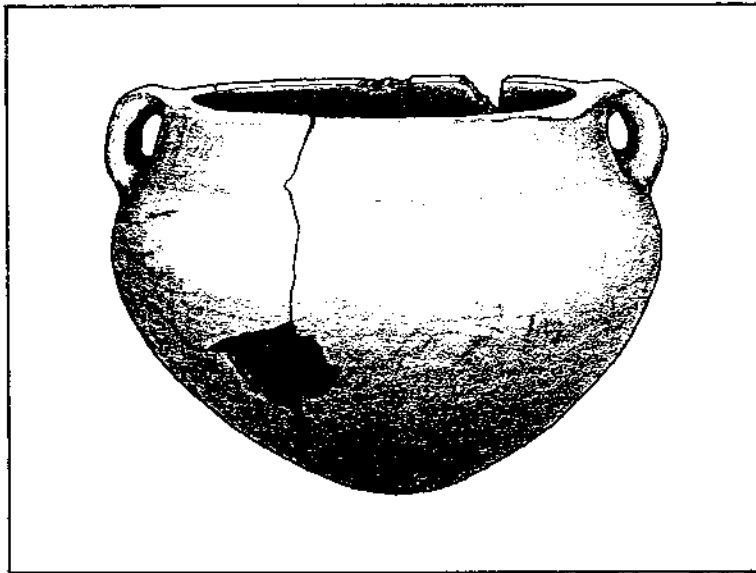


Pottery: From Trash to Treasure

Themed Discovery Program Teaching Materials



Education Department
Dickson Mounds Museum
Lewistown, IL 61542
309.547.3721

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SUGGESTED USE OF THESE MATERIALS

Pre-Visit:

- Show video to introduce students to topic.
- Do pre-visit activities.
- Review “**Words to Know**” and “**Timeline of Illinois Indian Cultures**”.
- Photocopy any materials you wish to use. However, copying the video is prohibited. All “originals” are to be returned to the museum during the fieldtrip.

Museum Visit:

- Review “**A Guide to Touring Dickson Mounds**”.
- Provide copies of the museum worksheet and pencils for all students.
- Leave evaluation form and teachers kit with museum receptionist.

Post-Visit:

- Do post-visit activity.
- See “**Suggested Books and Videos**” for further study.

A NOTE TO TEACHERS

WHY USE THIS KIT ?

While many people are somewhat familiar with American Indian cultures of the Northeast, Southeast, Northwest, and Southwest, few know much about the Indians who lived in the Midwest.

Illinois is rich in evidence of Native American cultures of the past. Archaeological work on sites at and around Dickson Mounds has contributed greatly to our knowledge of the long sequence of Indian cultures in Illinois. Dickson Mounds Museum's exhibits and educational programs take an entertaining, educational and interdisciplinary approach to their presentation of this diverse and exciting Indian history.

"Pottery: From Trash to Treasure" is a program that incorporates State Goals for Learning. Its purpose is to help students understand how scientists can use objects that are seemingly insignificant to interpret cultures. While objects such as broken pottery sherds may be seen as trash, they are treasures of information.

As a result of participating in this program students will be able to demonstrate skills in the following subjects:

SOCIAL SCIENCES

1. Understand and analyze events and movements shaping the history of Illinois.
2. Demonstrate a knowledge of the basic concepts of the social sciences and how these help to interpret human behavior.
3. Apply skills and knowledge gained in the social sciences to decision making in life situations.

MATHEMATICS

1. Understand and use methods of data collection and analysis.

BIOLOGICAL AND PHYSICAL SCIENCES

1. Understand the social and environmental implications and limitations of technological developments.
2. Understand the processes, techniques, methods and available technology of sciences relating to archaeology.

LANGUAGE ARTS

1. Use spoken and written language effectively to communicate ideas and information and to ask and answer questions.

FINE ARTS

1. Identify processes and tools required to produce visual art.
2. Demonstrate the basic skills necessary to participate in the creation of art.
3. Identify significant works from major historical periods and how they reflect cultures past and present.

TEACHING ABOUT AMERICAN INDIANS

In recent years there have been changes in the public perception of American Indians by non-Indians. Even in today's popular culture (eg. films and television programs) there is often an attempt to present a more balanced view of Native American Cultures than has been common in the past. Both the views of Indians and Euro-American historians and scholars are taken into account. There are more attempts to avoid ethnic stereotypes, such as the notions that all Indians wore war bonnets, lived in tipis, and rode horses. Our aim is to instill, in children, an understanding of the complexity, depth, and diversity of America's Indian cultures. Children often don't realize that sitting "Indian style", saying "How", "Ugh", or producing "war whoops" are actions that perpetuate stereotypes. Class discussions on the hurtful affects of ethnic stereotyping, of any kind, will help future generations to become more sensitive to the cultural perspectives of others.

TIMELINE OF ILLINOIS INDIAN CULTURES

HUNTING AND GATHERING

Paleo-Indian Culture.....10,000 - 8000 B.C.

- Nomadic people who followed herds of ice-age mammals such as the mastodon and hunted them with a spear
- Lived in small campsites
- Gathered plant foods to supplement diets
- Had stone, bone, antler and wood tools such as scrapers, hammerstones, knives and projectile points
- Small hunting bands and families were the important social units

The Archaic Indian Culture.....8000 - 1000 B.C.

- Gathered seeds, nuts, berries, roots as an important part of their food supply
 - Hunted small game and deer with the spear and a spear-throwing tool called an atlatl
 - Fish and mussels were important foods -- used fishhooks and nets
 - Were seasonally nomadic within a region, setting out from base camps to use available resources
 - Cultivated squash and gourds on a limited basis
 - Used some copper as well as stone, bone, antler, shells and wood for tools and jewelry
 - Established a few villages
 - Had rituals connected with death; grave items placed with burials; painted corpses at time of death
 - Related family groups and hunting bands were important social units
-

GARDENING

Woodland Indian Culture.....1000 B.C. - 1200 A.D.

- Obtained food by hunting, gathering and gardening
 - Hunted deer and small game, fished and gathered wild foods
 - Cultivated plant foods such as squash, marshelder, amaranth, and sunflowers
 - Began using the bow and arrow
 - Used deep pits for long term food storage
 - Established permanent villages of 50 or so people
 - Traded widely (e.g. seashells from the Gulf of Mexico and obsidian from Wyoming)
 - Highly skilled as craftsmen for both functional as well as art objects used in ceremonies
 - Wide spread building of burial mounds, graves often elaborate
 - Had a social class structure with an inherited leadership
-

FARMING

Mississippian Indian Culture.....1000 - 1500 A.D.

- Agriculturists
- Cultivated corn, beans, and squash as a staple part of their diet
- Continued to hunt, fish and gather wild foods but with dependence on cultivated crops
- Lived in fairly large towns and villages
- Complex society centered around religious traditions
- Job specialization creating interdependence among one another to meet wants and needs (e.g. farmers specialized in growing food to feed many others)
- Built flat-topped ceremonial mounds
- Traded widely
- Greatly stressed the environment; large populations, cleared large areas of land, made huge demands on animal food resources and on the wood supply; moved earth for mounds

CONFLICT AND CHANGE

Historic Illinois Indians.....A.D. 1673-1830s

- Traded with Europeans
- Used iron tools, trade beads, glass bottles, guns
- Cultivated corn, beans, and squash
- Hunted bison seasonally
- Introduced to the horse
- Hunted deer, elk and smaller game
- Fished and gathered wild plants
- Eventually were forced to move from Illinois

(Indian tribes present in Illinois in historic times included: The Cahokia, Kaskaskia, Michigamea, Moingwena, Maroa, Tapoura, Espiminkia, Chinkoa, Chepoussa, Coiracoentanon, Tamaora, Peoria, Miami, Wea, Piankashaw, Sauk, Fox, Potawatomi, Mascouten, Kickapoo, Delaware, Shawnee, Ottawa, Menominee and Winnebago.)

ACTIVITIES FOR THE CLASSROOM

TRASH TALES

OVERVIEW

The saying "one man's trash is another man's treasure" is especially true for archaeologists. Much of the information that archaeologists gain about the past is found in ancient trash pits. Objects that have been discarded as trash thousands of years ago are a treasure to archaeologists because of the information that they reveal about a past culture. A simple, everyday object may actually tell us more than we think about the people that made and used it. The object can tell us what their lives were like, what their limits and possibilities were, how they thought, what they valued, and how they shaped their world.

In this activity students will examine today's trash and what it can tell us about our own culture in order to understand how an archaeologist can learn about cultures from trash of the past.

