Adaptable Designs

formerly known as
THE UNCLUTTERED CLOSET

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ACKNOWLEDGMENTS

"No man is an island" is an especially appropriate line when putting together a book project of this nature. In the interest of gender equity, neither "is a woman an island." I would like to acknowledge the contributions of the following individuals and agencies.

This book had its inception during the end of my sabbatical leave in 1980. Thus, the Sabbatical Leave Committee and the University Administration of Shippensburg University is greatly acknowledged for providing me initially with time to work on this project. It has been most appreciated to work with the students and teachers of Rowland School for Young Children in field-testing and revising these activities with adaptable designs over the year. In addition, in conducting workshops with graduate and undergraduate students, as well as in-service teachers, I have appreciated their positive responses, encouragement, and suggestions.

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This book is being revised during another sabbatical leave in 2000. It is also being place upon the WWW for in-service and pre-service teachers to use. Dr. Robert Bartos, Dean of the College of Education and Human Services, has generously supported this project. Ms. Shelley Gross-Grey, Instructional Technology Specialist at the Faculty Microcomputer Center has been instrumental in supplying applicable knowledge for placing this book on the Internet. An array of university equipment and programs has been used to present this book in an appealing format. I extend my appreciation and gratitude to the University and Microcomputer Faculty/Staff Training and Resource Center for bringing this project to fruition.

Randall Pellow
2000

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An Interview With The Author Of Adaptable Designs

What major feature about this book should "catch my eye?"

As you are browsing through this book, the first thing you should look at are the designs. Why? Because teachers are usually looking for convenient ideas that will enhance the quality of their teaching and for activities that their students will learn from and enjoy. On the basis of many workshops presented to teacher groups on teaching strategies, one of the most popular segments has been activities that have adaptable designs.

Just what are adaptable designs?

Adaptable designs, or "frame games" as they are called by some educators, are design formats that can be used repeatedly throughout the year with different concepts and/or skills. Questions or descriptive statements pertaining to one theme are removed and replaced with another set of questions or content material. The basic design is used over and over again. Perhaps one of the best known examples of an adaptable design is the "concentration" game format. Many different activities and topics can be adapted to this specific design.

Have the designs been tried with kids?

Absolutely! All of these designs have been used with children and have been found to be successful. By using the field-testing approach, we have been able to effectively revise them. That is not to say that we have achieved perfection because the learning process is so inexact. If a problem emerges, it may be that the reading level of the content material may be too difficult for your students. This is not due to faulty design; rather it requires a diagnostic look at the questions or statements to ascertain wherein the difficulty lies.

How was the content for the designs selected?

Each of the sixteen (16) designs has at least one example of how content can be applied to it. Most of the content was selected based upon textbook material and popular units in grades 2 through 8. The content itself is interchangeable with other examples because of the very nature of adaptable designs. Some of the designs have additional activities and/or content presented. The beauty of adaptable designs is that each teacher can use her own brand of vitality with the ideas by adjusting her content priorities to the designs.

What content is represented?

Content coverage is provided on the following unit themes and topics. In many cases, content parallels concepts in textbooks.

- Animal Characteristics and Animal Body Parts
- Geographic Land and Water Features
- Volcanoes
- Dinosaurs
- Deserts
- World Locations (Use of Maps, Globes and Atlases)
- Times Table
- Inventors and Inventions
- Era of Explorers
- Occupations (Use of Telephone Directory)
- Famous People of the American Revolution
- Energy Sources
- Unusual Nouns (Use of Dictionary)
- Morse Code
- U.S. Geography
- Latitude and Longitude
- Compass Directions
- Graph Coordinates
- Cowboy Era
- Antonyms
- Contractions
- Compound Words

The content used with the designs promotes the following **skills**: locating, classifying, sequencing, following directions, questioning, thinking, and problem-solving.

In addition, many of the questions contained in the activities are worded so that they could constitute test questions. There are a variety of question formats.

Why should I use these designs?

Well, if you are philosophically opposed to them or believe them to be educationally unsound, I certainly would not recommend their use. But, there are many advantageous features that make the use of adaptable designs particularly appealing. They are:

1 Once the design is constructed, you can use it for a countless variety of activities. It saves in construction time and this promotes greater efficiency.

2 Because you use one design for many activities, it is more economical. Thus, you get more for your money from one design.

3. Adaptable designs can help to ease classroom storage problems that typically plague teachers. Most of the designs featured in this test are a flat, two-dimensional style. Thus, the idea emerged for **"uncluttered closets."**

4. Once children have engaged in an activity that has an adaptable design, they have familiarity with the directions. You will not need to write new directions or explain how the activity works.

5. The designs are interdisciplinary in nature. Concepts and skills from many subjects of the school curriculum can be used with these designs.

6. All of the designs have the potential to be multi-graded. That is, they can be used in grades 1 through 8 in some capacity. Teachers only need to adapt the content to a particular design. Some have been used in kindergarten.

7. With slight modifications, these designs work well with a wide variety (modalities) of learners.

8. The designs depicted in this book have been very popular with elementary/middle school children. Popularity incites motivation that, in turn, creates a desire to learn and remember the concepts/skills.

Do you have any suggestions when teachers construct these designs?

There are a number of helpful construction hints that I can recommend when making these designs. In addition, some of the considerations will help teachers get more mileage from the designs.

1 Insofar as the design permits, think about sketching a design on the reverse side of the posterboard that can be used with another topic of study at a different time.

2 Use blank business cards or dissected oaktag sentence strips for cards upon which to place content. These are relatively inexpensive cards and will save you construction time. They can be purchased at bookstores, office supply stores, or newspaper places. Different colors are available.

3 One of the more versatile supply items is magnet tape. This material is actually a magnet with rubber coating. It also contains an adhesive backing that will stick to all kinds of smooth surfaces, including contact paper. However, remember that when you are arranging these magnetic pieces on posterboard, you are working with a magnet so the laws of magnetism are in effect. Do not become overzealous and use large pieces of magnet tape. Smaller ones work just as well. You may not need to put magnet tape on both objects you are using. A paper clip attached to a card will adhere to magnet tape. Magnet tape will also adhere to a variety of metal surfaces in the classroom such as filing cabinets, closets, desks, projection carts, and some specially designed blackboards. Magnet tape can be purchased at a hardware store or a K-Mart type of store.

4 Velcro is another versatile and popular item that can be effectively utilized to make a design more adaptable. However, if your students are frequently using objects that have velcro on

them, you will find it necessary to staple the velcro in order for the activity to last longer. Velcro can be purchased at fabric stores.

5. Contact paper or lamination can increase the longevity of your activities, but it is not necessary to cover every item in your product. If children are handling the material, and/or if you invest a considerable amount of time in making the activity, you may wish to protect the item.

6. Ziploc-type bags are an excellent medium in which to store game pieces and materials. In addition, you can clearly see to which design/activity the materials of the bag belong.

7. To increase student involvement in group-oriented academic games, have the children use chalk and small slateboards. They can write their answers to the question. In this fashion, they will be more actively involved in the learning process.

8. It may be easier to construct some gameboard designs by placing a copy of the design onto an overhead or opaque projector. The transferred image can be projected onto a piece of posterboard and easily sketched. Using map transparencies in this fashion also works well.

9. Cigar boxes may be difficult to find (for "The Flume") in which case, a milk carton, "school box," or shoe box can be substituted. School boxes are available at a local "Dollar General type store or school supply store. It is inefficient and expensive to buy a full box of cigars as one person did!

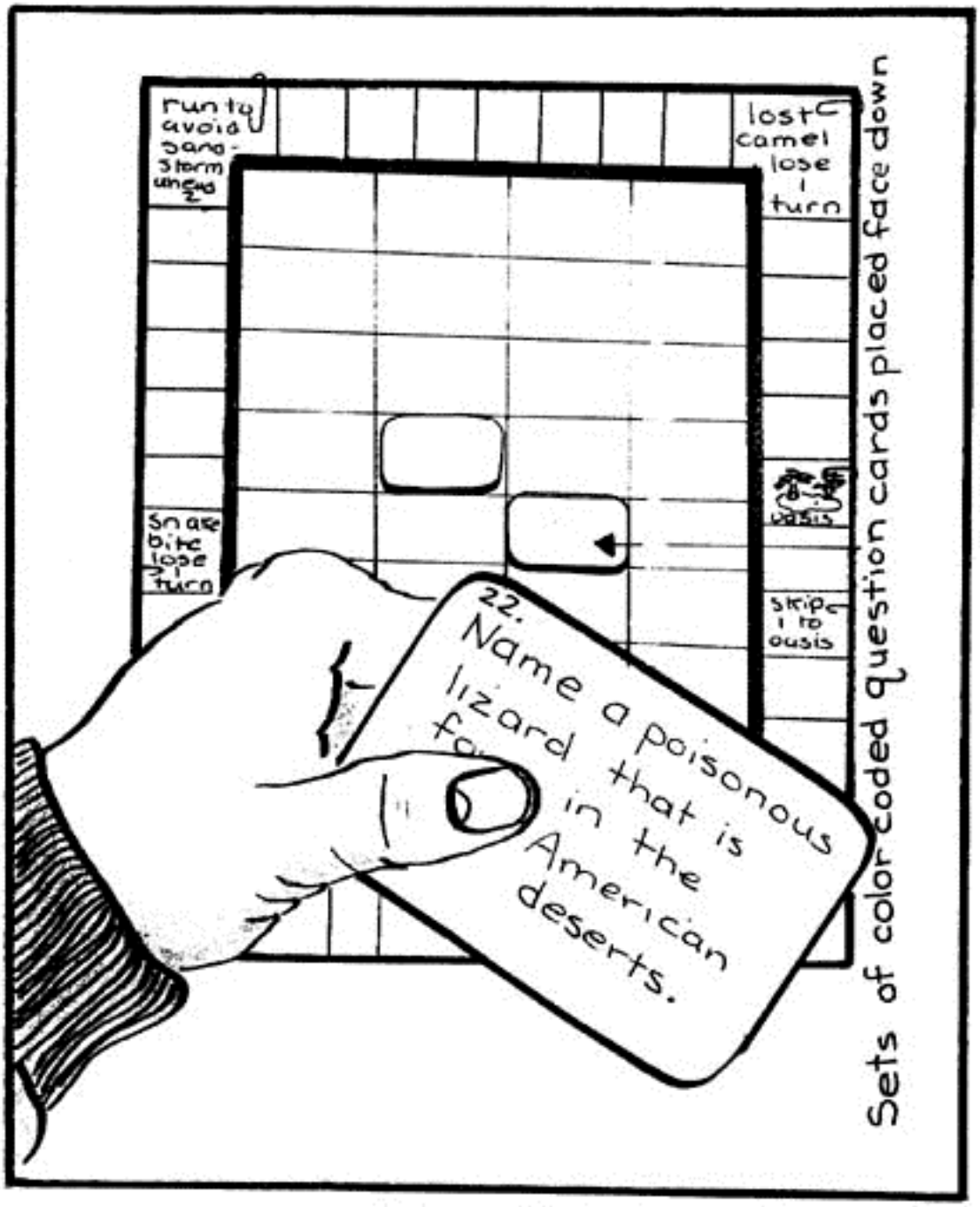
10. If you make sets of cards and/or circle discs, think about making each set in a different color. By doing this, you will help children to keep cards and discs from "straying away and getting lost" from the "parent" activity.

11. Older children can become responsible for making other sets of question cards based upon textbook units of study. They can make some of the designs such as the Felt Flip-over, or even the Electric Board.

12. There are an endless number of materials that can be adapted to these designs. Over the years, students and teachers have brought countless and creative adaptations to these designs.

Title: **HOT FUDGE SUNDAE (HOT STUFF/COLD STUFF) - Deserts**

Purpose: For students to review information regarding the deserts of the world.



Description:

1 Sketch the following design on 28 x 22 matboard. Use a business card to draw the sections.

2 Create a series of questions that have correct answers. Number each one and write it on a blank business card. Use a different color business card for each category of questions. For instance, pink = "what" questions, yellow "where" questions, and blue = "why" questions.

3 Type the corresponding correct answers according to categories on a separate sheet of 8 1/2 x 11 paper. On the reverse side of this answer key, type student directions for the game. Place this paper in clear plastic.

4 Create a set of chance factor cards to be paper clipped to the board. For instance, "You stepped on a scorpion. Move back one space."

Student Directions

1 Two to four students can play this game. Get a moderator to check the answer key.

2 Place the question cards facing downward on the board so that each section has one question. Leave the remaining question cards in stockpile. You can draw from this pile to replace incorrectly answered cards.

3 Select a playing piece. Throw a die. Player with the highest number goes first. Play proceeds in a clockwise direction.

4 Draw a question card, read the number, and question so the other players can hear you.

5 Answer the question and have the game moderator check the answer key.

6 If your answer is correct, move the number of spaces indicated by the color of the card. (Can use a spinner instead of number values on color cards, if desired)

Pink "what" cards = move 2 spaces forward
Yellow "where" cards = move 3 spaces forward
Blue "why" cards = move 4 spaces forward

7 If incorrect, you are not allowed to move. Put this card on the bottom of the stockpile cards and replace with a new question card.

8 Some of the squares on the game board tell you to do something. If you land on one of these squares, follow the directions.

9 The first player who reaches the starting point wins the game.

SAMPLE QUESTIONS AND ANSWER KEY

What

1.	Sand lies in hills called _____	dunes
2.	What is the name given to the nomads of the Gobi?	Mongols
3.	Much of the Great Basin Desert has been changed into farmland through _____	irrigation
4.	A fruit that grows on a tree in the Sahara is called a/an	date
5.	What does the word Sahara mean?	great desert
6.	What portion of the earth is covered with desert?	between one third and one-fourth
7.	A green place in the desert where water is found is a/an:	oasis
8.	What is the name of the tent-like house the Mongols of the Gobi live in?	yurts
9.	An animal with three stomachs is a/an :	camel
10.	Name the type of vegetation (plant) which grows best in hot deserts.	cacti
11.	Name one outstanding feature of the type of plant which grows best in hot deserts.	stores water and has spines
12.	What is the name of the largest of all American deserts?	Great Basin Desert
13.	What animal do all boys in the Gobi ride?	horse
14.	Part of the Atacama Desert in Chile has become well known for:	mining
15.	Name the mountain range that prevents the Great Basin Desert from receiving the moist winds of the Pacific Ocean.	Sierra Nevadas
16.	What is the type of building material used in the homes of oasis dwellers?	mud brick
17.	In warmer climates, desert soil has everything to make plants grow but	water

18. The Sagebrush Desert is another name for: — Great Basin Desert

19. Another name given to the Painted Desert because of the people who live there is — Navaho

20. A very fast bird with powerful legs found in the United States deserts is the _____ — roadrunner

21. Name the hottest of all the American deserts. — Mojave

22. Name a poisonous lizard found in the American deserts. — Gila Monster

23. People who wander from place to place in the desert are called — nomads

Where

1. Death Valley is located in which desert? — Mojave

2. You will find almost every kind of cactus and desert flower in this desert. — Great Basin or the Mojave

3. The trading nomads of the Sahara sell their goods at — bazaars

4. Where do camels store fat? — in their humps

5. Where is the largest desert in the Southern Hemisphere located? — Great Desert of Australia

6. Water for irrigating the Imperial Valley in California comes from? — Colorado River or Hoover Dam

7. Many deserts have rivers that flow where? — below the surface of the ground

8. In an oasis, vegetables are planted near? — springs or water

9. Most of the deserts in the United States lie in what part of the country. — southwestern

10. The Nile River flows for 1,000 miles through this Desert. — Sahara

11. The Atacama Desert is located on which continent? — South America

12. On which continent is the Arabian Desert located?	Asia
13. The Gobi Desert is located on which continent?	Asia
14. A cactus holds moisture in the fibers of its _____	stem
15. Which is a Southern Hemisphere desert? a) Painted (b) Gobi (c) Sahara (d) Atacama (e) Arabian	Atacama
16. Name the desert located in the southwestern peninsula of Asia.	Arabian
17. Name the southern hemisphere country which has several large deserts located in its western region.	Australia
18. Name the desert that has the coldest climate on earth.	Antarctic
19. Name one of the large interior deserts and its country's location in eastern central China.	Gobi in Mongolia, Takla Makan in China
20. The Bushmen people live in this desert located in southern Africa.	Kalahari
21. Which country is not located in the Sahara Desert? (a) Libya (b) Botswana (c) Egypt d) Algeria	Botswana
22. Name the desert located at 23 1/2 degrees N latitude (Tropic of Cancer) and 45 degrees E longitude.	Arabian
23. Name the desert located at 45 degrees N latitude and 105 degrees E longitude.	Gobi
24. Name the desert located near 23 1/2 degrees S latitude (Tropic of Capricorn) and 70 degrees W longitude.	Atacama
25. Name the desert located in southeastern Argentina.	Patagonia
26. Name one European desert.	There is none. Europe has no deserts.
27. The Great Indian Desert is located in India. Where is the Turkestan Desert located?	Not in Turkey! in Russia

Why

1.	Give two reasons why the Painted Desert is considered unusual?	It has bright colored soils and petrified trees
2.	Why do the Mongols of the Gobi Desert move into the mountains during the spring season?	to get food (grass) for their
3.	Give one reason why rain does not reach the desert very often.	Mountain ranges, or so far inland that only dry winds can reach the area
4.	Why are baby camels strapped to their mother's backs in the winter in the Gobi Desert?	They can't walk on the snow.
5.	Why is it better to have horses in the Gobi than in the Sahara?	More grass for food and more water
6.	Why do desert dwellers tie the camel's knees together at night?	so they don't wander away
7.	Why do caravans stop moving in the afternoon?	is too hot.
8.	Why are palm fences built in some areas in the desert.	to keep sand dunes from forming where they are not wanted
9.	Why is Antarctica considered to be a desert?	because it has less than 10 inches of precipitation per year
10.	Why are nights cold in hot deserts?	There is nothing to hold in the heat. There is rapid cooling.
11.	Why don't camels sink into the sand like horses?	They have broad pads on their feet.
12.	Why are nomad homes very simple?	They must often move from place to place.

13. Why are trees planted deeply in the desert soil?

So the roots can more easily reach water

14. Why cannot cold deserts be used for farming, even after the snow melts?

because the soil remains frozen

15. Why are camel's lips and tongues so rough?

so they can eat spiny cactus plants

16. Why do camels nostrils and inner eyelids close?

for protection in sandstorms

Variations:

This design has great potential for devising other activities.

