

ANGEL SITE OF SOUTHWESTERN INDIANA

By Nancy Cox & Kathy MacGregor

GRADE LEVEL: Elementary

Prepared in partial fulfillment of requirements for
"INDIANA AND THE NEW NATION, 1776-1876"
a project of the Historic Southern Indiana Project
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FUNDED BY THE NATIONAL ENDOWMENT FOR THE HUMANITIES

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ANGEL SITE
OF
SOUTHWESTERN INDIANA

Lesson Plans
by

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and

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For
Indiana and the New Nation
Dr. Bigham
1989

Historic Southern Indiana Project
University of Southern Indiana
funded by the Education Division of the National Endowment for the Humanities



AUGUST
31
THURSDAY

Early archaeologists

ANGEL SITE OF SOUTHWESTERN INDIANA

Goals and Content

This series of lessons is designed to give an overview of the people who lived at Angel Site, located near Evansville, Indiana. The intent is to introduce elementary students to a culture of prehistoric times, stressing the importance of a people's interaction with their environment.

These lessons feature the implications of the organizational structure of these Indians, highlighting their knowledge, patterns and techniques in responding to their basic needs. Experiences are suggested which simulate some of their day to day activities.

A major goal is to enhance the students' understanding of the inhabitants of Angel Site in order to enrich the experience of a field trip. If an actual field trip is not within the realm of possibility, these lessons will serve to enrich students' understanding of prehistoric people in general.

Certain background information is incorporated into many lessons. Since no written history is available on the people who lived at Angel Site, certain archaeological finds and correlations with early observations of Indians who lived at that same time and in similar areas become the basis for our perceived knowledge. This obviously leaves our information speculative and hypothetical which imposes some limitation on complete accuracy.

Acknowledging that young students are not capable of thinking formally about history, these lessons take the form of many hands-on experiences. The overall purpose is to make the past seem real.

TEACHING PLAN

Lesson One

Linear Placement of the Indians at Angel Site

Objectives

To introduce and gradually build an understanding of time and chronology.

To help students gain in ability to recognize placement in prehistoric times.

Opening the Lesson

Briefly introduce the concept of Time Line as you stretch a clothesline or heavy string

Developing the Lesson

Using the background information provided, hang a file folder at a place on the line, as you tell something about each of the Traditions. Insert an indicator at the place or division between Prehistoric and Historic time. Finish by adding a folder to designate Historic Indians and European explorers.

Closing the Lesson

Give each student a copy of the Time Line of Archaeological Periods, letting them use that as a guide to place the file folders on the line in the proper order. You may want to remove one or two at a time and have students replace them. Point out that the Indians who lived at Angel Site were of the Mississippian Tradition.

Materials

Clothesline or heavy string.

6 file folders

BACKGROUND INFORMATION

Lesson One

Prehistory refers to that interval in human existence prior to the invention or introduction of written records. Man and his immediate ancestors have existed for hundreds of thousands of years, yet writing is a relatively recent development with a time span not much in excess of 5,000 years. In North America it was not until European explorers arrived, bringing with them literacy, that prehistory ends. It was late in the seventeenth century that what was to become Indiana is represented in the literature in any substantial detail. Therefore, prehistory ends and history begins at different times in different parts of the world.

Prehistoric Cultures have been divided into four Traditions. The Indians of Angel Site can be placed in the Mississippian Tradition. Prehistory ends and History begins between the Mississippian Tradition and Historic Indian and Europeans Archaeological Periods as indicated on the Time Line below.



Angel Mounds State Historic Site

PREHISTORIC CULTURAL PERIODS

PALEO—INDIAN (to about 8000 B.C.)

This is the earliest documented population in the New World. During glacial times, the water level of the ocean lowered, exposing a body of land between Asia and Alaska called Berengia. Small groups or bands (or families) followed large game across this land to what is now North America and dispersed throughout the continent. These nomadic bands hunted large mammals, such as mammoth and mastadon, now extinct, as well as smaller animals. Their life and social organization was simple, based upon acquiring the necessities for survival—food, water, shelter. Paleo-Indian sites are distinguished by the presence of fluted projectile points for spears.

ARCHAIC (8000 B.C. to 1000 B.C.)

The harsh environment of the "ice age" diminished, followed by warmer climate conducive for a large variety of flora and fauna. To survive in this changing environment and to best exploit the new resources, their lives and tools were modified. Groups were small in size and seasonably mobile. They followed the available resources, hunting, fishing and gathering for their subsistence. Compared to the earlier Paleo-Indian period, there was a more efficient use of natural resources, a new tool-making process (grinding), beginnings of trade in raw materials, greater residential stability and a population increase.

WOODLAND (1000 B.C. to A.D. 900)

This period is marked by the appearance of pottery or ceramic vessels. The major difference between the early Woodland and the previous Archaic is the presence of pottery and a decline in the use of river mussel as a food source. During the middle of the Woodland period, ritualism and complexity of the society reached a peak. Life became sedentary in villages. Widespread trader patterns emerged throughout the United States. Strong regionalism and even local varieties developed in this period. To support this more complex society, the subsistence base included plant horticulture along with hunting and gathering. Horticulture involves the conscious selection of seeds from larger plants for the garden next year, producing a greater crop. Corn also appears in the Woodland - a storable staple. Burial mounds were common. The late Woodland exhibits a decline in the more elaborate middle Woodland. The bow and arrow is introduced towards the end of the Woodland.

MISSISSIPPIAN (A.D. 900 to A.D. 1600)

This is the climax period in prehistory. It included settled town life with smaller villages and farm hamlets. Their life was based upon intensive utilization of cultivated plants - corn, beans, squash, pumpkin, sunflower. Truncated pyramidal mounds upon which public buildings were constructed distinguished these towns. This period is marked by social stratification with social controls enforced through religious-political institutions. There was communication and interaction between groups. Elements of this culture persisted into contact period in the southeast states. In Indiana, this culture was intrusive, reflecting a migration of new people into this region. Angel Mounds is the largest and most "classic" Mississippian site in Indiana.

TEACHING PLAN

Lesson Two

A Scientific Study of Past Human Life: Archaeology

Objective

To introduce archaeology as a scientific study of past human life.

Opening the Lesson

Display a table of Indian artifacts that may have been used by Prehistoric Indians.

Developing the Lesson

Use the slide presentation Archaeology As a Tool

Hold a class discussion, What Do We Learn From Artifacts?

Have the presentation, Indian Toolmaking, in the classroom.

Concluding the Lesson

Simulate artifact sorting and classifying by making up several boxes of soil, bones, arrowheads, and broken dishware. Divide the class into several groups and, after sorting, have each group orally report their findings.

Materials

Indian artifacts for display--arrowheads, spear heads, scrapers, pottery pieces, etc.

Slide presentation, Archaeology As a Tool, available through Media Center, EVSC. See Appendix for ordering instructions.

In-Class Program, Indian Toolmaking, presented by trained volunteer from Angel Mounds. See Appendix for ordering instructions.

Artifacts Boxes containing:

- soil
- chicken bones
- arrowheads or spear heads
- pieces of broken dishes

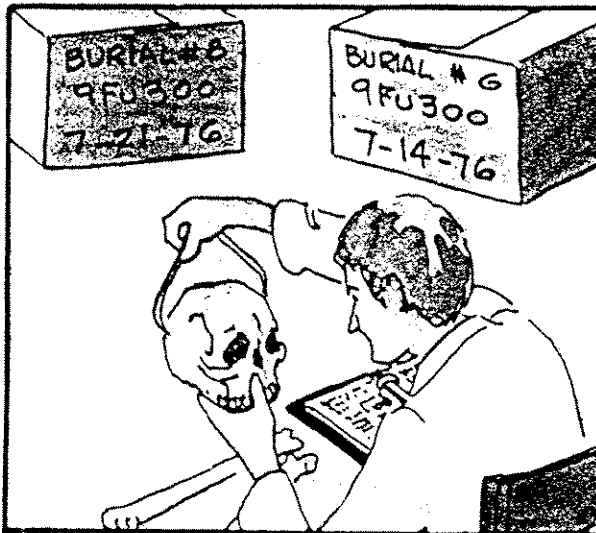
BACKGROUND INFORMATION

Lesson Two

It is readily apparent that the prehistoric interval is a very long one, indeed, and if we were totally dependent upon written documents for understanding the past, then that understanding would necessarily be confined to a few thousand years. However, an almost innate inquisitiveness has led to the development of additional ways of learning about the human past that transcends the limits imposed by the absence of writing. Probably the most fruitful of these methods is archaeology, an ever-increasing body of methods and techniques designed to identify, recover, and interpret the surviving cultural and physical evidence.

Archaeology is part of the Social Science called Anthropology. Anthropology is the study of human groups. Archaeologists study human groups that have lived in the past--sometimes thousands of years ago--and they often dig in the soil to find clues to how these groups lived.

CULTURAL ANTHROPOLOGISTS
STUDY GROUPS OF PEOPLE
LIVING TODAY IN VARIOUS PARTS
OF THE WORLD. A PEOPLE'S
SOCIAL ORGANIZATION, KINSHIP,
TECHNOLOGY, ECONOMY, AND
LANGUAGE CAN TELL US MUCH
ABOUT HOW THEY HAVE ADAPTED
TO THEIR ENVIRONMENT. THESE
STUDIES CAN ALSO HELP US
TO UNDERSTAND HOW OUR
OWN SOCIETY HAS DEVELOPED.



PHYSICAL ANTHROPOLOGISTS STUDY
THE BIOLOGICAL HERITAGE OF MAN.
THEY EXPLORE ANCIENT DEPOSITS
IN SEARCH OF FOSSIL HUMAN
BONES, AND THEY STUDY THE
PHYSICAL CHARACTERISTICS OF
GROUPS IN THE MODERN WORLD
AS WELL. IF ARCHAEOLOGISTS
FIND HUMAN SKELETONS IN
THEIR EXCAVATIONS, THEY
USUALLY SEND THESE BONES TO
A PHYSICAL ANTHROPOLOGIST FOR
DETAILED STUDY.

A THIRD GROUP OF ANTHROPOLOGISTS
CALL THEMSELVES ARCHAEOLOGISTS.
ARCHAEOLOGISTS STUDY THE
MATERIAL REMAINS OF PAST HUMAN
ACTIVITY. THIS ACTIVITY MAY HAVE
TAKEN PLACE SEVERAL MILLION
YEARS AGO OR MAYBE ONLY A FEW
DOZEN YEARS AGO. ARCHAEOLOGISTS
BELIEVE THAT WE WILL NEVER
UNDERSTAND PEOPLE OF TODAY
WITHOUT STUDYING PEOPLE OF
THE PAST.



TEACHING PLAN

Lesson Three

Geographic Placement of the Indians of Angel Site

Objectives

To introduce and strengthen an understanding of geographic location.

To gain some understanding of the number and diversity of Prehistoric Indian Cultures.

To geographically place Angel Site in Southern Indiana.

Opening the Lesson

Use a large map of the United States to point out to students the geographic location of Angel Site.

Developing the Lesson

Further explain about the many and diverse Prehistoric Tribes and make some mention of those tribes evolving into the Historic Tribes whose names are familiar. Use copies of any of the maps that could be of benefit, depending upon the sophistication of your group.

Concluding the Lesson

Using the blank map of the United States, guide students in marking the location of Angel Site. Fill in the rest of the map in any way you choose.

Materials

Large United States map

Copies of any of the maps included in this lesson that you choose to use.

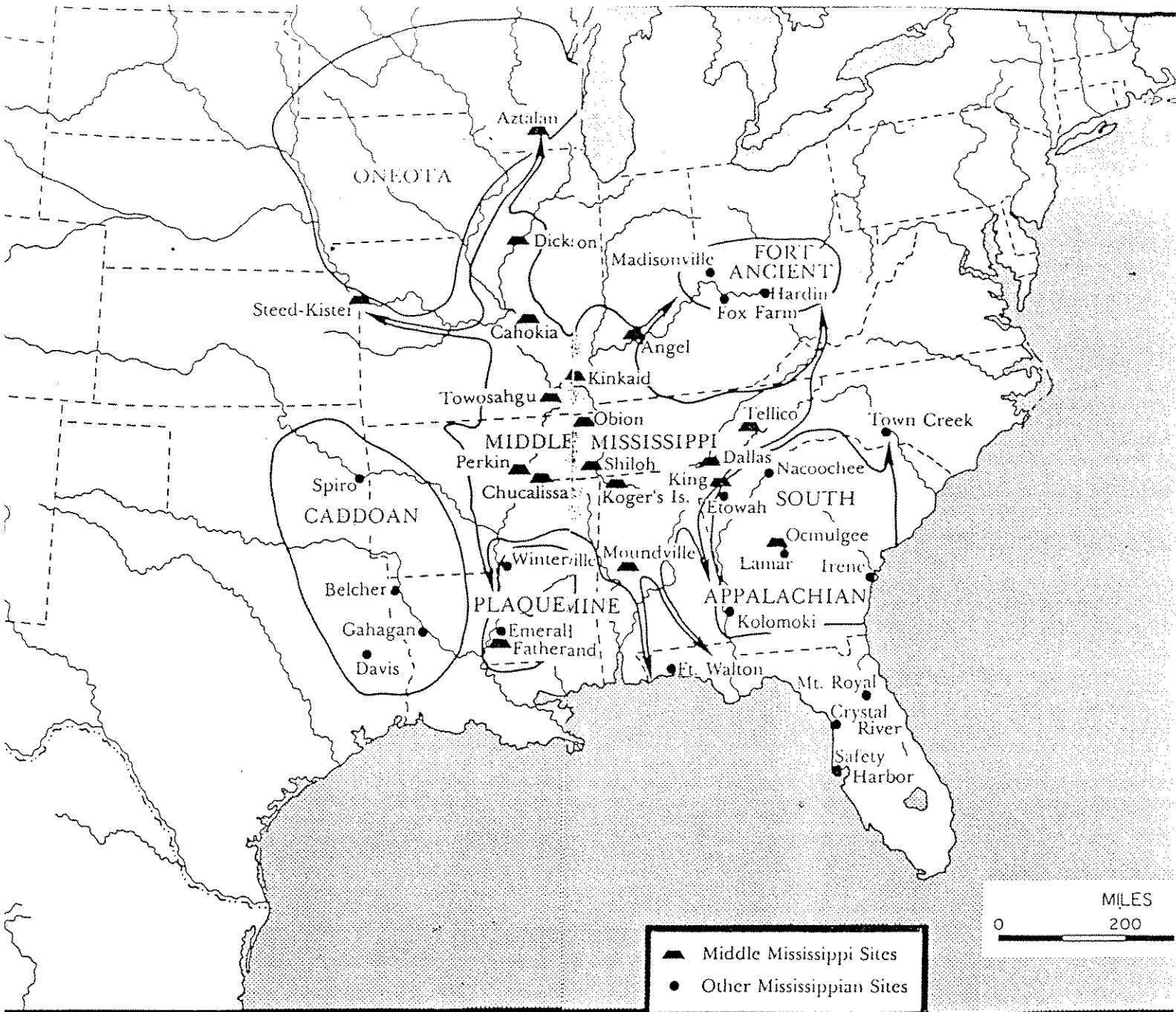
BACKGROUND INFORMATION

Lesson Three

The Indians who lived at Angel Site were Prehistoric Indians. They were on the northwestern border of the Southeastern Culture realm, but gained most of their influence from the south. The location gives some credence to the possibility there was also some influence from other Prehistoric tribes to the north and west.

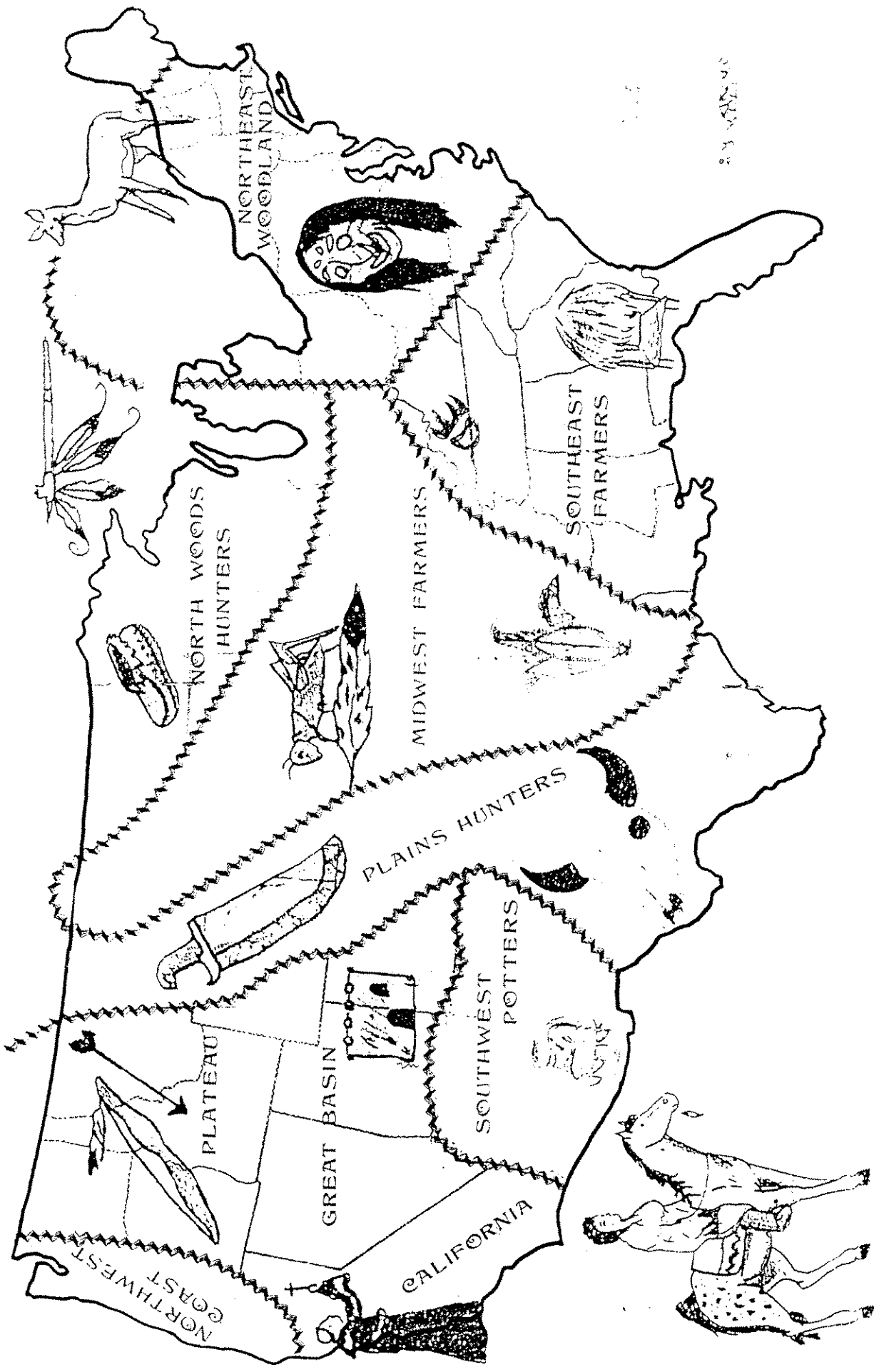
Map #1 shows location of other Prehistoric Indian Sites. The other maps, however, indicate location of Indian groups of the Historic Period. They were descendants of some of the Prehistoric Tribes, but there is no absolute proof as to which Historic Tribe the Indians at Angle Site became.

Tribal names shown on Map #3 are Historic Indian Tribes. With the main objective of introducing and strengthening geographic location, a blank map of the U.S. is also included and you are urged to briefly differentiate between Prehistoric and Historic Tribes for the students.



Angel Site can be placed within the geographic realm of the Southeastern Culture Area. A reasonable hypothesis is that the Angel society was similar to those tribes of the Southeast that were described by the Hernando deSoto expedition in the mid-South in the 1540's.