OBJECTIVES

Students will be able to:

1. "Read" an object by carefully examining it and then analyzing the observations.
2. Apply methods of data collection that archaeologists use to interpret artifacts from the past.
3. Apply skills of observation with a present-day container to be used when examining pottery containers of the past.

SUBJECTS

Social Sciences, Sciences, Language Arts

AGE LEVEL

Grades 4 - 12

TIME REQUIRED

45 minutes

MATERIALS

1. Coca-cola can from the trash
2. Chalk board and chalk
3. Paper and pencil

PROCEDURES

1. Arrange the students to sit in a semi-circle so that they can see the object and the board.
2. Discuss the meaning of the saying "one man's trash is another man's treasure." (see overview explanation)

3. Explain that you will be "reading" a coca-cola can found in the trash today and ask "What do you think I mean by 'reading' an object?"
(Objects tell stories just like words. Archaeologists study cultures that existed before any writing was used. Since there are no books about these cultures, archaeologists have to be able to read the objects that they find--meaning to carefully examine and analyze them--in order to learn the stories of these prehistoric cultures. Today many objects have words on them that can be read, but characteristics like the shape and decorations can also be read.)
4. "Read" the Coca-Cola can to see what it can reveal about our own culture.
Each person must make one observation about the can and then pass it to the next person. The teacher, or an appointed scribe can write the observations on the board. The teacher can start the observations and prompt the students with questions if they get stuck.
(see "Trash Tales: Ways to Look at a Coca-Cola Can")
5. Analyze the observations and discuss what they reveal about our own culture and the people who make and use the Coca-Cola cans today.
(For example, the design of the can and its practicality, the advertising gimmicks and extent of commercialism, the efforts to recycle in a society that tends to use things and throw them away, the emphasis on Nutrition Facts, the location of the canning process and the extent of trade that takes place)
6. Discuss how archaeologists might use these same skills of observation of a present-day container to learn from containers of the past - pottery.

Optional

7. To take the idea of *Trash Tales* further, each student can collect a piece of container trash from the lunchroom cafeteria (or from home) and "read" it.
8. After careful observation, students can write a brief description of their object with an analysis, noting what they can tell about this present-day culture from the trash.

TRASH TALES

WAYS TO LOOK AT A COCA-COLA CAN

Each student should make one observation about the can and then pass it to the next person. This guide is to help teachers prompt students if they get stuck. Observations do not have to be made in any order. In parentheses are further questions for analyzing what the Coca-Cola can can tell us about the present-day culture.

TOUCH

- Smooth or rough?
- Hard or soft?
- Light or heavy?
- Hot or cold?

TASTE

- From past experience, is the product sweet, sour, bitter, or salty?

SMELL

- Pleasant or not?

HEAR

- Does it make a noise when dropped, crumpled, or beaten like a percussion instrument?

SEE

Measurements

- What is the size of the can?
(Why is it this size? Are all soft drink cans the same size? If so, why?)
- How much liquid can the can hold?
(Why is this information in ounces and also in milliliters?)

Shape

- Describe the shape.
(Why is it this shape? Is it easy to hold or awkward?)

Design

- Is it just a regular cylinder like a glass?
(Why does the bottom and the top curve in? Why is it important to be able to stack the cans and to attach 6 cans together with plastic rings? Are there other ways to package a drink for selling? Why don't we just drink out of a glass? What is the real purpose of a soft drink can?)
- What is the purpose of the pop top?
(The tab didn't always stay attached to the can when it was opened. Why would there be a need for this new design? Is it responsive to the desire for less litter?)

Decoration

- Is the can plain or decorated?
(Why does the can need to be decorated rather than being just a plain color? Does our society have a lot of competition with products so that they have to stand out to get noticed?)

- What color do you see most?

(Why is this color used? Does it catch attention? Does it remind you of anything? Does it make you feel any way?)

- Are there any designs or fancy lettering?

(The Coca-Cola lettering with the swoosh through it is unique and even trademarked so that no one else can use it. Why are trademarks so important in our society? What is so important about this particular lettering? Do the flowing lines remind you of the drink itself?)

Advertisement

- Are there any special slogans on the can?

(Why are they important?)

- Do the slogans, like "Always Coca-Cola," remind you of ads on the radio or T.V. with catchy music and pleasing images?

(Does it make you want to drink the drink?)

- Why is Coca-Cola called "classic" and the "original formula"?

(Why are these descriptions important? Is there a history behind the wording? Is there competition with other colas?)

Materials

- What material was used to make the can?

(Why was this material used? What are its advantages? Is it light, non-breakable, renewable, inexpensive?)

- Was the can made by hand or in a factory?

(Why would it need to be produced quickly?)

Written information

- Is the can recyclable?

(What does this say about the attitudes of conservation in our culture? Are resources scarce?

Are the cans always found in a recycle trash bin when they are thrown away? Why are the cans often seen on the side of the highway? Are they easy to carry and discard? Can the can be used for anything else in its current shape?)

- Was the can made nearby?

(If the cans were made far away does that mean that we have a good trade network where we can get anything we want fairly easily? What would we do if we couldn't get the product? How far away can people get Coca-Cola? In other countries? Is it found worldwide?)

- Is the product nutritious?

(Why is it important to list the nutrition facts? Is our culture very fitness conscious?)

- Are the ingredients listed on the can?

(Why would anyone want to know the ingredients? Could there be medical problems like allergies that would cause a reaction if the person drank the product?)

- What do the numbers and lines mean?

(The bar code or UPC symbol--Universal Product Code--is scanned by a computer in the store when the product is bought to know what is sold, when, and where. Why is this information important for the Coca-Cola Company? Does this suggest a culture with high technology? The numbers on the bottom of the can include a date. Is this important for the person who drinks the cola?)

- What is the phone number on the side of the can?

(Is it important for consumers to have an information line? What might the consumer want to know about the product that is not already written on the can?)

BEING RESOURCEFUL

OVERVIEW

Many resources were available for native peoples to use in making the objects they needed to live. Animal, plant and mineral materials provided their clothing, shelter, food, tools, ornaments and more.

OBJECTIVES

Students will be able to:

1. Describe natural resources in the environment.
2. Examine a scene of life in the past and identify the kinds of resources that were available to American Indians for use in making various containers.

SUBJECTS

Social Sciences, Environmental Sciences.

AGE LEVEL

Grades 3 through 6.

TIME REQUIRED

Approximately 20 minutes.

MATERIALS

1. Crayons
2. Copies of "Being Resourceful" worksheet. (Teacher is to make enough copies for students.)

PROCEDURES

1. Discuss the meaning of the phrase "natural resources" (see vocabulary list). Ask students to list natural resources in their environment and how they are used.
2. Ask students to think of natural resources found in other environments that we don't find in Illinois. (Have them think of diverse environments, e.g. Hawaii, Alaska, desert, prairie or mountain regions.)
3. Distribute color-in worksheets.
4. Ask students to circle any natural resource that an Indian could have made into a container. After they do this, discuss their choices.
5. Students can then color on the worksheet.

