

Have you ever watched one of your classmates raise the flag to the top of the flagpole at your school?

If you have, you saw that person use another simple machine called a pulley (pull e). It is a wheel with a rope moving around it.



Pulleys help us do work by changing the direction of the force. (push and pull) Do you think it would be easier to pull down or lift up?

**Become a scientist and try an experiment.**

**Get your paper and pencil ready to record your findings.**

**Write your name and task card number on your paper.**

You will need:

- a spool on a clothes hanger
- a string
- 2 small boxes connected with a string
- 4 unifix cubes or coins
- a ruler or yardstick
- a hook

1. Hang the hanger and spool on the hook.
2. Place one cube or coin in each box.
3. Place the boxes on each side of the spool with the string resting on the spool.
4. Add one more cube or coin to one of the boxes. What happened?
5. Now make the boxes even or balanced (balanced) again. How did you do it?
6. When the boxes are balanced, carefully pull one box down two inches. What happened to the other box?

On your paper, answer these questions in complete sentences:

1. What happened when both boxes were even?
2. What is a word you can use that means the boxes are even in weight?
3. When you pulled one box down two inches, what happened to the other box?
4. How far did the box move?
5. Draw a picture of a pulley.

**For more information, go to the computer. Use the program, How Things Work, and look at "Pulley."**



## The Wedge

A wedge is another type of inclined plane. It is two inclined planes joined together to form a sharp edge or triangle. This edge can be pushed into something. A wedge can split an object (log) or it can lift a heavy load (a ramp for cars).

An ax and a hatchet are two hand tools or machines that are wedges.

Sometimes it is hard to recognize wedges. Forks, needles, and nails are wedges.

**Become a scientist and try an experiment.**

**Get your paper and pencil ready to record your findings.**

**Write your name and task card number on your paper.**

You will need:    nails  
                           a file  
                           a hammer  
                           a block of wood

1. Hammer a nail into your block of wood.
2. Pull the nail out with the claw of the hammer.
3. Next, make the end of a nail blunt (not sharp) by filing it.
4. Try to hammer the blunt nail into the block of wood.

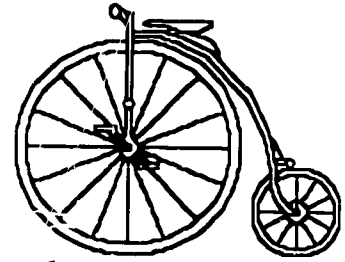
What did you discover from your experiment? Write your answer in complete sentences.

To record your findings, copy and complete:

A \_\_\_\_\_ is two inclined planes joined together to form a sharp edge. A nail is one example.

**DRAW AND LABEL** three things you have at home that are wedges.

## Wheels and Axles



Did you know that when you use a doorknob to open a door you are using a simple machine?

When you use the pencil sharpener to sharpen your pencil you are also using a simple machine.

A simple machine that makes work easier is called a wheel and axle (ax l). It is a wheel that turns an axle or rod. A wheel and axle use less force to lift objects.

**Become a scientist and make some observations.**

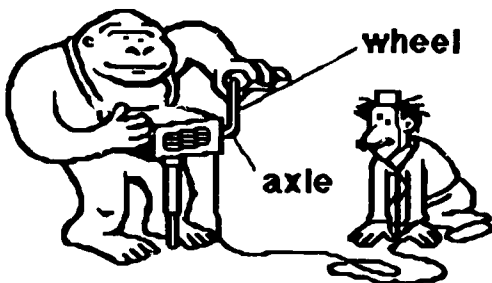
**Get your paper and pencil ready to record your findings.**

**Write your name and task card number on your paper.**

You will need: illustrations of toys, household equipment, and tools that have a wheel and axle. ( Ex. wagon, pencil sharpener, egg beater, doorknob)

doorknob and toy (if available)

Work with a partner. Look at the objects and pictures which show examples of wheel and axle machines.