MAP #1



This map gives an overview of the various types of Indian tribes and their location. Note that Angel Site lies at the northwestern boundary of the Southeastern Culture.



THE SOUTHWEST - The Indians of this area lived in what is now the states of Arizona, New Mexico and Colorado. They were mostly farmers. They grew maize and beans. Most of them lived in towns made of terraced stone and adobe.

THE EASTERN WOODLANDS - This area covered the state of Minnesota and parts of southern Canada. It continued south to North Carolina and east to the Atlantic Ocean. This was a heavily forested area which provided the Indians with much game hunting and fishing. They also grew some crops.

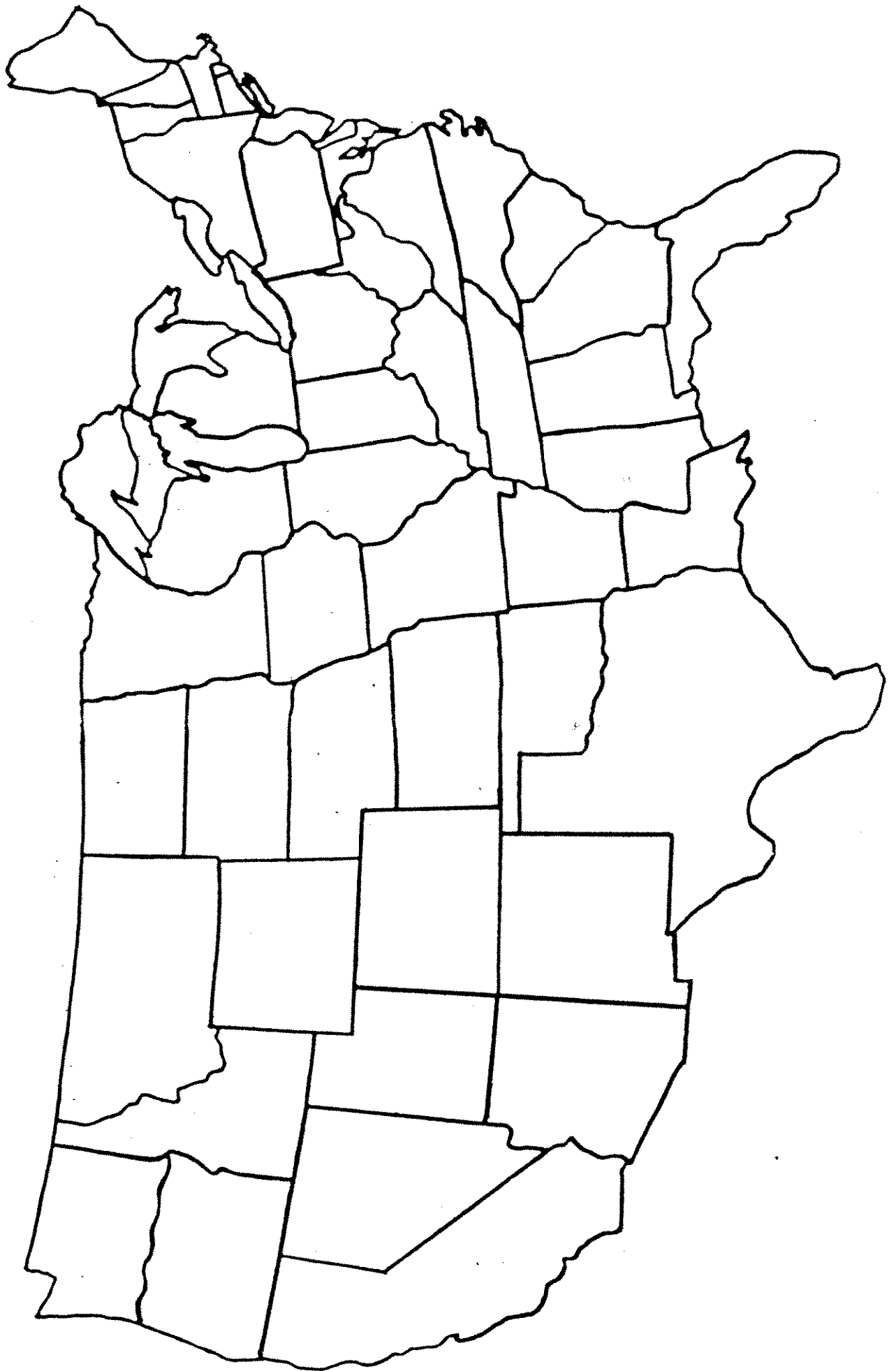
THE SOUTHEAST - The Indians of this area lived in parts of Texas and throughout the south to the Atlantic shoreline in the east. These tribes raised some of their own deer for hunting. They also farmed and made beautiful handicrafts.

THE PLAINS - This is by far the largest Indian area. It extends from Canada to Mexico and the midwest to the Rocky Mountains. These Indians lived in small tribes which followed the herds of bison. They were great horsemen and are noted for their feathered head-dresses and tepee houses.

THE PLATEAU REGION - The areas of Idaho and parts of Oregon and Washington was home to these Indians. They lived in sunken round houses in the winter and camped in mat homes in the summer. They fished the many rivers for salmon.

THE CALIFORNIA INTERMOUNTAIN - These Indians settled the valleys of Utah, Nevada and California. They lived in villages with thatched roofs and hunted sheep and deer. They were excellent basket weavers.

THE NORTHWEST PACIFIC COAST - This area covers the coast of California, Oregon, Washington and parts of Canada. The Indians lived in wooden long houses in large villages. They fished the Pacific Ocean and hunted mountain sheep and goats.



TEACHING PLAN

Lesson Four

Organizational Structure of People Who Lived at Angel Site:
Social Organization

Objectives

To help students gain an understanding of Angel Site as a central community with a network of smaller villages.

To understand the concept of social organization which include an elite group.

To aid students in understanding the significance of the mounds.

Opening the Lesson

Distribute to each student a booklet consisting of the maps and/or pictures included in this lesson. Briefly explain to students the information from the Background Information.

Developing the Lesson

Plan, with your class, to construct a table top model of the village at Angel Site. Do not plan the construction of the palisade at this time as it's construction is suggested in conjunction with another lesson

Concluding the Lesson

Begin construction of the table top model. Cover several classroom tables with brown wrapping paper. The mounds could be made of paper mache over small piles of wadded newspaper or molded of Plaster of Paris. Small boxes or small milk cartons can be used for buildings. Clay, small sticks and small stones could be used. This construction will become an on-going project, lasting several days.

Materials

Booklet made of maps and/or pictures from this lesson.

Materials for village construction including either paper mache or Plaster of Paris, clay, etc.

Large, flat area for village construction.

BACKGROUND INFORMATION

Lesson Four

All indications are that Angel Site was a regional center of significance which exerted influence over the small villages and hamlets in the adjacent area. It may have been the "capital" of the area. Satellite communities often looked to the central community for protection and as a political and religious center.

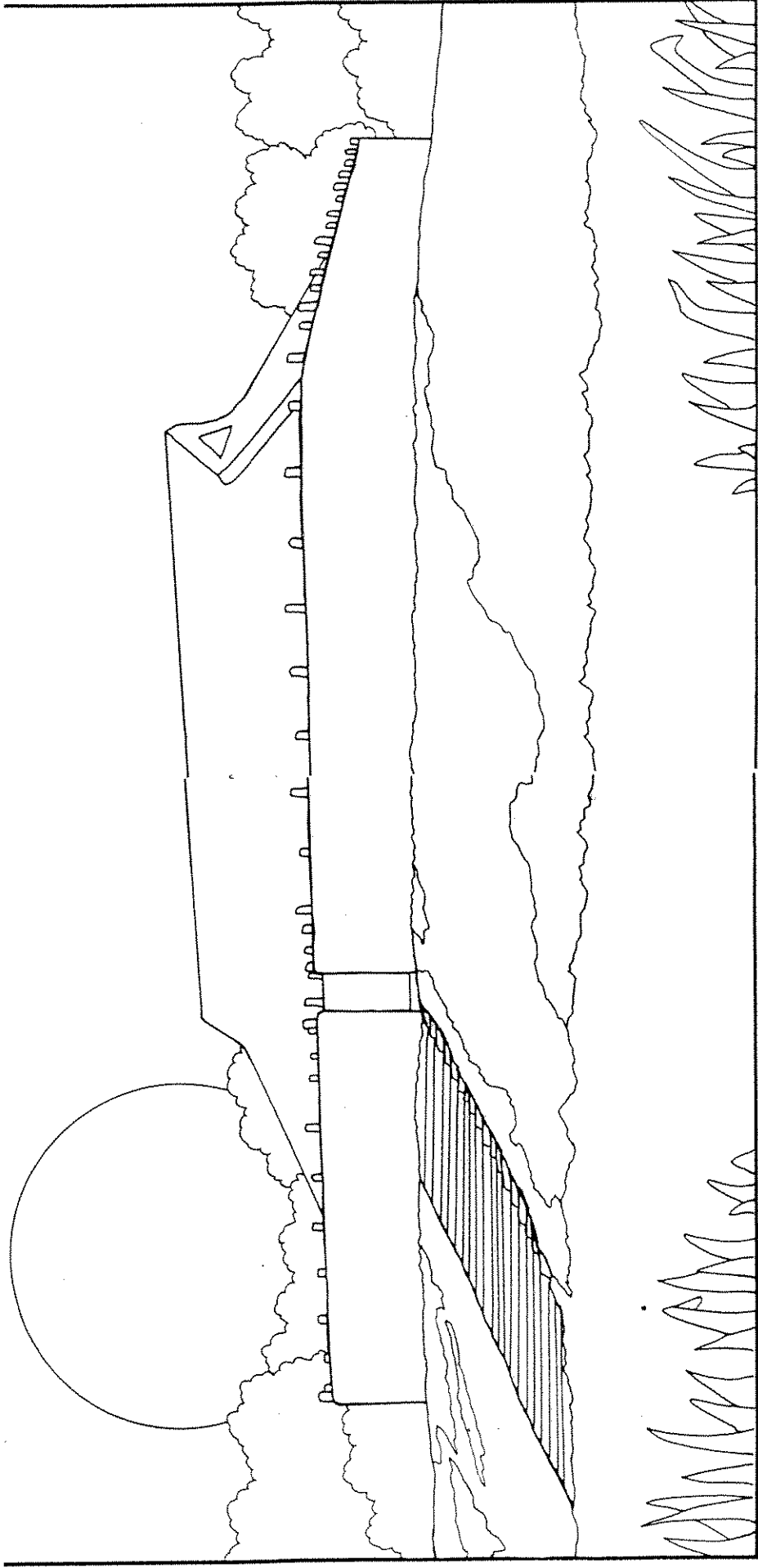
This map shows a central community as indicated by "striping" and satellite communities surrounding it, as indicated by black dots



The size of Angel Site and the location of other culturally related sites in the Ohio and lower Wabash Valley leads us to conclude that these "rural" farmsteads provided support for the main settlement and, in return, looked to Angel Site for social, political, and religious leadership. Social orders existed among the people who lived at Angel Site. This included an elite group. Chiefdoms were characterized by the existence of a family or kin group enjoying elite social status. The chief made many important decisions, along with a small group of closely related kinsmen. This family group was set apart from the rest of the population in many ways.

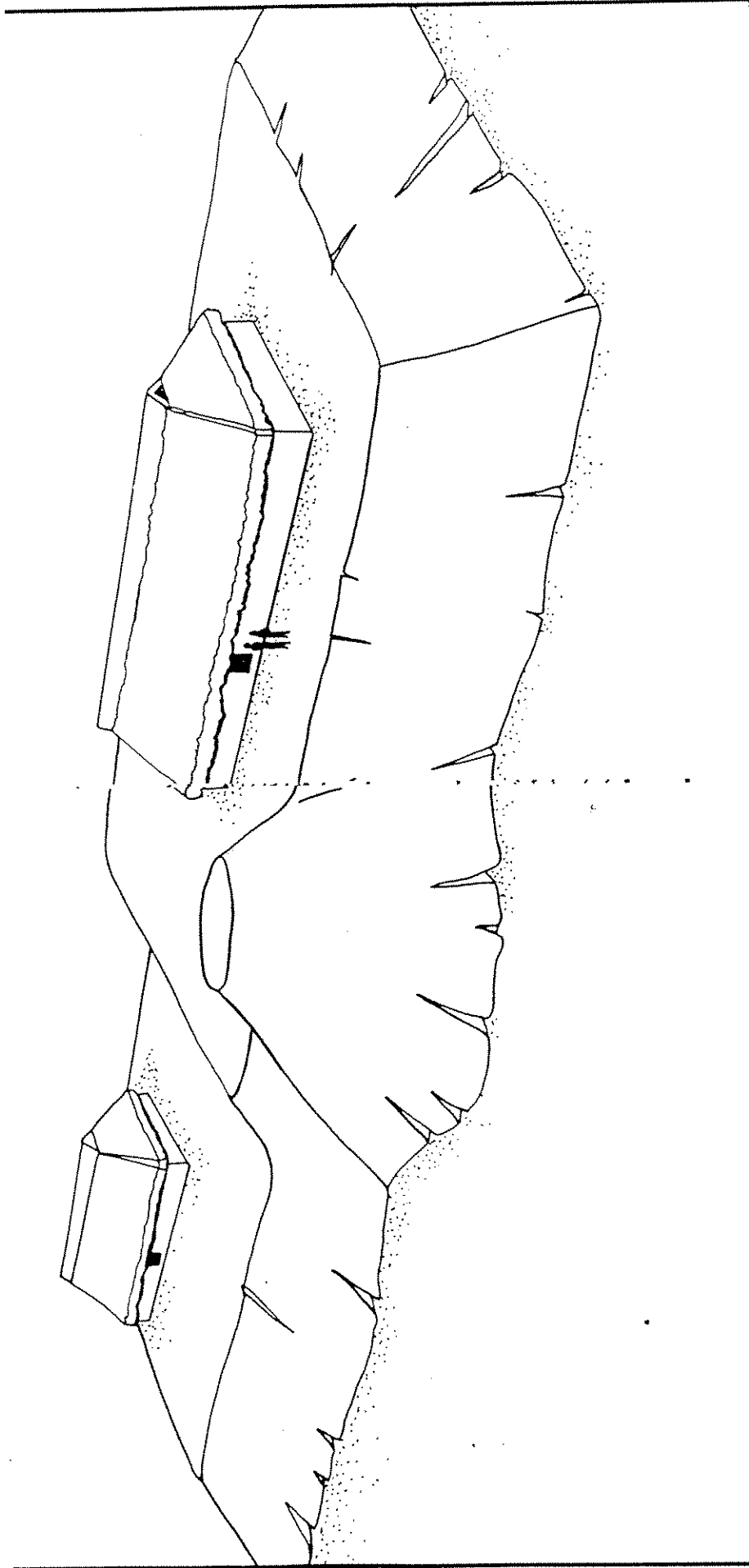
Members of the elite lived in high status residences often raised above the others on mounds. When members of the elite died, they were buried in public buildings on mounds. Most of the earth mounds at Angel Site served as elevated earth platforms upon which were constructed buildings important to the political, religious, and social life of the town and area.

(See Angel Site--Prehistoric Indian Town and Information from Angel Mounds Museum, in the Appendix, for further facts on the mounds.)



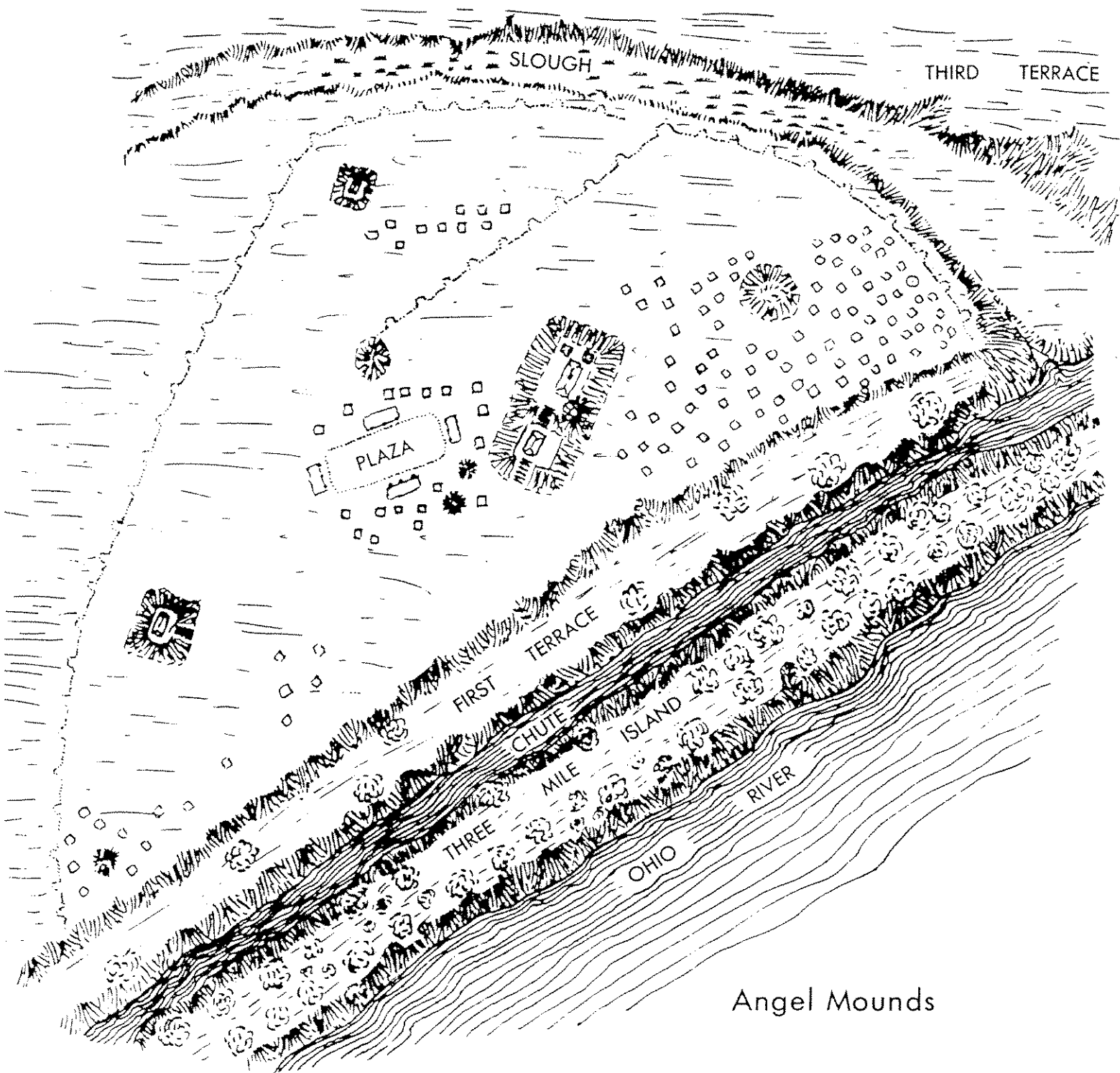
THE
TEMPLE

The Temple was the building where the priest lived and the Indians worshiped. The Temple at Angel Mounds is a replica and stands on Mound F where the original once stood.



CENTRAL
MOUND A

The largest mound on the site is Central Mound A. It has three levels. The city leaders lived on the first level with the Chief's house on the second level. The smallest, the top level, was reserved for special ceremonies.