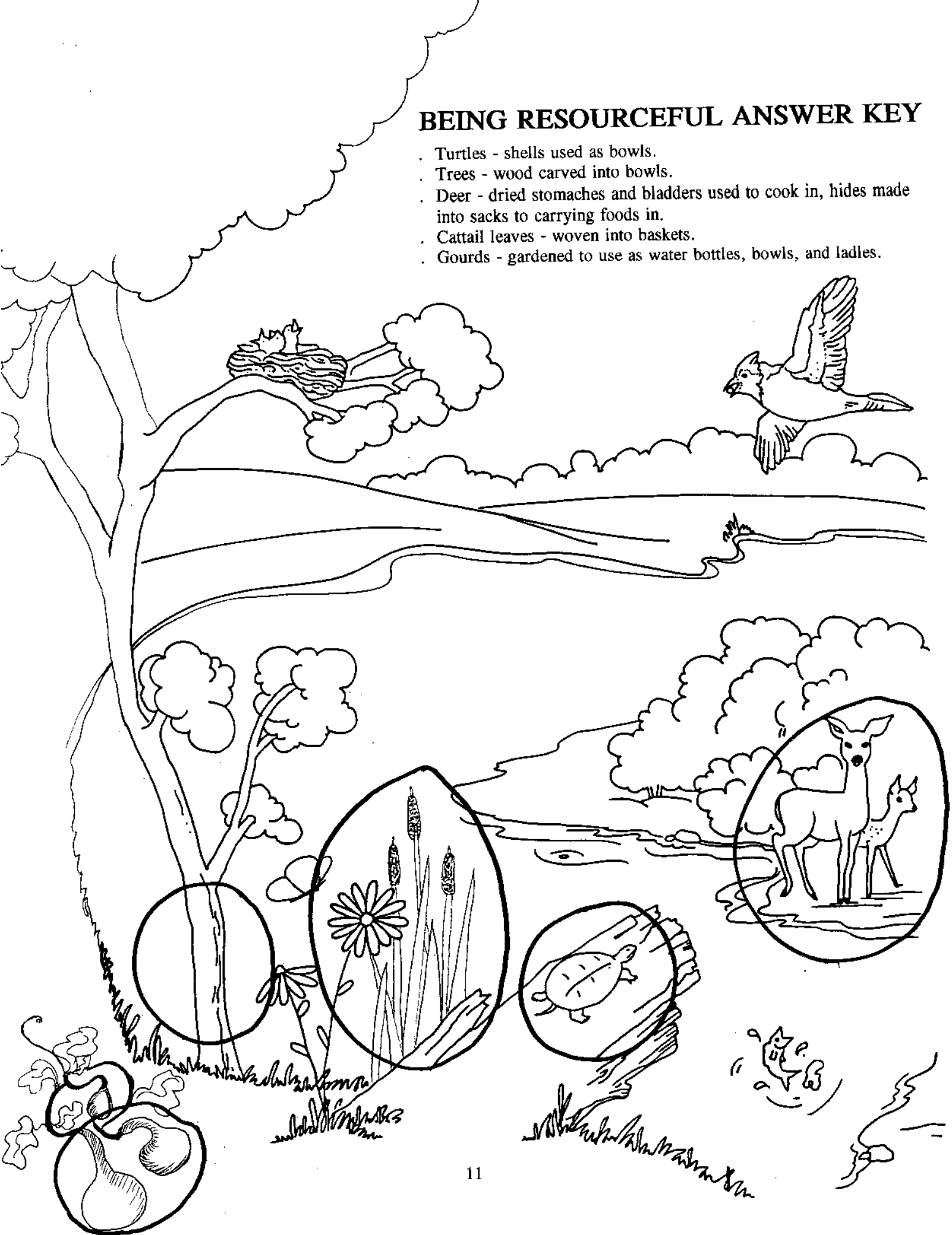
BEING RESOURCEFUL

Circle any natural resource that an Indian might have used to make into a container.



BEING RESOURCEFUL ANSWER KEY

- . Turtles - shells used as bowls.
- . Trees - wood carved into bowls.
- . Deer - dried stomachs and bladders used to cook in, hides made into sacks to carrying foods in.
- . Cattail leaves - woven into baskets.
- . Gourds - gardened to use as water bottles, bowls, and ladles.



POTTERY PARTS

OVERVIEW

Archaeologists seldom find whole pottery containers. More often, they find broken pieces of pottery, called sherds, scattered across archaeological sites. Because archaeologists usually only find a few pieces of a pot, they must determine how the pot looked before it was broken. Putting a pot together with a few sherds is like working a puzzle with missing pieces. And, while broken pottery doesn't have straight-edged border pieces as a conventional starting point for putting the puzzle together, pottery does have different body parts that can be identified by their shapes.

OBJECTIVES

Students will be able to:

1. Use skills of analysis to determine what a pot would look like from its broken sherd parts.
2. Understand how an archaeologist develops a more complete picture about a culture from scattered clues.

SUBJECTS

Social Sciences.

AGE LEVEL

Grades 4 through 8

TIME REQUIRED

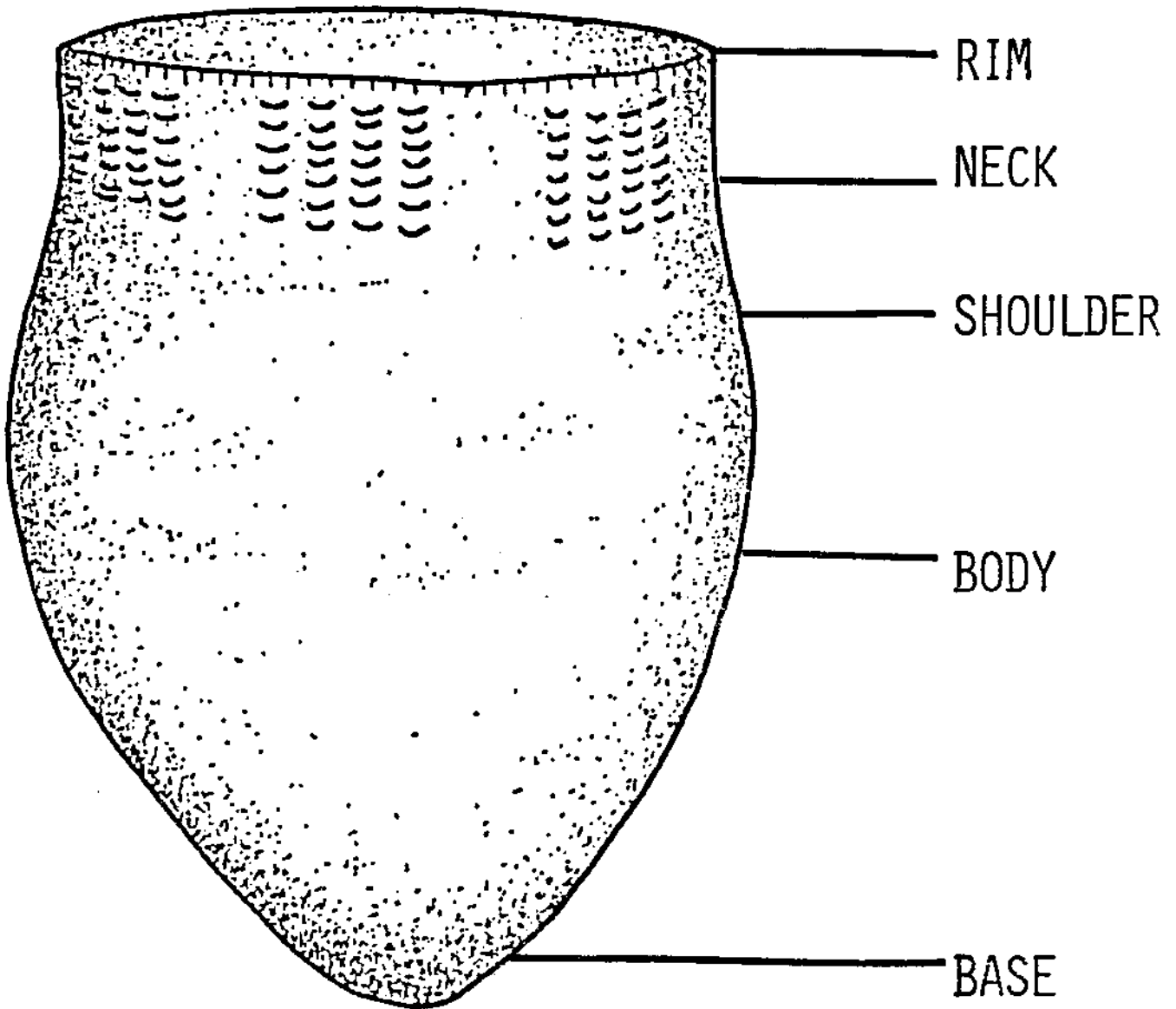
20 minutes.

MATERIALS

1. Illustration of typical pottery body parts and illustrations of pottery with unidentified body parts.
2. Paper pot sherds. (The teacher can copy the form provided and cut the sherds.)
3. Elmers glue and a sheet of posterboard.