**Organ Grinder**

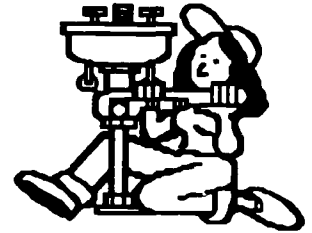
After you look at the examples, choose two and illustrate them. Write the name of the object and label the axle and wheel. Remember, the wheel is the part that turns in a larger round motion and the axle is the rod.

Think of another example of a wheel and axle machine that you did not see in the pictures. Illustrate it. Write the name of the object and label the wheel and axle.

HINT: What wheel and axle machine is found in your family car and is used by your mom and dad to steer the car?)

**For more information, go to the computer. Use the program, How Things Work, and look at "Wheel and Axle."**

# The Screw



You have learned that inclined (in klind) planes help us do work. One hidden inclined plane that we often do not think about is the screw.

Let's prove it.

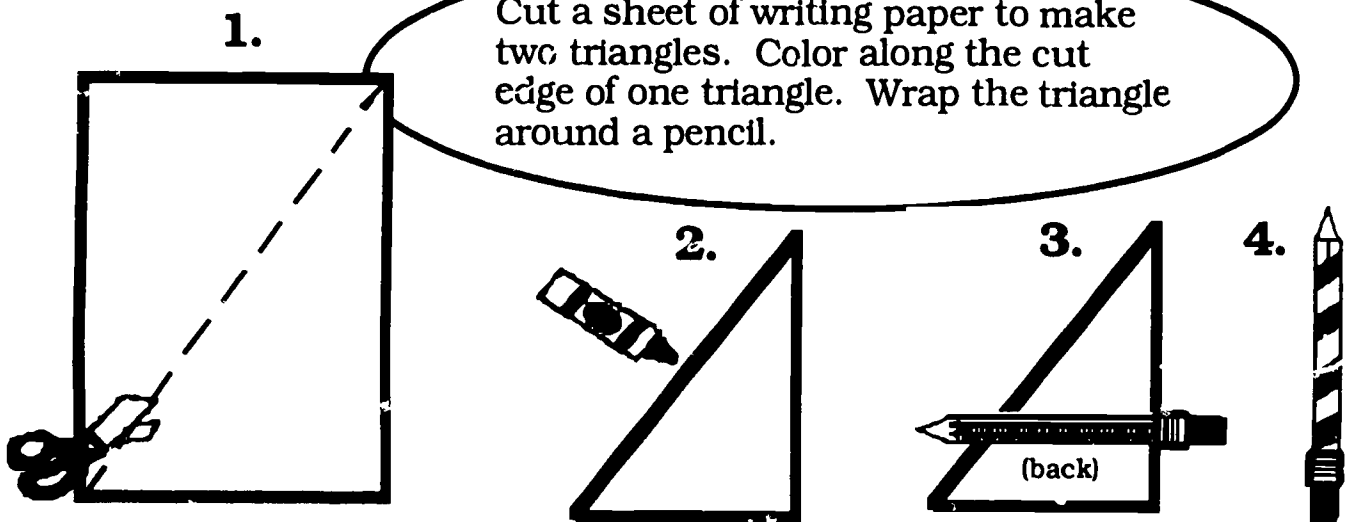
**Become a scientist and try an experiment.**

**Get your paper and pencil ready to record your findings.**

**Write your name and task card number on your paper.**

You will need: paper  
scissors  
crayon  
pencil

1. Follow the directions below to make a model screw.
2. Watch the colored line. What did it do? Could you say it climbed your pencil?



On your paper, answer these questions in complete sentences:

How does a screw get into materials to do work?

What are three things in our classroom that use screws?

## Discovering Simple Machines

You have completed your activities for the simple machines unit.