1. Several types of academic games such as "jeopardy," "concentration," or "climbing the ladder" could be created using the center section (i.e. - inventors to inventions).

2. Any activity requiring classification skills could be set to this design (i.e. - foods to food groups, or advertisements to advertising techniques).

3. Sequencing activities would also be very appropriate (i.e. placing events of the American Revolution in correct chronological order).

See page 12 for an Extension Activity.

Extension:

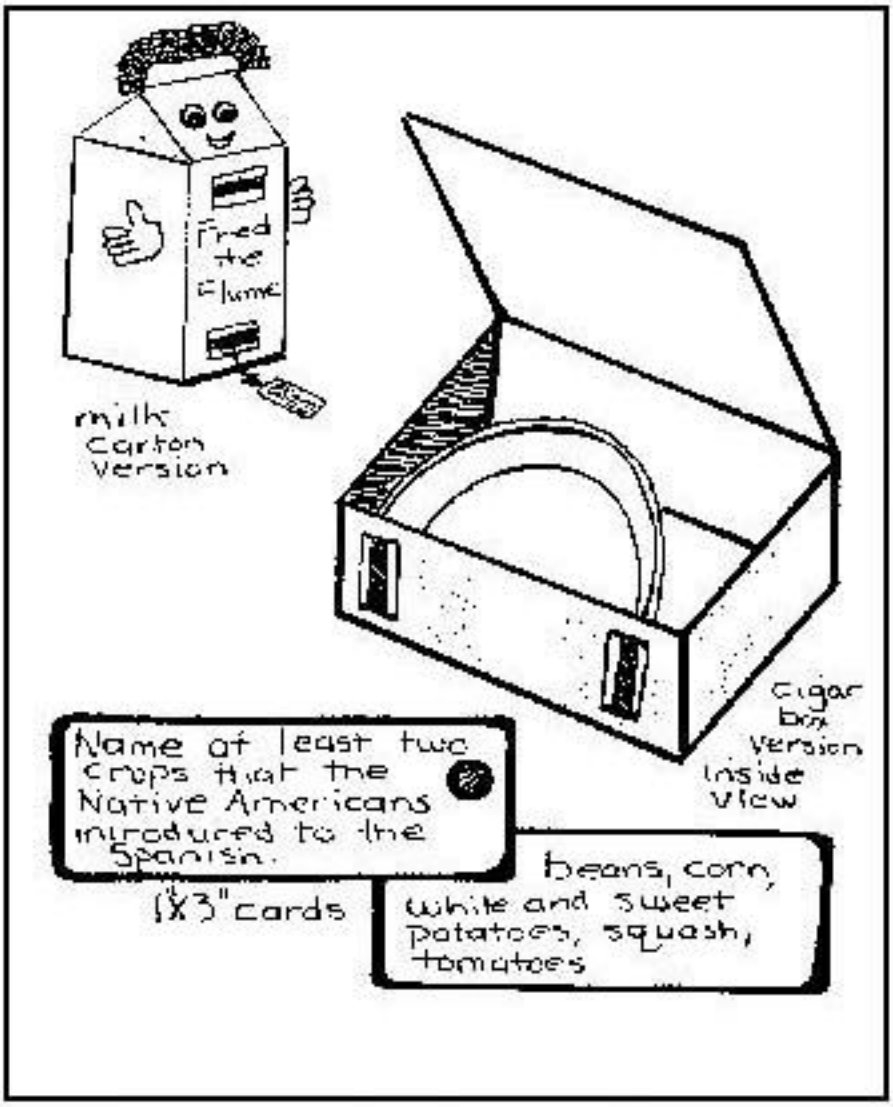
For a completely different activity, remove the business cards on "deserts" and replace them with another set of cards on some topic such as animals and the body parts. Play a game of concentration. If you want, put distractors in the game for more challenge. (Note: **For further mileage, consider using the words in sentences**.)

SAMPLE LIST OF ANIMALS AND THEIR BODY PARTS

Animals	**Body Parts**
camel	hump
cardinal	crest
cobra	fangs
elephant	tusks
hawk	talons
kangaroo	pouch
katydid	antenna
lobster	claws
moose	antlers
octopus	tentacles
rhinoceros	horned nose
shark	fin
spider	spinnerets
turkey	wattle
turtle	shell

Title: **THE FLUME**

Purpose: For students to correctly answer questions about the early exploration era of North America.



Description:

1) Obtain a cigar box, school box, milk carton, or shoe box and, as shown in the diagram, cut two 2 1/4" x 1/2", wide slots. (Use a utility knife.)

2) Cut two strips of aluminum (tin shears) or oaktag using the following dimensions: 2" wide by approximately 12 1/2" long, and 2" wide by approximately 9 1/2" long.

3) Place the strips in the box so as to form a chute. . Make sure the chute bends downward instead of upward at the lower end. Bend the strip ends at least 1/2" around the upper and lower edges of the cut out slots. Before closing, experiment with the chute to be sure the curve is correct. Fasten the strip ends to the outside with durable cement

4) Cover the box with decorative contac paper. You can decorate the box and give it a personality.

5) Using oaktag or business cards, measure and cut a number of cards 1" wide by 2 1/4" long. Cards of greater dimension may not glide easily through the chute.

6) Write a question or phrase statement on each card. Also, put a color dot on the question side of each card.

7) Place an answer on the reverse side of each card.

Student Directions:

1) One or two people can work at this activity.

2) Place the cards by the Flume with the color dot facing upward.

3) One person reads a statement while the other person gives an answer.

4) The reader places the card into the top slot of the Flume with the color dot facing up.

5) The answer will come out the lower slot for all to read.

6) Take turns reading the cards and giving the answers.

SAMPLE QUESTIONS ON EARLY EXPLORATION

1	One of the first European explorers to discover Greenland and to start a settlement in Newfoundland, Canada, was:	Leif Ericson
2	One of the first European explorers to record a trip overland to China was:	Marco Polo
3	Why did the Portuguese want to explore China and the East Indies in the 1400's?	trade
4	What is Prince Henry the Navigator known for?	first person to set up a school to train seamen
5	Name two devices which helped sailors to explore the world in the 1400s.	magnetic compass and astrolabe
6	Name the item used to measure the position of the stars.	astrolabe
7	What is a caravel?	a ship that was safe enough to sail across oceans in the 1400s
8	An Italian sailor (mapmaker) wrote about the discovery of the "New World" which the mapmaker called Americus. Name the sailor.	Amerigo Vespucci
9	Columbus first sighted land among a group of islands known as:	West Indies
10	Name the English explorer who gave the English claim to settle land in the New World.	John Cabot
11	Which European explorer first reached Africals Cape of Good Hope?	Bartholomeu Diaz
12	For what is Vasco da Gama known?	first European to sail to India
13	What area in the United States did Ponce de Leon explore?	Florida
14	What European explorer is given credit for"discovering" the Pacific Ocean?	Balboa

15. Who was the Aztec leader when the Spanish first came to search for gold?

Montezuma

16. Who was the leader of the Spaniards who invaded the Aztec Empire and treated the Indians cruelly.

Hernando Cortez

17. Who was the Spanish leader who invaded the Incan Empire to rob these people of their gold?

Francisco Pizzarro

18. What is Ferdinand Magellan known for?

first European to sail around the world to show it was round

19. Where was Magellan killed?

(Magellan was killed in the Philippine Islands)

20. Name the Spaniard who explored southeastern United States.

Hernando de Soto

21. Name the Spaniard who explored southwestern United States and was the first European to see the Grand Canyon.

Francisco de Coronado

22. One of the most important crops the Spanish introduced to the West Indies was:

sugar cane

23. A **most** important animal the Spanish introduced to the "New World" was the:

horse

24. Name at least two crops the Native Americans introduced to the Spanish.

beans, corn, white and sweet potatoes, squash, tomatoes

25. A famous "sea dog" who sailed around the world in 1577 and landed in California to claim it for England was:

Sir Francis Drake

26. One of the early French adventurers who explored the Saint Lawrence River was:

Jacques Cartier

27. This Frenchman established a settlement at Quebec and explored Vermont and New York.

Samuel de Champlain

28. Another important fur trading settlement started south of Quebec in Canada was:

Montreal

29. Name the two Frenchmen who explored halfway down the Mississippi River in 1673.

Marquette and Jolliet

30. Another Frenchman who explored the Mississippi River to the Gulf of Mexico in 1680-1682 and tried to set up a colony in this area was _____.

Sieur de la Salle

31. A Dutch explorer sailing under the English flag explored New York and Canada.

Henry Hudson

32. An Englishman who attempted to start a colony on Newfoundland in 1583, but failed was _____.

Sir Gilbert Humphrey

33. An Englishman who attempted to start colonies in North Carolina from 1585-1587 was _____.

Sir Walter Raleigh

34. Name the first permanent European settlement which is now considered to be the **oldest** city in the United States.

St. Augustine, Florida

35. Name the **first permanent English** settlement in the United States.

Jamestown,Virginia

36. Name the **second permanent English** settlement in the United States.

Plymouth, Massachusetts

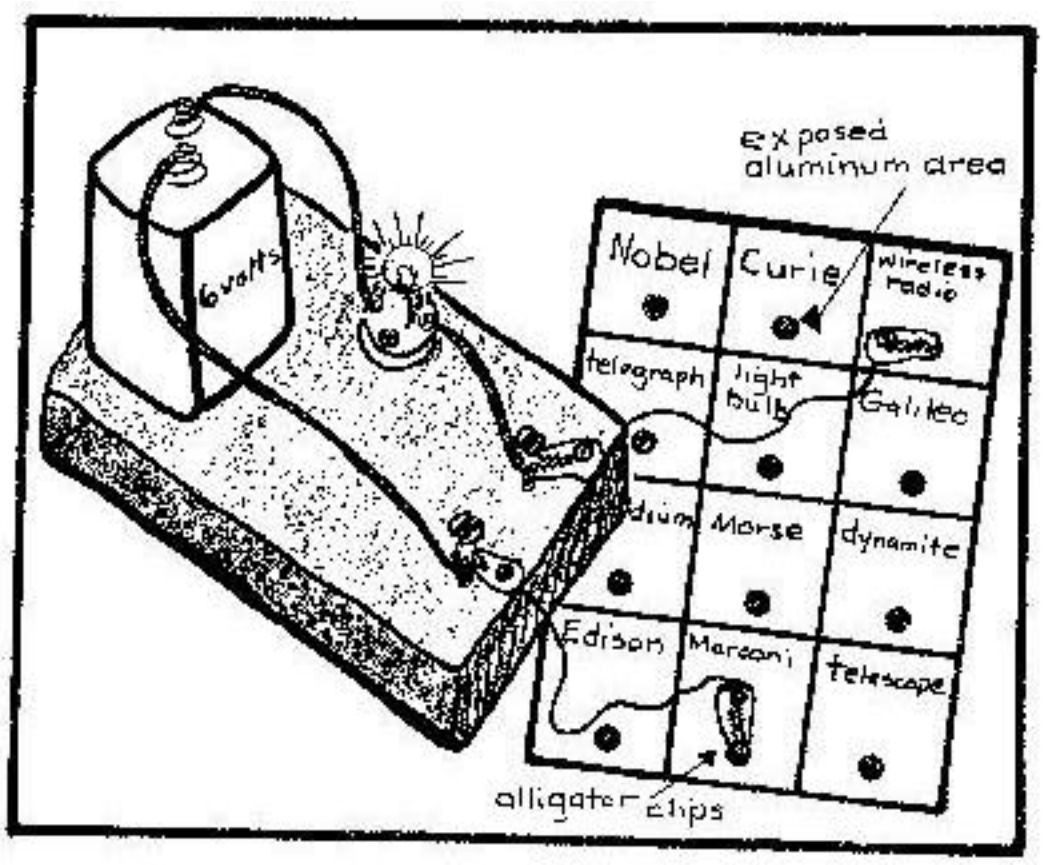
Comment:

Children have gone agog over this design. True, the manner in which students receive immediate reinforcement is gimmicky but, it works. Why argue with success?

There are many variations that could be applied to this design at most of the elementary and middle school grade levels.

Title: **LIGHT THE BULB**

Purpose: Each student will be able to associate inventors with their respective inventions.



Sketch 1

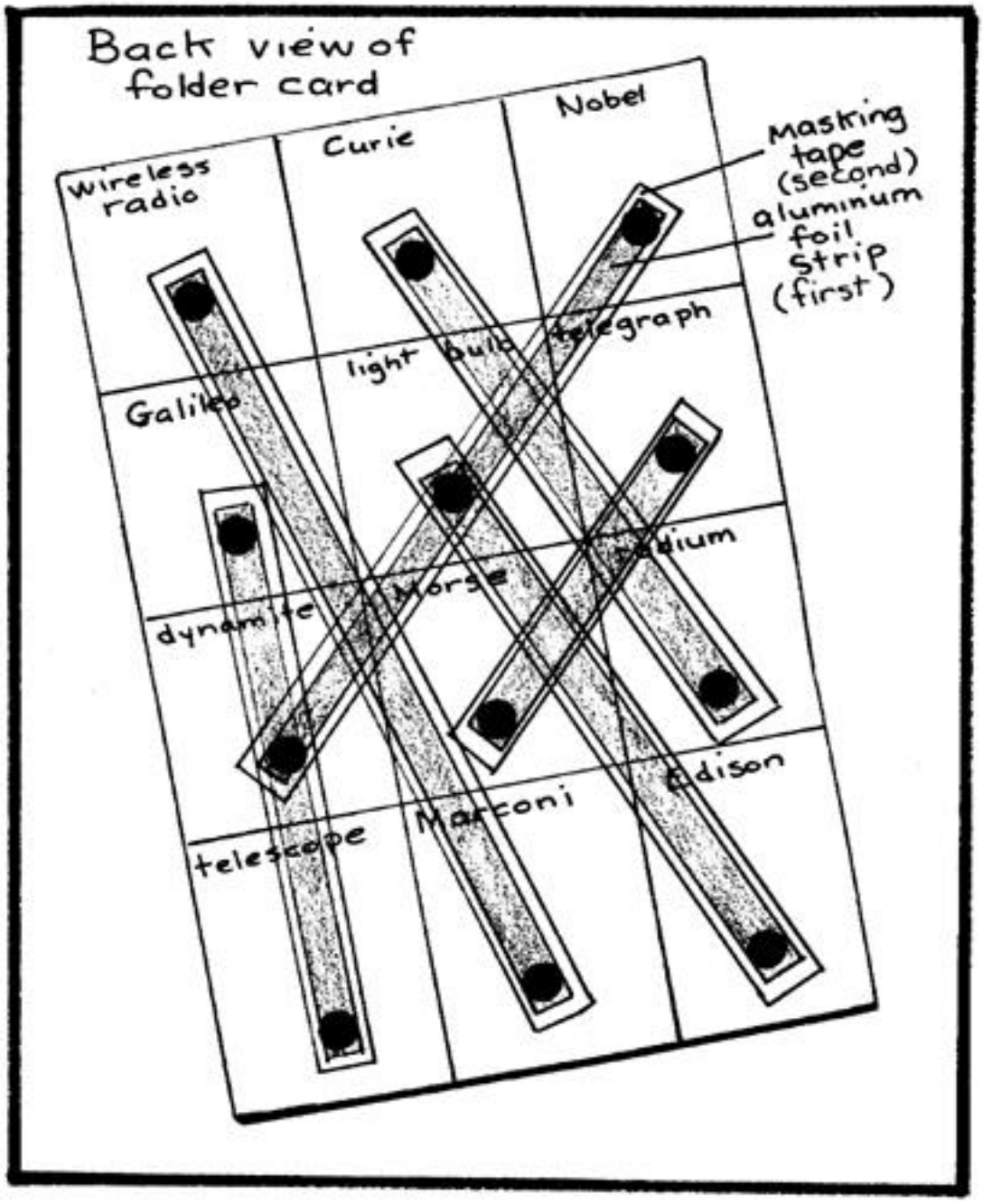
Description:

1. Construct a simple electrical circuit design such as that shown in the first sketch. Caution: 9 volt batteries burn out most flashlight type bulbs; thus, a 6 volt battery would be more advisable unless you use a small buzzer.

2. Cut a manila folder into two equal halves. Use only one of the halves to divide the folder into 16 equal sections by drawing the lines as shown in the second sketch. Note: The number of sections on the top of the folder will depend upon how many matched pairs you want.

3. Write your desired matched pairs in a scattered fashion on one side of the folder.

4. Use a punch and hammer to make one hole into each of the 16 sections. Devise a way to designate each matched pair such as placing a string between the two matching holes.



Sketch 2

5. Flip over your folder card. Cut a narrow strip of aluminum foil one-half inch wide and long enough to cover each set of matching holes. Use or scotch tape to fasten each aluminum strip. **Important: <u>For each aluminum strip, cover it with</u> a <u>three-quarter inch strip of masking tape after each match is completed</u>**. This will ensure that you have only one correct answer per matched pair.

6. Obtain two pieces of bell wire 18 inches long. Attach alligator clips to both ends of the bell wire. (Any metal such as paper clips will work.)

7. Place the nails closely together for a future science activity on conducting electrical current. Attach two alligator clips to the nails. (See sketch.) Use the other two alligator (or paper) clips to make your matched pairs light the bulb.

Student Directions:

1. Place the alligator clips on the nails. If you have trouble, look at the diagram to see where the clips should be placed.

2. Read all of the information in the sections. With the alligator clips, place one lightly on an aluminum area and place the other clip lightly on an aluminum area of matching information.

3. If you are correct, the bulb will light up. If you are incorrect, try another item of information that you think will match.

SAMPLE CONTENT OF INVENTORS AND INVENTIONS

Nobel	**Curie**	**wireless radio**	**telescope**
x-rays	**Volta**	**light bulb**	**Morse**
Radium	**Galileo**	**dynamite**	**Roentgen**
Marconi	**Edison**	**electric battery**	**telegraph**

Variations:

1. This activity is extremely motivational and versatile. Any type of content that requires children to associate information can be applied to this design. For instance, another folder card of matched pairs could be made on the times table. In addition, it would be a good learning exercise to have your students construct these cards.