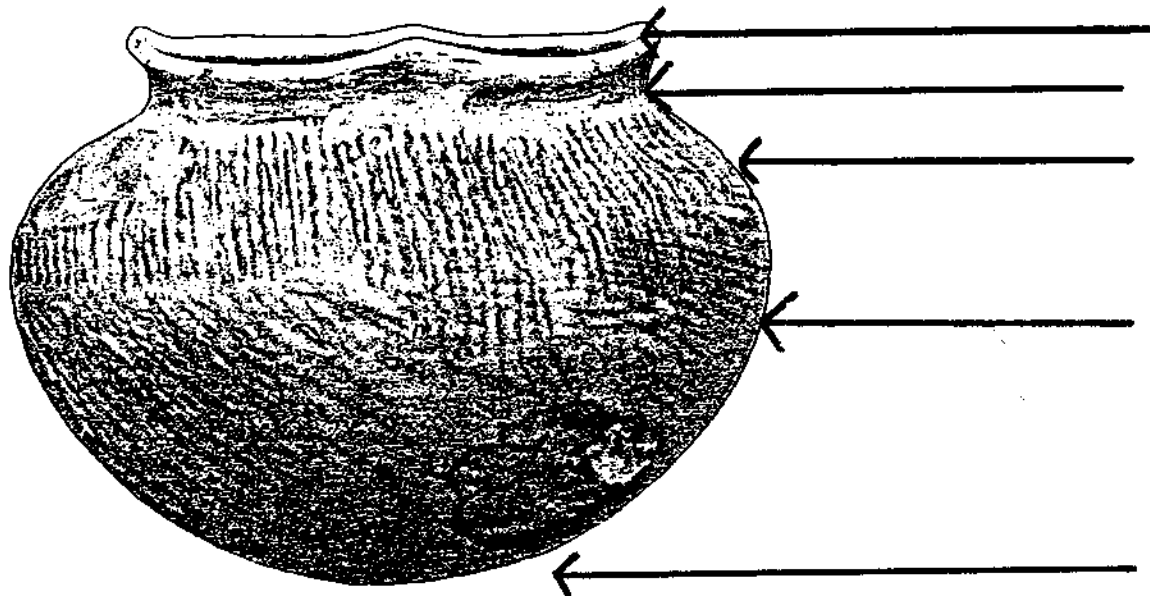
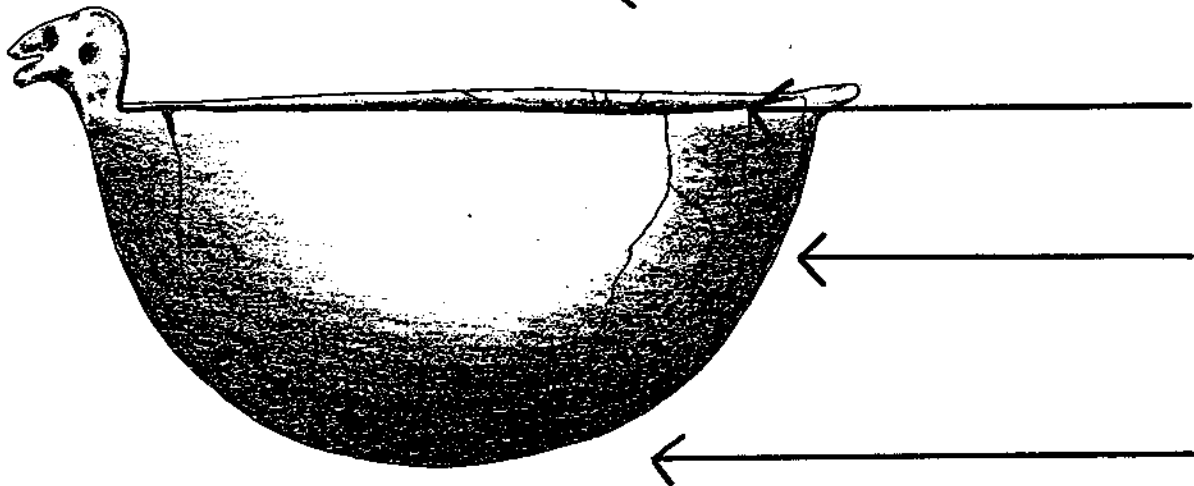
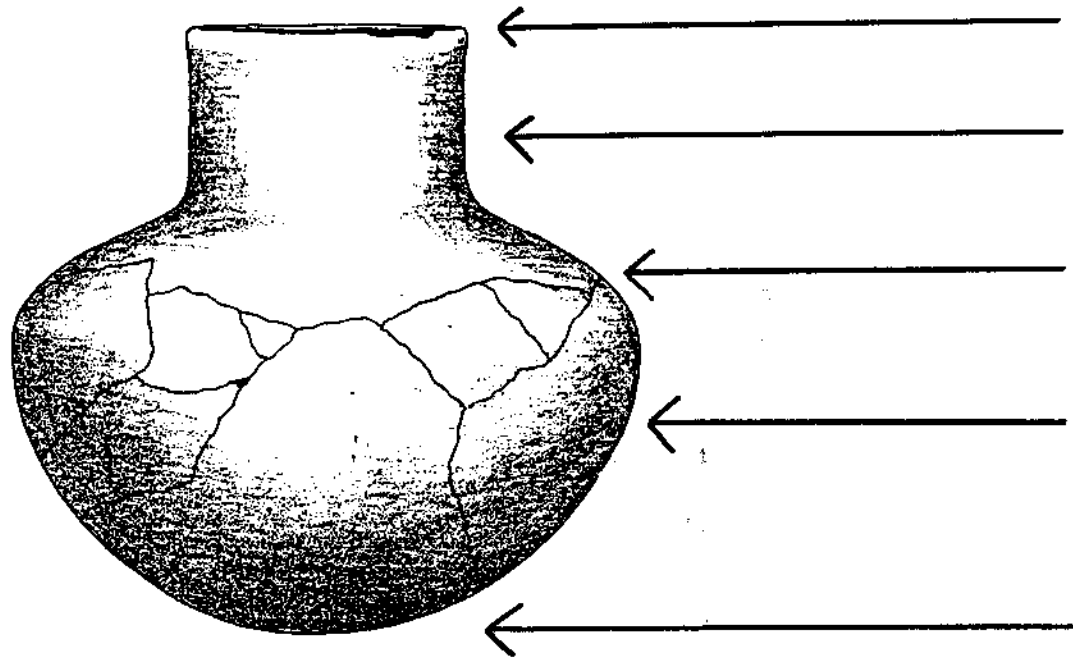
PROCEDURES

1. Class looks at drawing of a pot that has its' body parts identified. Practice identifying the parts of a pot. (eg. The rim has a smooth top edge, the neck curves in, etc.)
2. Class looks at drawings of pottery with unidentified body parts and determine what the sections are. Not all pots have the same body parts.
3. Teacher is to take the picture of the "cracked" pot and cut on fracture lines to create "sherds". Sherds are distributed to students.
4. Students should try to determine their sherd's body part.
5. Students work as a group to assemble their pottery sherds.
6. Once sherds are correctly laid out, they can be glued to a piece of posterboard to the display the assembled pot.
7. Make the point that archaeologists seldom find whole artifacts, so they have developed certain methods for reconstructing the past using the fragments of information they retrieve.

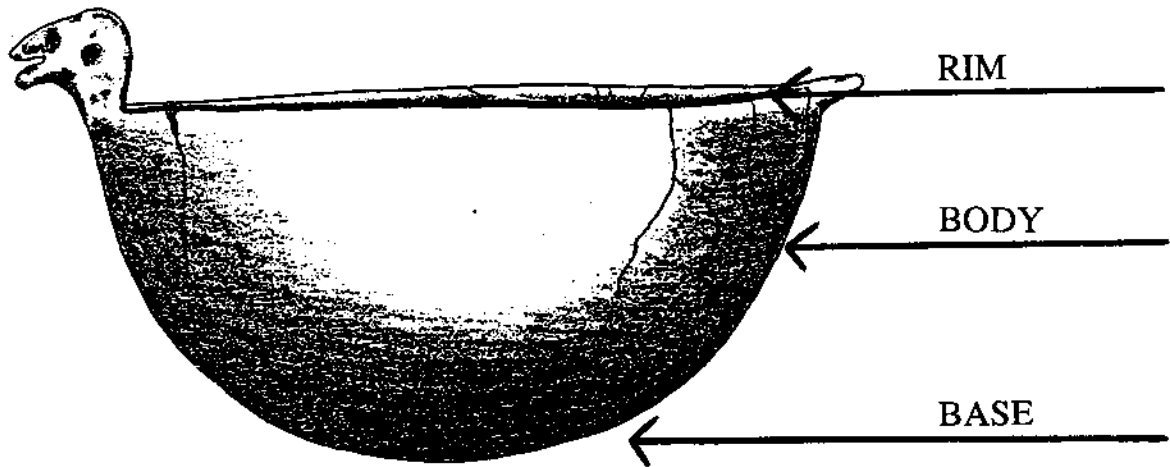
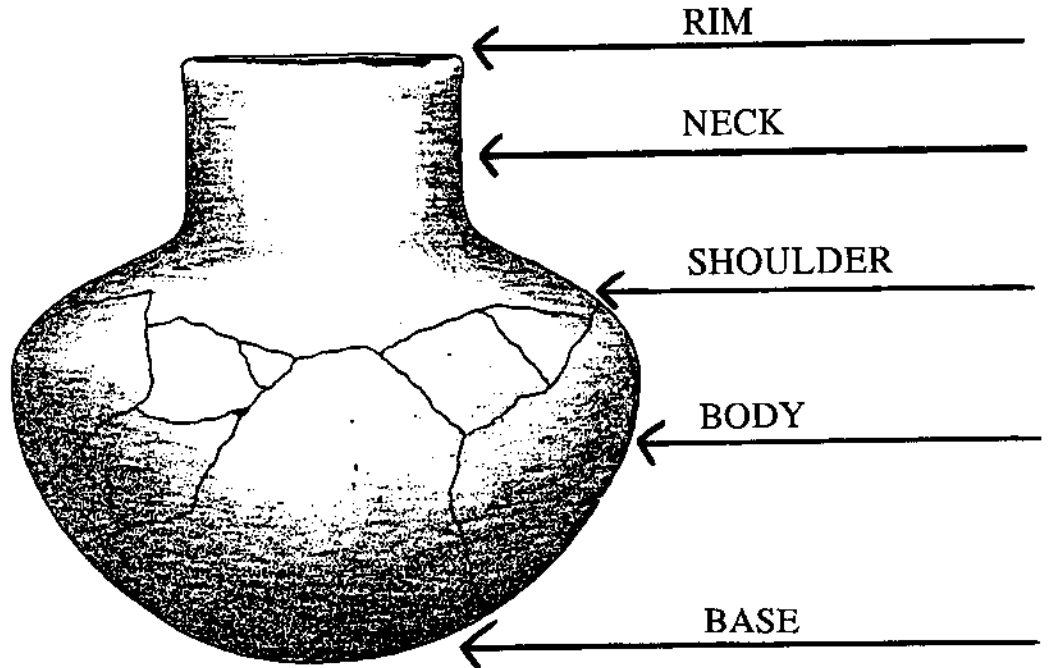