For a review, go to the computer and use the program, Discovering Simple Machines. Look at these :

1. Machines
2. The Simple Machines

If you have time, check yourself on how many words you know and how quickly you can use your hands and eyes. Look at:

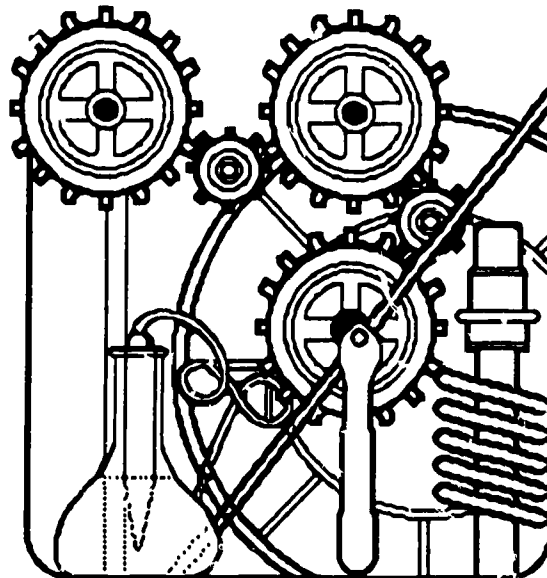
3. Vocabulary Builder

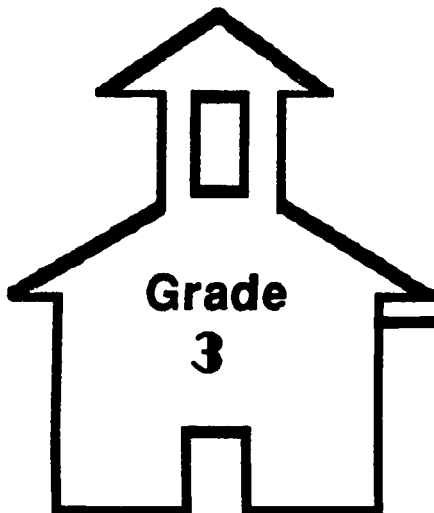
Test yourself to see how much you have learned about simple machines. Look at:

4. Quiz

Give your teacher the score shown on the monitor.

**Good Luck and Have Fun, COMPUTER WHIZ KID!**





## **FACT OR FICTION**

Traditional and computer and activities to teach the recognition of fact or opinion, and fiction and nonfiction materials.

### **SOFTWARE:**

**FACT OR OPINION.** Hartley, 1984.

### **OTHER MATERIALS:**

Center (See Directions)  
Student Activity Sheets  
(See Samples)  
Transparencies (See  
Masters)

### **COMPETENCIES:**

#### **LIBRARY/MEDIA/COMPUTER SKILLS:**

**GOAL 1:** The learner will demonstrate a working knowledge of the media center's organization and the procedures required to use the center and its collection.

1.2 Define simple media terms (fiction/nonfiction)

1.3 Locate and identify fiction and nonfiction resources in the Media Center

**GOAL 3:** The learner will identify concepts presented in media, interpret and organize information, and develop evaluative skills for understanding the media at school and elsewhere.

3.9 Differentiate between fact and fiction in print materials

#### **COMMUNICATION SKILLS/READING/LITERATURE:**

**GOAL 1:** The learner will continue to develop familiarity with books.

1.3 Become familiar with informational books

**GOAL 9:** The learner will evaluate what is read



# **FACT OR FICTION**

## **A LIBRARY/MEDIA/LANGUAGE ARTS CENTER**

**Directions:** The student directions and illustrations for this center may be placed on a piece of posterboard, a bulletin board, or inside a study carrel in the media center. These activities may be used as a follow-up to a language arts unit in the classroom as well as a review and introduction to the nonfiction and fiction sections of the media center. The lessons lead the student from the concept of fact and opinion into a recognition of fiction and nonfiction science subjects in the media center. The classroom teacher or media coordinator may introduce the lesson about **FACT** or **OPINION**. The completion of student activities is managed with a contract sheet. As each activity is completed, it is checked by the media coordinator or teacher. (See the suggested contract following this section.) The activities should be completed in order.