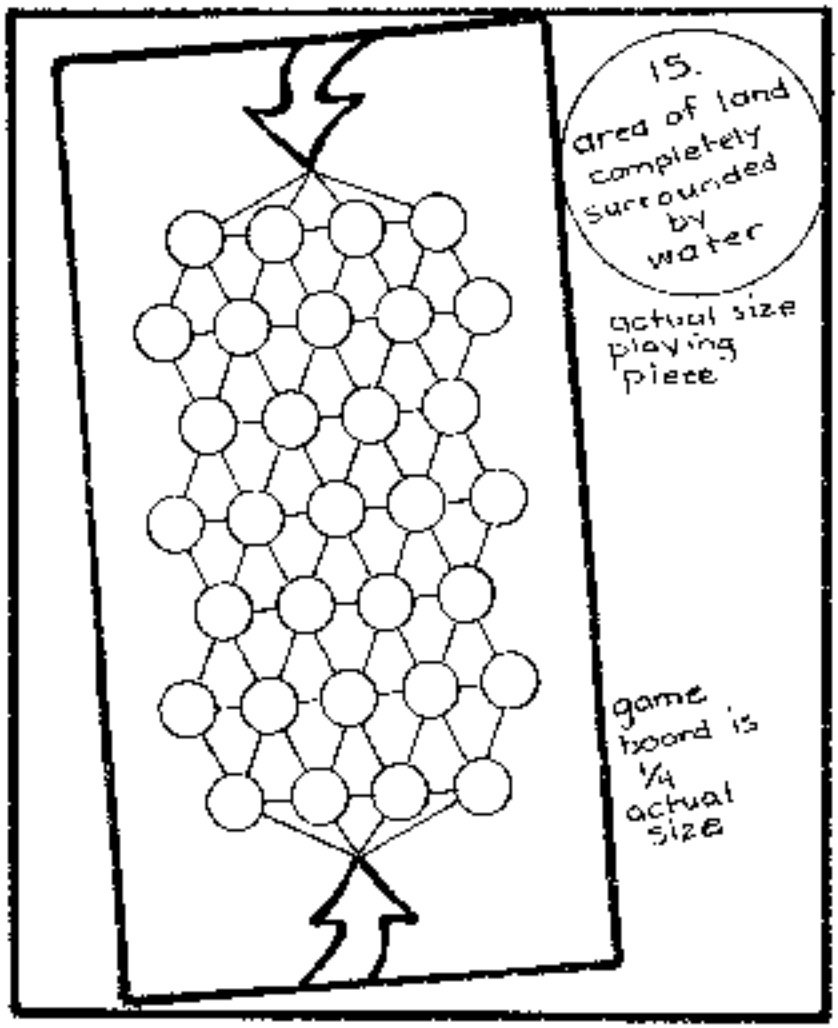
6, 7 , AND 8 TIMES TABLES

7 x 8	**42**	**48**	**8 x 9**
49	**7 x 9**	**64**	**6 x 9**
6 x 7	**72**	**56**	**54**
63	**8 x 8**	**7 x 9**	**8 x 6**

2. For a completely different activity, remove the alligator clips and bell wire. Use the simple electrical circuit model as the basis for a science lesson. A variety of objects such as a pencil, a paper clip, paper, a coin, etc. could be used for children to see and record the types of material that will conduct current and complete the circuit.

Title: **GEOGING THE MIND**

Purpose: For students to review information related to the meanings of geographic terms.



Description:

1. Sketch the following gameboard design on a 28 x 22 piece of matboard.
2. Draw two-inch diameter circles on an 8 1/2 x 11 piece of construction paper.
3. On each circle disc, print or type the desired information.

4. Number each disc to correspond with the numbers on an answer key.

5. To increase durability, laminate the construction paper or cover it with contact paper.

6. Cut out each laminated disc and place the set in an envelope.

7. Make new sets of discs, as desired on appropriate themes, on different colored construction paper. In that way, color-coded discs and answer keys will not get mixed in with other sets.

Student Directions:

1. Two students or teams of two can play this game. Get a game monitor to check the answer key.

2. Place the discs on the board with the printed side down.

3. Roll a die to see who goes first (highest number goes first). Select a playing piece.

4. Take a disc, tell the monitor the number, read the definition and give an answer.

5. If the answer is correct, move to that circle and keep the disc. If incorrect, place the disc back on the circle.

   (Note: If there are enough questions, you may replace a question that was answered incorrectly with a new question.)

6. Move one circle at a time. You are not permitted to skip a circle or to land on a circle that has already been answered correctly.*

7. The first player to reach the opposite arrow wins. (If neither player can reach the opposite arrow, the player with the most discs wins the game.)

*A variation in these directions would be to have the monitor place a "new" disc in each circle that is vacated by a player's forward progress. In this way, only two circles would be without questions at any one time.

SAMPLE DISCS AND ANSWER KEY ON GEOGRAPHIC TERMS

1	In size, the second largest body of water	sea
2	A large arm of land reaching into the water and is bordered on three sides by water	peninsula
3	sharp mountain top	peak
4	narrow strip of land connecting two larger land masses	isthmus
5	long, narrow valley with high steep sides usually with water flowing through it. Refers more to southwestern United States.	canyon
6	deposit of land at the mouth of a river	delta
7	a waterway that cuts through land to connect bodies of water, usually man-made	canal
8	in size, the largest of all landforms	continent
9	large natural flow of water that usually empties into a larger body of water	river
10	smaller arm of land reaching into the water	cape
11	land that rises high and sharply	mountain
12	large area of high, flat land	plateau
13	body of water surrounded by land. Much larger than a pond and usually fresh water.	lake
14	place along the shore where the land is protected from wind and waves	harbor
15	area of land completely surrounded by water	island
16	narrow, natural body of water connecting two larger bodies of water	strait
17	in size, smallest body of salt or fresh water which is almost surrounded by land	bay
18	in size, largest body of salt water	ocean
19	cone-shaped mountain where lava pours out	volcano

20. place where a river or creek flows into larger body of water	mouth
21. land that rises sharply for a short distance and is rounded on the top	hill
22. group of islands	archipelago
23. beginning of a river, stream or creek	source or head
24. large body of salt water circled in part by land	gulf
25. narrow mountain valley, usually with water running through it. Refers more to eastern United States.	glen
26. narrow passageway or opening through the mountains; a gap	pass
27. watery, marshy outlet of a river with boggy grass (marshy inlet of a lake)	bayou
28. high plateau with steep sides and flat land on its surface	mesa
29. area of low, wet spongy land usually with trees	swamp
30. area of land receiving fewer than 10 inches of precipitation	desert
31. steep hill standing all alone in a plain area	butte
32. area of low, wet, boggy land usually without trees	marsh
33. dry gully in western United States	arroyo
34. long, narrow reef or sandbank stretching out from the shoreline	spit
35. very small stream emptying into a larger stream	run
36. land along the sea or ocean	coast
37. large area of low, flat land	plain
38. long, deep hollow in the earth's surface, worn away by water; large gully; gorge; gulch	ravine

Variations:

This gameboard design is a versatile one. Disc sets could be created in conjunction with almost any unit of study at any grade level.

Disc Sets	Answer Keys
1. Math Facts	Answers
2. Animals	Animal Characteristics
3. Foods	Description of Foods
4. Homonyms	Spelling of Homonyms
5. Antonyms	Opposite Word Meanings
6. Synonyms	Definitions
7. Inventions	Inventors
8. Discoveries	Explorers
9. American Revolution	Famous Men and Events

Extension:

Reading comprehension can be promoted by using the geographic terms in sentences in which students could use an atlas or wall map of the world or the United States to find the correct answer. Provide a word list of geographic terms.

On the following page, a sample activity is demonstrated. Once again, this allows the teacher to obtain more mileage from a set of vocabulary (geographic) terms.

Match the Geography Term With Its Sentence

Directions: Read the sentence and fill in the blank with the correct geographic term that makes the sentence correct. **Not all of the words from the word list will be used.**

WORD LIST OF GEOGRAPHY TERMS

archipelago	canyon	desert	glen	gulf	islands
isthmus	lake	peninsula	strait	swamp	volcano

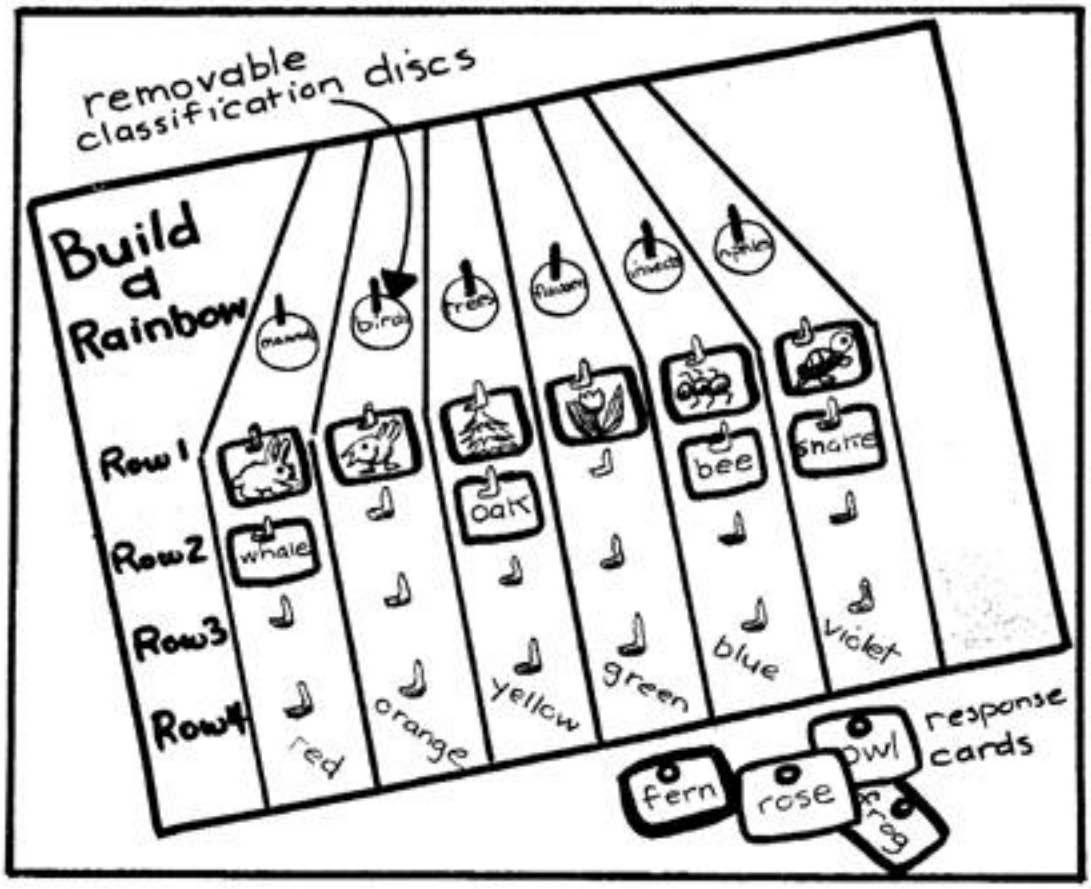
1. Florida is an example of a /an _____
2. The large body of water located to the north of New York State is known as a/an _____
3. Everglades National Park, which is located at the southern tip of Florida, is an example of a/an _____
4. There are places on the continent of Antarctica which receive about 2 inches of moisture each year. With this information, Antarctica would be known as a/an _____
5. The country of Indonesia is located off the coast of Asia and is an example of a/an _____
6. New Zealand is located to the southeast of Australia and is made up of primarily two _____
7. The huge "water sandwich" located between Texas and Florida is known as a/an _____
8. Mount St. Helens is located in the state of Washington and is an example of a/an _____
9. Central America connects South America with North America. Central America is known as a/an _____
10. The Colorado River flows through Arizona and other states. It has cut deep into the earth to form the Grand _____

Answer Key

1 . peninsula	2. lake	3. swamp	4. desert
5. archipelago	6. islands	7. gulf	8. volcano
9. isthmus	10. canyon		

Title: **BUILD A RAINBOW**

Purpose: For students to classify pictures, names, features and characteristics of living things to their respective categories.



Description:

1. Sketch the following design on 28 x 22 matboard. Color the rainbow.

2. Bend brad fasteners into position (as shown in the sketch). Apply a durable tape behind the board in order to hold the fasteners in position.

3. Make a set of classification discs on living things. Write each disc card in the color to which it will be associated. For instance, write "mammals" in red, "birds" in orange, and so on.

4. Make one set of cards to correspond with each of the four rows (could use business cards). Punch holes in all cards and discs.

   Row 1 could be pictures to be grouped according to the category.

   Row 2 could be names of living things to be categorized. **(Note:** Words would need to belong to a category, but they would not need to be associated with the pictures in Row 1.)

   Row 3 could be a particular part of the living thing to be classified.

   Row 4 could be a brief description of the characteristics of the living thing to be grouped.

   Note how each row requires the student to engage in a harder learning behavior.

5. Place a color-coded dot on the back of each card to correspond with its correct category. It would also be helpful to write the row number on each card in case it should be misplaced.

6. Add two cards to each set that would not belong to any category. These two cards would be distractors. Do not place any colors on the reverse sides of these cards.

7. Label small envelopes to correspond with the rows and groups, and place each set of cards into its proper envelope.

Student Directions:

1. Take the classification discs from the envelope and hang them in their proper places according to color.

2. Remove the cards from envelope 1 and match each card to its correct group at the top of the rainbow. Hang them in Row 1.

3. When you have finished the row, turn the cards over. If your answers are right, the colors on the back of each card will match the color of the group.

4. There are some cards that do not belong to any group. Put these back into the envelope when you have finished with the activity.

5. Follow the same directions for envelopes 2, 3, and 4.

6. When you have built your rainbow and checked your answers, remove the cards one row at a time. Place each set in its correct envelope.

LIVING THINGS

	red	orange	yellow	green	blue	purple	
Discs	**mammals**	**birds**	**trees**	**flowers**	**insects**	**reptiles**	**distr actors**
Row 1 Pictures	**seal**	**cardinal**	**Pine tree**	**tulip**	**bee**	**turtle**	**banana trout**
Row 2 Names	**whale**	**owl**	**elm**	**rose**	**fly**	**lizard**	**celery melon**
Row 3 Parts	**fur**	**feather**	**branch**	**petal**	**stinger**	**scale**	**gills tentacle**
Row 4 Charac teristics	**produces milk for its young**	**lays eggs and is warm-blooded**	**used to make paper**	**used by bees to make honey**	**largest group in number**	**lays eggs and is cold-blooded**	**Breathes air under water, rich in vitamin C**

Variation:

Variations abound with this design. Activities associated with academic games, classification and sequencing would be quite feasible. In addition, teachers have commented that such a design could be used for problem-solving activities in mathematics and for checking comprehension of reading stories.

Here is a completely different activity involving the skills of classification that can be used with this design.

CLASSIFYING PENINSULAS, ISLANDS, AND ARCHIPELAGOS

	red	orange	yellow	green	blue	purple
discs	**peninsula country**	**peninsula part of a country**	**island country**	**island part of a country**	**archipelago country**	**archipelago part of a country**
	Greece	**Florida**	**Sri Lanka**	**Hawaii**	**Indonesia**	**Hawaii**
	Spain	**Baja**	**Iceland**	**Sardinia**	**Japan**	**Aleutian**
	Malaysia	**Yucatan**	**Nauru**	**Greenland**	**Philippines**	**Azores**
	Italy	**Alaska**	**Cyprus**	**Tasmania**	**Maldives**	**Cook Islands**

Extension:

Design a series of statements using the terms associated with the word categories or with the distractors. Allow students to indicate whether the sentence makes sense. For instance, the following sentences were created using words from the animal activity. Students could rewrite sentences so that they make sense.

1 The lizard is a well known bird. Yes No

Rewrite _____

2 The trout ate the banana. Yes No

Rewrite _____

3 Humpback whales are known for singing on stage. Yes No

Rewrite _____

4 Seals have feathers. Yes No

Rewrite

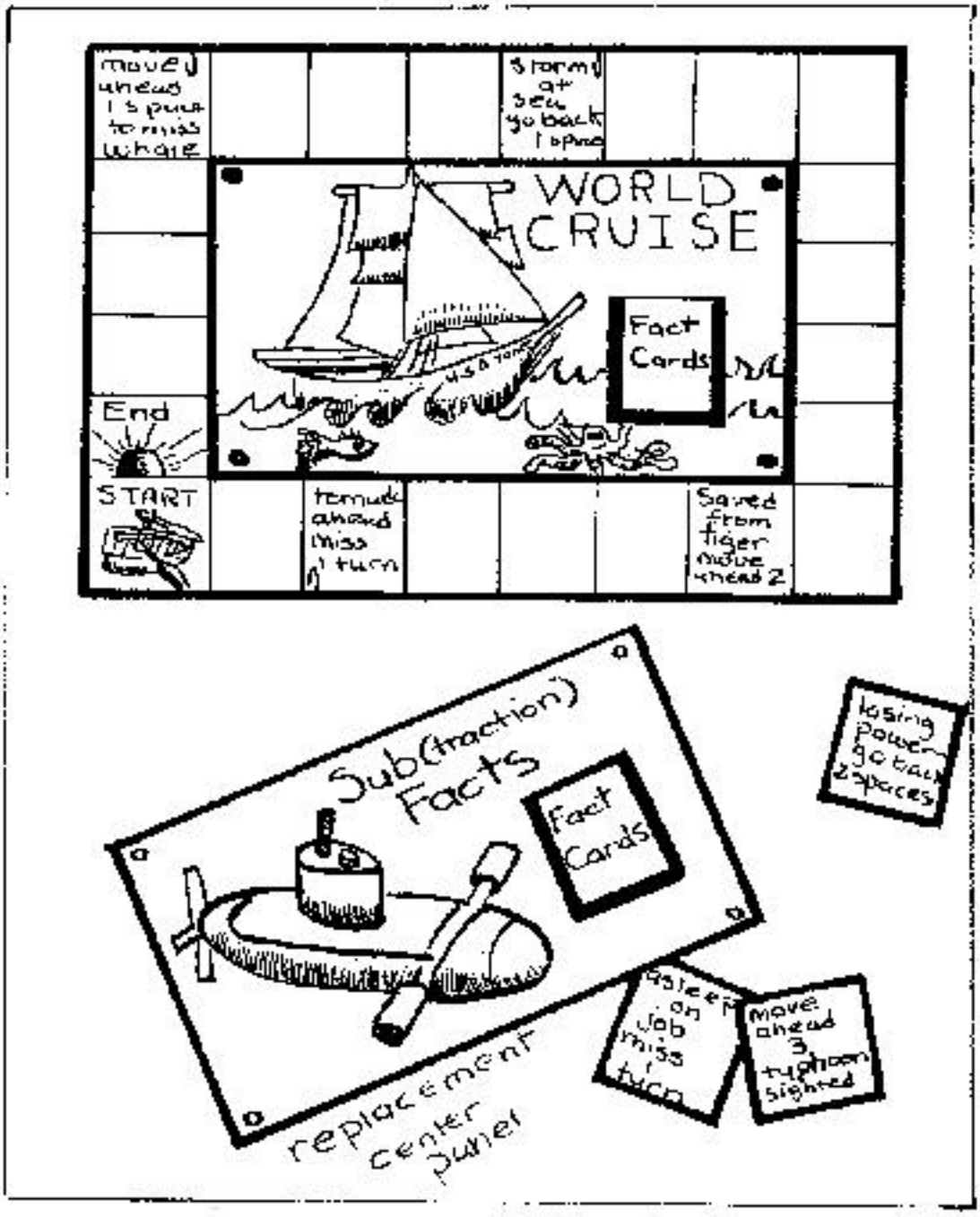
_____

5 Baby reptiles are born from their mother' stomach. Yes No

Rewrite _____

Title: **WORLD CRUISE**

Purpose: For students to review information pertaining to geographic features and places on our earth.