POTTERY PARTS

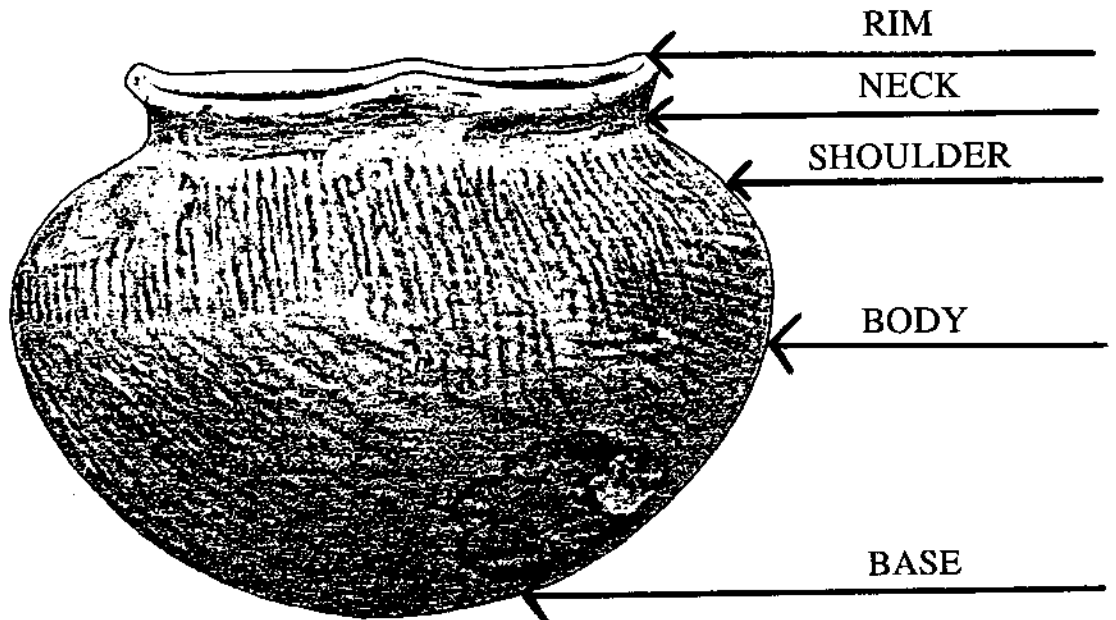
Write the names of the parts of each pot in the blank spaces provided.



POTTERY PARTS ANSWER KEY

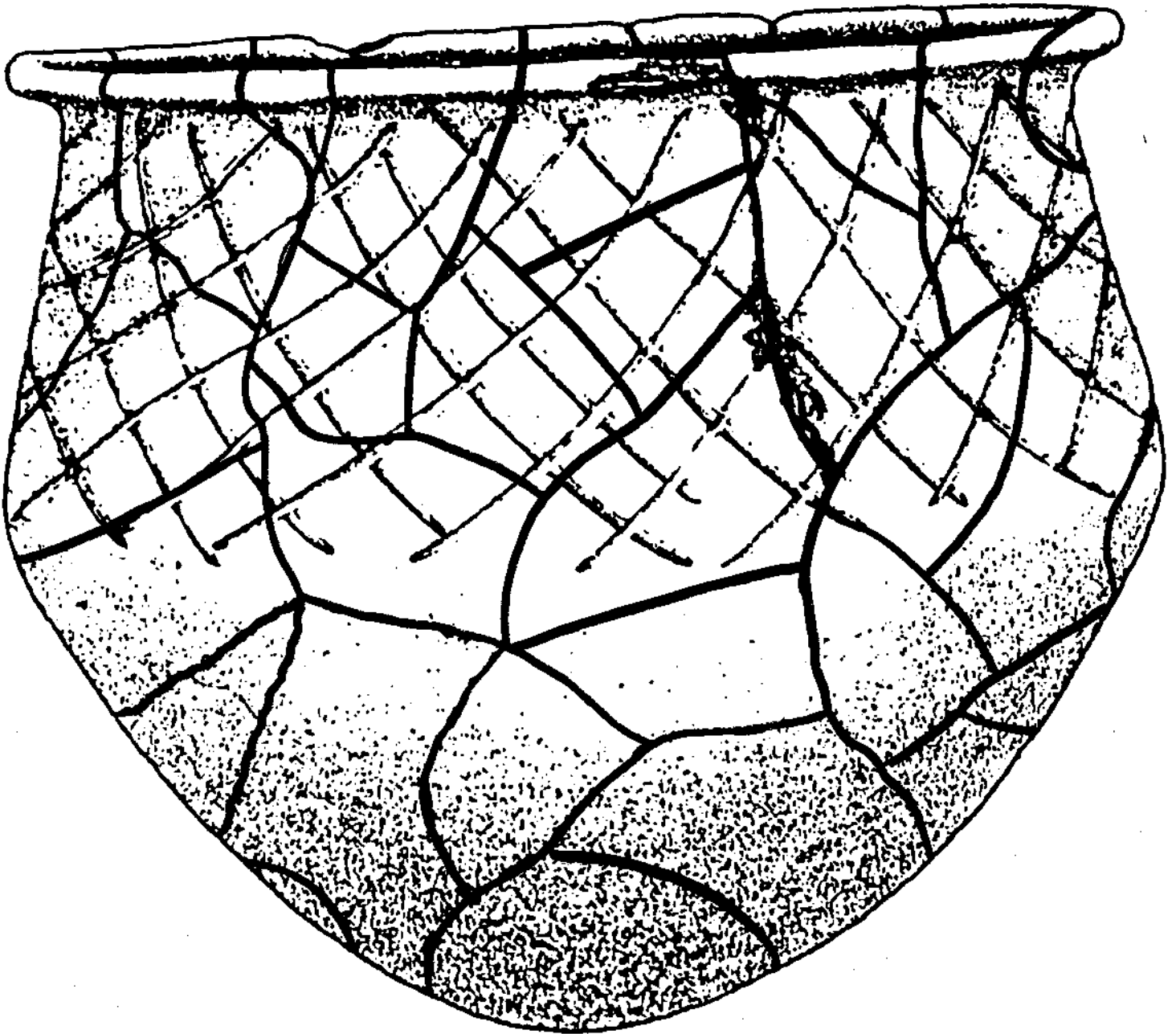


(Duck effigy pot does not have a neck.)