**INTRODUCTION TO CENTER:** Introduce the center by discussing with the class the difference in a fact and an opinion. Use Transparency #1 (**FACT OR OPINION**). As each statement is shown on the overhead projector, ask the students if each statement can be proven. Explain the center activities to the students and make sure they understand where all the items are that will be needed for the completion of the activities. They should also understand the contract, where it is kept between visits to the media center, and how the teacher or media coordinator must check each activity as it is completed.

**ACTIVITY 1:** This activity consists of one activity sheet which is a follow-up to the introductory lesson.

**ACTIVITY 2:** All students will use the computer program, **FACT OR OPINION**, Lesson 1, FO1. If they are having difficulty with the concept, the media coordinator/teacher may choose for them to complete Lesson 2, FO2.

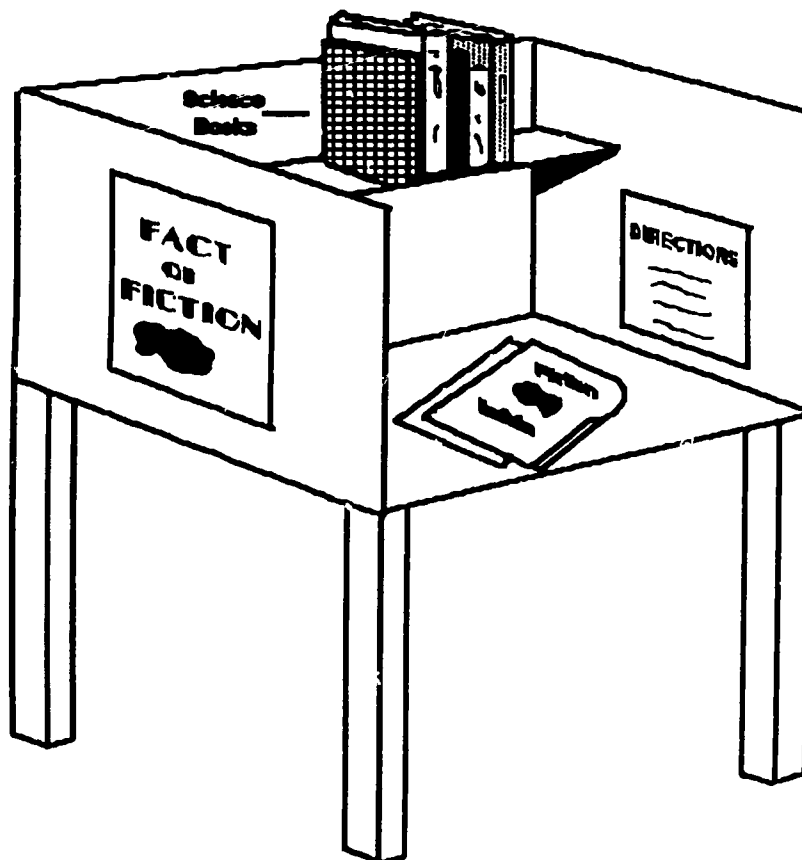
**ACTIVITY 3:** All students will complete Lesson 3, FO3 in **FACT OR OPINION**. For students having difficulty, the media coordinator may choose for them to complete Lesson 4, FO4.

**ACTIVITY 4:** As students complete Activity 1-3, the media coordinator will introduce the science section (500's) of the media center to small groups. Transparency #2 (**SCIENCE CLASSIFICATION**) is used to present the various subjects found in the nonfiction section. Lead students to give titles of books they may have read from the fiction section with the same subject. Discuss how the two types are different. Use Transparency #3 as a group activity to reinforce the concept of fiction and nonfiction. The media coordinator should walk with the students to the science section of the media center and point out the location of the books. Each student will check out one science book.