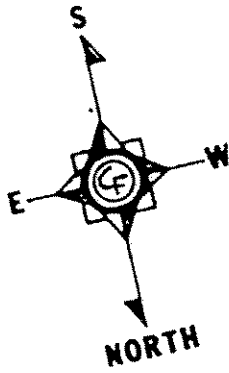
Angel Mounds

Fig. 546. A diagrammatic representation of Angel Site as a stockaded town with a temple atop a mound, a town plaza, the chief's houses atop a mound, and the houses of the inhabitants

ANGEL MOUNDS

STATE HISTORIC SITE

INDIANA STATE MUSEUM SYSTEM



OHIO RIVER

Three Mile Island

Ohio River Bayou (Chute)

Temple Mound F

Central Mound A

Plaza

Slough

Interpretive Center

Parking

MAP EXPLANATION

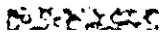
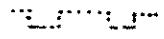
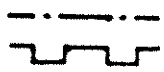
Mounds

Interpretive Path

Reconstructions

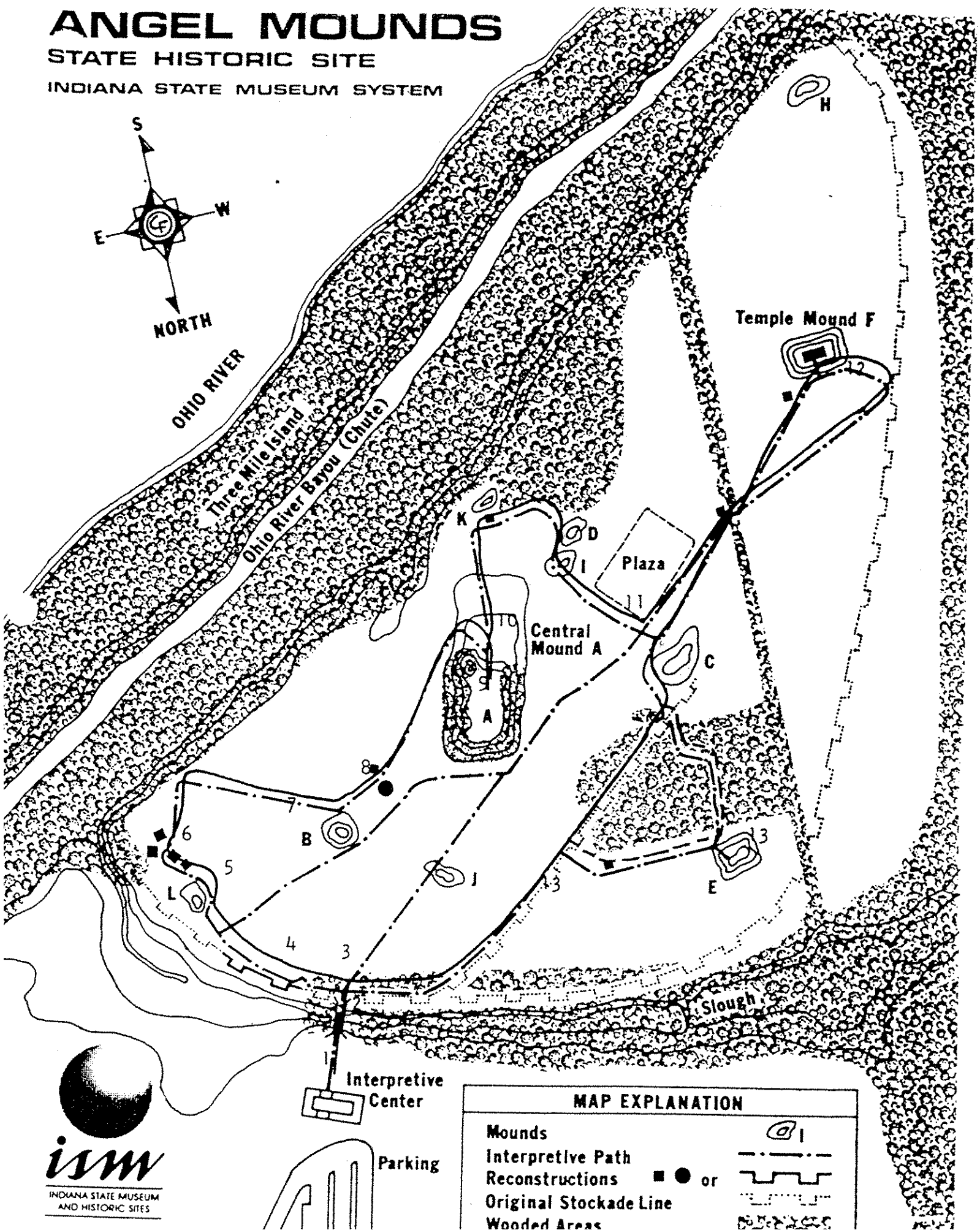
Original Stockade Line

Wooded Areas



ism

INDIANA STATE MUSEUM
AND HISTORIC SITES



TEACHING PLAN

Lesson Five

Organizational Structure of People Who Lived at Angel Site:
Economic Organization

Objectives

To aid students in recognizing the economic system of prehistoric times.

To introduce the concept of bartering.

Opening the Lesson

Share some information with the students about what bartering is and explain some of the items that were traded by the people who lived at Angel Site.

Role play bartering with some simple objects students might have in their locker.

Plan to have a class bartering session the next day with objects the students will bring from home.

Developing the Lesson

Hold a class bartering session, conducted in some manner devised by you.

Concluding the Lesson

Assist students in preparing and orally presenting an evaluation of bartering by asking them to write a response to these open ended sentences:

1. Indians bartered because.....
2. It is easier to use _____bartering because
_____money because.....
3. What I have learned about bartering is.....

Materials

Items for the students to barter.

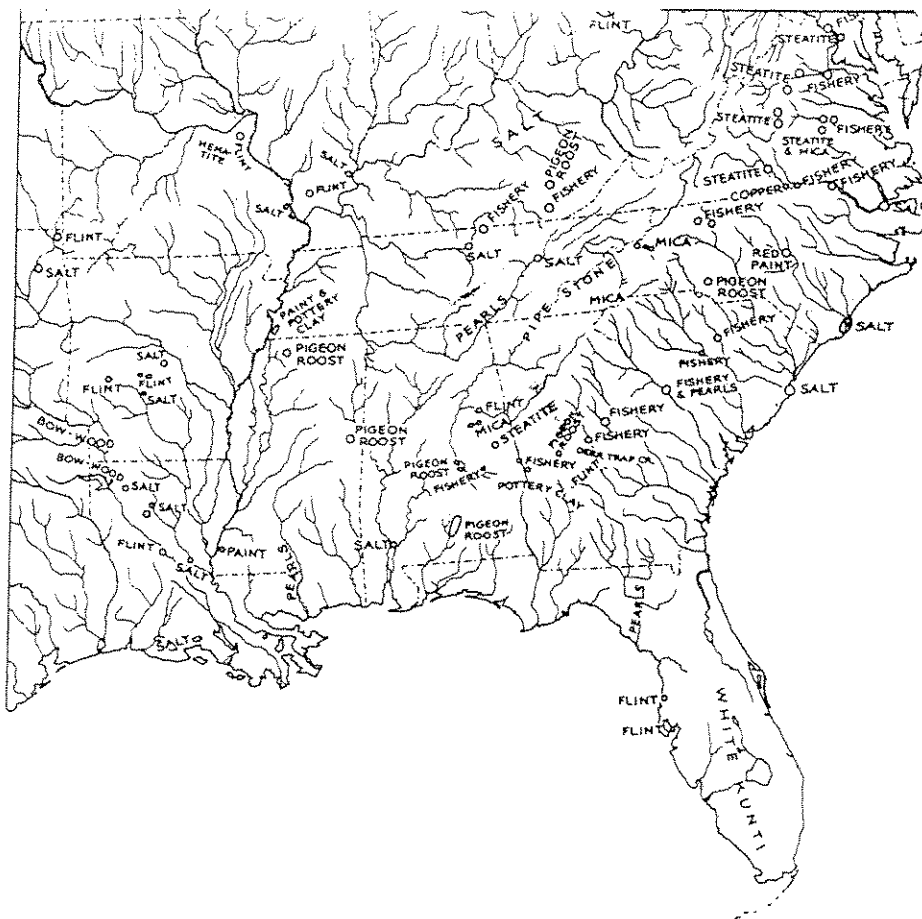
BACKGROUND

Lesson Five

- Indians of the Mississippian Tradition had no money or currency. All economic exchanges were in the form of barter, payment in kind or gifts. Many exchanges were in the form of reciprocity. Person A would donate his labor or share of his food to Person B as a "gift". At some time in the future Person B would return an equivalent amount of labor or food.

Evidence exists to suggest the people at Angel Site traded and bartered over great distances. Some examples of items traded by Indians are: copper, galena, lead, pottery vessels, flints, moss, dried smoked fish, skins of animals, shark's teeth, bird feathers, pearls, and stone beads. By tracing the source of such materials, one can surmise the extent of distances covered in a trade network.

This map serves to emphasize the wide-spread possibilities for regional trade. It does not attempt to show all types of articles traded.



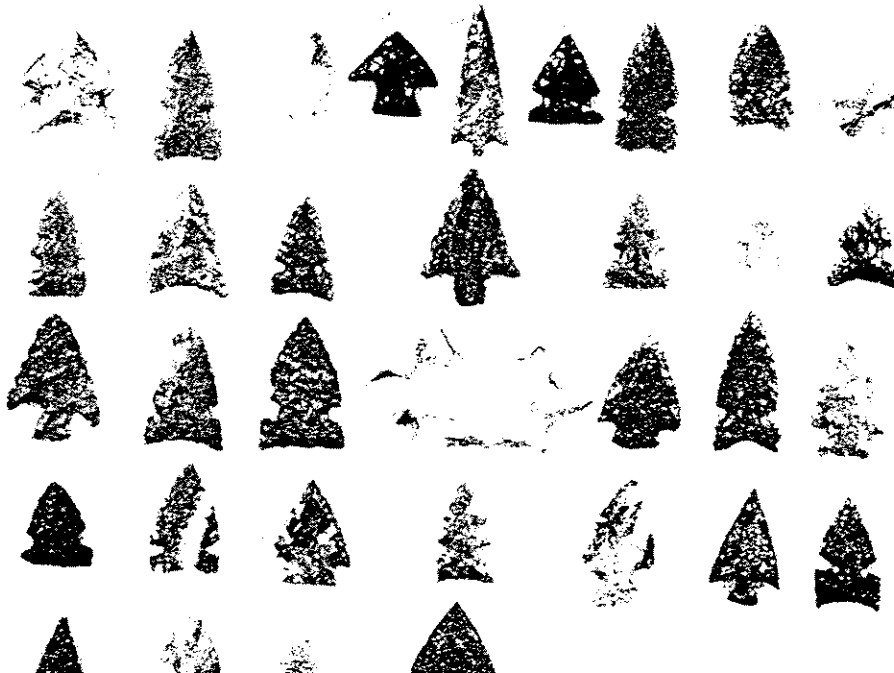
Stone tools or the stone for making them were items of interior to coast trade. Such tools are shown below.

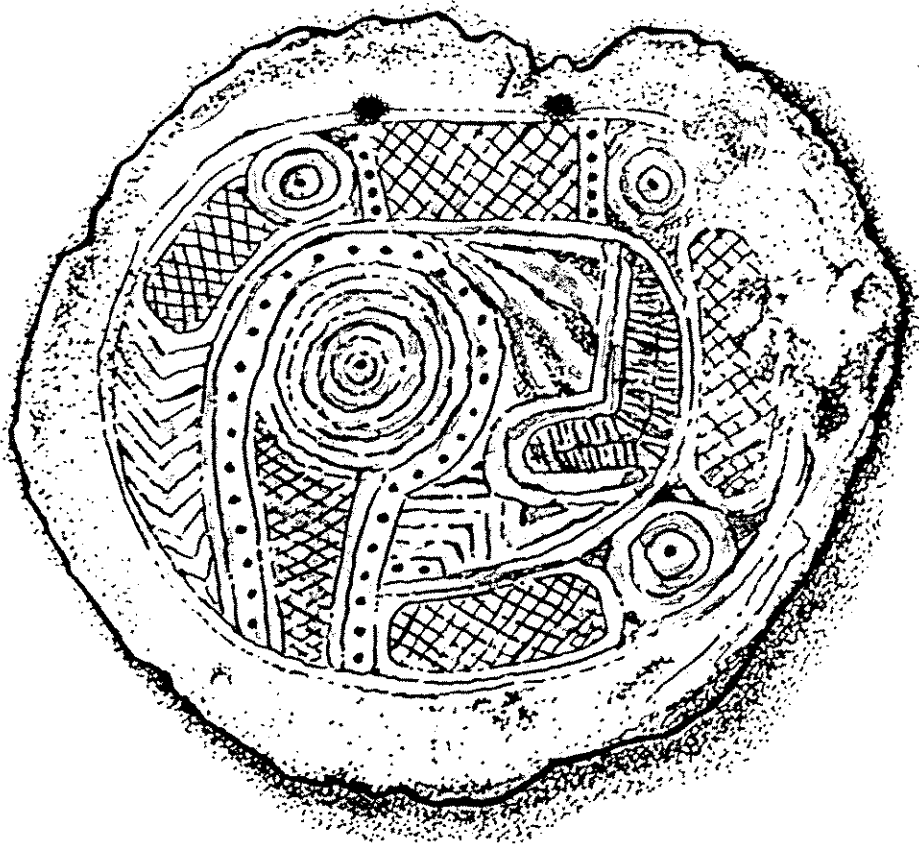


The conch shell dipper or cup shown below gives evidence of a trade going on from the coast to the interior.



These projectile points were made of materials found in a variety of places, giving rise to the probability of trading stone. These were all found with a burial.





The artifact shown above is called a "gorget". It is made from a piece of conch shell, a kind of ocean shell that was highly valued by Mississippian people. These shells were traded over long distances.

The designs on some Mississippian artifacts are similar to designs found on artifacts in Mexico. Some archaeologists think that Mississippian Indians and those in Mexico exchanged ideas and materials. Possibly there was contact during long-distance trading expeditions. Another possibility is that the ideas and materials were transferred by intermediate groups, without direct contact by people from the two areas.

TEACHING PLAN

Lesson Six

Organizational Structure of People Who Lived at Angel Site:
Political Organization

Objectives

To help students understand the connection between political structure and subsistence

To aid students in gaining an understanding of the need for leadership among prehistoric people

Opening the Lesson

Display a simple, basic political structure such as the one described in the Background Information. This could be done on the chalkboard or chart.

Developing the Lesson

Discuss and determine each group's responsibilities in terms of constructing a palisade (around the table top village). By drawing lots, assign each student to a position in the political structure. Simulate each group's activities as the palisade is being built by the ordinary people.

Concluding the Lesson

Hold a class discussion about the feelings of each group as to how each student felt about his position and job (or lack of one) .

Finishing the palisade will continue as an on-going activity.

Materials

Diagram of basic political structure

Student's names on lots, ready to be drawn at random

Materials to construct a palisade around the table top model village--small twigs, clay to hold sticks in place.

BACKGROUND INFORMATION

Lesson Six

A need for leadership existed among the Mississippian Indians. A certain political order existed. In simplistic terms, that order consisted of a Priest-Chief, Honored Ones, Warriors, Nobility, and the Ordinary People. A basic political structure may look like this.

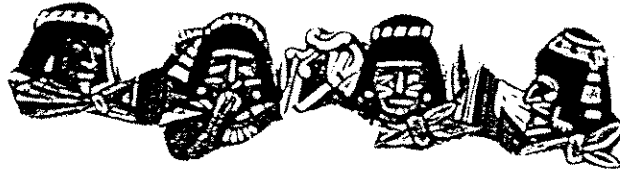
Priest-Chief

The Chief was also the Priest, thus serving a dual role as political and religious leader.



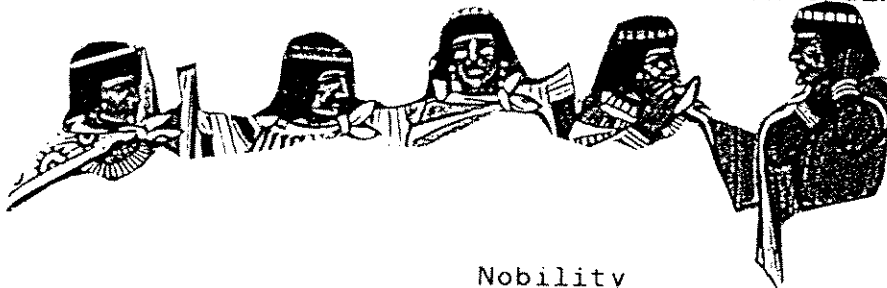
Honored Ones

These were the eldest and most respected members of the tribe. Their advice was sought before any major decision was made.



Warriors

The warriors gained status by virtue of their bravery. By proving himself in battle, a young man could achieve a degree of prestige even if he was born an Ordinary Person.



Nobility

Those of Nobility were kinsmen of the Chief. They did little work in order to spend their time on religious and political matters.





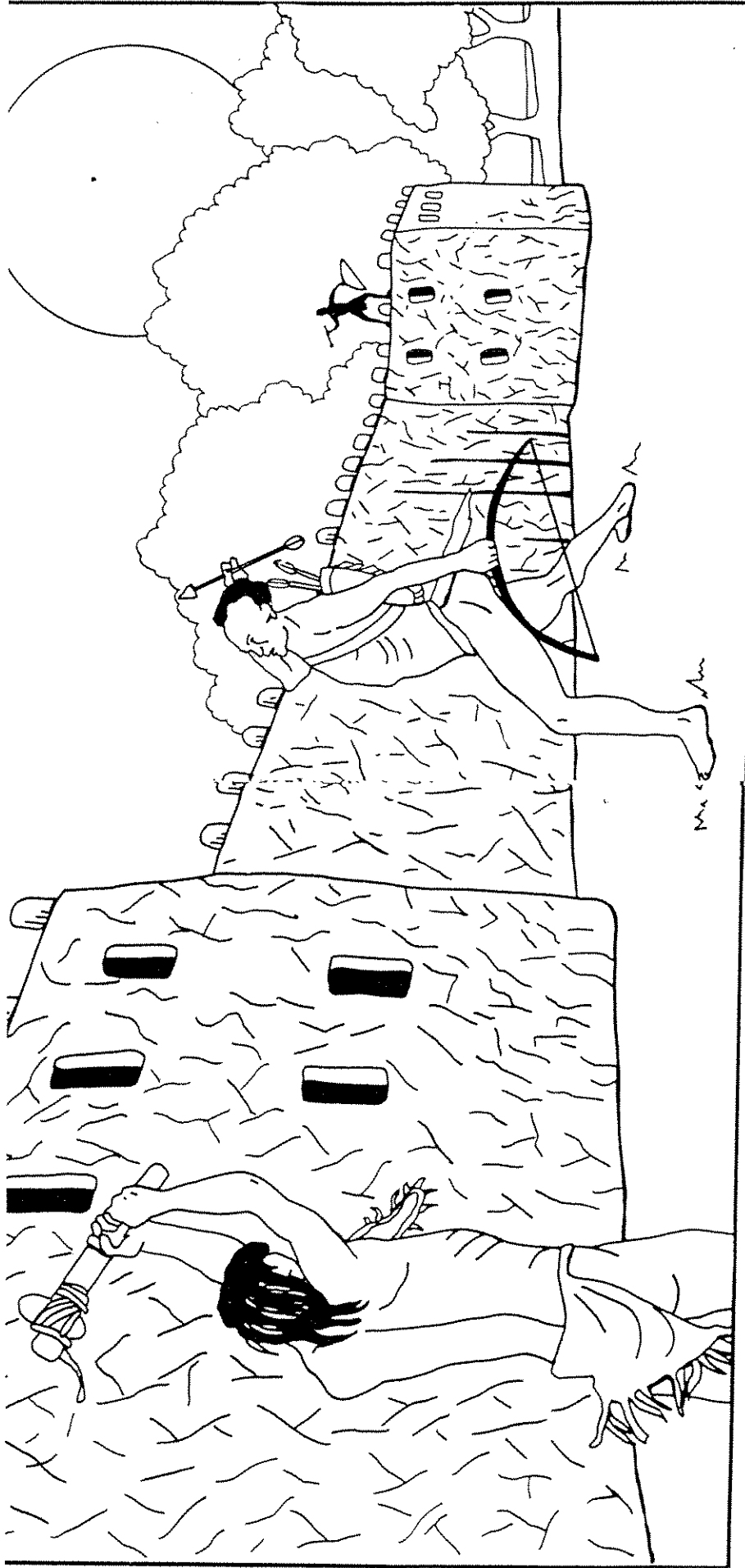
Ordinary People

These were the average citizens who hunted, gathered, fished, and gardened. They made the pottery, dug-out canoes, wove cloth and repaired the structures of the village, among other things.