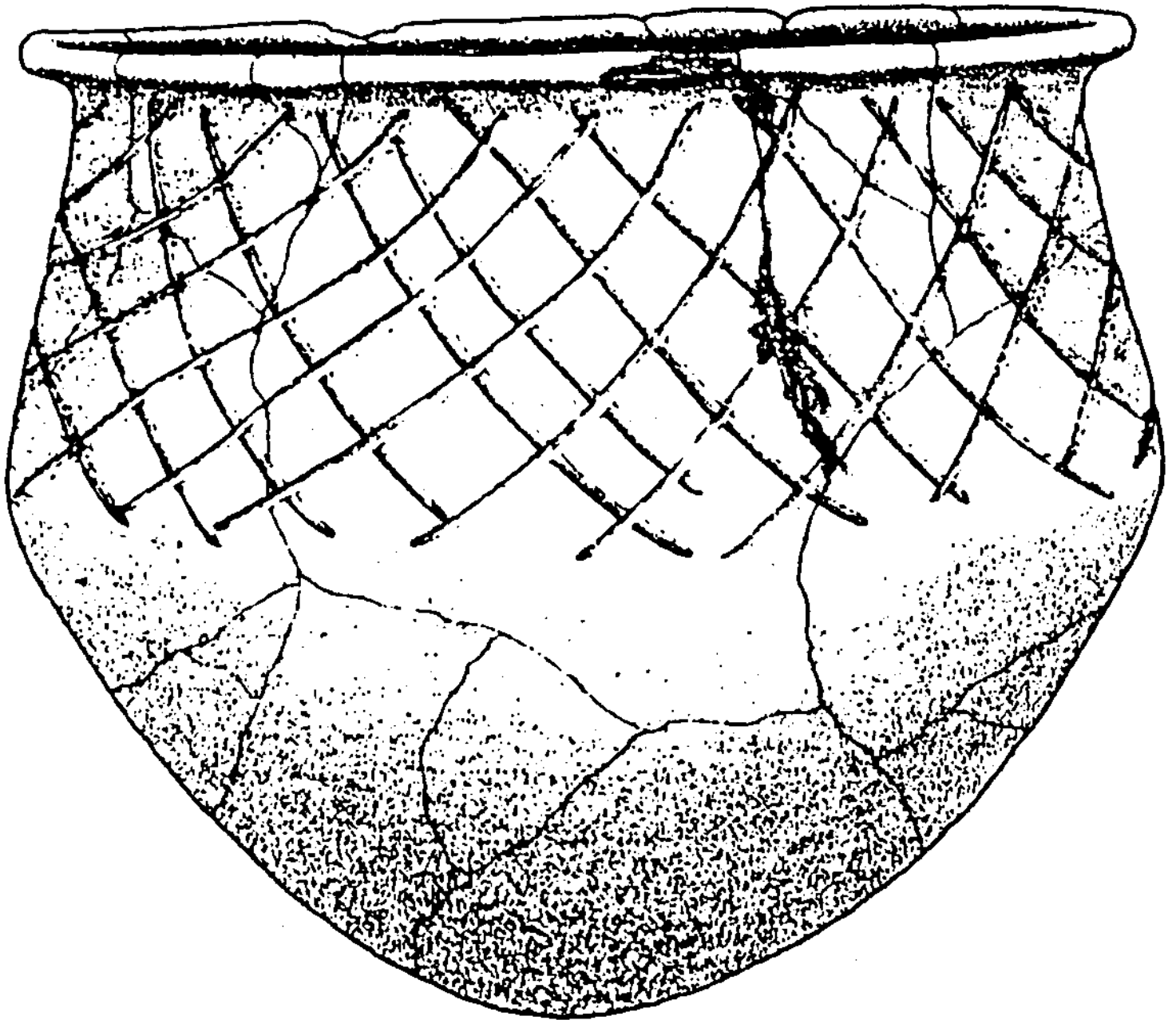
POT SHERD ASSEMBLY

Cut Along darkened lines to make paper pot sherds. Distribute sherds to students. Students can work together to reassemble the sherds. While working together, students should attempt to identify what part of the pots body their paper sherd is from (eg. rim, neck, shoulder, body or base).



POT SHERD ASSEMBLY ANSWER KEY

Properly reassembled pottery sherds should look like this picture when pieced together.



WHAT'S IN A SHAPE?

OVERVIEW

The pottery shapes made by early American Indians were influenced by forms found in nature, as well as the purpose for which containers were being made. For example, water bottles bear the same form as gourds. This is probably because gourds were once used by Indians to make water bottles, before bottles were made of clay. Indian people probably continued to make clay bottles in this form, because the shape suited the function of the container. The long neck of the bottle is easy to hold and helps in pouring liquid. Other container shapes were perhaps similarly inspired. (See "Being Resourceful Answer Key.")

OBJECTIVES

Students will be able to:

1. Analyze trends in pottery design.
2. Consider alternatives to conformity by designing a non-traditional style pot.

SUBJECTS

Fine Arts, Social Sciences, Language Arts.

AGE LEVEL

Grades 4 - 12.

TIME REQUIRED

Approximately 1 hr. and 15 min.

MATERIALS

1. Drawing paper
2. Crayons
3. Markers or paints
4. Colored modeling clay

PROCEDURES

1. Students discuss the most common shapes found in our containers today, and why containers take on circular, cylindrical and box-like shapes.
2. Students design their own uniquely shaped containers in non-traditional forms, using crayons, markers or paints.
3. Give students modeling clay and have them try to transfer their 2-dimensional ideas on paper, into 3-dimensional objects.
4. Students can create an exhibit for the completed containers. 4" x 5" index cards should accompany each object, as labels stating what the container is for (e.g. "beverage container" or "serving dish", etc.) the name of the artist, and the date of creation.
5. Class hosts an exhibit opening. They can dress-up, bring refreshments, and even invite guests. Each artist should plan to make a brief statement about their exhibit piece.
6. Teacher may wish to organize a critique of the pieces on display, and have students consider whether their designs are really functional.

POTTERY: FROM TRASH TO TREASURE

Soon you will be visiting the Dickson Mounds Museum. Here you will learn about American Indian people who have lived in Illinois for thousands of years. Dickson Mounds is a special place to learn about Indian culture because of where it is located and what has been learned here. The museum is on a blufftop that was occupied by Indian people many years ago. It overlooks the Illinois and Spoon River valleys where Indians had their hunting and fishing camps, farms, villages and ceremonial centers.

Since there are no written records from people who lived around Dickson Mounds in the distant past, archaeologists and other scientists must work together and share the things they learn to better understand 12,000 years of environment and culture in Illinois. Like detectives, archaeologists study the lives of people from the clues they've left behind -- such as the remains of their towns, temples, houses, tools, food, ornaments....and even their pottery.

When ancient people broke their pottery, they sometimes reused the broken pieces, but often broken pots were viewed as trash and thrown away. Today, this "trash" is thought of as "treasure" by scientists who try to understand the lives of ancient peoples. While broken pottery may not be worth a lot of money, it is of great value because of the information it can provide about cultures of the past.

But what can we really learn from a container that has been thrown in the trash? Think about the things that are thrown away today and the various clues that this trash reveals about our own present-day culture:

- The large quantity of juice boxes that we find suggest that this a popular kind of drink.
- The colorful decorations and wording on a package draw our attention and perhaps encourage people to buy the product.

- The containers are not hand-made, but produced all over the country and the world, so there must be strong trade networks in our culture.
- Foods are bought ready-made, rather than made at home, to save time, suggesting a fast-paced culture.
- Our containers are used once, then thrown away, showing that we are a wasteful society.

Just as these simple containers can reveal a great deal about our own culture, pottery containers are an important tool for learning about the cultures of the past. Archaeologists can learn about people who used pottery by examining the clues in the containers--the materials, the shapes, the decorations, and the items in and around the pottery.

Unlike items made from plant and animal materials, pottery does not easily rot. Broken pieces of pottery, called sherds, sometimes last for thousands of years. Broken pottery was also seldom made into some other form, the way that a broken arrowpoint or bone tool might be re-shaped into a new tool. So a great deal of pottery has been found in the original way that it was used.

But, pottery is perhaps most important to the archaeologist because it is an indicator of something's age. Just as we can look at a cup decorated with Disney's cartoon Pocahontas, and know that it was made in the 1990s when the movie was released, archaeologists can look at the shapes and decorations on pottery as clues to tell when it was made in the past. Indian groups of different areas, over thousands of years, have made pottery in a wide variety of styles. So much pottery has been found and studied that archaeologists are able to divide the containers by style into different areas and periods of time. Now, when pottery is found at a new archaeological site, the site can be dated by the type of pottery that is found.