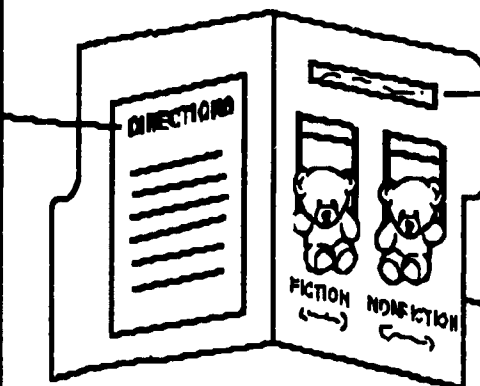
**ACTIVITY 5 Fiction or Nonfiction Game:** This game reinforces the concept of fiction and nonfiction. The directions and materials for the game are found in a file folder at the center. Several folders should be available so that more than one game can be played at a time. The outside of the folder has a large, attractive picture with the words **FICTION** and **NONFICTION**. Inside are the directions and two pockets. (Book pockets will work well.) A picture inside the folder will make the folder more appealing. On the back of the folder, staple a plastic bag which contains cards (5" x 2 1/2") for the

game. The cards are made from a sturdy, colorful tagboard. On one side of the card there is a picture and on the reverse the word "fiction" or "nonfiction," depending on the picture which is used. The "nonfiction" pictures should show scenes from science such as wild animals, rockets, plants, etc. The "fiction" pictures would be scenes of animals, clouds, planets, dinosaurs, etc., with human-like qualities (clothing, animated faces, playing games, etc.). The students are to look at the pictures and choose the correct pocket for each card. When they have finished, they can check their answers by looking at the back of the cards.

**ACTIVITY 6:** Review nonfiction and fiction with the whole class. Read aloud the two short paragraphs about penguins on Transparency #4 and #5. After a discussion about the two paragraphs, students complete an activity sheet which contains five statements about penguins.



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <p><b>FICTION</b><br/>(make-believe)</p> <p>Players Needed: 2</p> <p>Directions:</p> <ul style="list-style-type: none"> <li>. Remove cards from envelope</li> <li>. Look at the book illustrations</li> <li>. Decide which is FICTION and which is NONFICTION</li> <li>. Place card in correct pocket</li> <li>. Take turns with the playing and the checking.</li> </ul> <p>WINNER: Player with the most correct answers</p> <p>*** Check answers on back of cards ***</p> | <p><b>NONFICTION</b><br/>(real)</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|



Books about real people, things, or FACTS are NONFICTION.

Books with MAKE-BELIEVE or imagined stories are FICTION.

plastic envelope stapled to back of folder containing picture cards

# MANAGEMENT

## SCHEDULING

This center is used in the media center. It should be introduced during the second half of the first nine weeks and completed by the second nine weeks. The center could also be used for reinforcement during the second semester.

## GROUPING

The activities can be introduced to an entire class, but would be better to use with small groups.

## NUMBER OF COMPUTERS NEEDED

The center needs one to six computers.

## LENGTH OF TIME

It will take about nine weeks for a class to complete these six activities.

## SPECIAL CONSIDERATIONS

For students who have difficulty reading or working independently:

- Use transparencies for all activities rather than individual written work.
- Read content to whole class
- Use file folder game for reinforcement

## BIBLIOGRAPHY

Bonnors, Susan. A Penguin Year. Delacorte, c1981.

Atwater, Richard and Florence. Mr. Popper's Penguins. Little, Brown, c1938.



NAME \_\_\_\_\_

TEACHER \_\_\_\_\_

**MEDIA SKILLS  
FACT OR OPINION**

[ ] Introduction with Teacher/Media Coordinator

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[ ] ACTIVITY 1: Practice Activity : FACT OR OPINION

[ ] ACTIVITY 2: Computer Program - FACT OR OPINION

**Lesson 1: F01**

TRIED \_\_\_\_\_ CORRECT \_\_\_\_\_

**Lesson 2: F02**

TRIED \_\_\_\_\_ CORRECT \_\_\_\_\_

[ ] ACTIVITY 3: Computer Program - FACT OR OPINION

**Lesson 3: F03**

TRIED \_\_\_\_\_ CORRECT \_\_\_\_\_

**Lesson 4: F04**

TRIED \_\_\_\_\_ CORRECT \_\_\_\_\_

[ ] ACTIVITY 4: Check out a science book to read, after an introduction by the media coordinator.