Description:

1. Sketch the following game board design on a 28 x 22 piece of matboard. Obtain a spinner.

2. To gain an "inkblotter" effect, place appropriate printed material such as a map or pictures on a separate piece of 20 x 14 matboard. It will be a removable center panel.

3. On a selected topic, create a series of questions that have correct answers.

4. Number each question and write onto blank business cards.

5. Place the corresponding correct answers on a separate sheet of 8 1/2 x 11 paper. On the reverse side of this answer key, write student directions for the game. Place this paper in clear plastic.

6. Create a set of chance factor cards and attach to the board by paperclip. i.e. - "You were caught in a snowstorm in the Swiss Alps. Lose one turn." or "Spitting Cobra missed you. Move ahead two spaces."

7. Display a world map for reference purposes.

8. When another topic is being studied, remove the "inkblotter" board, chance factor cards, and questions and replace these items with appropriate material to be used with the same board design.

Student Directions:

1. Two to four students can play this game. Get a moderator to check the answer key.

2. Place the question cards in the center of the board with the print side down.

3. Select a playing piece.

4. Spin the spinner. The player with the lowest number goes first. Play proceeds in a clockwise direction.

5. Draw a question card, read the number and question so that the other players can hear you.

6. Answer the question and have the moderator check the answer key.

7. If your answer is correct, spin the spinner and move the number of spaces it indicates.

8. If incorrect, you are not allowed to spin. Place the question card underneath the pile.

9. Some of the squares on the gameboard tell you to do something. If you land on one of these squares, follow the directions.

10. The first player who reaches the finishing point wins the game.

SAMPLE QUESTIONS AND ANSWER KEY

1. Which ocean is located to the west of Australia?	Indian
2. What island country is located to the southeast of Australia?	New Zealand
3. Name the archipelago country located to the northwest of Australia.	Indonesia
4. What country is located at 105° E longitude and 30° N latitude?	China
5. What country is located at 60° W longitude and 30° S latitude?	Argentina
6. Name at least three countries that, in part, lie north of the Arctic Circle.	Norway, Sweden Finland, Canada United States, Russia
7. Name the sea located between the continents of Africa and Europe.	Mediterranean
8. Name the country that has the **greatest** land mass area.	Russia
9. What is the name of the sea located between Italy and Yugoslavia?	Adriatic
10. What is the name of the body of water that separates Great Britain and France?	English Channel
11. Name the **highest** mountain chain in Europe located in Switzerland" and Austria.	Alps
12. Name the body of water located north of Turkey.	Black Sea

13. Which is **not** a country of Southeast Asia? (a) Thailand (b) Burma (c) Laos (d) Mongolia (e) Cambodia	Mongolia
14. Name the island country located off the southeast tip of India.	Sri Lanka
15. Name the archipelago country located east of China.	Japan
16. Which is **not** a country of South America? (a) Bolivia (b) Paraguay (c) Costa Rica (d) Venezuela (e) Argentina	Costa Rica
17. Name the waterway at the southern tip of South America named for a famous explorer.	Magellan Strait
18. Name two famous canals in the world. One is located in Africa and the other is located in Central America.	Panama and Suez Canals
19. Name the body of water located east of the Central American countries.	Caribbean Sea
20. Name a waterway which allows ships to sail from ocean to ocean without going around the tip of South America.	Panama Canal
21. Name the **large** mountain chain of South America.	Andes
22. Name the **longest** river in South America.	Amazon
23. The Equator does **not** pass through which African country? (a) Zaire (b) Ethiopia (c) Uganda (d) Kenya	Ethiopia
24. What is the name of the desert in North Africa?	Sahara
25. Which is **not** considered to be a country in Africa? (a) Egypt (b) Nigeria (c) Tanzania (d) Turkey (e) Chad	Turkey
26. Which river is the **longest** one in the world?	Nile
27. Name the body of water separating Egypt and Saudi Arabia.	Red Sea
28. Name the **large** island off the east coast of Africa.	Madagascar
29. Name the very **large** island located northeast of Canada.	Greenland
30. Name the **first** country located south of southwestern United States.	Mexico

31. Name the **first** island country located east of Mexico.	Cuba
32. Name the country with the **northernmost** capital city.	Reykjavik, Iceland
33. Name the country with the **southernmost** capital city.	Wellington, New Zealand
34. Which country is **not** located on a peninsula? (a) Saudi Arabia (b) Spain (c) Algeria (d) Greece (e) Denmark	Algeria
35. Which country is **not** an archipelago nation? (a)Indonesia (b)Thailand (c) Solomon Islands (d) Japan (e) Philippines	Thailand
36. Which country is **not** an island nation? (a) Iceland (b) Sri Lanka (c) Ireland (d) Tanzania (e) Cyprus	Tanzania
37. Which country is **not** located in the Northern Hemisphere? (a)Venezuela (b) Sudan (c) Burma (d) Peru (e) Malaysia	Peru
38. Which country is **not** located in the Southern Hemisphere? (a)Argentina (b) Philippines (c) Angola (d) Paraguay (e) Zimbabwe	Philippines
39. Which country is **not** located in the Eastern Hemisphere? (a) Poland (b) Iraq (c) South Korea (d) Ireland (e) Turkey	Ireland
40. Which country is **not** located in the Western Hemisphere? New Zealand (b) Morocco(c) Bolivia (d) Mexico (e) Portugal	New Zealand
41. Name at least two nations that are located on two continents.	Russia, Turkey, or Egypt
42. Name the countries that lie south of the Antarctic Circle.	There is none.

Variations:

Any self-correcting academic game in which the teacher desires to reinforce a body of knowledge may be used with this design.

Extension:

To increase geographic literacy and global awareness, have students use individual slateboards in small or large groups to answer questions about **current events**. In conjunction with this exercise, use a large globe and/or flat wall map of the world. In addition, have an outline map of the world on which each student can respond. The teacher should make an overhead copy of this map and use it to ensure children have located and labeled these countries. Some sample questions are:

1. Name and locate the country and city that hosted the 2000 Summer Olympics. (Sydney, Australia)

2. In southwest Asia, two countries that were fighting each other recently stopped their eight year war to negotiate for peace. Name and locate both countries. (Iran and Iraq)

3. Class Five hurricanes form over what body of water? (Atlantic Ocean)

4. Russia recently pulled its troops out of this rebellious state. Name and locate the state within Russia. (Checknya)

5. The rain forests of the Amazon region are being cut down at an alarming rate. In which country are many of the Amazon rain forests located? (Brazil)

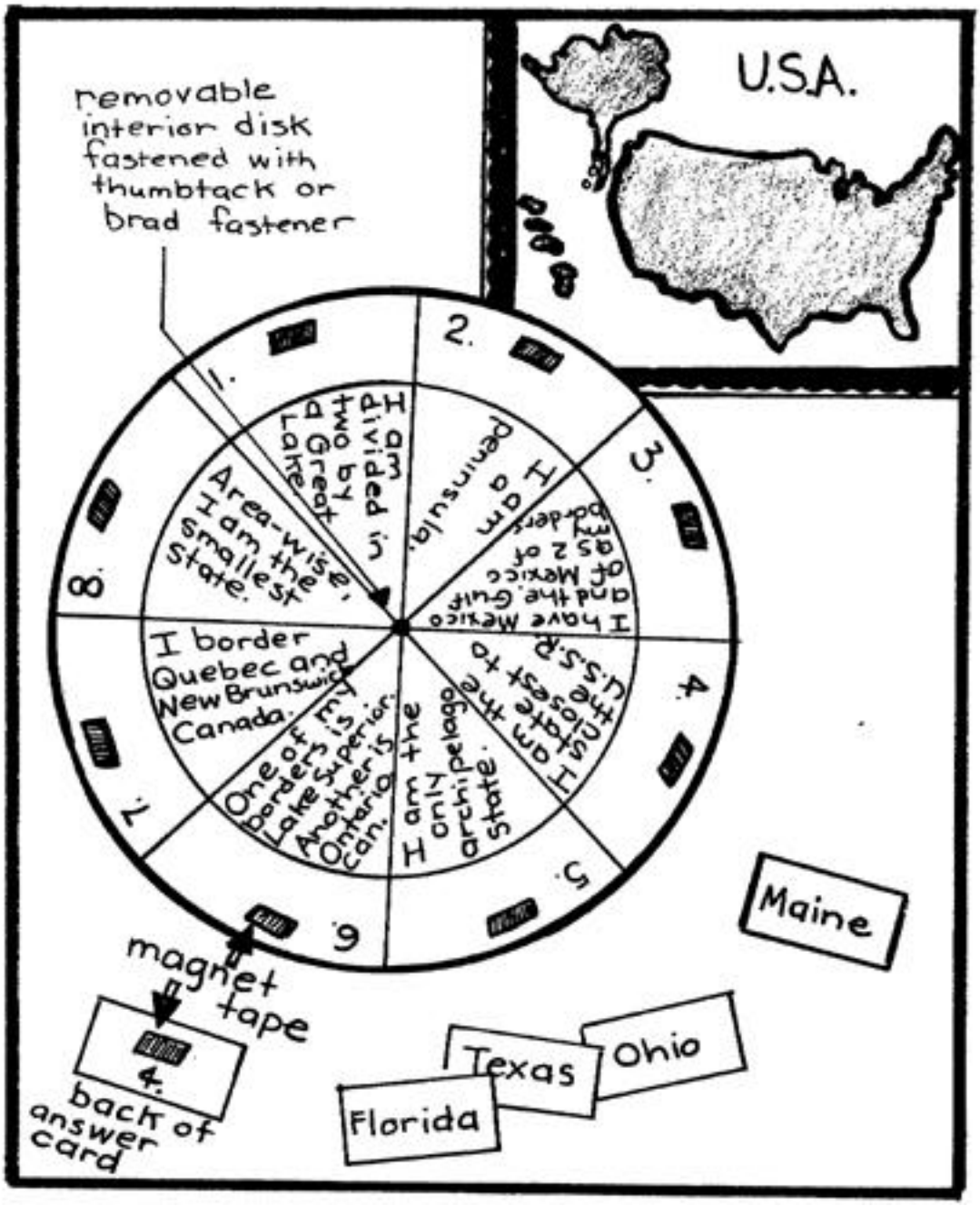
6. The forests of this Asian archipelago country are burning and sending much pollution into the air. Name this country. (Indonesia)

7. Typhoons occur in which large body of water? (Pacific)

8. What is the name of the **new** European dollar called? (Euro dollar)

Title: **MYSTERY LOCATION**

Purpose: For students to identify and locate specific places in the United States with the help of geographic clues.



Description:

1. Divide an oaktag disc into eight sections (about the size of the diameter of a large pizza).

2. Write a geographic statement about certain places in the United States on each of the eight areas on the oaktag disc. (See content questions.) **Note:** This disc may be attached to a posterboard, bulletin board, or any metallic surface, such as a filing cabinet, to which a magnet will adhere.

3. Place eight pieces of adhesive magnet tape around the disc and number each one. (See sketch.)

4. On the back of each answer card, attach a small piece of magnet tape or paper clip and write a corresponding number.

5. Provide a number coded answer key.

6. If needed, place an atlas, globe, or map at the activity.

Student Directions:

1. Read each statement about the United States on the front of the disc.

2. Find an answer card for each statement.

3. Place the answer card on the magnet tape next to the statement it answers.

4. If you need help, check the atlas, globe, or map.

5. After you have answered all statements, check your work with the answer key. If the numbers by the statements match the numbers on the key, you are correct.

SAMPLE CONTENT AND ANSWERS

Set One

1. I am divided into two sections by a Great Lake and have two peninsulas.	Michigan
2. I am a peninsula.	Florida
3. I have Mexico and the Gulf of Mexico as two of my borders.	Texas
4. I am the state that is closest to Russia.	Alaska
5. I am the **only** archipelago state.	Hawaii
6. One of my borders is Lake Superior. Another border is Ontario, Canada.	Minnesota
7. I border Quebec and New Brunswick, Canada.	Maine
8 Area-wise, I am the **smallest** state.	Rhode Island

Set Two

1. I am at 90 degrees west longitude and 32 degrees north latitude.	Mississippi
2. I am at 76 degrees west longitude and 40 degrees north latitude.	Pennsylvania
3. I am at 100 degrees west longitude and 32 degrees north latitude.	Texas
4. I am at 115 degrees west longitude and 40 degrees north latitude.	Nevada
5. I am at 156 degrees west longitude and 64 degrees north latitude.	Alaska
6. I am at 100 degrees west longitude and 48 degrees north latitude.	North Dakota
7. I am at 110 degrees west longitude and 40 degrees north latitude.	Utah
8. I am at 68 degrees west longitude and 46 degrees north latitude.	Maine

Comment:

1. If desired, you can provide distractor cards.

2. There are a multitude of topics that can be adapted to this design. Simply remove all material and insert another disc, answer cards, and answer key. For instance, use the following activity with the area code and time zones map found in the telephone directory.

TELE MAP

1. What is the area code of Arizona? (602)

2. Which western state in the Mountain Time Zone has an area code of 303? (Colorado)

3. What is the **westernmost** area code of Iowa? (712)

4. Name the state in the eastern part of the Pacific Time Zone with an area code of 702. (Nevada)

5. Name the southern state that has area codes of 901 and 615 and is located in two time zones. (Tennessee)

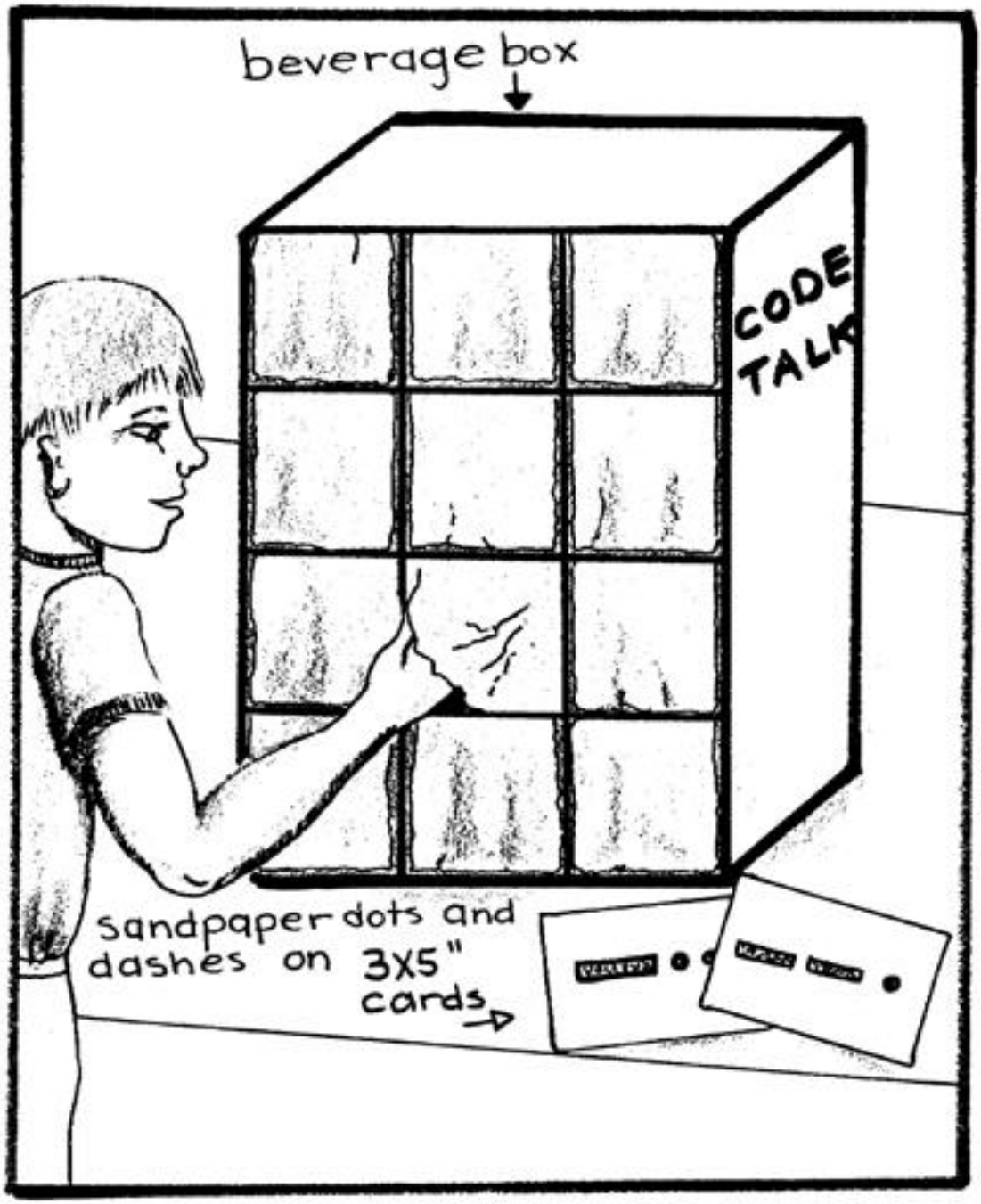
6. Name a southern state with an area code of 205 that borders on the Gulf of Mexico. (Alabama)

7. If it is 9 P.M. in a southern state with an area code of 803, what time is it in the western state with an area code of 503? (6 P.M.)