For almost 10,000 years the Indians who lived in the Illinois River Valley did not make pottery. Big, heavy pottery would have been inconvenient for the Indians to carry in the earliest years, as they often lived in temporary villages and camps, moving with the seasons and following the animals they hunted. Before pottery came into use, people cooked and stored food in baskets, dried stomachs of animals, leather bags, woven bags, and wooden bowls. About

4000 years ago, people began to grow gourds that they made into water bottles, dippers, bowls, and rattles.

World-wide, pottery has been one of early people's most important discoveries. The idea for pottery probably spread to this country from South America. Around 3,000 years ago, people in the Midwest began to make pottery for cooking and storing foods, thus changing the way they used these foods. Pottery was more than an everyday, household item that made life easier. It became a necessity of life and a way of expressing how people worked, lived and believed. Pottery was not only used by people throughout their lives, but it was also used in death. The ancient people's discovery of how to make pottery, or how to make tools from chipped stone, affected their lives in much the same way that computer or television technology has changed our world today. Pottery-making was an important discovery for the American Indians for a number of reasons:

- The clay for making pottery was found all across North America. Because it was easily obtained, clay could be made into pottery quickly, at any time and in large quantities.
- Once a pot was made, it was baked in a fire to permanently harden the clay. Fire-hardened clay was partially water resistant. A pot could be made more water-resistant by applying various substances to the inside of the pot.
- Baked clay pots were more durable than containers made of plant fibers, or animal skins and stomachs.
- Pottery bowls were better to cook in because they could be placed directly on a fire. This direct contact made it possible to heat foods and liquids to a higher temperature for boiling and stewing foods.
- By cooking in a container, fatty nutrients that would otherwise have cooked away in an open fire were saved, requiring less food to be needed.

Also,

- Pottery containers were better for storing foods than storage pits in the ground. It was easier to keep moisture, insects, and rodents out of a pottery container.

Archaeologists believe that women made the pottery because they have found potters' tools buried with women and not men. Also, the first written accounts describe pottery-making as a woman's craft. The first pottery was thick, crude, and made in simple forms. These pots were made by a "slab-construction method". In this technique, clay is flattened out and cut into thick sheets. Then slabs are joined together by pressing and shaping them into a bowl, with the aid of fabric-wrapped paddles. The early pottery of this area shows fabric impressions which were created as the slabs of clay were being shaped into a container.

Shortly after pottery-making began, Indian people started to cultivate gardens of "Marshelder", "Sumpweed" and "Lambsquarters," all plants which are considered weeds in today's fields. These plants produced large quantities of nutritious seeds that the Indians boiled in ceramic containers. Another food prepared in this way was hickory nuts. Cracked hickory nuts were boiled, causing the nutmeats to separate from the shells. Boiling also extracted oils, which were especially nutritious and could be skimmed off the top of water and mixed with other foods.

In addition to changes in cooking and using foods, people experimented with the pottery-making technology itself. Potters began to use two additional methods for making pottery...the pinch pot and coiling methods. The pinch pot method begins with a round ball of clay. A thumb impression is made in the center of the clay and then the clay between the thumb impression and the outside of the clay ball is squeezed upward with the fingers to form the sides of the pot. Larger pots could be constructed by a method known as coiling. Coil pots are made by stacking coils of clay and pressing them together. Sometimes these coils were stacked on top of a pinch pot base. Slab pottery-making methods were soon abandoned in favor of pinch pot and coiling methods because these latter methods produced thinner, more nicely formed pots.

Throughout this evolution of pottery-making processes, potters also "tempered" their clay. Tempering means to add a substance such as crushed stone, sand, or shell to the clay to make it stronger. Tempering helps to keep the pottery from shrinking and cracking as the clay dries, and helps prevent a pot from breaking when it is used for cooking over a hot fire.

Once pottery was constructed, it was dried slowly, then fired. Drying pottery allows all moisture in the clay pot to evaporate or dry-up. If a pot is baked while the clay is still moist, it will break. Unlike potters in other cultures, Illinois Indians did not bake their pottery in special ovens called "kilns". They dug a shallow pit in the ground and started a fire in the center. When the wood had turned to hot coals, the pots were preheated around the edge of the fire. Preheating was important because placing a cool pot in an intensely hot fire could cause it to blow up! After the pots were heated, they were placed on the fire and more fire was built over and around them. Sometimes large broken pottery pieces were used to protect the vessels from the intense heat of direct contact with the burning wood. Pottery firing typically lasted 3 to 4 hours, with pots being allowed to slowly cool afterwards.

Pottery was made in several different forms-- bowls, jars, bottles, beakers, and plates. Each of these forms had a specific purpose, just as our pottery and containers have today. Bowl forms were not that different from bowls today; they had large wide mouths, curved bodies, and tapered bottoms. Bowls were used for serving food. Jars were similar to bowls in overall shape, with the exception of having higher rims, which were perhaps for tying on coverings. Some had handles. Jars were used for cooking and storing food or seeds. Water bottles were small or medium-sized containers with narrow necks. Their overall shape was similar to gourd water bottles used in earlier times. Beakers were a type of straight-sided cup with a short stem-like handle attached on one side. Water bottles and beakers held liquids. Plates were large and probably used as platters to cool and serve food. A family would eat together from one large plate rather than from individual plates, as we do today. In addition to their everyday use, some of these containers were used in ceremonies to hold special foods and drinks.

Pottery was decorated in a number of ways with string, fabric, and carved stamps pressed into the clay, lines scratched into clay with a sharp tool, and sometimes paint. Often the decorations were symbols of something in the natural world--such as the sun, water, and animals. These decorations might tell about a culture's beliefs and what was thought to be important. For example, animal effigies were ceramic containers shaped to look like an animal that had special

meaning. The figures, such as ducks, found on effigy containers are symbols of things associated with the different worlds in ancient people's beliefs. Legends tell that American Indians believed in an upper world, which was the sky, heavens, sun, and clouds; this world, where we live on the earth; and the lower world, a place beneath the earth and waters. Some animals were considered special spirits from each of these worlds, who could bring messages to people from sacred places, or guide people spiritually on journeys to the other worlds. A Pawnee Indian ceremony quotes a duck as saying, "I am an unerring guide. I know all paths below and on the earth, and the water and above in the air."

The arrival of the French explorers and traders in the 1680s changed Indian pottery-making forever. The French brought brass and iron cooking kettles to Indian people. Metal containers could be heated better and could take more abuse. When metal pots were broken, the scraps were cut up and used to make ornaments to wear. Shortly after the French introduced brass and iron pots in Illinois, Indians stopped producing their own pottery containers.

Today, archaeologists strive to preserve and record the cultural traditions of Indian people. Their knowledge of the pottery traditions of ancient cultures is made possible through the careful recording of where pottery and other artifacts are found and through experimentation with ancient pottery-making tools and techniques. When artifacts such as pottery sherds are removed from a site without using proper scientific methods of study, their meaning and what they can tell us about the past is lost forever.

Protection of our state's cultural resources is something in which everyone can be involved. Archaeologists at Dickson Mounds were able to help area students piece together an important discovery they made. When these students found large pottery sherds, they contacted Dickson Mounds to report their find. With the students' help the museum staff was able to record the ancient site where the sherds were found, and help put the sherds together to form this large storage pot made over 2,000 years ago. While this pot may have been "trash" on the beach, it is a "treasure" in the museum. It is the largest pottery vessel on exhibit.

During your museum visit you will see the pottery used by Indian cultures in the Illinois River Valley and you will experiment with methods of pottery-making. But the museum is a place to which you can return throughout your life to learn many things about lifeways in the past and the science of archaeology.

WORDS TO KNOW

Anthropology - The scientific study of humans.

Archaeology - The systematic recovery and study of material evidence remaining from past human life and culture. Scientists who do this work are called **archaeologists**.

Archaeological site - A place where human activity occurred and artifacts were left behind.

Artifact - An object made and used by humans.

Ceramic - Pottery, fired clay.

Ceremony - A special occasion at which people participate in particular customs. For example, weddings and funerals.

Coiling method - A way of making a pottery container in which long thin cylinders of clay are stacked in a circular form, and then pinched and smoothed, to make a bowl.

Container - An object used to hold something, such as a bowl, jar, or bottle.

Context - The relationship of artifacts to other cultural remains and the situation in which they are found.

Cultural resources - Objects and ideas created and used by humans.

Culture - A set of learned beliefs, values and behaviors--the way of life--shared by a group of people.

Decoration - Colors, designs, or ornaments added to an object to make it more attractive.