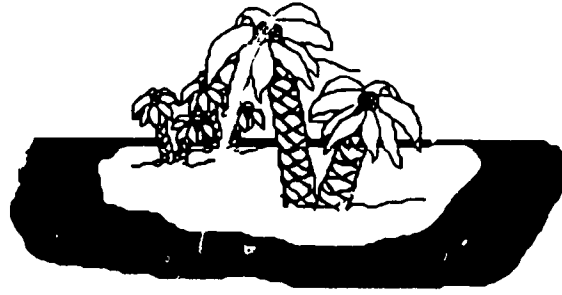
[ ] ACTIVITY 5: Skill Game: FICTION OR NONFICTION

[ ] ACTIVITY 6: Evaluation: PENGUINS (Fact or Make-Believe)

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**REMINDER: A FACT is something we can prove to be true.  
An OPINION is what we think.**





## FACT OR OPINION

An island is a piece of land that is surrounded by water.

People who live on islands can fly and make themselves disappear.

An owl is a bird that flies at night.

I think owls are very wise.



NAME \_\_\_\_\_

TEACHER \_\_\_\_\_

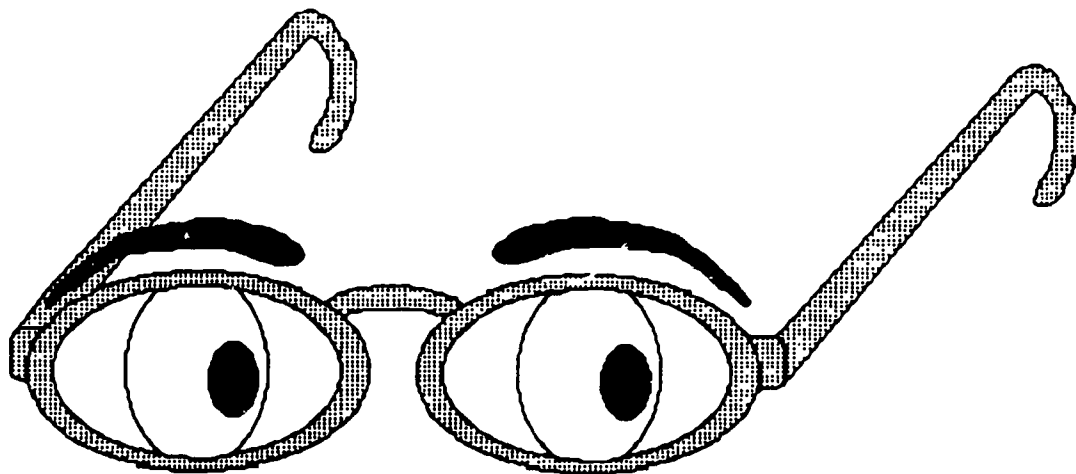
**A FACT is true. You can prove a FACT.**

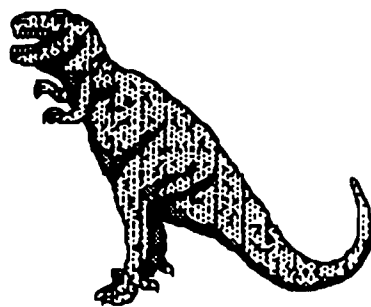
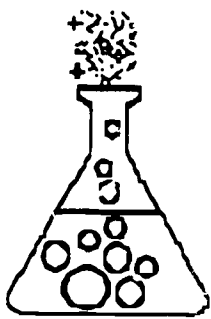
**An OPINION is what someone thinks or feels.**

**Directions:** Read these statements to see if they are facts or opinions. Write **FACT** or **OPINION** on the blank line in front of each statement.