The power of the chief was to a degree an economic matter. Production and acquisition of food, building homes and public buildings and providing all the basics necessary to sustain life required the organization of manpower. This organization was not very complex, but was a necessity.

Occasionally the Priest-Chief and his assistants would call on the people to enlarge one of the mounds, build a new temple or strengthen the palisade. The ordinary people also worked in the community gardens. Food from these gardens were used by the nobility since they had to be free from work in order to spend their time on religious and political matters. Some of the food from the community gardens was put into storage for everyone's use in times of need. It is possible that the Priest-Chief was also responsible for distributing resources to the satellite villages.

In their daily lives, the ordinary people were seldom concerned with the activities of the nobility. They were busy hunting, collecting, fishing, caring for their gardens and doing the other chores necessary for existing. Young men aspired to be good hunters and story tellers, while young women hoped to become skilled potters and to make wise decisions for their families.



STOCKADE

A wall made of mud and straw, twigs and logs set upright surrounded the entire city. The Indians used this wall for protection against wild animals and for defense against attacking enemies.

The ordinary people were often called upon to repair or strengthen the palisade.

TEACHING PLAN

Lesson Seven

Organizational Structure of the People Who Lived at Angel
Site: Religious Structure

Objectives

To introduce and gradually build an understanding of a religious organization based upon a belief system
To gain knowledge of the importance of ceremonies and symbols
To learn about symbols in art artifacts

Opening the Lesson

Use pictures of the Priest-Chief and some of the symbols to stir interest as you briefly discuss some of the background information with the students.

Developing the Lesson

Make a booklet of designs and symbols for each student. Allow them to color them or create their own designs by referring to them.

Concluding the Lesson

Demonstrate the technique for making pottery from clay. Then show several different ways to use what is found in nature to decorate the pottery. Finally, let each student make their own piece of pottery, devising their own method for decorating it.

Materials

Student booklets consisting of designs and symbols available in Background Information.

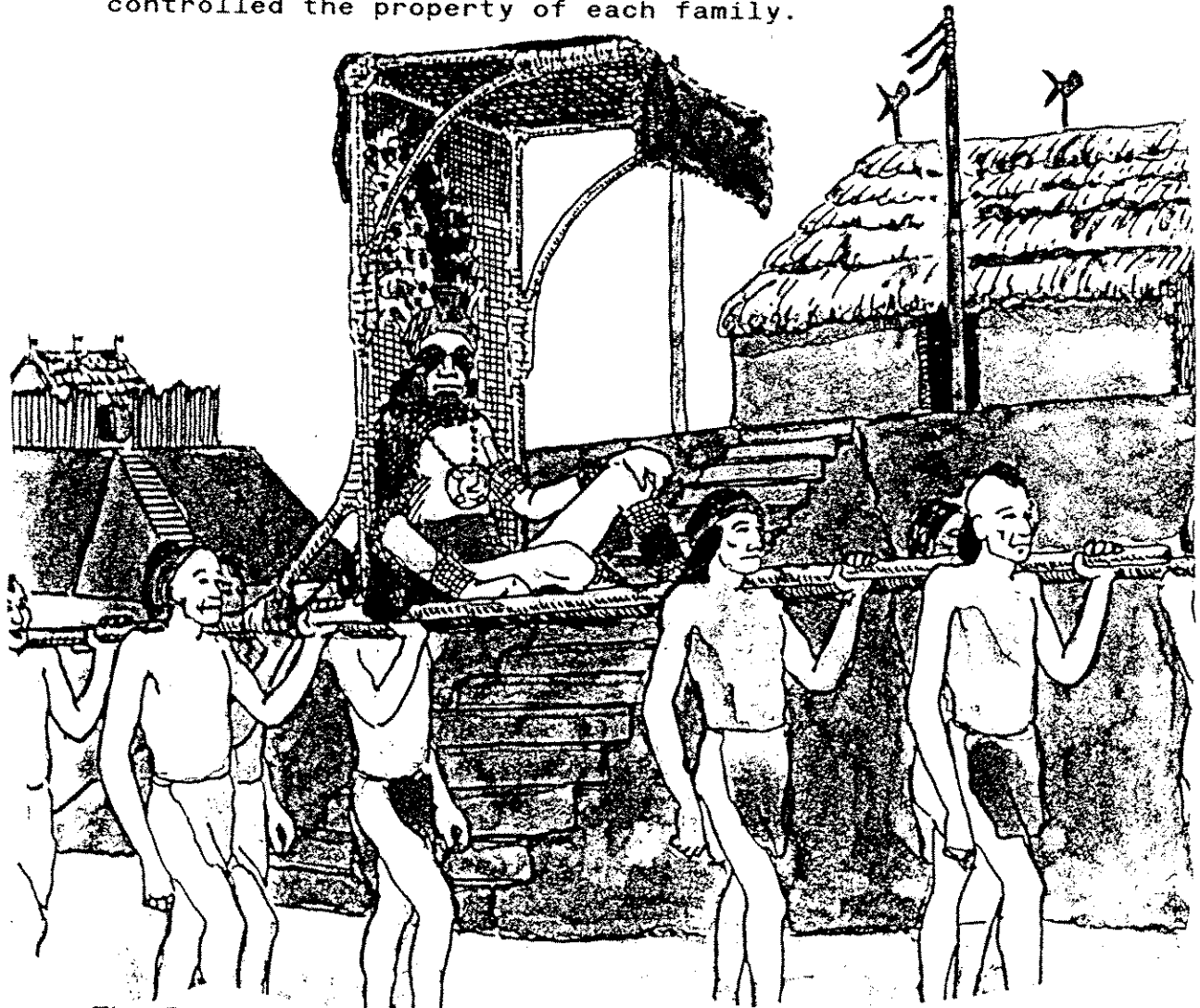
Clay for making pottery

Various objects for scratching, impressing or stamping pottery surface--sticks, string, fabric, rocks, shells, etc.

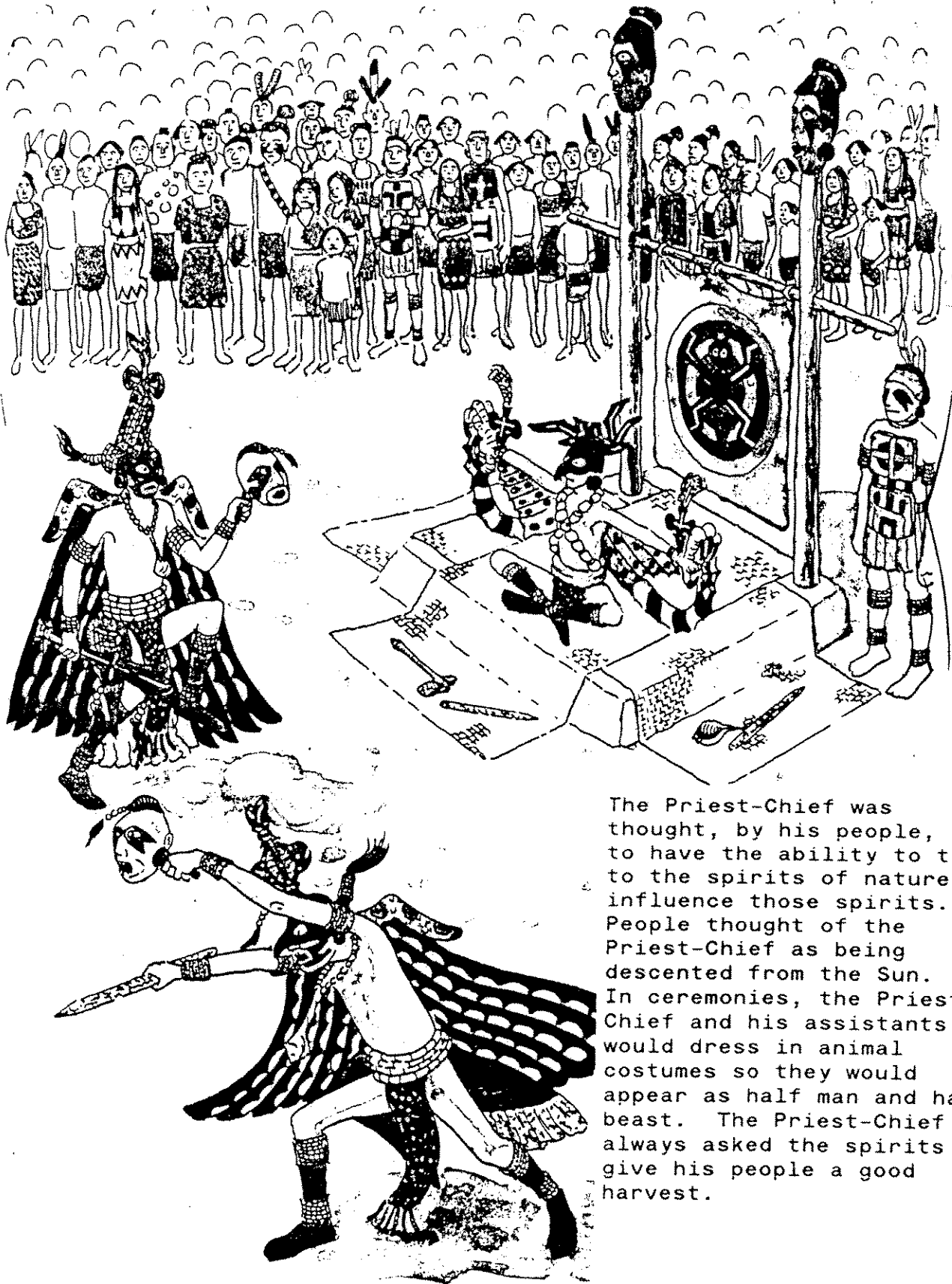
BACKGROUND INFORMATION

Lesson Seven

- The settled and abundant life of the Mississippian Period led to the development of a new type of society call "Chieftom". In a Chieftom, families are ranked according to how closely there were related to the ruling family. At the head of the ruling family was a powerful Priest-Chief. This position was inherited. When the Priest-Chief died, his position was inherited by his sister's son, not his own son. This was because Mississippian people traced their family through the women rather than through the men. Women also controlled the property of each family.

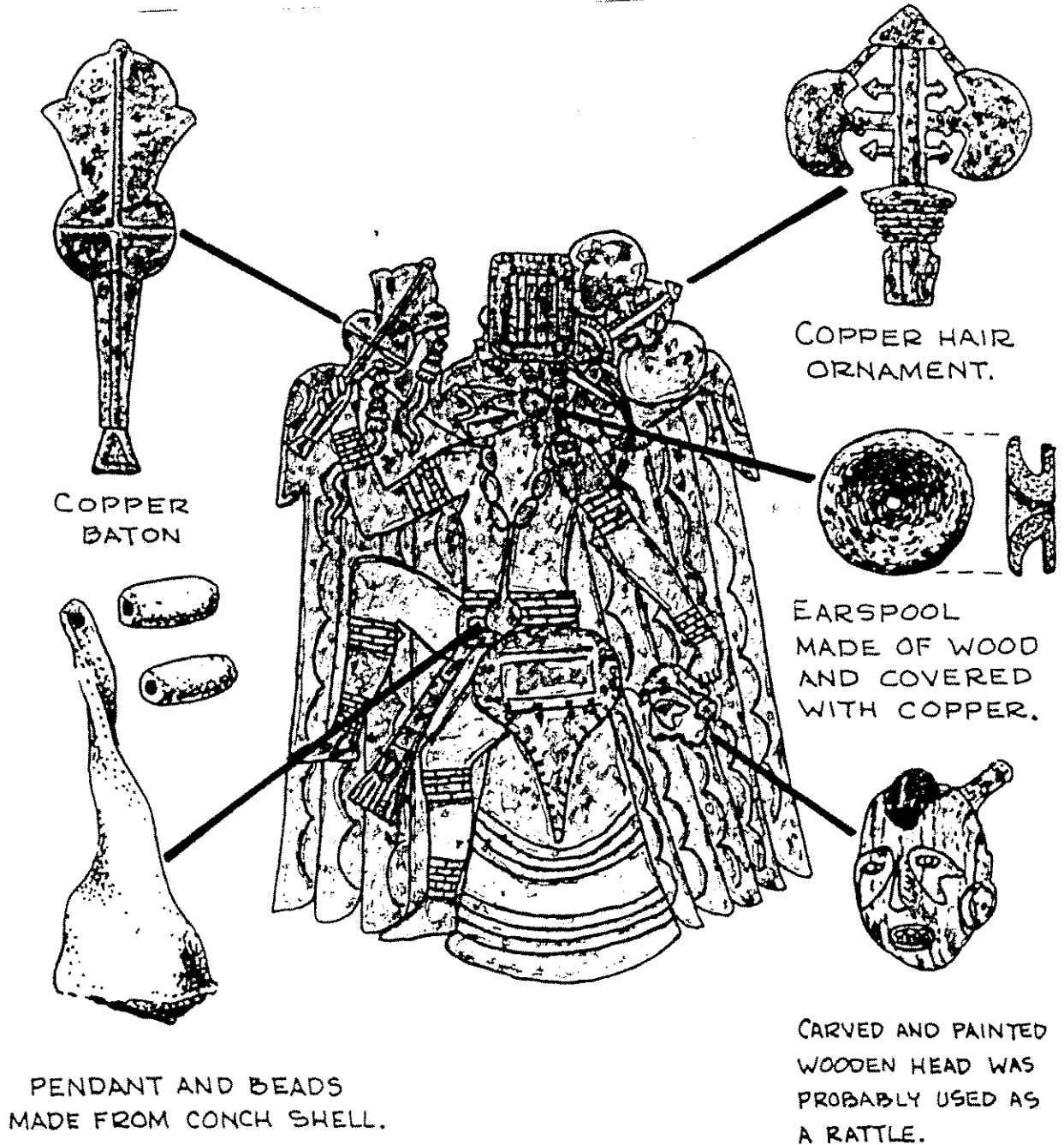


The Priest-Chief was well cared for by his family. He was dressed, fed, and carried wherever he went on a litter. Some of his relatives were also priests and they assisted the Priest-Chief in important ceremonies and meetings.



The Priest-Chief was thought, by his people, to have the ability to talk to the spirits of nature and influence those spirits. People thought of the Priest-Chief as being descended from the Sun. In ceremonies, the Priest-Chief and his assistants would dress in animal costumes so they would appear as half man and half beast. The Priest-Chief always asked the spirits to give his people a good harvest.

Since the Indians of the Mississippian Period did not leave written records, we have to learn about their culture through artifacts. Below are pictured some ceremonial objects. They were made from stone, wood, seashells and copper. The embossed copper plate below shows a dancer in an eagle costume. This plate was hammered into shape and the design was put on with wooden or bone tools. Like most copper ornaments, it was made in several pieces and then riveted together.

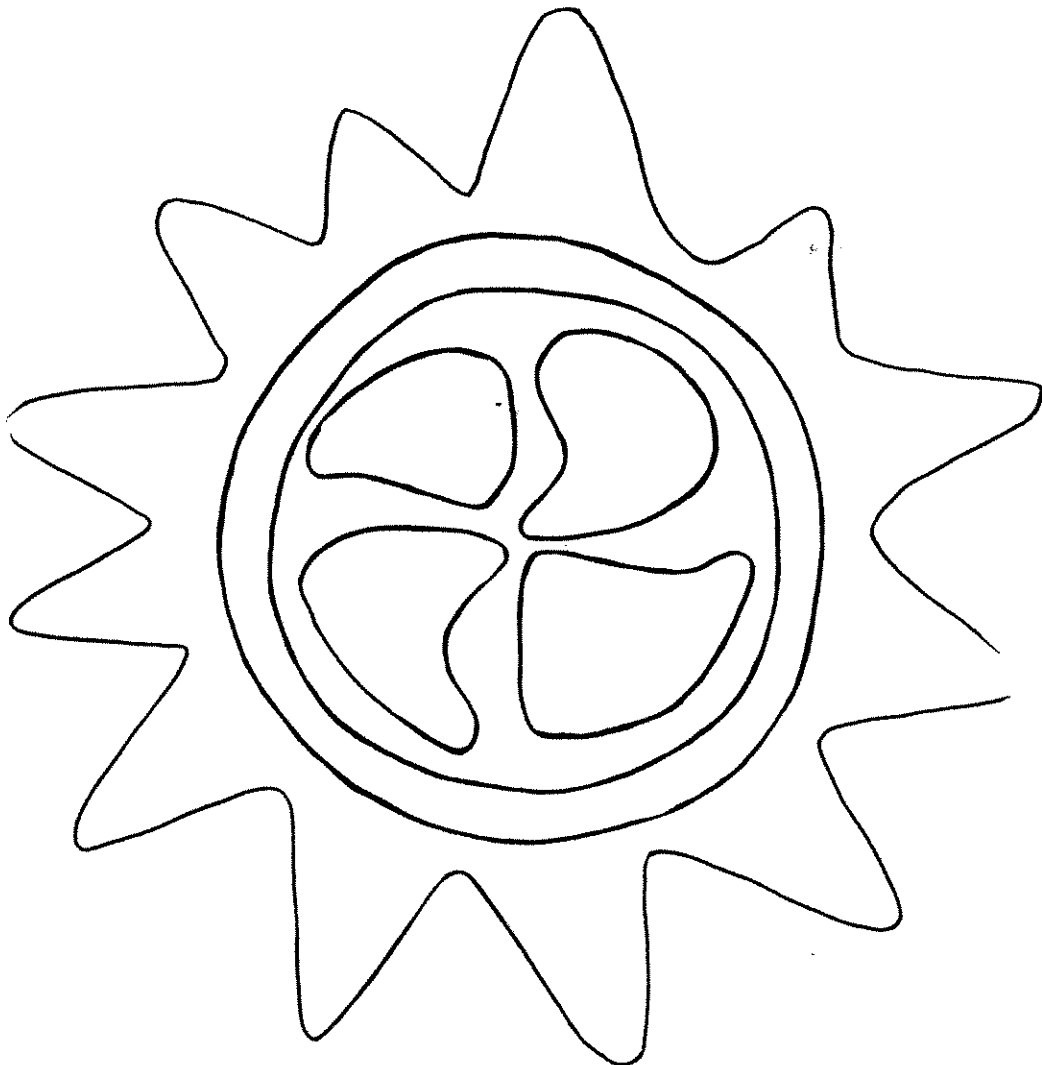


BACKGROUND INFORMATION

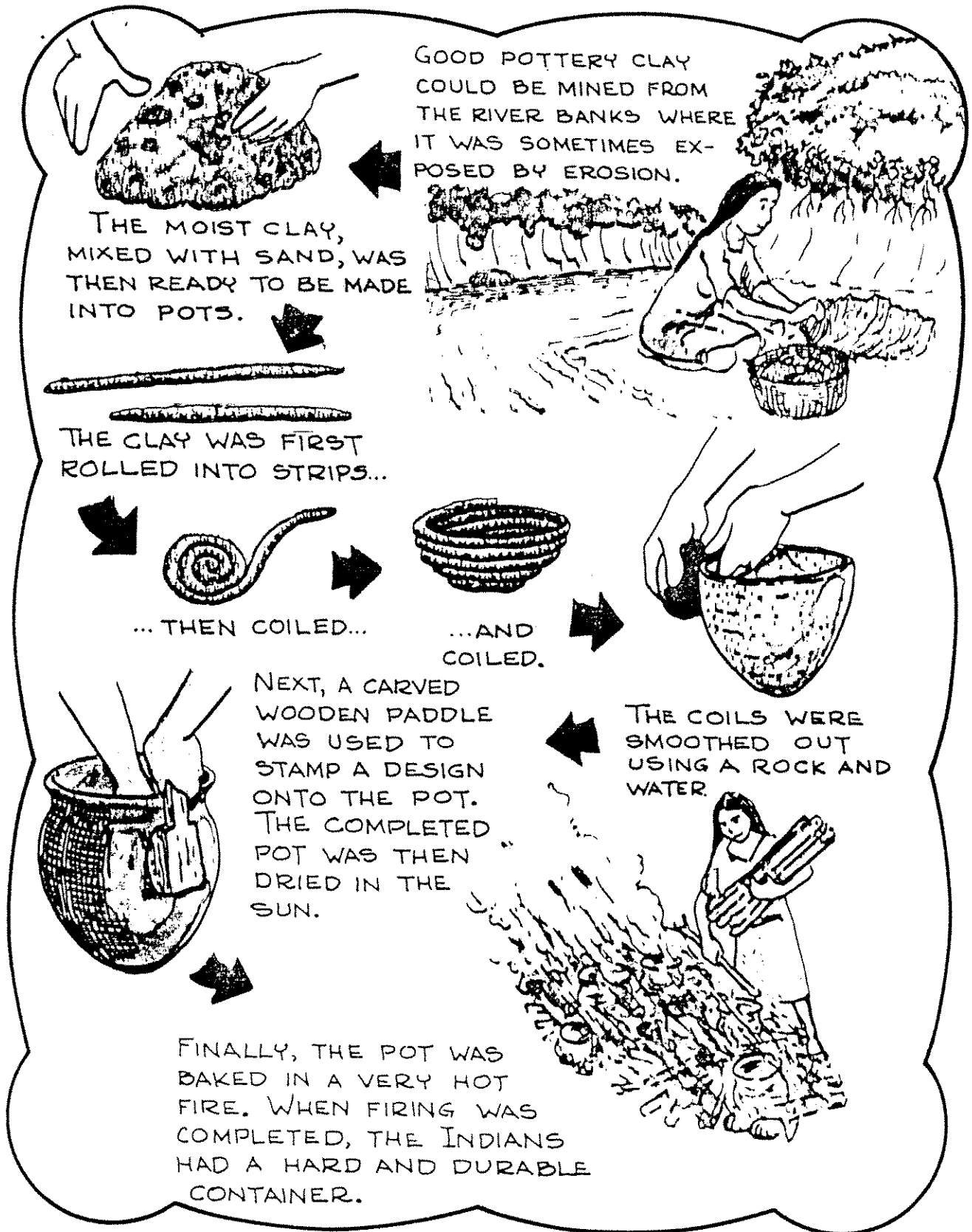
Our knowledge of symbols comes from art artifacts found by archaeologists. We speculate that these symbols had religious significance. The temple at Angel Site also leads to the conclusion that religion was a major factor in the lives of the people.