8. If it is 10 P.M. in the state of Washington, what time is it in a southeastern state with an area code of 912 that borders, in part, on the Atlantic Ocean? (1 A.M.)

Title: **CODE TALK**

Purpose: For students to decipher letters and words through the Morse Code.



Description:

1. Obtain two beverage cartons and glue a flannel flap over the front of each opening.

2. Make a chart of the Morse Code system on posterboard. (See content for this.)

3. Cut out dot and dash symbols from sandpaper and glue on 3" by 5" cards so as to represent letters of the alphabet.

4. In one box, place the cards in random order. In the second box, arrange the cards in the four rows so as to spell simple 3 letter words. (See sample content.)

5. Purchase an inexpensive telegraph sender (radio key operator) from a radio communication store (a motivational device).

Student Directions: (for an instructional aide or parent to explain to the children)

Box A

1. Get a partner to complete this activity.

2. Place your hand inside one of the twelve slots.

3. Feel the sandpaper and decide the order of the dots and dashes.

4. Use the telegraph sender to tap out this same order of dots and dashes to your partner.

5. Your partner should write down the dots and dashes that were tapped on the telegraph.

6. S/he should look at the Morse Code chart and figure out the letter that was sent over the telegraph.

7. Lift up the flap and check the dots and dashes on each card.

8. Check underneath each card to see if you have figured out the correct letter.

Box B

1. For the second box, follow the same procedures as in Box A.
2. Only, tap out the dots and dashes for all three slots in the top row.
3. Your partner should figure out the "secret" word with three letters.
4. Do the same thing for the second, third, and fourth rows.
5. Check your answers with the answer key.

Morse Code System

A = . -	**B = - . . .**	**C = - . - .**	**D = - . .**	**E = .**
F = . . - .	**G = - - .**	**H = ...**	**I = . .**	**J = . - - -**
K = - . -	**L = . - . .**	**M = - -**	**N = - .**	**O = - - -**
P = . - - .	**Q = - - . -**	**R = . - .**	**S = . . .**	**T = -**
U = . . -	**V = . . . -**	**W = . - -**	**X = - . . -**	**Y = - . - -**
Z = - - . .				

Box A

Row 1	**. -**	**- . .**	**- -**
Row 2	**- .**	**. - .**	**. - -**
Row 3	**- . -**	**. . . .**	**. . .**
Row 4	**-**	**. .**	**. . -**

Box B

Row 1	**-**	**- - -**	**. - - .**	**TOP**
Row 2	**. . .**	**. . -**	**- .**	**SUN**
Row 3	**- . . .**	**. -**	**- - .**	**BAG**
Row 4	**. - .**	**.**	**- . .**	**RED**

Variations:

This design may be used with a number of other activities. For example, any small three-dimensional object may be placed in the separate compartments for identification along with corresponding picture cards.

In addition, this beverage packing carton could have activities which involve addition of numerals, problem solving questions or task cards, "mail boxes," a tic tac toe game, and so on. For example, as a variation of this design, you could select to conduct one of the activities outlined in procedures 3, 4, or 5.

1. From around the home, obtain small items such as the following: key ring, paper clip, penny, battery, compass, pen, lock, badge, lid, screwdriver, file, and hammer.

2. Sketch these objects onto cards or obtain pictures of these objects and glue onto cards.

3. Have one child reach into a compartment and describe the characteristics of the object, while another child locates a picture card of the described object, or

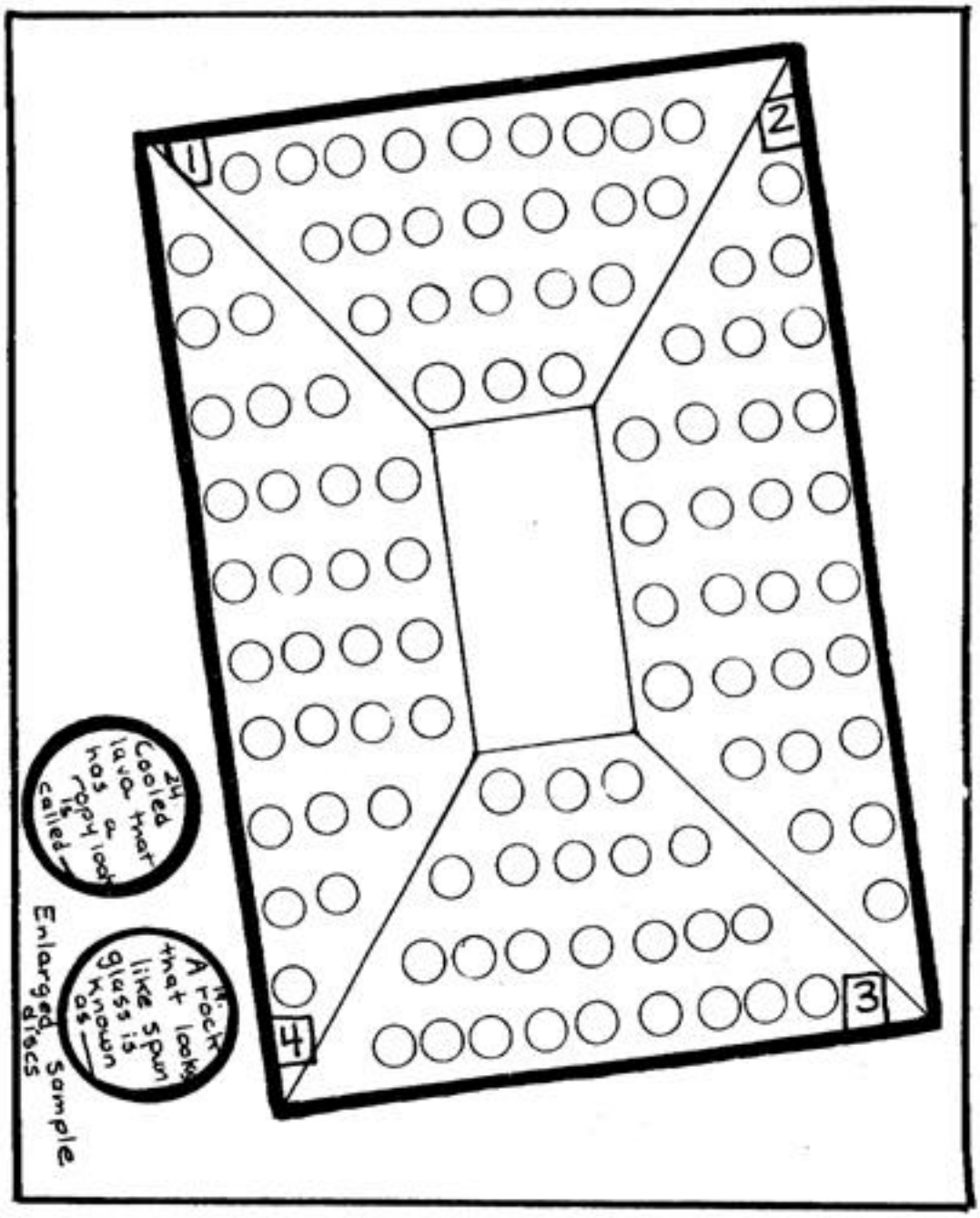
4. Have one child select a picture card while another child locates the object in a compartment, or

5. Perform this activity in front of the classroom by having one child describe an object he is feeling while class members write the name of the object on a piece of paper.

Note: This activity could be used as a learning center, in small group instruction, or large group instruction. It appeals to a variety of learning modalities.

Title: **QUAD CANO**

Purpose: For students to associate specific geographic features with volcanoes and to identify the locations of famous volcanoes.



Description:

1. On sturdy posterboard, draw the design as shown in the sketch. Number each quadrant or sector.

2. Draw 2" diameter circles in each quadrant. Make sure the discs are large enough (and on the board) so that you can write questions. If desired, make each quadrant of circle discs in different colors.

3. On sturdy oaktag or construction paper, make circle discs in four different colors.

   Note: The purpose of the different colors is a developmental consideration. By having children working in one quadrant at a time, they are not so overwhelmed with the number of responses that are required. For younger children, the teacher can treat each quadrant as a separate activity. Many intermediate children should have little difficulty with the entire board.

4. Write or type the numbered content questions onto the circle discs.

5. Laminate or contac the circle discs before they are cut out.

6. Make a separate answer key for the game monitor.

Student Directions:

1. Two to four players can play this game. Get a monitor to check the answer key.

2. Place a question disc on each circle on the board with the print side down.

3. The player with the lowest number on the die goes first. Play proceeds in a clockwise direction.

4. Draw a question disc, read the number and question so that the other players can hear you. Answer the question and have the monitor check the key.

5. If your answer is correct, keep the disc. If it is not correct, put the disc back on the same place from which it was taken.

6. Whether the answer is correct or incorrect, it becomes the next player's or team's turn.

7. The person or team with the greatest number of question discs wins the game.

SAMPLE QUESTIONS AND ANSWERS ON VOLCANOES

Volcanic Features

1. A volcano thought to be "dead" and which has not erupted for thousands of years is called what type of volcano?

2. A volcano thought to be "sleeping" or taking a rest, but has erupted at times, is called what type of volcano?

3. A volcano that is "kicking out" steam, lava or rocks nearly all of the time is called what type of volcano?

4. What is very hot, melted rock inside the earth's surface called?

5. When hot, melted rock inside the earth's surface spills out and flows onto the earth's surface, it is known as _____

6. Clue: shape of a volcano
   A type of volcano that is made up of layers of rocks and ashes, and lava flows is called what type of volcano?

7. Clue: shape of a volcano
   A volcano that is round like a big bowl that is upside down, or looks like a domed stadium is known as what type of volcano?

8. Clue: shape of a volcano
   A volcano that is made up of rocks and ashes that have piled up from many explosions so that it has steep sides like a cone that is upside down is called what type of volcano?

9. A large hole at the top of a volcano through which lava flows or through which rocks and ashes are erupted is called a / an _____

10. A crater that has grown very large by the collapse of the top of the volcano is called a / an _____

11. Small cracks in the earth's surface around a volcano from which steam or lava flows are called _____

12. Vents where hot steam or gas can be heard roaring out from the ground much like a train's steam engine are called _____

13. Very dirty and usually stinky hot springs that look much like thick hot chocolate are called _____

14. Name two common features in Yellowstone National Park that show evidence of the dying stages of volcanic activity.

Answers for Volcanic Features

1. extinct	**2. dormant**	**3. active**	**4. magma**	**5. lava**
6. composite	**7. shield**	**8. cinder cone**	**9. crater**	**10. caldera**
11. fissures or vents	**12. fumaroles**	**13. mud volcanoes**	**14. geysers, hot springs**	

Types of Rocks

15. A big type of "rock group" that has cooled from a hot, melted state is known as _____ rocks.

16. The name given to a rock that forms by cooling very rapidly and that looks like glass is _____.

17. The name given to a rock that is full of tiny air spaces and that floats in the water is _____.

18. Rocks that are large, rounded lumps of lava blown into the air are known as _____.

19. A type of rock that looks like spun glass is known as _____.

20. Rather large, solid chunks of rock blown from a volcano are known as _____.

21. Fine ash and dust particles that have stuck together and cooled are called _____.

22. Small volcanic stones about the size of walnuts that are blown from a volcano are known as _____.

23. Cooled lava that looks like large, jagged blocks is called _____.

24. Cooled lava that has a ropy look to it is called _____.

Answers for Types of Volcanic Rocks

15. igneous	**16. obsidian**	**17. pumice**	**18. volcanic bombs**	**19. Pele's hair**
20. breccia	**21. tuff**	**22. lapilli**	**23. aa**	**24. pahoehoe**

Names and Locations of Volcanoes

25. The Pacific Ocean is circled by volcanoes. The circle of volcanoes is called the _____.

26. Name the continent that has **no** active volcanoes at this time.

27. In which country is the volcano Paricutin located?

28. Which volcano erupted in 79 A.D. and completely covered two Italian towns.

29. One of the **most violent** volcanic explosions occurred in Indonesia in 1883. Name the volcano.

30. Name the **southernmost** country that has an active volcano.

31. In 1902, a city named St. Pierre of 30,000 people was wiped out by Mt. Pelee's volcanic eruption. Name the location.

32. Name the **southernmost** place that has volcanic activity.

33. Name the **northernmost** country that has volcanic activity.

34. A very violent eruption occurred in 1921 on the North American continent. it didn't do much damage because it was so far from everyone. Name the volcano and its location.

35. For its size, which Central American country has the **greatest** amount of volcanic activity concentrated in one area?

36. Scientists were able to watch the island of Surtsey being created in the ocean by a number of volcanic eruptions. Near what country was the island formed?

37. Name the **best** known archipelago created by volcanic eruptions.

38. Name the famous western National Park that is an extinct volcano and is a caldera.

39. Which volcano is **not** located on an island?
    a. Fujiyama (Japan)
    b. Ngauruhoe (New Zealand)
    c. Mauna Loa (Hawaii)
    d. Cotopaxi (Ecuador)

40. Which country does **not** have a dormant or active volcano?
    a. United States
    b. New Zealand
    c. West Germany
    d. Chile

41. Which state in the United States does not have a volcano?
    a. Alaska
    b. Nebraska
    c. Oregon
    d. Washington

42. One of the **best** known peninsulas for volcanoes is:
    a. Florida
    b. Mexico
    c. Denmark
    d. Italy

43. Which place of volcanic activity is **not** located on an archipelago?
    a. Philippines
    b. Indonesia
    c. Mexico
    d. Hawaii

Answer Key to Names and Locations of Volcanoes

25. Ring of Fire	**26. Australia**	**27. Mexico**	**28. Vesuvius**	**29. Krakatoa**
30. New Zealand	**31. Martinque, West Indies**	**32. Antarctica**	**33. Iceland**	**34. Mt. Katmai, Alaska**
35. Nicaragua	**36. Iceland**	**37. Hawaii**	**38. Crater Lake, Oregon**	**39. Cotapax**
40. West Germany	**41. Nebraska**	**42. Italy**	**43. Mexico**	

Variations:

1. Create two sets of circle discs. One set would contain angles drawn on the discs while the other set would contain the number of degrees (45 degrees) the angles represented. Students would match the sketch of the angle with its corresponding number of degrees.

2. Create two sets of circle discs. One set would contain clocks with hands sketched on to show certain times. Use a stamp pad of clock face. The other set would contain digital times. Students would match the traditional time with the digital time. Color code the sets to allow children to work on one quadrant at a time.

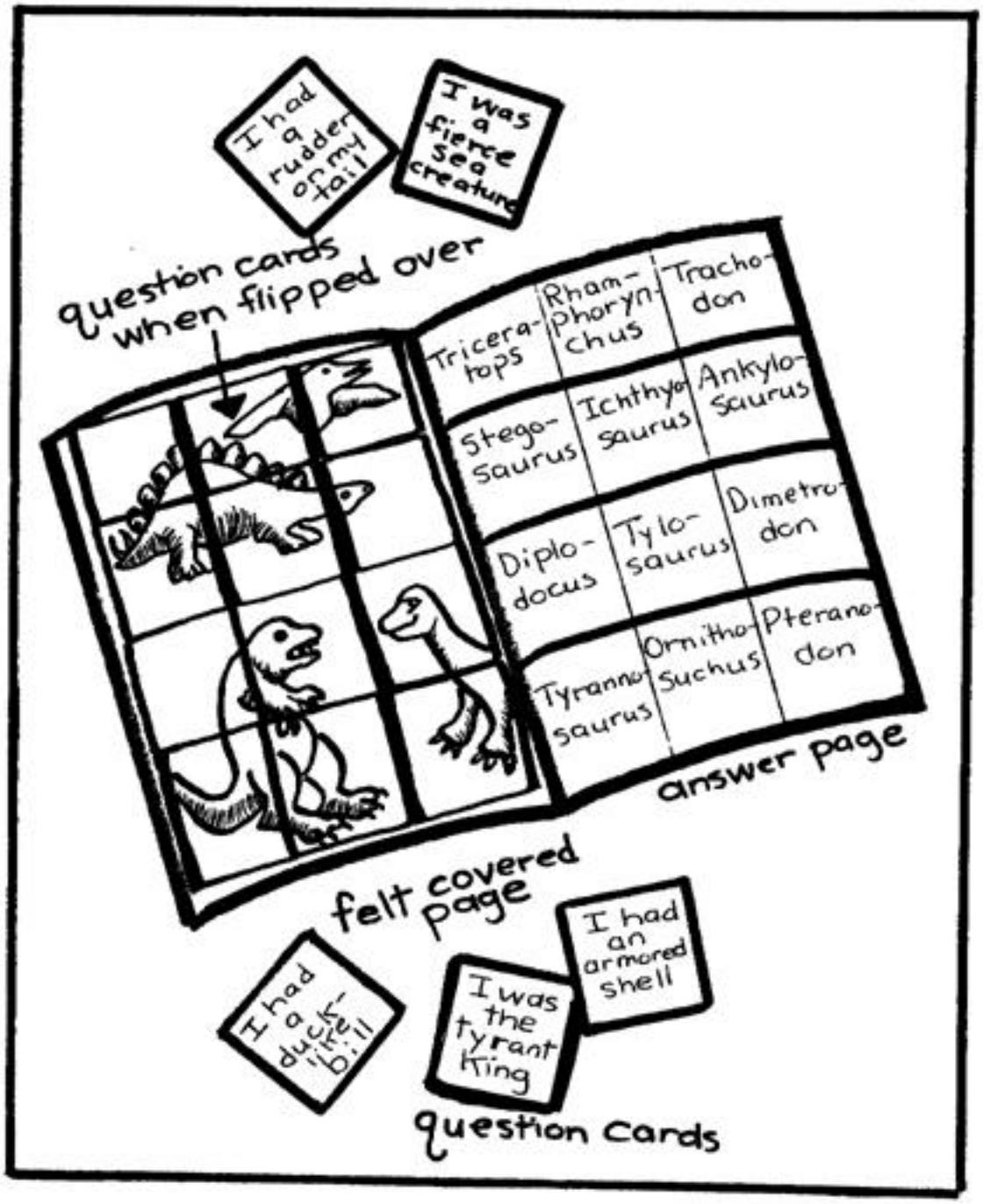
3. Create two sets of circle discs on antonyms (or synonyms or homonyms). Put one set of antonyms in quadrant 1 and its matched pairs in quadrant 3. Likewise, one set of synonyms can be placed in quadrant 2 and its corresponding matches in quadrant 4.