**FACT OR OPINION**

1. \_\_\_\_\_ North Carolina has more snow than Florida.
2. \_\_\_\_\_ The best books in the media center are mystery books.
3. \_\_\_\_\_ Nonfiction books tell about real things or people.
4. \_\_\_\_\_ A media coordinator is a person who works in a media center.
5. \_\_\_\_\_ If you read a lot, you will need to use eye glasses when you get older.





**Science Experiments (507.2)**

**Mathematics (510)**

**Solar System (523.2)**

**Sun (523.7)**

**Chemistry (540)**

**Weather (551.6)**

**Dinosaurs (568)**

**Plants (581)**

**Animals - *Habits* (591.5)**

**Insects (595.7)**

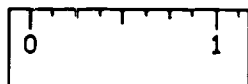
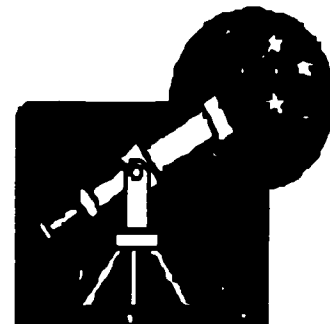
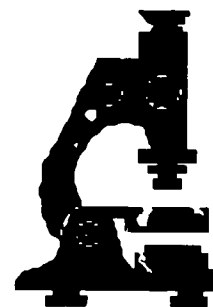
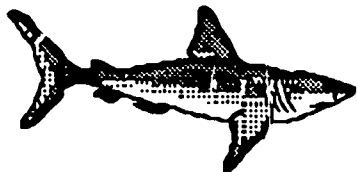
**Fish (597)**

**Reptiles (598.1)**

**Birds (598.2)**

**Animals - *Mammals* (599)**

**Pets are not included in this section**



***Nonfiction books are placed together by their subject.***

***Match each book on the left with the book on the right that has the same subject.***

- |                              |                                            |
|------------------------------|--------------------------------------------|
| 1. How to Make a Cloud       | A. Dinosaur Time                           |
| 2. Digging for Rocks         | B. The Story of Glaciers and the Ice Age   |
| 3. Icebergs                  | C. Rain and Hail                           |
| 4. Jupiter                   | D. Field Book of Common Rocks and Minerals |
| 5. My Visit to the Dinosaurs | E. The Giant Planets                       |



**FACT  
or  
MAKE-BELIEVE**

A Penguin Year is a book of facts by Susan Bonners.

Penguins live in the Antarctic with other sea animals. Penguins have a layer of fat and an oily feather coat to keep them warm.

In late September when spring comes to Antarctica, the penguins swim, walk, and toboggan to the North. They spend the summer mating where the weather is cold.

The female penguin lays her eggs in late June or early July. The male penguin then takes charge of the eggs, carrying them on his feet under the soft, warm fold of his skin. He waits for two months for the chicks to hatch.

**FACT  
or  
MAKE-BELIEVE**

**Mr. Popper's Penguins is a make-believe story written by Richard and Florence Atwater.**

**There were two penguins in the refrigerator, one standing and one sitting on the nest under the ice cubes. They're as alike as two peas," said Mrs. Popper. "As two penguins, you mean," answered Mr. Popper.**

**"Yes, but which is which?"**

**At that moment the standing penguin jumped out of the icebox, reached inside and took one of the checkers from under the sitting penguin, whose eyes were closed in sleep, and laid it at Mr. Popper's feet.**

**NAME** \_\_\_\_\_

**TEACHER** \_\_\_\_\_

**Directions:** Read each sentence.  
Decide which sentence is fact and which is make-believe.  
Write **FACT** or **MAKE-BELIEVE** on the blank line.

## **PENGUINS**

1. \_\_\_\_\_ A male penguin keeps an egg warm.
2. \_\_\_\_\_ Penguins build their nests in a refrigerator.
3. \_\_\_\_\_ It is hard to tell one penguin from another.
4. \_\_\_\_\_ Penguins live in cold weather.
5. \_\_\_\_\_ Baby penguins are called chicks.