The temple was the religious center of the town. One of the most interesting artifacts found at Angel Site is the figuring that was discovered in the Temple Mound. The remains of the elite members of Indian society were often kept in the temple.

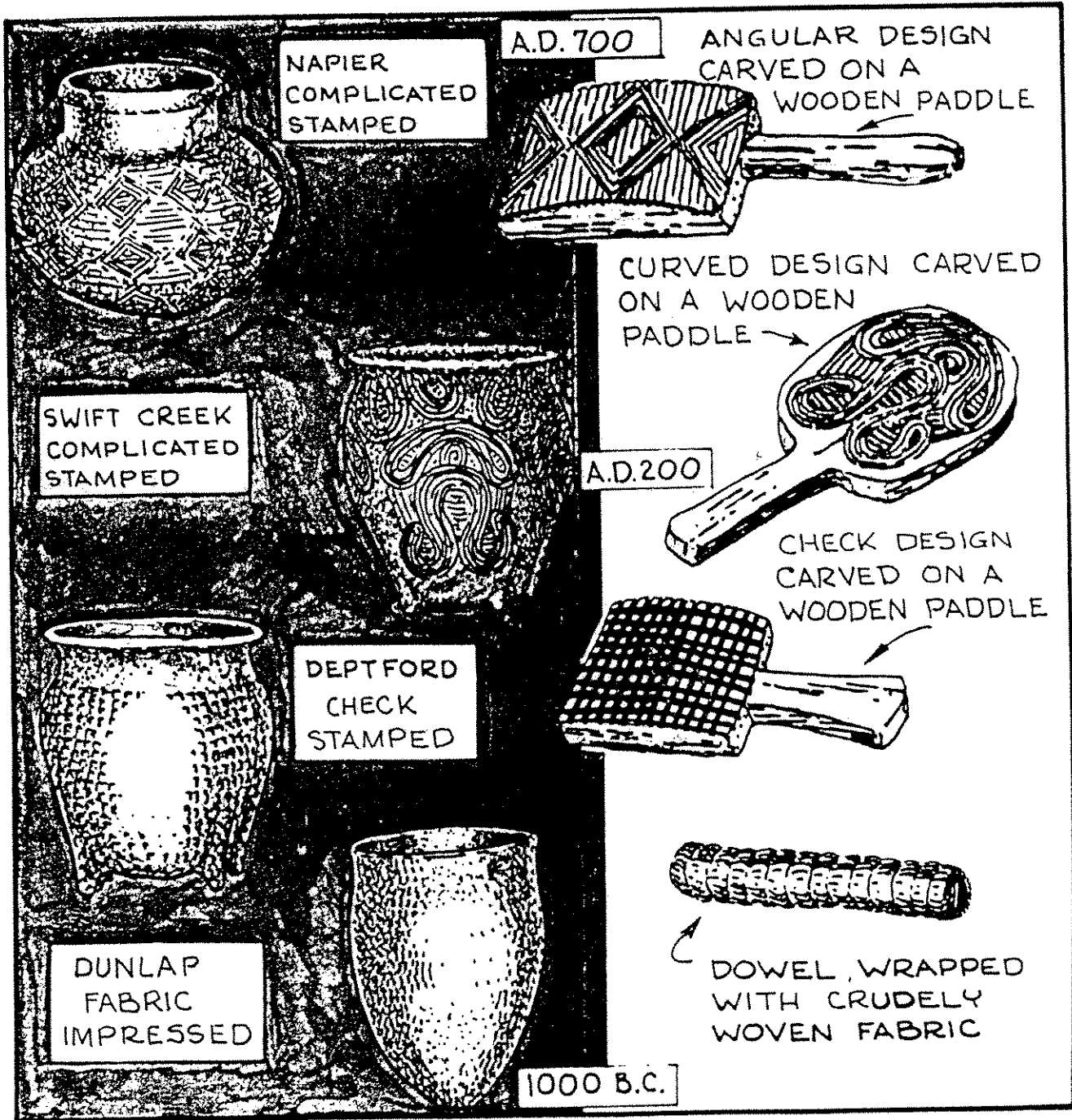
The people were sun worshippers and the religious leaders were able to predict weather, lunar and solar activity, including eclipses and they had calendrical knowledge. All of these effected crop planting, maintenance and harvest. This was an Agricultural society based on corn as the stable food source.



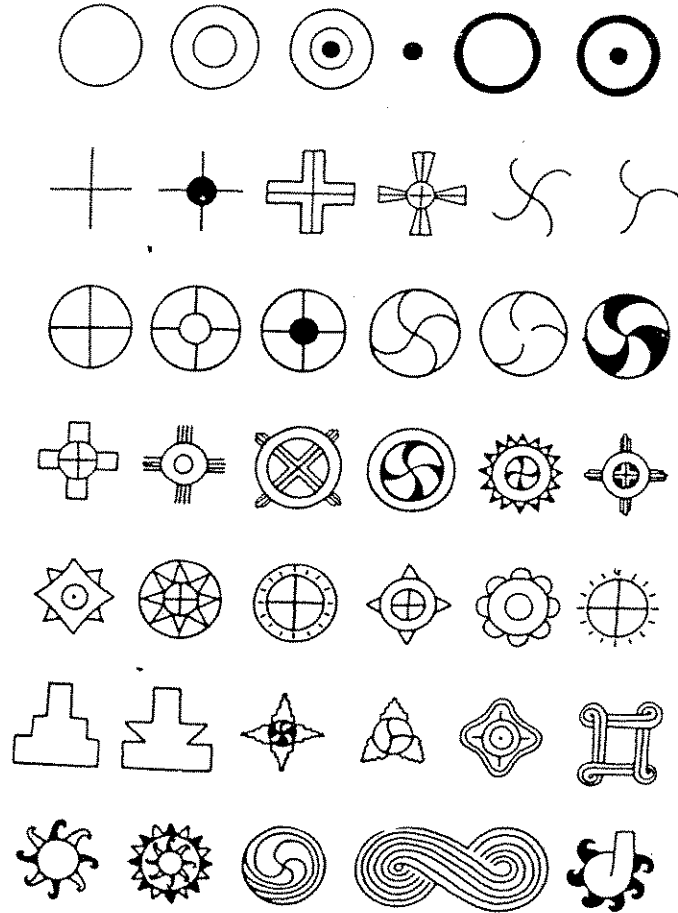
Many artifacts are in the form of pottery. The women were the pottery makers. Below is a pictorial explanation of the pottery making process.

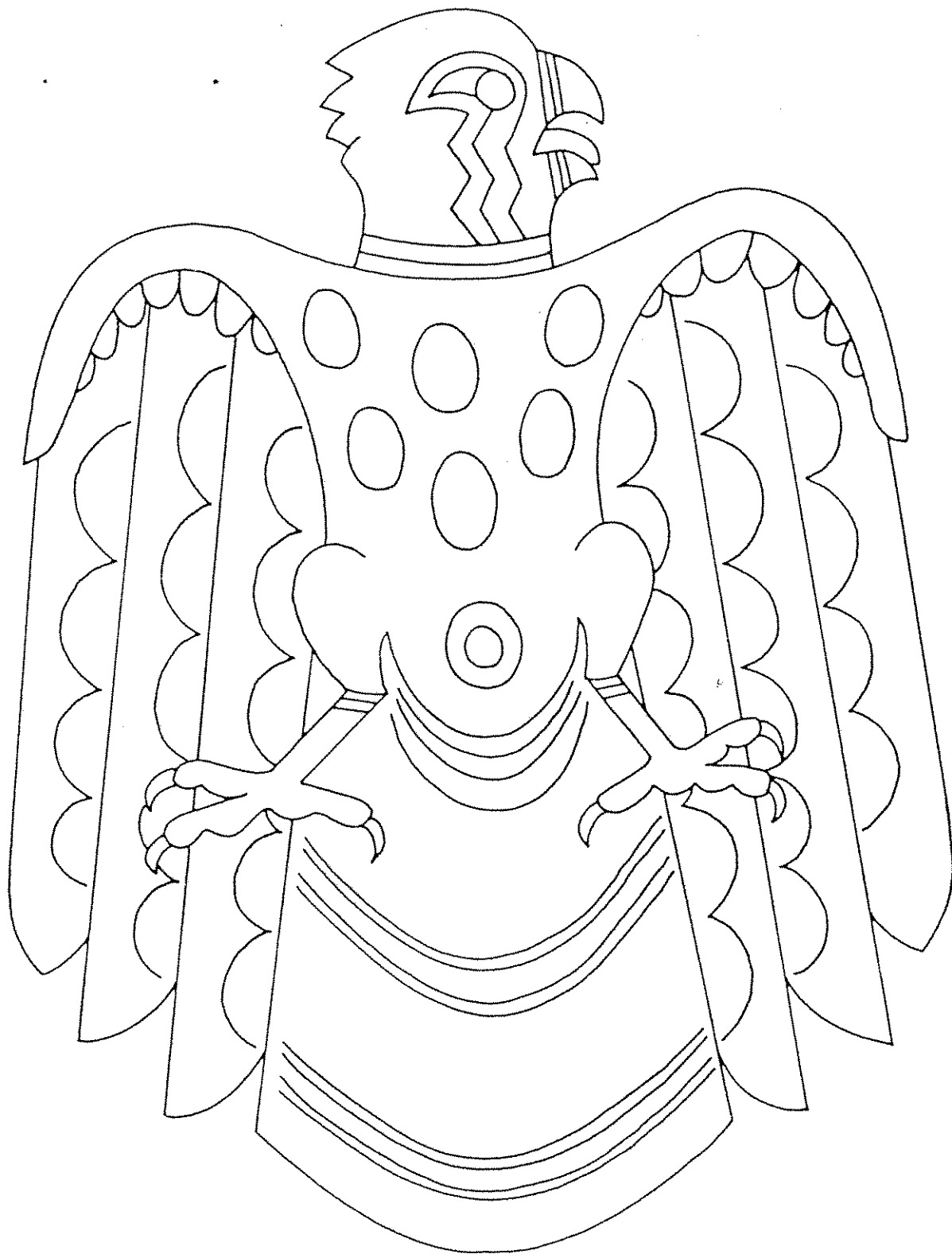


Pottery was decorated by incising (scratching), impressing, or stamping the surfaces. Designs on pottery changed through the centuries. Archaeologists study these designs in order to determine the time period in which each was popular. Shape changed as well. In addition, Indian potters added various materials to the wet clay in order to make it work properly. Plant fibers were added to the earliest pottery. Later, they mixed sand, crushed quartz or limestone with the clay.

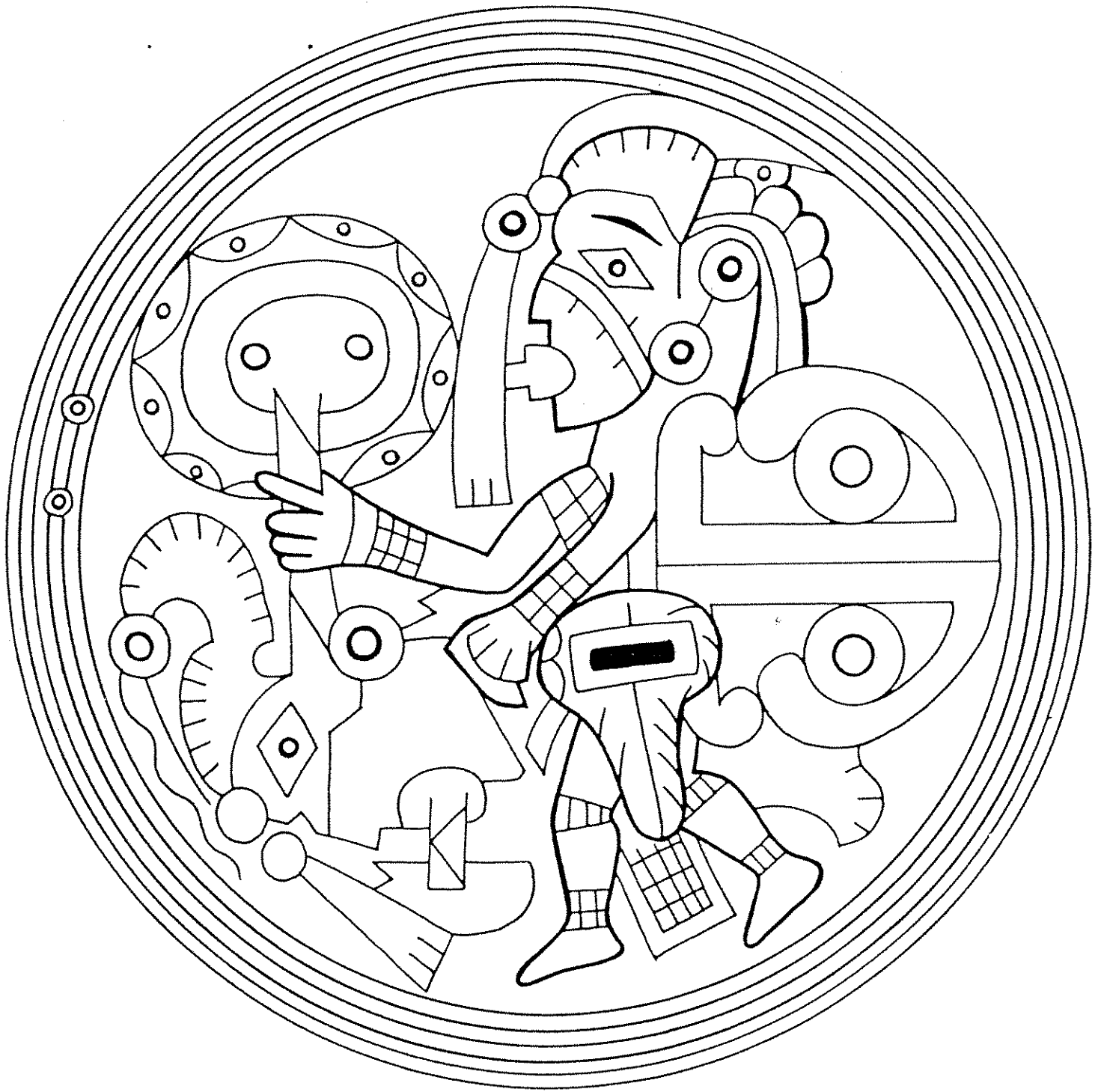


Following are a variety of different designs used by the Indians. As a rule the designs had a serious significance to the people using them and were not merely decorative. Many vessels marked with these figures were no doubt devoted to particular functions in the ceremonial activities of the people. Some of these designs may have been painted on the pottery as opposed to incising, impressing or stamping.





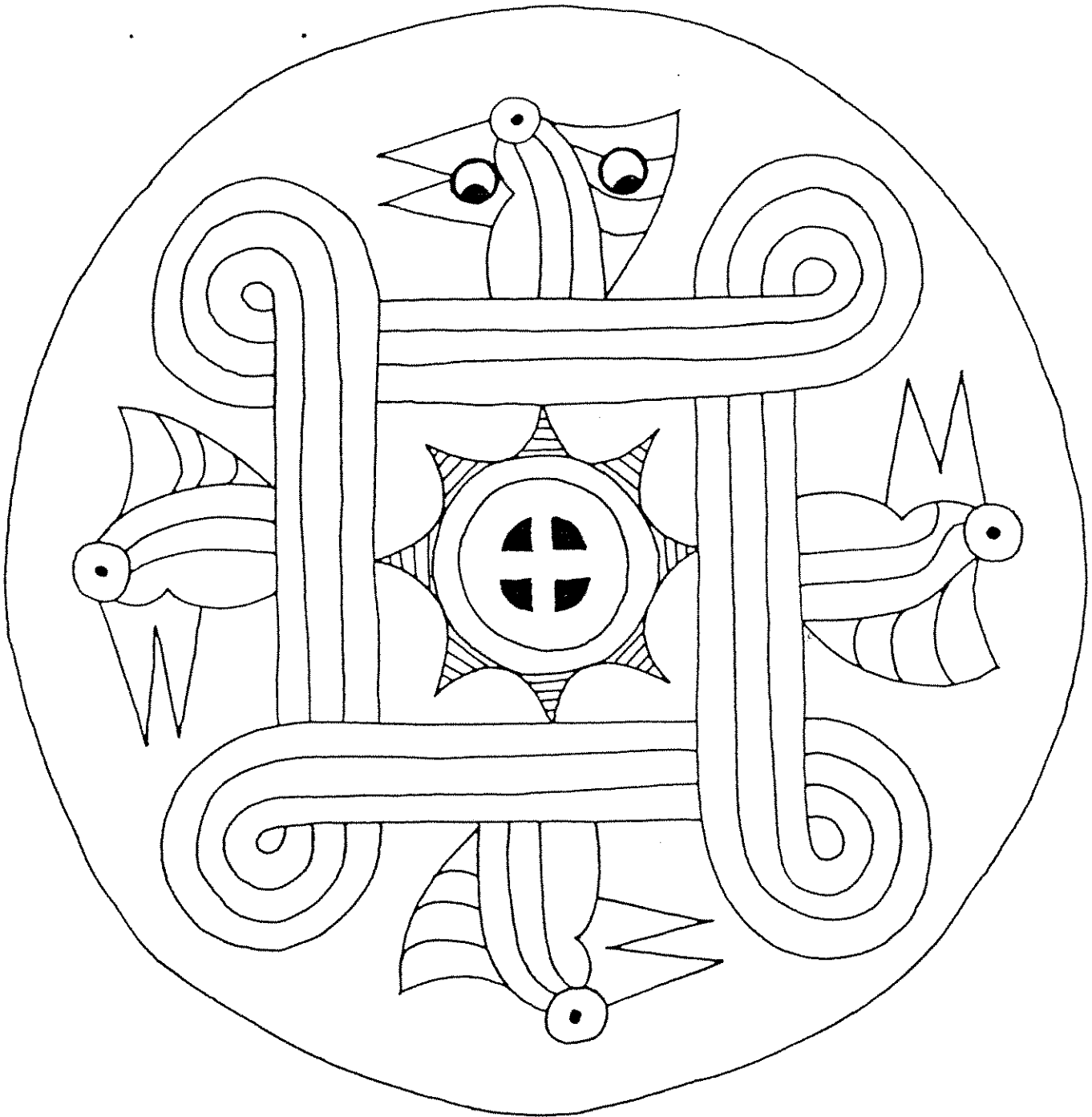
Hawk (thunderbird?) embossed on copper plate. Moundbuilder (Temple Mound II culture)
c. 1400 A.D.