4. Create two sets of circle discs -- one on small pictures of objects and the other on initial consonant sounds (or consonant blends, consonant digraphs, vowel digraphs, etc.). Follow similar procedures as described in variation three above.

5. Create two sets of circle discs -- one with the names of TV programs listed on them, and the other with the days and times of the TV programs listed on them. Children could use a TV program guide to find the correct matches.

Title: **FLIPPING OVER YOU**

Purpose: For students to match the names of dinosaurs to their correct descriptions.



Description:

1. Cut a manila folder in half and divide one section of it into twelve equal parts. Do not cut this section.

2. Write the names of events or characters in the twelve slots.

3. On the reverse side of the oaktag, mount a suitable magazine picture that covers, in part, all twelve areas. **Caution: Make sure the picture is pasted on correctly!**

4. To help the cards stay in place when being flipped, glue a small piece of felt on each of the twelve answer cards (not on the picture side). Cut the oaktag into twelve answer cards.

5. On the other half of oaktag, divide it into twelve corresponding areas. In each separate area, write a question or phrase that would require students to find answers in a textbook (or reinforce information).

6. On the reverse of this oaktag, place adhesive magnet tape at the four corners.

7. Take another manila folder and glue a piece of felt or flannel on the inside left cover.

8. On the inside right cover, place pieces of magnet tape on the four corners. Attach the section of oaktag that contains the statements or questions. Note: Placement of magnet tape makes this design very adaptable. Simply remove the oaktag insert that contains the questions or phrases and replace it with another set of questions on a completely different topic.

Student Directions:

1. Place all word cards in front of you.

2. Match the word cards to the questions or phrases in the folder. Lay the answer card on top of the statement so that the word side is facing up.

3. When you have matched all the cards, close the folder. Quickly flip it over. Try to keep the cards from moving inside the folder.

4. Open the back cover of the folder. If your answers are correct, you will see a picture in its correct order.

5. Place all cards back in the envelope.

SAMPLE QUESTIONS AND ANSWERS FOR DINOSAUR MATERIAL

I had a duck-like bill with more than 1000 teeth.	**My name means three-horned head.**	**I was an early flying dinosaur with a rudder on my long tail.**	**I had an armored shell, something like a turtle's.**
I was a ten foot long sea creature who looked like a modern dolphin.	**I had large bony plates coming out of my back.**	**I had a large "sail" on my back. It may have helped my body to cool down.**	**I was a fierce sea monster who could swallow large fish.**
I was the longest dinosaur that ever walked on Earth.	**I was a huge flying creature who mostly ate fish.**	**I was a meat eater with a bony ridge down the center of my back.**	**I was the terrible tyrant King. Beware!**

ANSWER CARDS

Trachodon	**Triceratops**	**Rhamphorynchus**	**Ankylosaurus**
Ichthyosaurus	**Stegosaurus**	**Dimetrodon**	**Tylosaurus**
Diplodocus	**Pteranodon**	**Ornithosuchus**	**Tyrannosaurus Rex**

Sample Content on Famous People of the American Revolution

I warned the patriots in Lexington and Concord that the Redcoats were approaching.	**I was considering one of the biggest troublemakers in stirring up the New England colonists against Great Britain.**	**I designed and made the first flag for the United States of America.**
I wrote a booklet called "Common Sense" in which I urged the colonists to fight for complete freedom from England.	**The Second Continental Congress voted me to be Commander-in-Chief of the Continental Army.**	**I shouted these words in one of my speeches: "Give me liberty or give me death."**
I was the main author of the Declaration of Independence.	**I went to France and convinced the King to send men, ships, and supplies to America to help fight England.**	**I took my husband's place at the cannons when he was killed by British fire. I was the first WAC. (Women's Army Corp)**
I held my own interests at heart when I sold the plans of West Point to the British.	**In a famous naval battle, I forced the British ship, Serapis, to surrender while my ship, Bonhomme Richard, was sinking.**	**I organized the western settlers to fight against the British on the frontier.**

Answer Cards

Paul Revere	**Samuel Adams**	**Betsy Ross**
Thomas Paine	**George Washington**	**Patrick Henry**
Thomas Jefferson	**Benjamin Franklin**	**Molly Corbin**
Benedict Arnold	**John Paul Jones**	**George Rogers Clark**

Comment:

Paste pictures on the backs of distractor cards, if you desire. Some distractor cards might be: Nathan Hale, John Hancock, Lord Corwallis, and so on.

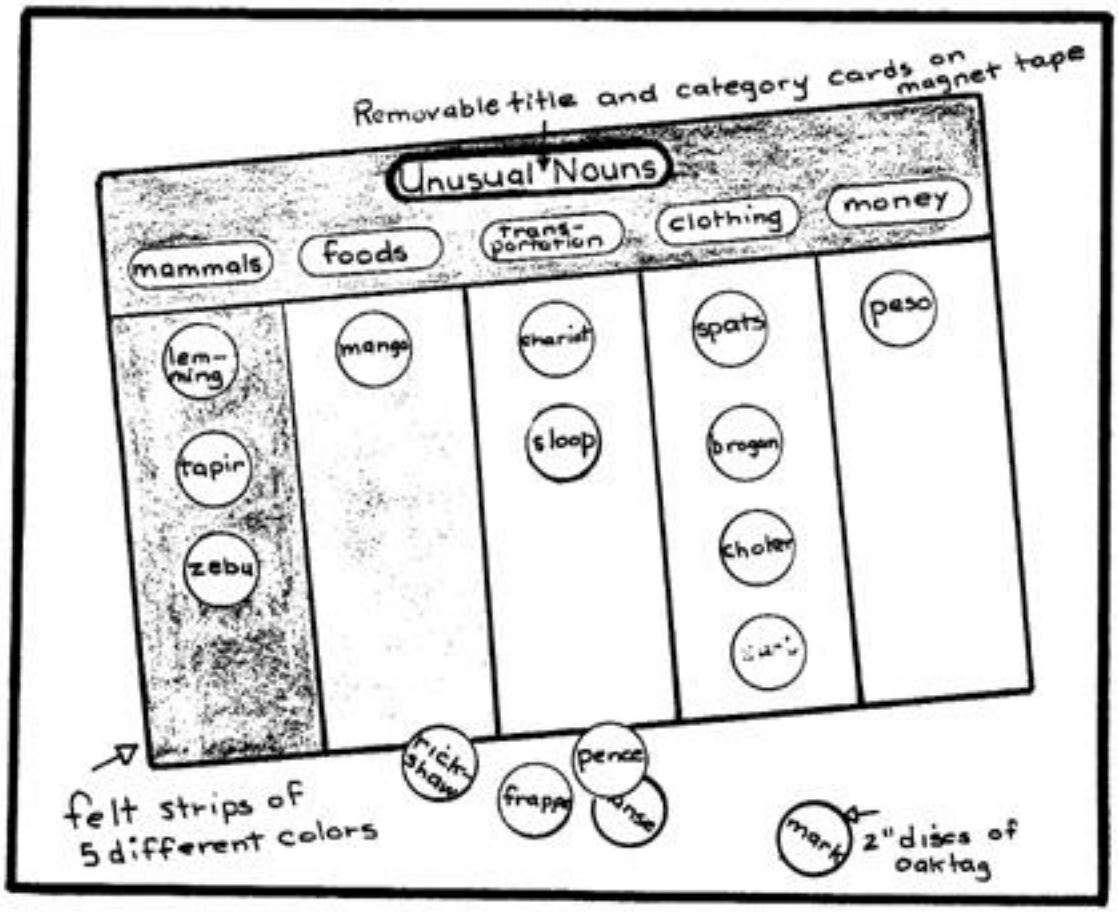
Variations:

A. If your picture is well chosen, you can get more mileage from this activity. Devise a list of words, some of which are represented in the picture. Allow children to classify the words as to whether or not they are observed in the picture. Such an exercise promotes language development and observation of detail.

B. You may have fewer than or greater than twelve responses for matching. These activity folders are relatively easy to construct provided the picture is correctly pasted on the reverse side of the oaktag answer cards. This design works very well for reinforcing math facts as well.

Title: **AROUND THE WORLD IN WORDS**

Purpose: For students to classify the meanings of uncommon nouns to their respective categories.



Description:

1. Measure five strips 4” by 10” from different colors of felt and cut out. Glue these strips to a section of oaktag 22” by 14".

2. Make category cards and a title card such as those shown in the sketch. On the back of each card, place a small piece of magnet tape or a paper clip. Put magnet tape on the oaktag so that it serves as a holder for the title and category cards.

3. Cut 2” discs from oaktag. Write an unusual noun on each disc to correspond to a designated category. (See example.)

4. On the reverse side of each card, provide an appropriate coded response. For instance, fo = foods, mo = money. Also, to increase the sticking capability of the discs, glue a small piece of white felt on the back.

Student Directions:

1. Remove the title and category cards from the envelope. Place them on the board.

2. Remove the discs from the envelope. Read the word on each disc and place it in its proper category.

3. If you do not know the word, look it up in the dictionary. Then classify the card to its proper category.

4. After all the discs are placed, ask me to explain how you can correct your work.

SAMPLE CATEGORIES AND NOUNS

mammals	foods	transportation	clothing	money	distractors
platypus	fricassee	caravan	cummerbund	peso	centenary
echidna	sorghum	rickshaw	spats	ruble	rouge
lemming	mango	chariot	brogan	mark	zax
zebu	frappe	sloop	choker	pence	cholera
tapir	avocado	brigantine	sari	franc	manse

Variations:

This design is very versatile and can be used with a range of topics in a variety of grade levels that require skills, such as classifying, sequencing, left to right progression, and so on.

Extension:

As a continuation of this activity, place the words in some kind of context that will promote comprehension skills. For instance, using sentences to integrate the skill of locating information in various references such as atlases, almanacs, or dictionaries would be very desirable. Note that clues are contained in each sentence so that children will know which set of words from which to draw the correct answer.

Samples might include:

1. Mango is a type of fruit that is found on trees. T or F

2. A small mouse-like animal that lives in Norway and Sweden is called the (lemming).

3. This sailing ship has only one mast. (sloop)

4. Which statement is true about the platypus?

   a. It is a fish.
   b. It can fly.
   c. It is hunted for its feathers.
   d. It is a mammal.

5. A kind of disease that people get as a result of unhealthy germs in the drinking water is known as (cholera).

6. The United States' money system is based upon the dollar. The German's money system is based upon the (mark).

7. A spiny anteater, with a long sticky tongue, from Australia is known as a/an (echidna).

8. A type of fruit that grows on trees, but tastes more like a vegetable is the (avocado).

9. This item is part of the Mexican money system. It is called the (peso).

10. This item of clothing is worn around your waist. It is a/an (cummerbund).

11. An item used as a tool is called a/an (zax).

12. Which type of food is sometimes used in an ice drink? (frappe)

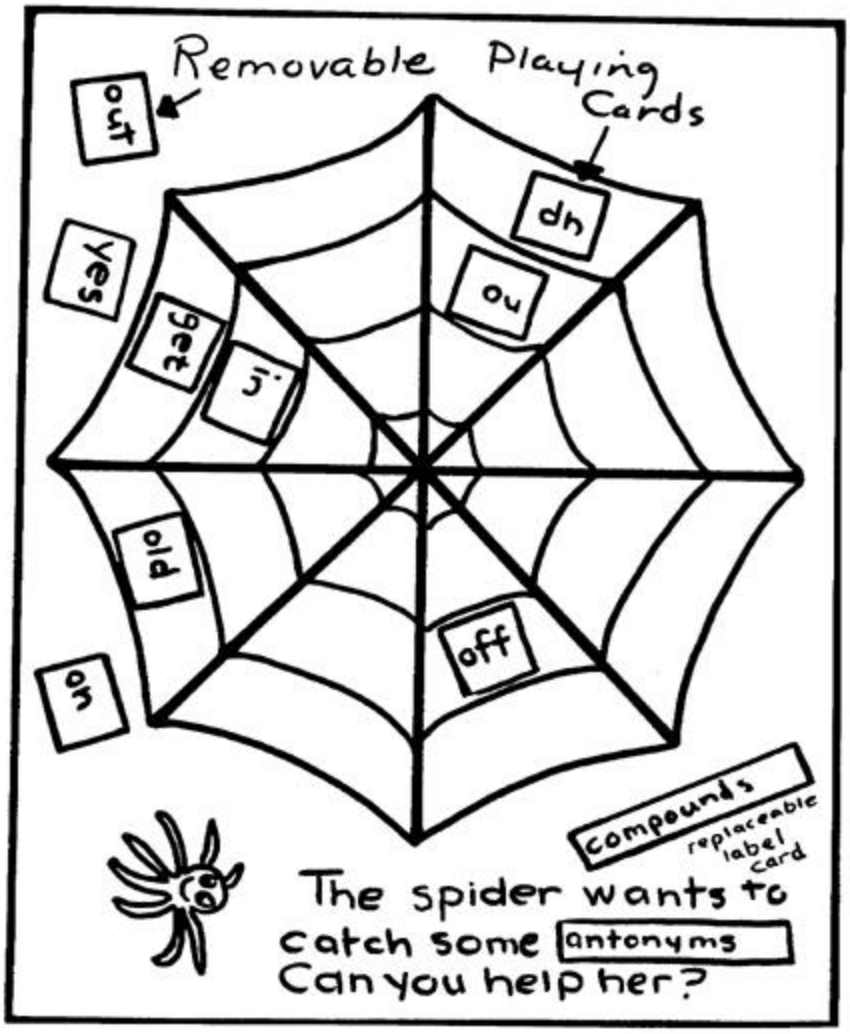
13. This type of clothing covers the ankle and upper part of shoes. (spats)

14. A type of Russian money is called a/an (ruble).

15. A type of clothing worn by the women of Indian is known as a/an (sari).

Title: **HOT WEBS**

Purpose: Students will be able to associate specific words to their opposite meanings. (antonyms)



Description:

1. Sketch the following "spider web" design on a 28 x 22 matboard. To increase durability, contac the board.

2. Write your words (matched pairs) on a set of numbered question cards that will fit within each webbed space. To make the design adaptable, each card can be attached by placing scotch or masking tape on its reverse side.

Note: Velcro or magnet tape will also work well. If you use velcro, you may wish to staple it on. That will provide you with greater durability. If you use magnet tape on the board design, put a paper clip on the answer card. The answer card will adhere to the magnet tape. By doing this, you use less magnet tape.

3. Write your answers (matched pairs) on a set of answer cards that will be associated with the word cards.

4. Place a number or letter code on the back of each answer card to correspond with its correct question card. If you do not care for this technique, provide a separate answer key for your children to check.

Student Directions:

1. Take the question word cards and place each one within a webbed area. They do not need to be in any order.

2. Remove the answer cards from the envelope and scatter them on the floor around the spider's web board.

3. Match each answer card to its question word card.

4. When you have finished, turn the cards over. If your answers are correct, the numbers on the back of each answer card and question card will be the same.

SAMPLE ANTONYMS LIST

white	**black**		**stop**	**start**
up	**down**		**arrive**	**leave**
no	**yes**		**first**	**last**
small	**large**		**find**	**lose**
kind	**cruel**		**get**	**give**
off	**on**		**little**	**big**
found	**lost**		**back**	**front**
high	**low**		**after**	**before**
near	**far**		**below**	**above**
night	**dark**		**good**	**bad**
never	**always**		**right**	**wrong**
left	**right**		**old**	**young**
in	**out**		**open**	**close**

SAMPLE COMPOUND WORDS LIST

outlaws	tiptoe	afternoon
leftover	pinball	bulldog
frostbite	windshield	sailboat
cowboy	airline	popcorn
lookout	rattlesnake	vineyard
highway	crosswalk	sunshine
bathroom	notebook	weekend
newspaper	breakfast	haircut
undercover	snowdrift	pancake
backyard	waterfall	eyeball
bloodhound	headache	dishpan
cobwebs	earring	campfire
baseball	basketball	touchdown

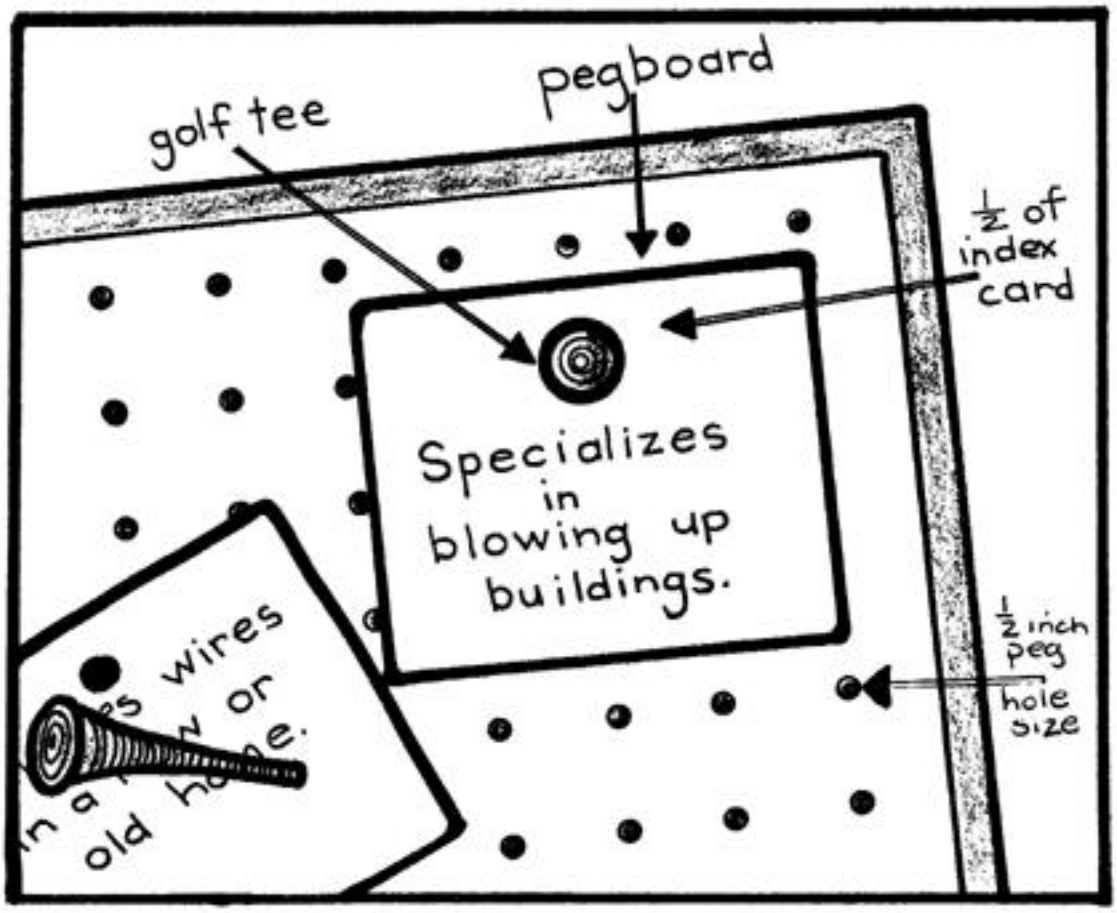
Variations:
When you are finished with this unit of study, remove the content question cards and replace them with a different set of content oriented cards such as compound words and contractions. Activities requiring students to associate or match would be best suited for this design as well as use in sentences.