Effigy - An object made to look like a particular person or animal.

Evolution - The process of development or gradual change, as from a simple to a complex form.

Excavation - The scientific way in which an archaeologist digs and records a site.

Firing pottery - To bake a clay form so that it dries and becomes hard and water-resistant.

Mammoth - An extinct species of elephant with hairy skin, long tusks curving upward, and special teeth for grinding grasses and mosses.

Mastodon - An extinct species of elephant with hairy skin, long tusks, and special teeth for tearing and chewing stems, leaves, and seeds.

Mounds - Hills of earth built by humans and used to cover burials or used as platforms for special ceremonial buildings.

Natural resources - Things found in nature and used by humans, such as water, land, plants and animals.

Nomadic - A way of life in which people move from place to place in search of food.

Nutritious - Food that helps one to grow and be healthy.

Pinch-pot method - A way of making pottery by pinching a bowl form from a ball of clay.

Pothunter - A person who removes artifacts from sites for other than scientific reasons to collect or sell. Pothunting is illegal on state-owned land.

Prehistory - A period of time before events were recorded in writing.

Preserve - To save or protect from harm or damage.

Sherds - Pieces of broken pottery.

Slab-construction method - A way of making a pottery container by taking large, flat pieces of clay and pressing them together with a fabric pad.

Subsistence - The method used to provide food, clothing, shelter and other necessities for survival.

Symbol - A design or decoration that has special meaning for a group of people.

Technology - The ways in which a cultural group makes things for people to use.

Temper - Materials such as rock, shell, sand, and plant fibers that are worked into clay to give it strength and prevent a pot from shrinking when it is fired.

Temple - A special building used for ceremonial purposes.

Water resistant - Something that does not absorb water or leak liquids..

Trade network - An exchange system where ideas and materials move from one group of people to another.

Vessel - A container used to hold something.

SUGGESTED BOOKS AND VIDEOS

The following publications and videos are suitable for student viewing and provide a wonderful introduction to the study of Indian cultures through archaeology. Teachers may obtain some of these titles through their school library, inter-library loan, or may bring a class to see them at Dickson Mounds Museum. However, the museum does not loan these resource materials.

Some good general reference sources on archaeology and/or American Indian culture are listed below:

BOOKS

**The language and concepts in these books are geared more for students aged 12 to adult.

The Adventure of Archaeology juvenile non-fiction
by Brian Fagan
published by National Geographic Society, Washington, D.C. 1985

The American Indians in America. juvenile non-fiction
Vol. 2: The Late 18th Century to the Present
by Jayne Clark Jones
published by Lerner Publications Co., Minneapolis, MN. 1991

Archaeology: A New True Book juvenile non-fiction
by Dennis B. Fradin
published by Children's Press, Chicago, IL

The Archaeology of North America juvenile non-fiction
by Dean Snow
published by Chelsea House Publishers, New York, NY. 1989

Digging Into the Past juvenile non-fiction
by John W. Hackwell
published by Macmillan Publishing Co., New York, NY. 1986

The Handbook of North American Indians. adult non-fiction
Vol. 15: Indians of the Northeast
edited by Bruce G. Trigger
published by Smithsonian Institution Press, Washington, D.C. 1978.

(*This book is not a juvenile publication but is easy to read and a wonderful reference for students writing reports.)

- I Can Be An Archaeologist** juvenile non-fiction
 by Robert B. Pickering
 published by Children's Press, Chicago, IL
- Indians in American History** juvenile non-fiction
 by Frederick E. Hoxie
 published by Harlan Davidson Inc., Arlington, Heights, IL. 1985
- Indians of the Eastern Woodlands** juvenile non-fiction
 by Rae Bains
 published by Troll Associates, Mahwah, New Jersey. 1985
- Keepers of the Animals** juvenile non-fiction
 M. Caduto and J. Bruchac
 published by Fulcrum Publishing, Golden, CO. 1988
- Keepers of the Earth** juvenile non-fiction
 M. Caduto and J. Bruchac
 published by Fulcrum Publishing, Golden, CO. 1988
- Lost Civilizations: Mound Builders
 and Cliff Dwellers** adult non-fiction
 by the editors of Time-Life Books
 published by Silver Burdett Co., Morristown, New Jersey
- The Practical Archaeologist: How We Know
 What We Know About the Past** adult non-fiction
 by James McIntosh
 published by FACTS ON FILE. 1986
- Secrets From the Past** adult non-fiction
 by Gene Stuart
 published by National Geographic Society, Washington, D.C. 1979.
- Talking With the Clay: The Art of Pueblo Pottery** adult non-fiction
 by Stephen Trimble
 published by School of American Research Press, Santa Fe, New Mexico. 1987
- Where Two Worlds Meet: The Great Lakes Fur Trade** adult non-fiction
 by Carolyn Gilman
 published by the Minnesota Historical Society. 1982.

VIDEOS

**The language and concepts in these videos are geared more for students aged 12 to adult.

Lost In Time

This film observes the work of archaeologists in the Tennessee Valley, who traced the history of the early native peoples way of life. American prehistory, beginning with migration of paleolithic hunters in the New World over the Bering Strait land bridge is described. Program presents information about early Indian life through re-enactments which focus on artifacts and their use. Produced by Auburn Television, Auburn University, TN. 60 min.

More Than Bows and Arrows

A documentary about the contributions of American Indians to the development of the United States and Canada...from net fishing off cliffs over a northwest river to prehistoric mounds that rival the pyramids of Egypt...from early mines and medicine men to ancient Hohokam irrigation canal systems in Arizona. Narrated by Pulitzer Prize-winning author N. Scott Momaday. Produced by Camera One video. 60 min.

Myths and Moundbuilders

In the 19th century it was believed that the tens of thousands of earthen mounds that dotted the central United States were engineering feats created by a mysterious, lost race. In the 1880s it became clear that the mounds were actually built by the ancestors of numerous American Indian groups that had inhabited the central states. This film reconstructs the history of ideas about the mounds and looks at contemporary archaeological research in the Illinois River Valley. Produced by PBS. 60 min.

Other People's Garbage

This PBS film from the television series, ODYSSEY, looks at the work of three American archaeologists. Charles Fairbanks excavates slave quarters in Georgia to verify and correct written documents of slave life; James Deetz looks at a multi-ethnic 19th century mining community in California; and archaeologists in Boston use legislative and bureaucratic means to save valuable sites from subway construction. Produced by PBS. 60 min.

Seeking the First Americans

The richness and diversity of past and present cultures is explored in this episode from the PBS anthropology series, ODYSSEY. Archaeologists from Texas to Alaska share their search for answers to questions about North American history. The film reviews evidence for the first Americans arriving 20 to 30,000 years ago. Produced by PBS. 60 min.

POTTERY: FROM TRASH TO TREASURE

TEACHER'S KIT EVALUATION

To evaluate the effectiveness of our educational programs, and to plan for future programs at Dickson Mounds Museum, we would appreciate some information and thoughts about your use of the Teacher's Kit materials.

School & City _____

Teacher _____

Grade & Class Size _____

Date of Museum Visit _____

1. Put a check by the materials that you used in the classroom and in the museum:

- | | |
|---|--|
| <input type="checkbox"/> A Guide to Touring Dickson Mounds | <input type="checkbox"/> Pottery Parts Pre-Visit Activity |
| <input type="checkbox"/> Museum Worksheet | <input type="checkbox"/> What's in a Shape Post-Visit Activity |
| <input type="checkbox"/> Video | <input type="checkbox"/> Video Transcript |
| <input type="checkbox"/> Timeline of Indian Cultures | <input type="checkbox"/> Words to Know |
| <input type="checkbox"/> Trash Tales Pre-Visit Activity | <input type="checkbox"/> Suggested Books and Videos |
| <input type="checkbox"/> Being Resourceful Pre-Visit Activity | |

2. Were the age levels and times suggested for activities appropriate?

3. Were the instructions clear?

4. Were these teaching materials helpful? Why or why not?

(over)

5. Do you have any suggestions for improving these materials? (eg. Do you need any further information that is not provided in this kit?)

6. Did these activities help you to meet teaching goals?

7. Are there other areas in your curriculum that you would like to see addressed in this kit? If so, what?

8. Did you feel that the self-guided tour in the museum was manageable with the map, tips, and worksheets provided?

9. Would you use this kit again or recommend it to another teacher?

Please return this form to:

Dickson Mounds Museum
Education Department
10956 North Dickson Mounds Road
Lewistown, IL 61542