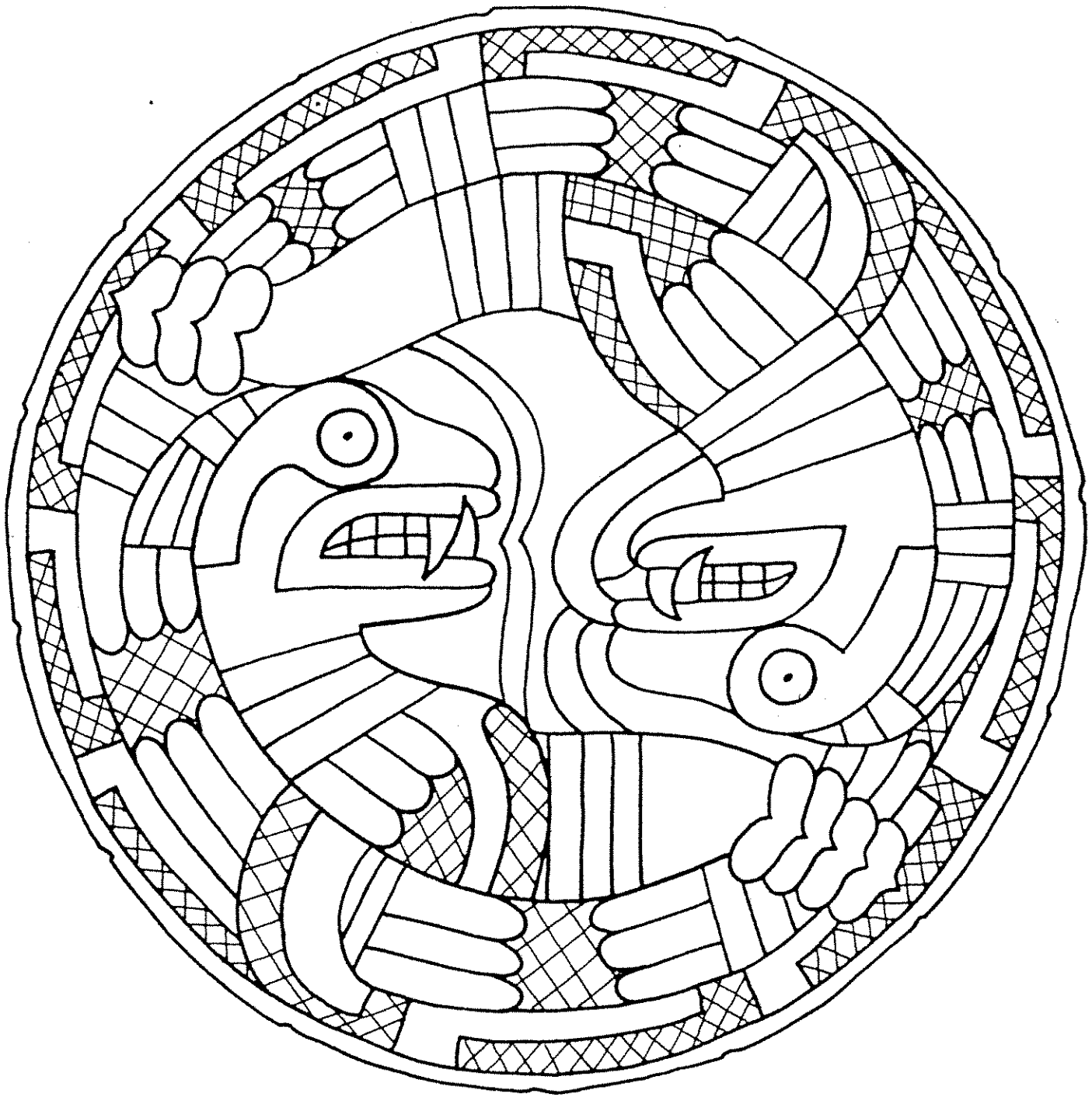
Eagle-man with stylized wings, trophy head. Engraving on shell. Moundbuilder



Eagle-man with mace, ceremonial copper headdress, trophy head; embossed on copper plaque. Note shell ornaments. Moundbuilder (Temple Mound II culture). Georgia. Circa 1400 A.D.



Cosmological symbols, four directions, "buzzard cult" symbols (woodpecker) engraved on
Moundbuilder (Temple Mound II culture). Tennessee. Circa 1400 A.D.



Winged serpents, rattlesnakes, engraved on sandstone disk. Moundbuilder (Temple Mound II culture). Mississippi. Circa 1400 A.D.

BACKGROUND INFORMATION

Lesson Eight

Exploitation of food resources of the Indian's environment has a long history with origins far back in the Archaic Tradition. Some of their hunting, fishing and gathering techniques could be more than 9,000 years old. Hunting of wild animals provided a major portion of their food supply.

Below is a list of animals that contributed to the food supply.

White-tailed Deer	Rabbits
Black Bear	Squirrels
Wild Turkey	Raccoons
Pigeons	Opossums
Fish	Buffalo

This is a list of wild foods which were gathered for food.

Persimmons	Crab Apples
Wild Grapes	Plums
Cherries	Prickly Pears
Pawpaws	Maypops
Nuts	Sunflower Seeds

Acquiring food was only part of the total picture: food also had to be preserved for use in the future or cooked to make it edible or more palatable. One method was drying. Other methods include broiling, boiling, and barbequing. Often cooked meat was made into soup or stew.

Here is a simple method for preparing meat as jerky. Any lean meat can be used but the most popular meats are beef and buffalo. This recipe comes from Ouabache Potpourri, Post Quiatenon Recipes and Reflections from the Feast of the Hunter's Moon. This booklet is published by the Tippecanoe County Historical Association.

As is explained in the cookbook, there is no attempt made to present authentic recipes. They are modern adaptations of foods which may have been available in earlier times.

TEACHING PLAN

Lesson Eight

Subsistence Techniques for Responding to Basic Needs;
Hunting and Gathering Wild Foods

Objectives

To gain some insight into the long history of
hunting, fishing and gathering techniques
To better understand the correlation between filling one's
basic needs and one's environment
To learn some techniques for the utilization of wild foods

Opening the Lesson

Develop a list of animals hunted for food and wild food
gathered for eating by the Indians. This list is available
in Background Information.

Developing the Lesson

Plan and make a mural which would include pictures of wild
animals hunted for food. These pictures will be drawn by
the students. Also include pictures of foods growing in the
wild which would be gathered and eaten. Include some sort
of authentic background for this mural--trees, the river,
etc.

Concluding the Lesson

Display the mural, perhaps sharing what the students have
learned with another class.

Prepare and serve Jerky. The recipe is included in
Background Information.

Materials

Large sheet of paper for mural
Paper for student art work
Ingredients for Jerky (See recipe)

JERKY

Take a portion of lean meat and cut it into strips 1" wide and 1/8" to 1/4" thick. Mix up a salt solution of 1 teaspoon salt to 1/2 gallon water. Soak the meat in this solution overnight.

Hang the meat strips on a rack or screen and place in your oven. Set the oven at the lowest possible setting and prop the door of the oven so that it is about 4 or 5 inches. Leave the meat in until it is dry and brittle, 6 to 18 hours.

Jerky can also be purchased, already prepared, at Sam's Wholesale Club

TEACHING PLAN

Lesson Nine

Subsistence Techniques for Responding to Basic Needs:
Cultivation of Domestic Foods

Objectives

To develop a knowledge of exploiting plant life native to one's environment
To gain some understanding of the significant implications of farming on the life of Prehistoric Indians
To increase respect for the skill and intelligence of Prehistoric Indians
To learn some techniques of the utilization of plants for food

Opening the Lesson

Develop a list of cultivated domestic plants. This is found in Background Information. Display any of the foods available.

Developing the Lesson

Plan to add garden and farm plots to the table top model of Angel Site that the class has been making. Determine how the foods will be replicated and added to the model.

Concluding the Lesson

Have a Tasting Party. Several suggestions and recipes are in the Background Information.

Materials

Food for display
Supplies for replicating foods to add to table top model
Prepared food for Tasting Party

BACKGROUND INFORMATION

Lesson Nine

Plant food made up an important part of the Indian diet. Agricultural items were planted, tended and harvested in small family plots near their homes and in larger communal areas outside the fortification of the village. Of all the agricultural items of the prehistoric Americans, corn ranked foremost in importance.

A list of cultivated domestic plants follows.

Corn	White Potato
Squash	Sweet Potato
Pumpkin	
Beans	

The bottle gourd was cultivated for uses such as water vessel, dipper, ladle, cup, bowl, bird house, rattle, mask and many other things.

Corn was cooked and eaten in many different ways. This ranged from roasting it over a fire when first picked to processing it and eating it as hominy. It was used to make bread, and also used to make "cold meal", something to which water could be added to make a thin gruel. They could carry this with them when they travelled.

Most vegetables were cooked by boiling or broiling. Beans and corn were often made into succotash. Bear meat or oil was sometimes cooked with beans which were mashed into a pulp and formed into small loaves. Pumpkin and squash were generally cooked for immediate consumption, but sometimes pumpkin was cut into round slices which were peeled and dried. Pumpkin and squash seeds could be roasted and eaten.

The following suggestions for Native American foods for taste-testing are courtesy of Angel Mounds State Historical Site. These foods are intended to replicate dishes eaten by the Southeastern Indians.

Smoked Turkey

This can be purchased cooked from Sam's Wholesale Club in Evansville. Slice and warm before serving.

Hominy

Purchase canned hominy and heat in crockpot. Hominy was prepared traditionally by making a lye solution by filtering water through wood ashes. Shelled field corn was then soaked until the husks loosened and came off. After soaking, the corn would swell up and the husks would come off and float to the top of the water. Once prepared, the Indians would rinse the corn through many changes of water to remove all of the lye. A shortcut is to use a prepared lye solution such as "Red Devil." It is advised not to serve homemade hominy to the students. A demonstration of the method followed by a taste test of commercially prepared hominy would be safer.

Black Bean Soup

Dried Black Turtle Beans can be purchased from most stores. These beans are the most similar to the native forms. Add some seasonings of onion and a little garlic, as these items would have been available to the Indians. Some salt can also be added. Indians had salt but it was quite difficult to obtain and was, therefore, used sparingly.

Squash Pudding

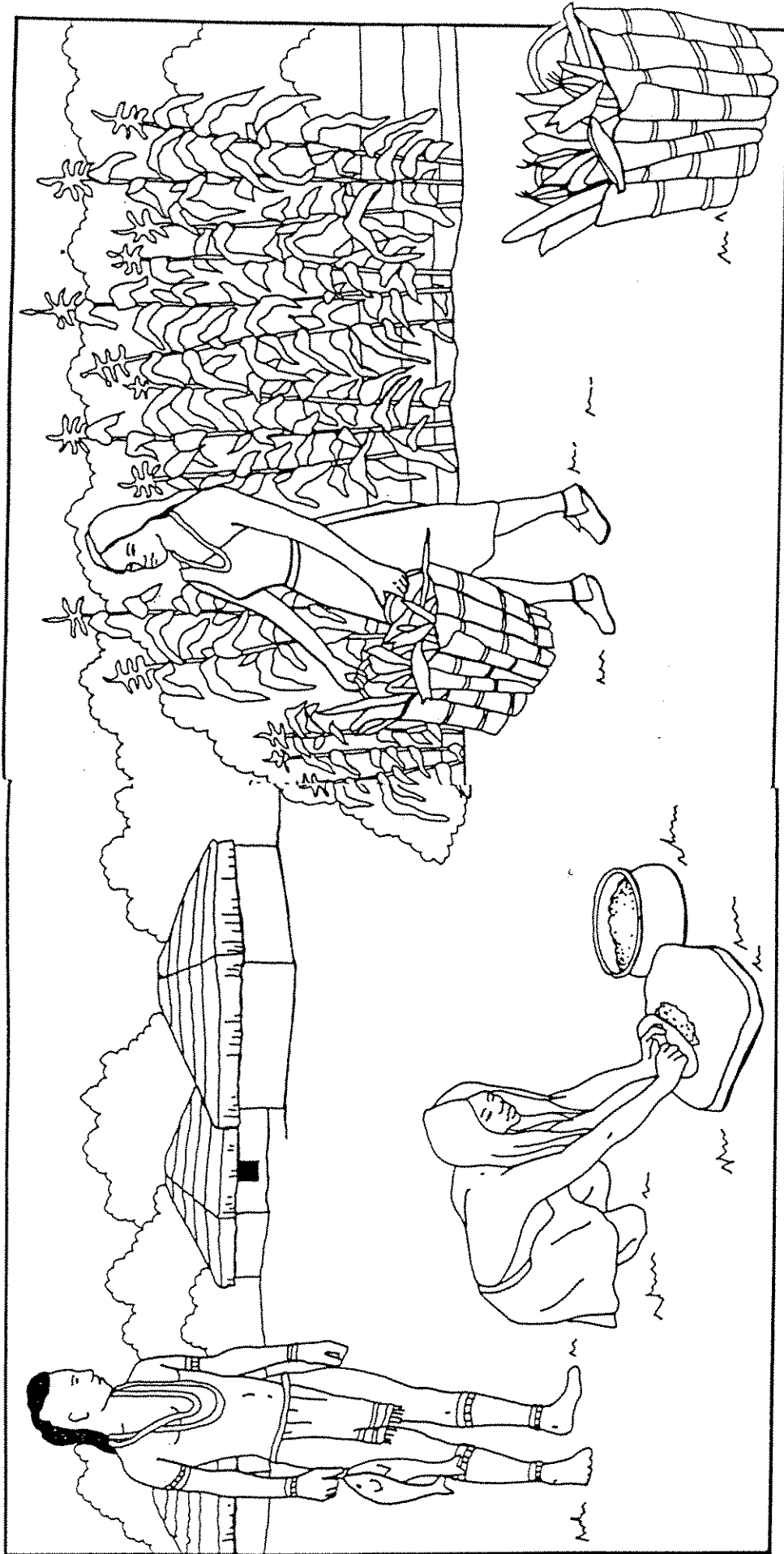
Butternut and Acorn Squash are known as winter squash and were the types closest to those that were available to the Indians. To prepare, slice them open, scoop out the seeds, and cook them in halves in a crockpot overnight. After cooking thoroughly, scrape the meat out of the shell and put it into a slow cooker. Add honey to taste. Add English walnut pieces and raisins. Then cook until the mixture is thick and the raisins are plump. Honey was not available to the Indians as honeybees were introduced by the Europeans. Maple sugar or syrup would probably have been used. Also, English walnuts were not available, but are good substitutes for the North American Black Walnuts.

Raisins, Sunflower Seeds and Walnuts

All are commercially available.

Sassafras and Wild Mint Tea

These may be served hot or cold. Both are available from specialty tea suppliers. Look for Frontier Herb Cooperative in Iowa as one source.



MISSISSIPPIANS' FOOD

The Angel Mounds Indians ate a wide variety of meats and vegetables. Fish were caught in the Ohio River, deer and other mammals were taken from the forests, and corn, beans, and squash were grown in well ordered fields.

TEACHING PLAN

Lesson Ten

Subsistence Techniques for Responding to Basic Needs:
Clothing .

Objectives

To develop an understanding of clothing in relationship to responding to the environment.

Opening the Lesson

Discuss with the children the kind of climate we have and the seasons. Point out that we change the type of clothing we wear as to the season and that the Indians also had different types of clothing.

Developing the Lesson

Discuss where we get our clothing--where do we get the material for our clothes. How did the Indians get the materials for their clothing? What was available?

Concluding the Lesson

The Indians used the materials available to them and dressed as the climate dictated. Some dress was very special and used by the leaders or for ceremony only.

Materials

The chart included shows how many tribes dress. There is also the picture of a warrior of the Southeastern Indians shown with his tattoos.

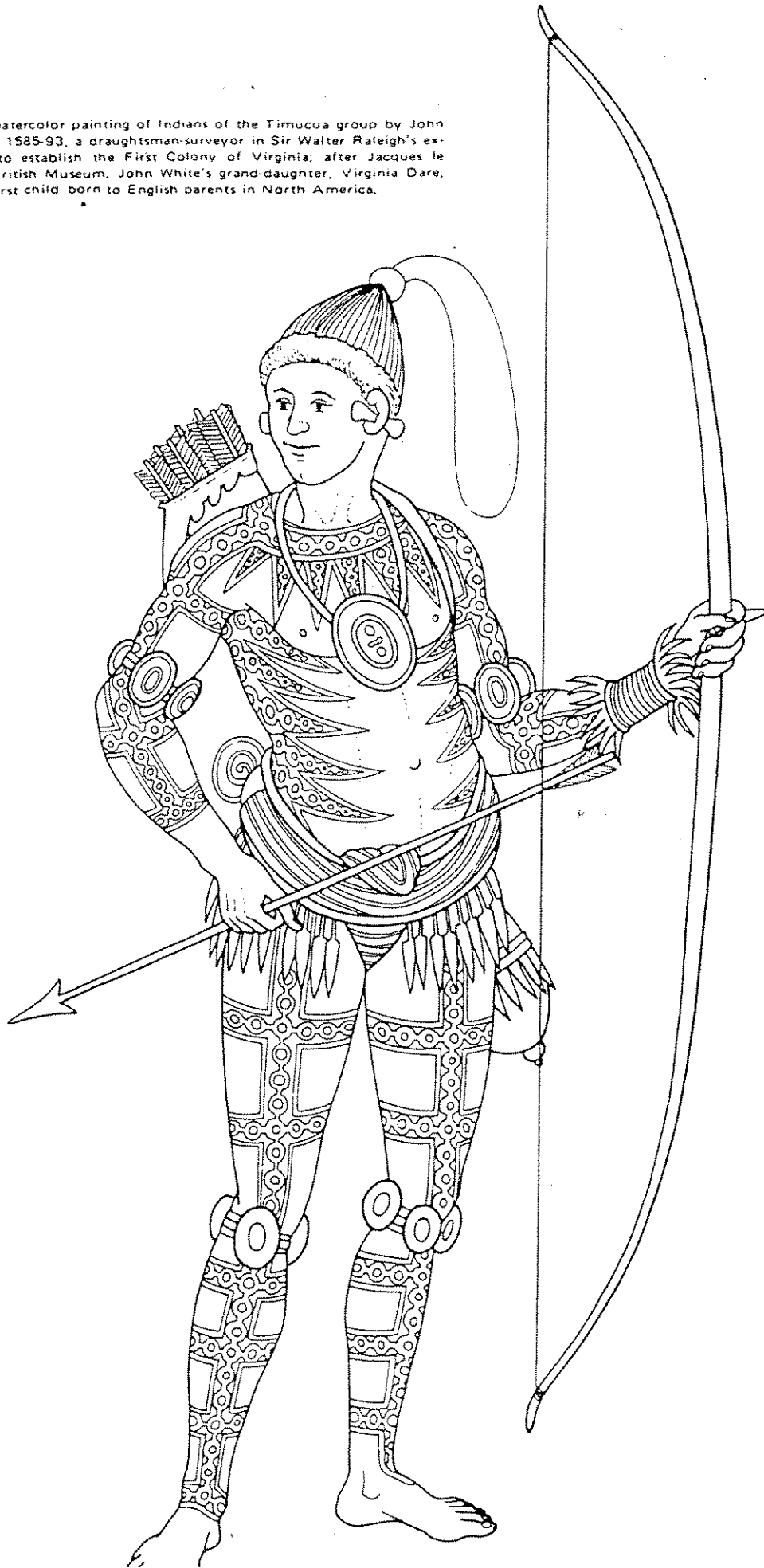
BACKGROUND INFORMATION

Lesson Ten

The basic item of clothing worn by Indian men was the breechcloth, a rectangular piece of leather about five feet long that was worn between the legs with the ends hanging over a belt. In the winter, the men wore moccasins and a matchcoat of animal skins that was thrown over the shoulders. They also put on leggings which were two separate garments that were attached to the belt. Women wore a short deerskin skirt in warm weather. In the winter, they also wore a mantle or matchcoat over the shoulder and moccasins. Children usually wore nothing in warm weather and began to wear adult clothing at puberty.