SAMPLE CONTRACTIONS LIST

not	will	have	would/ had	is/has	are	us	am
can't	it'll	I've	I'd	it's	we're	let's	I'm
don't	he'll	you've	you'd	she's	you're		
didn't	I'll	we've	they'd	he's	they're		
haven't	we'll	they've	that'd	what's	who're		
hasn't	you'll	who've	there'd	who's			
hadn't	they'll	might've	she'd	there's			
isn't	that'll	should've	he'd	that's			
doesn't	these'll	would've	we'd	here's			
wasn't	those'll	could've	what'd				
weren't	there'll	there've	who'd				
won't	she'll						
aren't	this'll						
shouldn't	what'll						
couldn't	who'll						
needn't							
mightn't							
mustn't							

Title: **PEGOSAURUS**

Purpose: For students to match words and statements to their respective occupations.



Description:

1. Purchase pegboard and cut a section 21 by 41. Many sizes would be appropriate. For instance, tip the board if you would desire to have a 41 by 21 dimension.

2. To increase its durability and usability, build a frame and attach the pegboard. (see sketch)

3. Get a supply of golf tees. If there is concern about the sharp points, saw them off.

4. On a set of index cards, place names of occupations. Number the reverse side of each card. (Set A)

5. For each occupation, write a word(s) that can be associated to the job (Set B). Number the reverse side of each card to correspond with its counterpart.

6. On a corresponding set of cards, write a statement or phrase that can be matched to the job. Number the reverse side of each card to correspond to its occupation. (Set C)

Note: Color coding the cards for each set would be helpful for maintaining the activity. A telephone directory also can be useful.

Student Directions:

1. Remove the rubber band from the pile of occupation cards (Set A). Take the first card and put it on the pegboard with a golf tee. Identify the occupation.

2. From the second set (B) of cards, locate the card which has a word written about the occupation. Place each card next to its occupation.

3. After you have completed matching the cards, look on the other side to see if the numbers are the same.

4. From a third set (C) of cards, locate the card which has a statement or phrase written about the occupation. Place each card next to its occupation.

5. After you have completed matching the cards, look on the other side to see if the numbers are the same.

6. Remove all sets of cards and return everything to its proper place.

SAMPLE CONTENT CARDS

Set A **Set B** **Set C**

Occupation	Word Association	Phrase Statement
1. optometrist	contact lenses	examines your eyes to see if they are healthy
2. beautician	hair spray	gives people different hair styles

3. minister	church	preaches sermons and helps people understand religion
4. architect	blueprints	designs buildings
5. excavator	heavy equipment	moves earth for building projects
6. auditor	calculator	checks agencies and businesses to see if any mistakes are made in keeping money records
7. florist	flowers	makes bouquets for and sells planters
8. insurance agent	written policies	sells protection against sickness, fire, theft, etc.
9. jeweler	diamonds	sells watches, rings, etc.
10. lineman	utility pole	repairs telephone or electrical wires after storms
11. plumber	faucet	puts in hot water tanks; fixes leaking water from toilets, etc.
12. travel agent	tickets	makes arrangements for people who want to travel on airlines, railways, and ships
13. welder	torch	puts metal pieces together with his equipment
14. dentist	cavities	teaches you how to care for your teeth; removes teeth
15. diplomat	embassy	represents his government dealing with another country
16. mechanic	engine	fixes or replaces parts in an automobile
17. manufacturer	finished products	makes items for industry
18. photographer	film	takes pictures and sells them to publishing companies
19. contractor	building materials	constructs houses, buildings, roads, and so on.
20. judge	courthouse	sees that a person is given a fair trial
21. demolition agent	explosives	specializes in blowing up buildings

22. realtor	land	sells a person's property to other people
23. musician	saxophone	plays in an orchestra
24. moving agents	packers	puts your belongings in a truck to take them to another home
25. mason	bricks	lays blocks and stones in houses and buildings
26. banker	mortgages	provides people with loans to buy houses
27. locksmith	keys	installs burglar systems to protect your home, changes locks on your doors
28. electrician	circuit tester	places wires in a new or old homes
29. auctioneer	antiques	sells a person's household items for a certain amount of money
30. programmer	computers	helps make programs for computers and the Internet

Comment:

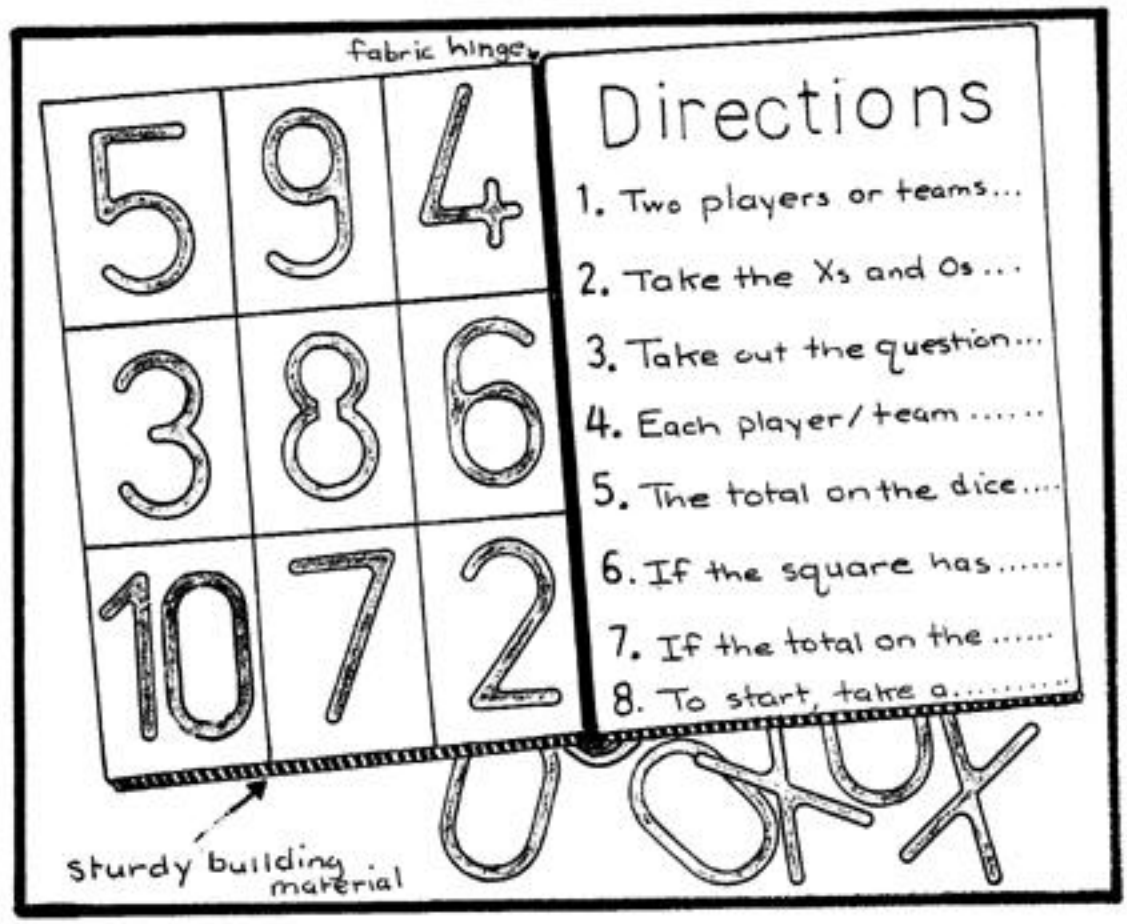
Pegboard is a vastly underutilized, underrated medium in the classroom. It should be more heavily used because it is such an extremely versatile teaching device. The main motivational device to which children readily respond is the golf tee. Activities that require sequencing, classifying, and matching would work well on pegboard.

Pegboard can often be found as room dividers, as backs for book racks, and as sliding doors for sink areas in the classroom.

Also, consider the possibility of making an adaptable electrical board with pegboard that can be purchased at a building supply store.

Title: **BLOCKING**

Purpose: For students to review information on modern energy issues.



Description:

1. Using solid building material such as plywood, measure and cut two squares 8" by 8".

2. Paint the outside surfaces. Color the inside surfaces white and use black to mark the boundaries. (See sketch.)

3. To get a hinged effect, take a piece of sturdy fabric 2 ½, by 8" and staple it to the outside surfaces of the building material. (A velcro hinge would work as well.)

4. Using a swatch of fabric 6" by 7", make a pocket to hold the Xs and Os. Glue it on the front cover. Make Xs and Os out of oaktag.

5. Write numerals on the inside cover of the left board. (See sketch.)

6. Type directions and put them on the inside cover of the right board.

7. Create a set of number-coded question cards. Make an answer key to correspond with the questions. Place these items in an envelope.

Note: This is an interesting variation of tic tac toe. Through a chance roll of the dice, a player could move another player's marker.

Student Directions:

1. Two players or teams of two are needed to play.

2. Take the Xs and Os from the pocket.

3. Take out the question cards and place them in a pile.

4. Each player/team takes a turn rolling the dice.

5. The total on the dice tells which square the player can place his 0 or X if the question is answered correctly. If incorrect, the player cannot put his marker on any square.

6. If the square has already been taken by the other player, move his marker to some other place on the board and put your marker on his square.

7. If the total on the dice is 11 or 12, you may take any square you want. But, <u>you must answer the question correctly</u>. If the square has been taken, you may remove the other player's marker from the board.

8. To start, take a question card, give its number, read it and tell the answer.

9. The other player checks to see if the answer is correct.

10. A player wins by getting 3 in a row -- either across, down or diagonally.

SAMPLE QUESTIONS ON ENERGY

1. Name 3 fossil fuels.

2. Windmills depend on energy from the _____.

3. Fossil fuels heat water to make steam. Steam turns the blades of a _____ to create electricity.

4. Electricity can be created by fast moving water. This energy source is known as _____.

5. Name at least two non-renewable .

6. What is the **chief** problem with using more coal to help our energy problem?

7. Splitting the atom is known as _____.

8. Smashing an atom sets free a huge amount of _____.

9. The kind of energy that puts atoms together and releases huge amounts of energy is known as _____.

10. There is a new, expensive technique for heating a type of rock deposit in western United States from which we can get an energy source. Name the type of rock deposit.

11. Some people use energy from the sun to heat their homes and water. Name this energy source.

12. Name the mechanical system that uses roof top panel collectors to transfer heat to water and air.

13. Name the system in which the design of the building provides the collection, transfer and storage of heat energy to air and water.

14. Another energy source under the earth's surface in which water is heated is known as _____.

15. Which one is a cheaper energy source? nuclear, oil, or geothermal

16. The Pacific Northwest of the United States is **best** known for what kind of energy?

17. Name the device that must have a speed of at least 10 mph to create electricity.

18. Changing plant material into energy is known as _____.

19. Name one energy source that is produced from grains in the United States.

20. The **most** important thing we can do to meet the growing demand of energy in the future is to _____.

21. The idea whereby you add a structure such as a "greenhouse" to your existing home for the purpose of heating your home is known as _____.

22. Give at least two **main** advantages that natural gas has over coal.

23. Give at least two reasons why Americans are not using new energy resources.

24. Name at least two major problems with the use of nuclear power.

25. Give at least two reasons why passive passive solar heating is so much more efficient than active solar heating.

26. Give two reasons why the future of energy created from nuclear fission is shaky.

27. Which energy source has **huge** potential for development, but is untapped?

Answer Key on Energy Questions

1. coal, natural gas, and oil	2. wind	3. turbine
4. hydroelectric power	5. oil, natural gas, coal and uranium	6. It pollutes the air more heavily.
7. fission	8. nuclear energy	9. fusion
10. shale (oil)	11. solar energy	12. active solar heating
13. passive solar heating	14. geothermal energy	15. geothermal
16. hydroelectric	17. wind generator	18. biomass
19. gasohol	20. conserve energy	21. retrofitting
22. 1. lighter 2. easier to move and store 3. less pollution	23. 1. costs a lot of money 2. takes a long time to develop 3. people don't see the need to use them	24. 1. meltdown possibility 2. how to store radio- active material 3. water used for cooling causes thermal pollution

25. 1. cheaper to build solar heating is so much more efficient 2. Less equipment than active solar heating. 3. equipment won't wear out 4. design is part of the building	26. 1. TMI or Chernobyl accident 2. not enough uranium (U-235) to meet future need	27. tidal energy

Variation:

Strip this design of its game contents and insert new material on "animal and animal characteristics." With a word list, statements such as the following could be used:

1. The largest (weight) bird is a / an (ostrich).

2. The **only** flying mammal is known as a / an (bat).

3. This creature is known as the **fastest** land animal (cheetah).

4. Give the name of the mammal that lays eggs (platypus).

5. This animal is known as the **largest** reptile (crocodile).

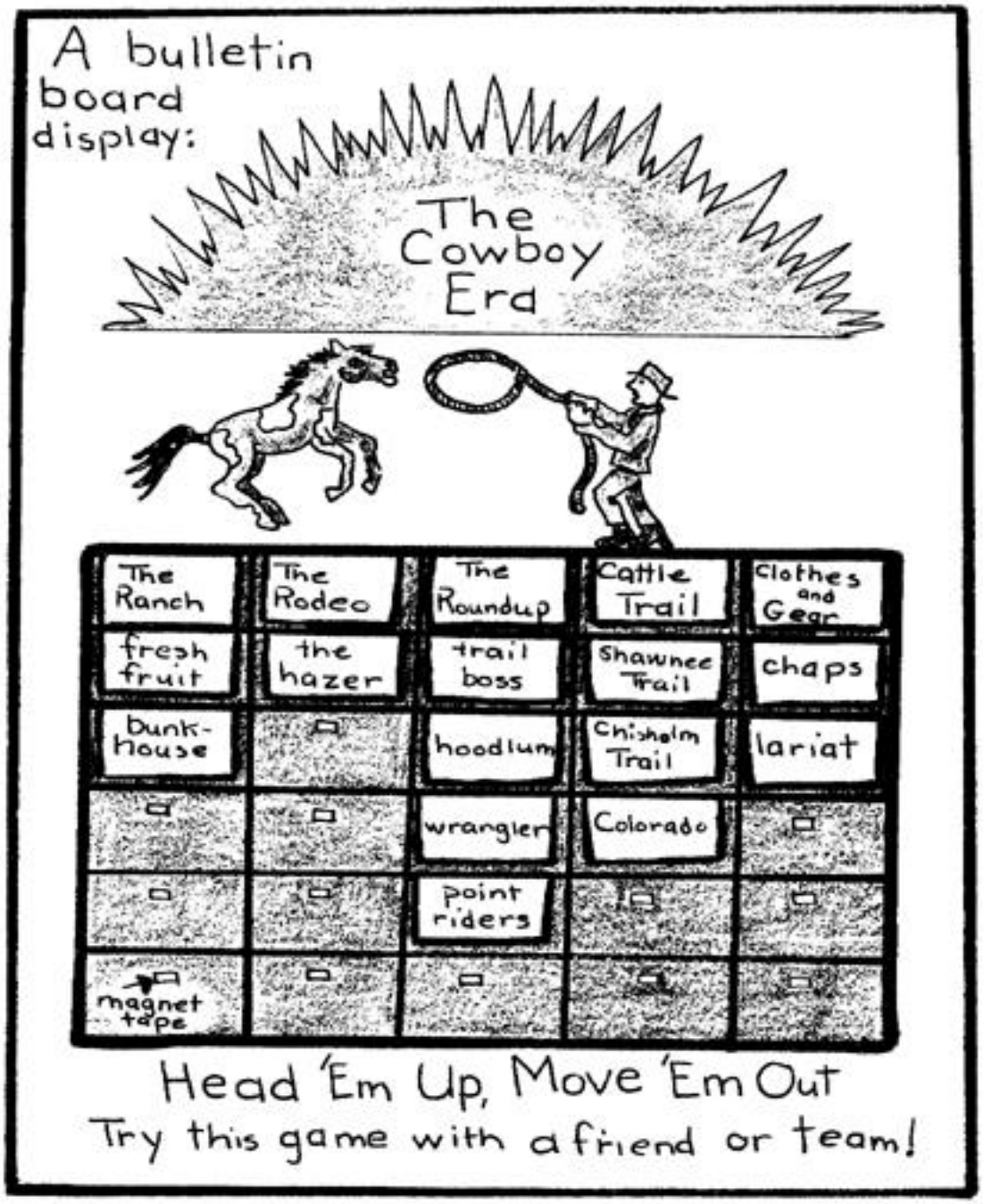
6. This animal has quills (porcupine).

7. This animal is shy, has a human-like appearance and eats fruits and vegetables (gorilla).

8. The world's **smallest** bird is known as the (hummingbird).

Title: **HEAD EM UP, MOVE EM OUT**

Purpose: For students to review information about the cowboy era during the American West movement.



Description:

1. Sketch the following design on 28 x 22 matboard using a 3 x 5 format.

2. If you wish to use activities on a bulletin board, attach a small piece of magnet tape to each compartment.

3. Make a set of category cards. (see sample content)

4. For each category, write a set of question cards. On the reverse side of each question card, write a category letter and number.

5. Place all cards into respective envelopes.

6. Place the corresponding answers on a separate sheet of 8 1/2 x 11 paper. On the reverse side of the answer key, write student directions for the game. Place the paper in clear plastic.

Student Directions:

1. Two students or teams of two can play this game. Get a game monitor to check the answer key.

2. Place five of the category cards on the board.

3. Remove the question cards from the envelopes for each category. Shuffle each set of question cards and select five from each category.

4. Place the cards on the board so that each one is facing downward.

5. Roll a die. The person with the highest number goes first.

6. Select a category and a question cards. Tell the monitor the letter and number, read the question and give an answer.

7. If the answer is correct, keep the question card. If incorrect, place the card back on the square.

8. Each player answers one question at a time. Whether correct or incorrect, it becomes the next player's turn.

9. The player with the greatest number of cards wins the game.

SAMPLE CATEGORY AND QUESTION CARDS ON THE COWBOY ERA

Category A - Life on the Ranch

A-1. Which one of the following items was **not** a normal part of the cowboy's menu? (a) coffee (b) potatoes (c) canned tomatoes (d) fresh fruit

A-2. What is "know your cans?"

A-3. What was the shack called where the cowboys lived?

A-4. Which is **false**? The shacks where the cowboys lived were: (a) messy (b) smelly (c) comfortable (d) crowded

A-5. What was the cowboy's favorite activity to pass away the evening time?

A-6. Name at least two kinds of meat that were a **main** part of a cowboy's diet.

A-7. What does "pulling the chicken" mean?

A-8. Which one of the following was **not** a job that cowboys were asked to do? (a) dehorning (b)branding (c) cooking (d) doctoring cows (e) wolf hunting in winter

Answers to Life on the Ranch

A-1. fresh fruit	A-2. A game played by the cowboys in which they would say from memory the exact words on the labels of canned foods used at a ranch house.
A-3. bunkhouse	A-4. comfortable
A-5. playing cards	A-6. beef, bacon, and salt pork
A-7. A chicken was buried except for his head. A cowboy would ride on his horse and would try to pull him out	A-8. cooking

Category B - The Rodeo

B-1. Name the person who helps the cowboy get off the bucking steer or horse.

B-2. Name and describe the item the rider holds onto in bareback bronc riding and bull riding.

B-3. How did the rodeo get started in this country?

B-4. Name at least three events held at the rodeo.

B-5. When a cowboy is bronc riding, what happens if he touches the saddle or horse with either hand.

B-6. What is the name of the event in which the cowboy tries to throw an animal within three minutes?

Answers to The Rodeo

B-1. hazer	B-2. surcingle - a broad strap which wraps around the animal's body
B-3. It grew out of the need for cowboys to prove which one had the greatest roping and riding skills	B-4. saddle bronc riding, bareback bronc riding, bull- dogging, calf roping, steer roping, team roping, wild cow milking, trick roping, and trick riding
B-5. He is disqualified from the event.	B-6. bull-dogging

Category C - The Roundup

C-1. Name given to the man who was hired to guide the herd to market.

C-2. Name given to the wagon which carried extra saddles, ropes and branding irons.

C-3. Name given to person in charge of horses and saddles while on the trail.

C-4. Name given to two best riders who rode at the head of the trail.

C-5. Name given to riders who would follow along the sides of the herd.

C-6. Name given to riders near the end of the herd.

C-7. During roundup, how many horses did each cowboy use?
C-8. In what seasons did the ranchers have roundups to sort out the herds?

C-9. What were the first roundups called?

C-10. What vehicle was used to carry the food?

Answers to The Rodeo

C-1. trail boss	C-2. hoodlum
C-3. wrangler	C-4. point riders
C-5. flank riders	C-6. drag riders
C-7. five or six	C-8. spring and fall
C-9. cowhunts	C-10. chuckwagon

Category D - Cowboy's Clothing and Gear

D-1. Name given to pair of leather leggings with wide flaps.

D-2. Give two reasons why a cowboy wore leather leggings.

D-3. Another name given to the cowboy's neckerchief.

D-4. Give two uses for a cowboy's neckerchief.

D-5. Name of device cowboy used to rope steers.

D-6. Name of device cowboy used to show which cattle belong to a rancher.

D-7. Some of the **most** important items a cowboy could own were his boots, horse and

D-8. A cowboy did not use his hat: (a) to fan a fire (b) as a pillow at night
(c) to carry food (d) to carry water

Answers to Cowboy's Clothing and Gear

D-1. chaps	D-2. protection against saddle burn and rattle-snake bites
D-3. bandana	D-4. protection against sun, smoke and dust, frostbite, as a drinking cup, as a sling, and as a tourniquet
D-5. lariat	D-6 branding iron
D-7. saddle	D-8. to carry food

Category E - Potpourri

E-1. When did the cowboy era begin to almost fade away?

E-2. Give one invention that nearly caused the cowboy era to fade away.

E-3. A calf who lost his mother was known as a/an _____.

E-4. A man who stole cattle was known as a/an _____.

E-5. When the herd began to run wild, this was known as a/an _____.

E-6. Cowboy's blanket rolls were called _____.

E-7. Name for a Spanish cowboy.

E-8. Spanish word for roundup.

E-9. The name for a western cemetery was _____.

E-10. Name of a town place where cowboys got drinks.

E-11. Name of a town place where you would have your horse kept.

E-12. Name of a fenced in area to keep many horses.

Answers to Potpourri

E-1. around 1900	E-2. barbed wire	E-3. dogie
E-4. rustler	E-5. stampede	E-6. hot rolls
E-7. vaquero	E-8. rodeo	E-9.boot hill
E-10.saloon	E-11.livery stable	E-12.corral

Category F - Cattle Trails

F-1. **First** of the major cattle drive trails of the Old West.

F-2. **Most heavily** traveled cattle drive trail.

F-3. **Busiest cattle** drive trail coming from the **north**.

F-4. Cattle drives using the Goodnight-Loving Trail met with the railroads in what state?

F-5. Name at least two territories that the cattle drive trail from the north crossed.

F-6. In what state did the **first** cattle drive trail end?

F-7. In what state did the **busiest** cattle drive trail end?

F-8. Three trails coming from Texas traveled through a territory. Name the territory.

F-9. All cattle train routes ended up in what city?

F-1. Shawnee Trail	F-2. Chisholm Trail	F-3. Western Trail
F-4. Colorado	F-5. Dakota, Montana, and Wyoming Territories	F-6. Missouri
F-7. Kansas	F-8. Indian or Oklahoma	F-9. Chicago

Variations:

This popular design is very versatile and can be used in many different forms. Some suggested ways would be:

1. associating matching-type activities

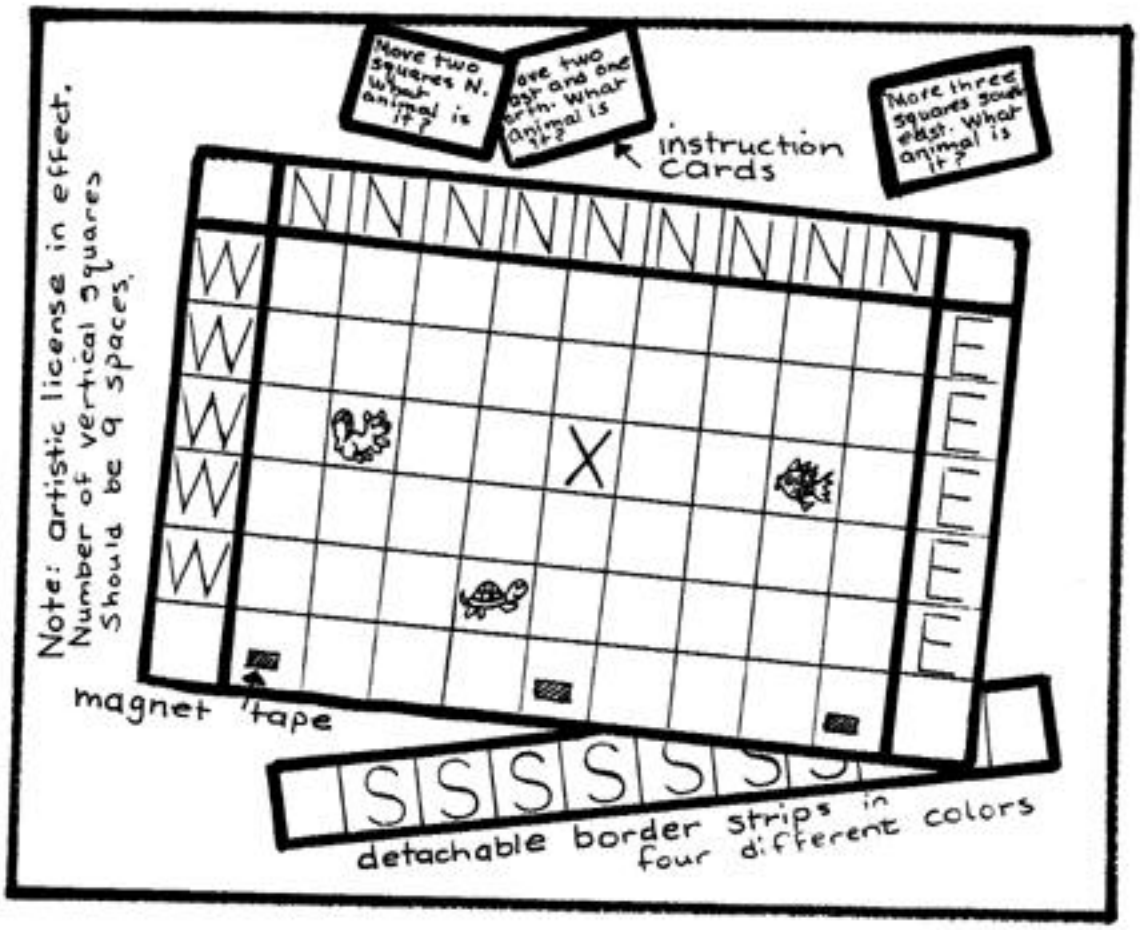
2. categorizing-type activities (i.e. - parts of speech, food groups)

3. sequencing-type activities
   a. left to right progression
   b. events in a story
   c. order of words in short sentences
   d. time line (people and events)

4. reviewing concepts in an academic game format
   a. addition ladder
   b. ascending and/or descending the compartments
   c. moving from outside perimeter of the board to the interior compartments of the board.

Title: **GRAPH COORDINATE BOARD**

Purpose: See specific activities.



Description for Making the Activities:

1. On a sturdy piece of poster board 22 x 28, draw a graph coordinate design. This grid system can be used for many activities.

2. Leave a one-half inch space on each side as a border area.

3. Place three small pieces of magnet tape (or velcro) on the top and bottom sides and two small pieces of magnet tape on the left and right sides. All magnet tape should be placed within the one-half inch border.

4. Make two different sets of one-half inch border strips. These strips will be placed around the edge of the board for different activities.

Set One - 4 different colors (red, blue, green, yellow) with symbols for cardinal directions printed on each strip.

Set Two - graph coordinate areas designated by numbers at the top and bottom and capital letters on the left and right sides.

5. On the back of each set of strips, place pieces of magnet tape (or velcro) so that they align with the magnet tape on the poster board. By doing this, the border strips can be removed and replaced with other border strips.

6. Make a red X that can be placed on the board as a starting point.

7. Find small pictures of animals (such as animal stickers) and paste them onto small cards that will fit into the spaces of the grid system. This set of animal cards can range from 12 to 24.

Sample Set of Animal Picture Cards:

tiger, lion, bear, fox, rabbit, skunk, elephant, deer, chipmunk, pheasant, snake, duck, shark, squirrel, rhino, alligator, gorilla, turtle, cow, horse, cat, dog, hippo, turkey, etc.

Directions For Teacher:

1. Place the animal picture cards on the board in a random fashion. Note: With very young children, make sure they can identify the animals first before they complete the activity.

2. Devise directions for students to move according to color direction and counting. Disregard the cardinal direction symbols on the border strips. They are for another activity.

3. Put a set of statements for moving on a cassette tape, or conduct the activity as an oral exercise, or put the statements in writing for an instructional aide to use.

4. Provide a verbal explanation as to how this activity works. If you are monitoring this exercise, you can determine the correct response. If children are working independently, you will have to provide some kind of answer key. One suggestion would be to have numbered jar rings. As each direction is read or listened to, children can check their responses with an answer key.

NAME THAT ANIMAL --- Activity One (to be used with different color border strips)

Purposes: Each student will be able to:

1. identify different kinds of animals from their pictures.

2. correctly count the number of squares while moving to the border colors.

Sample of Direction Statements

1. From the starting point, move three squares toward the blue. What animal is located there?

2. From the starting point, move five squares toward the yellow. What animal is seen there?

3. From the starting point, move two squares toward the red, then four squares toward the blue. What animal is located there?

4. From the starting point, move three squares toward the green, and five squares toward the yellow. What animal is there?

5. From the starting point, move three squares toward the blue, three squares toward the green, and five squares toward the yellow. What animal is located there?

Variation One (placing pictures of animals at locations)

1. From the starting point, move three squares toward the blue and two squares toward the yellow. Place a picture of a snake there.

Variation Two

1. From the starting point, move five squares toward the red. Put three pieces of macaroni there.

2. From the starting point, move two squares toward the blue, and three squares toward the green. Put five popcorn seeds there.

Variation Three

Classify the animals as to whether each one is a wild animal, a pet, or a domesticated animal.

Variation Four

Place the pictures of animal cards into smaller sets. Have the children associate names of animals with their corresponding pictures. Then have them alphabetize the names of the animals.

DIRECT HIT --- Activity Two (to be used with cardinal directions printed on the border strips)

Purposes: Each student will be able to:

1. identify animals by correctly using cardinal directions.

2. follow directions by placing animal cards at specified locations.

Modifications for the Teacher:

1. Use the color border strips with designated cardinal directions.

2. Make a similar grid coordinate answer key showing the names and numbers of animals.

3. Provide an activity sheet for students to write their answers.

4. Instruct your students to begin each set of directions at the starting point (red X).

Sample of Cardinal Directions:

1. Move three squares south. What animal is there?

2. Move four squares west. What animal is there?

3. Move three squares west and one square south. What animal is there?

4. Move two squares north and two squares east. What animal is there?

5. Move three squares south, two squares west, and four squares north. What animal is there?

Variation One With Intermediate Directions

1. Move one square southwest and one square east. What animal is there?

2. Move three squares northeast and six squares south. What animal is there?

3. Move one square northeast and two squares southeast. What animal is there?

4. Move four squares east, three squares north, and one square southwest. What animal is there?

Variation Two

Provide children with a set of directions whereby they place an animal picture card in a certain location. i.e.--Move three squares north and four squares west. Place the tiger there.

GRAPH COORDINATE AREAS --- Activity Three (to be used with graph coordinates printed on the border strips).

Purposes: Each student will be able to:

1. use graph coordinates to locate animals.

2. cite graph coordinates that pinpoint the location of animals.

Modifications for the Teacher:

1. Replace color border strips with border strips that designate graph coordinates.

2. Make a similar answer key showing the names and graph coordinates of animal locations.

Sample of Graph Coordinate Statements:

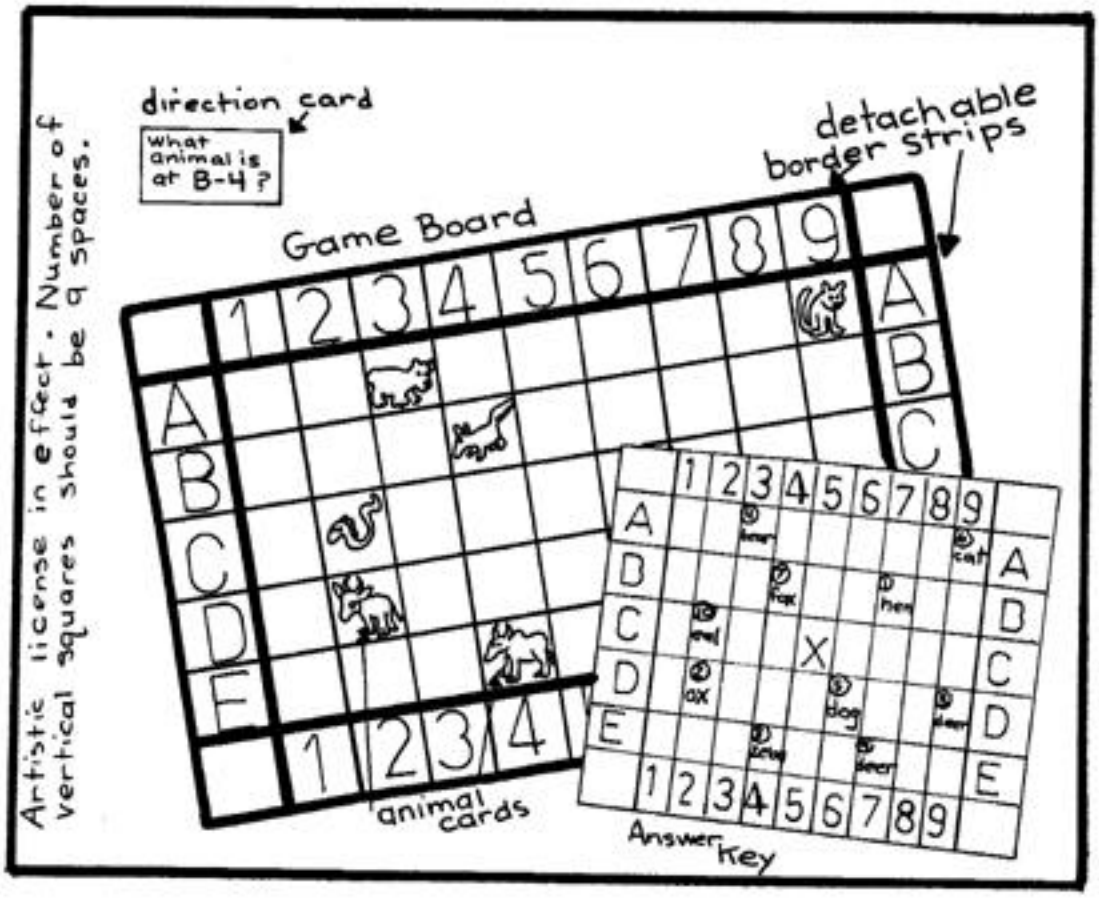
1. What animal is located in coordinate area H,2?

2. What animal is located in coordinate area F,3?

3. What animal is located in coordinate area D,2?

4. What animal is located in coordinate area B,l?

5. What animal is located in coordinate area A,3?



Variation One:

1. Place the tiger in coordinate area E,7.

2. Place the moa in coordinate area G,4.

3. Place the echidna in coordinate area B,6.

Variation Two:

1. Give the graph coordinates that locate the giraffe.

2. Give the graph coordinates that locate the elephant.