Most clothing was made from animal skins that the women processed and then sewed together. There were no looms as we know them, but the women did twin, plait and weave with their fingers and on upright looms. They used animal fibers like buffalo and opossum hair. They also used the fibers from Indian hemp, nettles and mulberry fiber made from shoots.

From a watercolor painting of Indians of the Timucua group by John White, fl. 1585-93, a draughtsman-surveyor in Sir Walter Raleigh's expedition to establish the First Colony of Virginia; after Jacques le Moyne. British Museum. John White's grand-daughter, Virginia Dare, was the first child born to English parents in North America.



INDIAN INFORMATION CHART

EASTERN WOODLANDS	PLAINS	DESERT	WEST - SEED GATHERERS
<p>Houses: Longhouses (some lived in teepees)</p>	<p>Houses: Teepees</p>	<p>Houses: lived in villages high on a bluff above a river. Stone houses with steep trails that led down to the river. Or, sun-baked houses high on flatland. Also lived in hogans.</p>	<p>Houses: Made of slabs from the cedar tree</p>
<p>Food: beans, squash, corn (used corn to make bread), hunted deer</p>	<p>Food: buffalo meat, berries, fruit, pemmican</p>	<p>Food: squash, corn, beans, melons, red fruit of cactus (made jam and wine)</p>	<p>Food: acorns, nuts, berries, fish, clams antelope, mountain goat, whales, roots</p>
<p>Clothing:</p> <p>Winter - Men: shirts and skirts made of buckskin and moccasins Women: skirts of wild grasses and wrapped themselves in warm furs</p> <p>Summer - Men: breechcloths Women: grass skirts</p>	<p>Clothing:</p> <p>Men: pants and breechcloth made from buffalo hides Women: dresses made from buffalo hides</p>	<p>Clothing:</p> <p>Men: breechcloth Women: woven dresses</p>	<p>Clothing:</p> <p>Very little. Men: breechcloth nothing Women: skirts of cedar bark</p>
<p>Transportation:</p> <p>canoes made of birchbark</p>	<p>Transportation:</p> <p>horses</p>	<p>Transportation:</p> <p>foot, some horses</p>	<p>Transportation:</p> <p>dug-out canoes</p>

VOCABULARY LIST

BRAVE - a warrior

BREECHCLOTH - a cloth worn about the hips for those in warm climates

BUFFALO - large plains animal hunted and used by Indians

CANOE - light boat moved by paddles

CHIEF - head of Indian tribe

DUGOUT - canoe made by hand from a single cedar log

HEADBAND - strip of decoration worn around the forehead

HEADDRESS - highly decorated head covering with many feathers

HOGAN - small earth covered hut

LONGHOUSE - long wooden building made of poles and bark

PAPOOSE - Indian baby

PEMMICAN - food made by Indians containing buffalo meat, dried fruit,
berries and buffalo fat

SQUAW - Indian woman or wife

SUNBAKED HOUSE - house made of stone and sunbaked bricks

TEPEE - tentlike house made of buffalo skins

WAMPUM - shells that were made into beads and used by Indians as decoration
and as money

TEACHING PLAN

Lesson Eleven

Subsistence, Techniques for Responding to Basic Needs:
Shelter

Objectives

To develop an understanding of how the Indians provided shelter.

Opening the Lesson

Lead a discussion about the climate in the Angel Site area and how people deal with the climate. What kind of protection do people need?

Developing the Lesson

Explain to the children how archaeologists have discovered the location of the Angel houses. Discuss the construction of the Angel Site houses from the materials available at Angel. Lead the discussion to include the Priest's house, Temple, and summer houses.

Concluding the Lesson

Review the concept that the houses at Angel Site meet the needs of the Indians living there. They were made to keep the Indians from the elements and they were made from the materials available in the area. Indians at Angel were able to construct buildings in addition to those needed for subsistence.

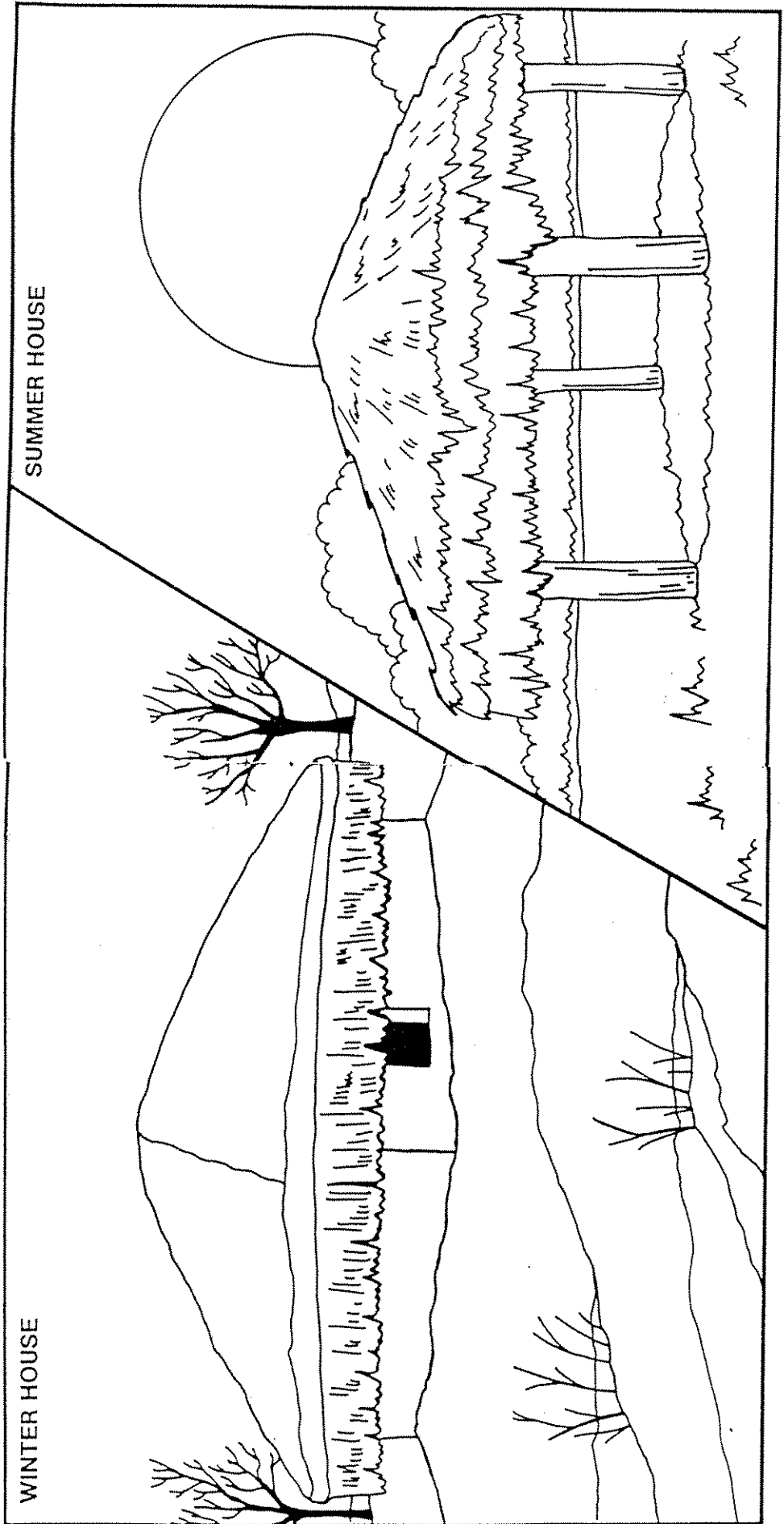
Materials

Use the chart from lesson ten that shows the Indian clothing and houses across North America.

BACKGROUND INFORMATION

Lesson Eleven

The houses at Angel Site were constructed of wattle-and-daub; upright poles for supports with walls of cane that were plastered over with mud. Woven mats were pressed onto the wet clay walls to protect it from rain. Random post holes are evidence that other buildings were built: summer houses, storage houses, and sweat lodges. There were also the ceremonial buildings on the mounds. The houses at Angel Site were square in shape. There is some evidence that summer houses were built that were only roofs with open sides.

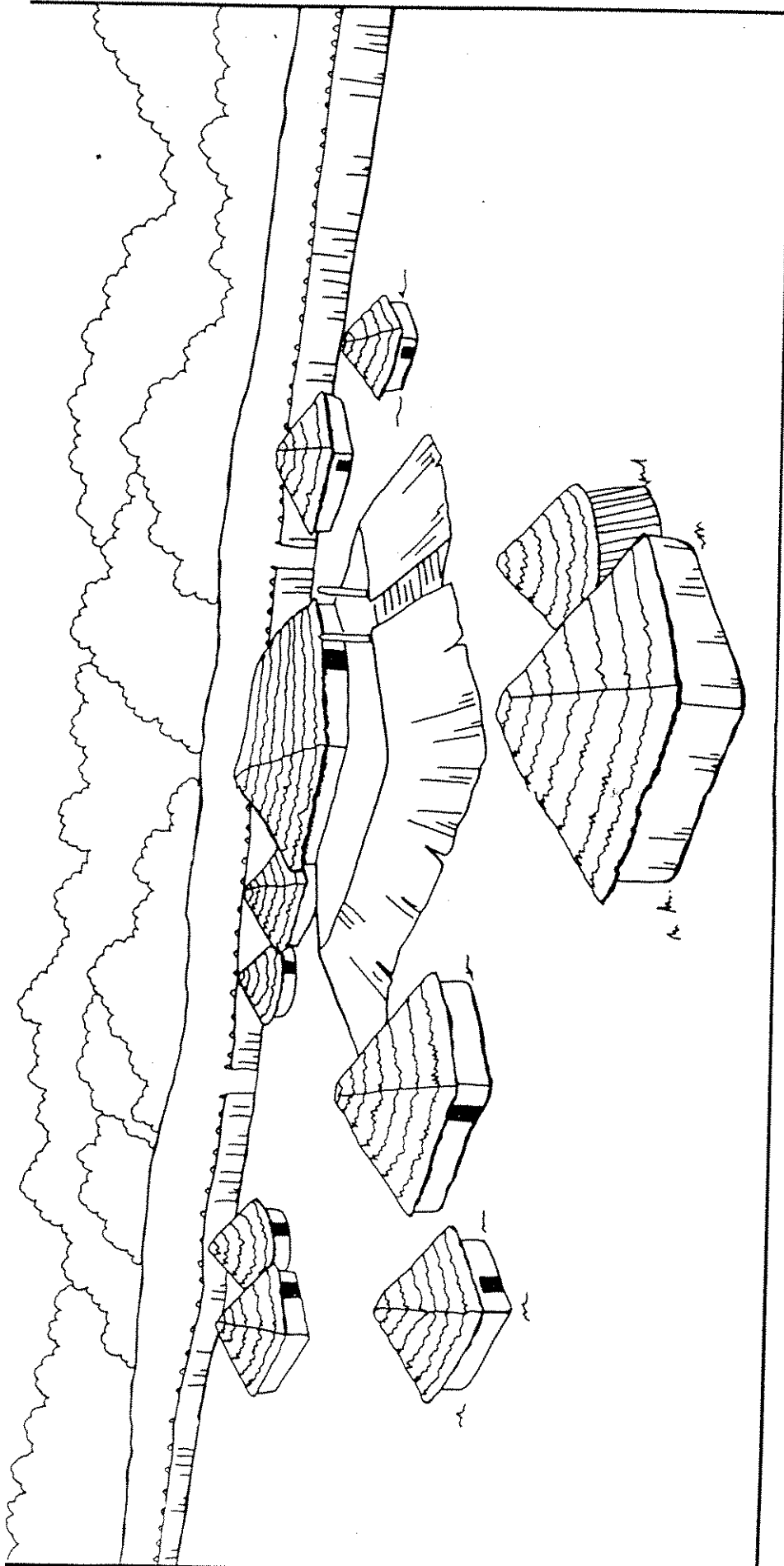


WINTER HOUSE

SUMMER HOUSE

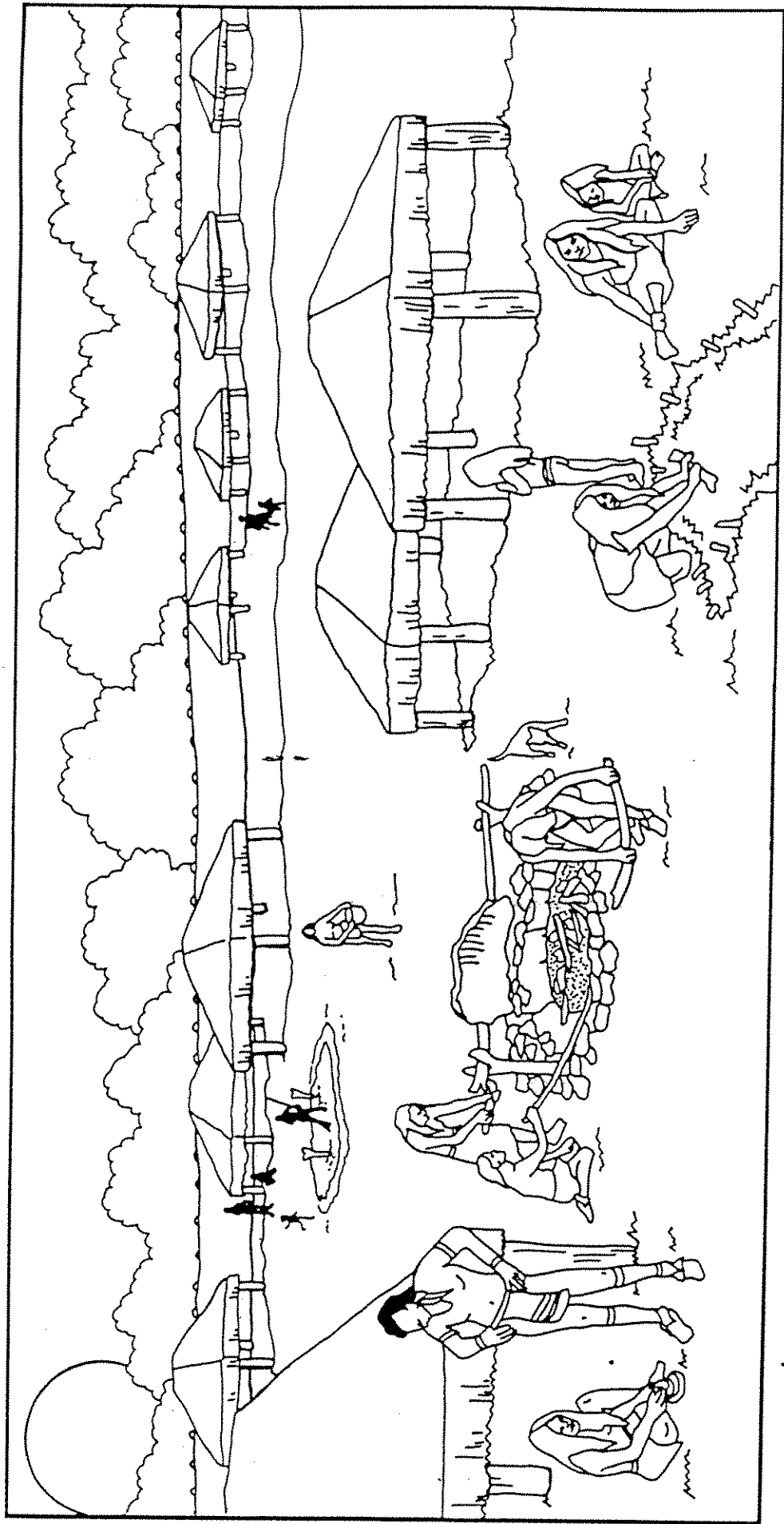
The winter house and summer house had thatched roofs, a central fireplace and a hole in the roof to let out the smoke. Can you see four differences in the two houses?

answer: The winter house had four walls and the summer house had just four corner posts.



MISSISSIPPIAN

The Indians who lived here were part of the Mississippian culture. They built large hills of dirt called platform mounds. The important buildings of the city were built on top of the mounds.



THE CITY

Angel Mounds was a large city for its time. There were more than 200 houses and 11 man-made mounds on the site. There were over 2000 people living here.

TEACHING PLAN

Lesson Twelve

Site Visitation of Angel Mounds

Objective

To gain a greater understanding of Prehistoric Indians by direct observation and participation

Opening the Lesson

Make arrangements with Angel Mounds State Historic Site.

Developing the Lesson

Tour Angel Mounds

Concluding the Lesson

After returning to school, wrap up the study by writing, drawing, painting, discussing or any other appropriate means.

Materials

A packet of information on planning a field trip to Angel Mounds is included.

PLEASE READ THIS PACKET BEFORE YOUR VISIT TO ANGEL MOUNDS

Your visit is scheduled for:

DATE _____

TIME _____

PRE-TRIP INFORMATION FOR THE TEACHER

Prior to your visit to Angel Mounds State Historic Site, we ask you to acquaint your students with Angel Mounds to make their visit as worthwhile as possible. A variety of information is provided in this education packet which contains:

- Angel Mounds brochure
- Membership Card to Friends of Angel Mounds, Inc.
- Vocabulary List
- Prehistoric Cultural Periods Fact Sheet
- Site Hike Guide
- "A is for Axe - A First Reader About Some Indian Artifacts"

It is best to allow about two hours for your visit. When arriving have bus driver disembark passengers at the front walk and then proceed to the bus parking area. Your group will be greeted outside by education volunteers who will spend an hour with your group in the Interpretive Center. Through the exhibits and introductory slide show, the education volunteers will help the students understand the lives of the Indians who lived at Angel Mounds and the science of archaeology.

The teachers will then lead the group on a hike of the town site to see the mounds and reconstructed houses and temple. The enclosed Site Hike Guide provides information to discuss with students on the hike.

Our gift shop has a variety of books, postcards, and souvenirs for the students to purchase with many reasonably priced under \$2.00, as well as books for the teachers that serve as excellent teaching aids for this subject. Please inform us when you arrive if your group intends to make purchases.

We look forward to your visit to Angel Mounds. If we can be of assistance, feel free to contact us at (812) 853-3956.

*Angel Mounds is a historic site of the Indiana State Museum System, and a location upon which an event, either prehistoric or historic, has occurred.

Education packet courtesy of Friends of Angel Mounds, Inc.

ANGEL MOUNDS STATE HISTORIC SITE

Tours

Free tours are available from 9 a.m. to 5 p.m., Wednesday through Saturday; and 1 p.m. to 5 p.m., Tuesday and Sunday. Two weeks notice is required for a guided tour by a trained volunteer or staff member.

To schedule a tour, call 853-3956.

Slide Presentations

The following programs are available through the Media Center of the Evansville-Vanderburgh School Corporation. Send in a regular AV request with the name of the program.

MISSISSIPPIAN CULTURE - learn about this prehistoric culture through the study of its principal towns sites, now preserved as Angel Mounds State Historic Site. (2nd grade and up)

ARCHAEOLOGY AS A TOOL - introduce your students to the science of archaeology, its justification and basic excavation procedures. (2nd grade and up)

VICTORIAN PASTIMES - examine the forms of entertainment popular with young and old from the 1860's to the 1900's. (9th grade and up)

PRODUCTIONS OF MY PENCIL - examine the culture, dress, and lifestyles of Indiana's historic Indians and early settlers through the works of artist George Winter. (3rd grade and up)

THE PEOPLE - examine the legends and stories of Native Americans. (4th grade and up)

In-Class Programs

The following programs are available between November and March. They are in-class programs presented by trained volunteers. To schedule call 853-3956.

COVERED WAGON - a decision, role-playing activity available to 4th grade classes. Using scale model covered wagons and accessories, students must cooperatively decide what items to bring to Indiana from the East during settlement of Indiana.

INDIAN TOOLMAKING - a hands-on activity for all ages. Classes are introduced to the techniques used by the Indians to manufacture their tools. Activities include drilling holes in stone.

HOOSIER KALEIDOSCOPE - the night skies to life in this inflatable planetarium as students learn Indian legends related to constellations. (1st to 6th grades)

BEGINNING ARCHAEOLOGY - introduce high school students to the science of archaeology with example of maps, tools, and artifacts. (high school)



INDIANA STATE MUSEUM
AND HISTORIC SITES

202 N. Alabama Street
Indianapolis, IN 46204
(317) 232-1637

Indiana State Museum
Angel Mounds
Commandant's Residence
Corydon Capitol
Culbertson Mansion
George Rogers Clark
Indiana Territory
J.F.D. Lanier Mansion
Levi Coffin House
Lumberlost
New Harmony
Old State Bank
Pigeon Roost
Ernie Pyle Birthplace
Gene Stratton Porter
T. C. Steele
Whitewater Canal

Accredited by
American Association
of Museums

Angel Mounds State Historic Site

SITE HIKE

Stops

- 1 **Interpretive Center back door**
Remind the class to enjoy the hike with their eyes rather than their hands; do not pick any plants nor disturb any animals.
- 2 **Bridge over the Slough (Beaver Pond)**
When the Indians lived in the town of Angel, this was a gorge with a stream at the bottom providing a source for food and water. The gorge added protection to the town since enemies had to cross it. The gorge has since filled in with 25 feet of dirt.
- 3 **Foot of the Bridge on the Stockade Line**
Look out on the site. This site was part of the prehistoric Mississippian culture. A population of about 1000 thrived in this community between 1300 and 1500 A.D. There were about 200 dwellings, public buildings, gardens, and probably graineries for corn. The town of 103 acres was surrounded by a stockade; you are standing on the stockade line.
- 4 **Reconstructed Stockade**
To build a stockade, a trench was dug, into which upright posts were inserted. Twigs and native cane were interwoven between the posts and then covered with daub (mud and grass) which sun-dried. The stockade served to protect the town with bastions spaced 40 yards apart. The town was surrounded on three sides by the stockade, with the Ohio River as the fourth boundary. The wall was rebuilt many times because of decay.
- 5 **Environmental Plaque**
Within the town the ground water was weedy grasses, some trees, small kitchen gardens, and dirt areas. Outside the walls were woods, cornfields, and the Ohio River. Food came from all these environments.
- 6 **Housing Cluster**
Houses - There are two types of houses; summer and winter. Summer huts more accurately provided sheltered areas for activities like cooking. House construction was the same technique as the wall. In addition house walls were painted with decorations bring lots of color to the town. The hole in the ceiling allowed smoke to escape from the hearth in the center of the house. Each house was for an entire family. The activities of daily life took place within these walls—sleeping, preparing meals, food storage in below-ground pits or hung from rafters, making tools of stone, bone, shell and making pottery, etc. Be sure to look in the partially furnished house.
Canoe - The canoe was made from a tulip log using the same techniques the Mississippian Indians used. Fire burned out the log; stone adzes chipped out the charred wood; clay, packed in areas not to burn, controlled the fire. It took about 100 hours of burning to complete.
Garden - They grew corn, beans, squash, pumpkin, gourds, and sunflowers.

- 7 **Mound B**

This is a mound. Its rounded shape is a result of years of plowing which smoothed the edges and increased erosion. Originally its shape was a truncated pyramid—a pyramid with its top cut off. Mounds were built with basketsful of dirt carried from the river. The mounds at Angel were not for burials. They were structural features upon which buildings were constructed. The mounds elevated the people closer to the heavens and the sun, and kept the important people and buildings of the community above the annual flood of the river.
- 8 **Roundhouse**

This public building was probably a meeting house or may have been used a sweat lodge for purification rituals.
- 9 **Mound A**

This is the largest mound on the site, located nearly in the center of the village. It covers 4 acres and stands 44 feet high. A structure for the chief was on top. There are 2 terraces and the knoll. The knoll was originally part of the mound serving as a lookout from which the entire town could be seen. PLEASE KEEP EVERYONE OFF THE KNOLL!!!
- 10 **Mound A, Level 2**

Encourage everyone to look out on the town and help them envision what this community looked like. It was a thriving town. It was an influential trading center for the area bringing in material from all over the country. The town was colorful with painted buildings and decorated clothing. People would be busy cooking, making pottery, clothing, tools, dugout canoes, decorative pieces, tanning hides, working in gardens, drying food for storage, teaching children, kids playing, men hunting and fishing, guards at the bastions, working cornfields outside the wall, building and repairing houses and walls, gathering wild foods, grinding corn and nuts into meal, gathering pecans in the lovely grove opposite this mound. The village had complexity with religious/political institutions. The leaders did control the population.
- 11 **Plaza**

This is an open area similar to a town square. It was kept clean, swept regularly. Ceremonies, festivals and competitive games were held on the plaza. Chunky was a well-known game. Players threw a shaft at the place a round, smooth stone was rolled with the closest shaft winning. It involved great vigor and skill. The great players were the fine sports figures of their day.
- 12 **Temple**

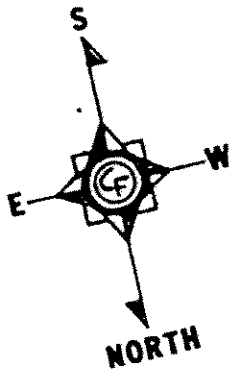
This temple and mound is a complete reconstruction based upon the archaeological excavations. The temple was the religious center of the town. This was an agricultural society based on corn as the stable food base. These people were sun worshippers and the religious leaders were able to predict weather, lunar and solar activity including eclipses, and had calendrical knowledge—all of which effect crop planting, maintenance and harvest. The beautiful flourite figurine was found in the temple mound and may have been the guardian figurine for the town.
- 13 **Mound E**

Either walk to the mound or view it from the path. This is the only unplowed mound on the site. It retains its original shape—a truncated pyramid visible even with vegetation. Probably the other mounds had this shape.

ANGEL MOUNDS

STATE HISTORIC SITE

INDIANA STATE MUSEUM SYSTEM



OHIO RIVER

Three Mile Island

Ohio River Bayou (Chute)

Temple Mound F

Central Mound A

Plaza

Slough






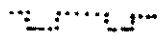

Interpretive Center

Parking



INDIANA STATE MUSEUM AND HISTORIC SITES

MAP EXPLANATION

- Mounds 
- Interpretive Path 
- Reconstructions   or 
- Original Stockade Line 
- Wooded Areas 

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PAMPHLETS AND PAPERS

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APPENDIX

ANGEL MOUNDS STATE HISTORIC SITE

Tours

Free tours are available from 9 a.m. to 5 p.m., Wednesday through Saturday; and 1 p.m. to 5 p.m., Tuesday and Sunday. Two weeks notice is required for a guided tour by a trained volunteer or staff member.

To schedule a tour, call 853-3956.

Slide Presentations

The following programs are available through the Media Center of the Evansville-Vanderburgh School Corporation. Send in a regular AV request with the name of the program.

MISSISSIPPIAN CULTURE - learn about this prehistoric culture through the study of its principal towns sites, now preserved as Angel Mounds State Historic Site. (2nd grade and up)

ARCHAEOLOGY AS A TOOL - introduce your students to the science of archaeology, its justification and basic excavation procedures. (2nd grade and up)

VICTORIAN PASTIMES - examine the forms of entertainment popular with young and old from the 1860's to the 1900's. (9th grade and up)

PRODUCTIONS OF MY PENCIL - examine the culture, dress, and lifestyles of Indiana's historic Indians and early settlers through the works of artist George Winter. (3rd grade and up)

THE PEOPLE - examine the legends and stories of Native Americans. (4th grade and up)

In-Class Programs

The following programs are available between November and March. They are in-class programs presented by trained volunteers. To schedule call 853-3956.

COVERED WAGON - a decision, role-playing activity available to 4th grade classes. Using scale model covered wagons and accessories, students must cooperatively decide what items to bring to Indiana from the East during settlement of Indiana.

INDIAN TOOLMAKING - a hands-on activity for all ages. Classes are introduced to the techniques used by the Indians to manufacture their tools. Activities include drilling holes in stone.

HOOSIER KALEIDOSCOPE - the night skies to life in this inflatable planetarium as students learn Indian legends related to constellations. (1st to 6th grades)

BEGINNING ARCHAEOLOGY - introduce high school students to the science of archaeology with example of maps, tools, and artifacts. (high school)



INDIANA STATE MUSEUM
AND HISTORIC SITES

202 N. Alabama Street
Indianapolis, IN 46204
(317) 232-1637

Indiana State Museum
Angel Mounds
Commandant's Residence
Corydon Capitol
Culbertson Mansion
George Rogers Clark
Indiana Territory
J.F.D. Lanier Mansion
Levi Coffin House
Limberlost
New Harmony
Old State Bank
Pigeon Roost
Ernie Pyle Birthplace
Gene Stratton Porter
T. C. Steele
Whitewater Canal

Accredited by
American Association
of Museums

Angel Site—Prehistoric Indian Town

By Dr. James H. Kellar
Director, Glenn A. Black
Laboratory of Archaeology

Angel Site was a large stable prehistoric town established by the American Indian. Occupied from about 1300 A. D. to 1500 A. D. the settlement encompassed 103 acres and had a probable population of approximately 1,000 individuals.

The settlement was limited on the South by the Ohio River and the mainland boundaries were protected by a sturdy protective stockade. Within this area were elevated earth platforms upon which were built important structures, a plaza, and many well-built residences. All of these indicate that Angel Site was a regional center of significance which exerted influence over the small villages and hamlets in the adjacent area.

The site and area were abandoned at the time of first European contact. Therefore the ethnic affiliation of the inhabitants is unknown. However, Angel Site represents a widespread culture type that archaeologists have termed *Mississippian*.

The Stockade

The defensive Stockade extended in a broad arc around the town for a distance of 6,300 feet and terminated at the Ohio River on its Eastern and Western ends. Another section extended Southward 1,020 feet to the West of the large central mound. Offsets (bastions) were regularly spaced every 120 feet.

The Mounds

Most of the earth mounds at Angel Site served as elevated earth platforms upon which were constructed buildings important to the political, relig-

ious, and social life of the town and area.

The larger mounds represent the final stages of many years of additions to earlier mounds, each of which had served as a building platform. The central mound (A) is one of the largest pre-historic structures in the Eastern United States. It measures 644 feet in length, 415 feet in width, 44 feet high, and the base covers over four acres. Mound F has been completely excavated and the reconstructed Temple on its summit is based upon the results of that work.

The Plaza

The town plaza was situated just to the West of the large mound. It was an open area bordered by houses and kept free from debris. There is evidence to suppose that it was here that competitive games were held, harvest rituals took place, and the townspeople gathered upon frequent occasions for formal and informal interaction.

The Houses

Houses were predominantly square or rectangular in ground plan and on the average contained about 400 square feet. That there was implicit town planning is indicated by the multiple rebuilding of houses on the same plot of ground and their consistent orientations.

Houses were constructed by digging a narrow trench and upright posts were set within it. Twigs were then woven between these logs and wet clay mixed with grass was then plastered to this base. House exteriors were sometimes painted. The roof was covered with grass thatching.

Making a Living

Cultivated plants, particularly corn, were essential to the support of the large stable population living at Angel Site. However, the subsistence base was a broad one and the innumerable plant and animal resources of the area were used extensively.

Animals, especially deer and wild turkey, made significant dietary contributions. The nearby Ohio River provided an abundant supply of fish and shellfish. And nuts, fruit, and other plant products were available in the forests and floodplain marshes.

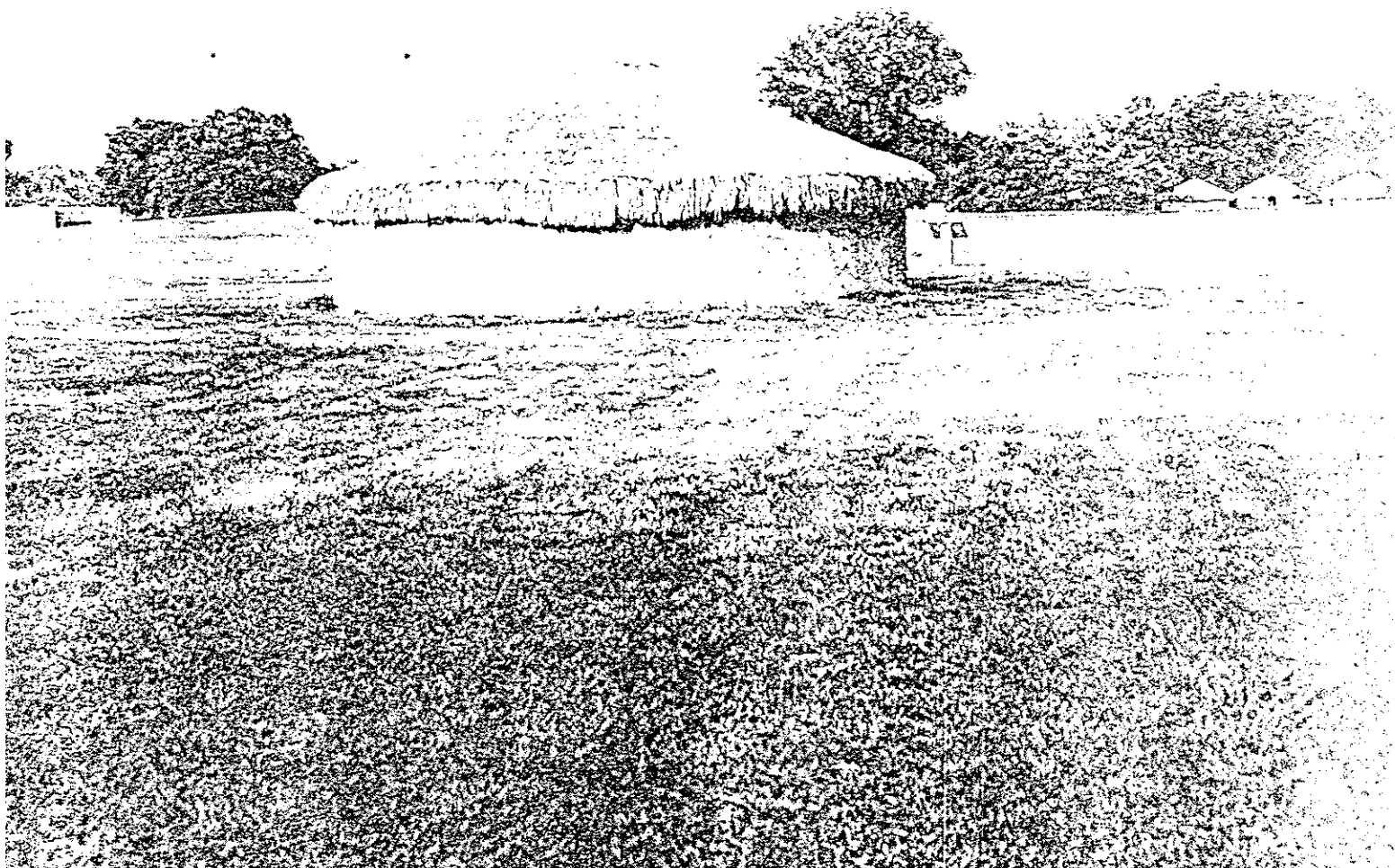
Salt, an essential diet supplement for agriculturists, was obtained by evaporating water from saline springs in large pottery containers.

The technological level suggested by the manufactured objects at Angel Site is simple, but it also reflects considerable skill and ingenuity in adapting native products to use. The raw materials employed were mainly local ones: stone, bone, shell, wood, clay, and plant fibres.

Furnishings were simple and included a central hearth for cooking and heating and sleeping benches around the room exterior. Upwards of 200 houses existed at Angel Site at a given time.

Imports are uncommon and include small quantities of copper from the Upper Great Lakes areas, fluorite and galena from Southern Illinois, marine shells from the Gulf of Mexico, and Tennessee flint.

A few pottery vessels appear to have been carried in from distant places. The techniques used to transform the raw materials to the maker's use were those which had been known



The Round House on the Village Square May Have Been Used for Purification Rituals Before Ceremonies and Celebrations.

for thousands of years. Stone was chipped or pecked and ground; copper was hammered; bone was cut and abraded; textiles and basketry were woven using finger techniques. River cobbles provided an abundant supply of hammers and grinding stones.

Ceramic products which required the application of heat to a mixture of clay, shell, and water were the only ones involving an actual physical transformation of the component parts.

The Recent History of Angel Site

Angel Site is named for the former

owners of the property. Its archaeological significance was first noted in print in 1875, though it was undoubtedly known to local residents much earlier. The Indiana Historical Society purchased the property in 1938, in order to preserve a unique portion of the region's past. Title to the land was transferred to the State in 1947.

Archaeological excavations were carried on for 27 years, sponsored by the Indiana Historical Society and under the direction of Glenn A. Black. As many as 250 W. P. A. employees were involved in the years preceding 1942. Beginning in 1946,

it was the scene of a Summer training program in archaeology.

Angel Mounds State Memorial is operated by the Indiana Department of Natural Resources. It also functions as an archaeological research station for Indiana University, Bloomington.

Lilly Endowment, Inc., made possible the interpretive developments at Angel Site, in order that present and future generations may have a better understanding of the rich American Indian culture which preceded them and contributed substantially to contemporary life.

The Indiana State Museum systems Angel Mounds Historical Site is one of the best preserved Mississippian sites in the United States. The Angel Mounds Indians settled on this 100-acre site along the Ohio River during Middle Mississippian period, probably appearing in the area near the end of the 12th century. The Angel Indians occupied the site until sometime in the 15th or 16th century.

Angel Mounds was excavated from 1939 until 1942 by the Federal Works Progress Administration. The work was halted by World War II. Serious excavations began again in 1945 and continued until 1962, under the direction of the Indiana Historical Society and Indiana University. Glenn A. Black was the driving force behind the excavations at Angel Mounds until his death in 1964. Excavations will continue under the direction of Indiana University.

There is room at the Angel Mounds village site for at least 200 homes and their nearby outbuildings, such as summer homes, corn cribs, and even garden plots. At an average of five individuals per family Angel Mounds could have had a population of 1,000 men, women, and children, possibly more.

The Indians probably chose Angel Mounds as the site for their village because of the nearby river, the abundant wood supply, and the great number of plants and animals available. The biggest attraction of Angel would have been Three Mile Island, which hides the site from the view of the river, and the

presence of the natural slough around the site. The river, the island, and the slough make Angel Mounds an ideal defensive location for a town.

The Indians made eleven man made earthen platform mounds at Angel. It should be noted that there are not burial mounds, but rather were built as platforms for the elevation of important buildings, such as the chief's house, the temple, and elite residences. The mounds suggest that a collective effort was necessary to build them. Soil had to be loosened from the earth, scraped up, loaded into baskets, carried, dumped, and compacted. Each basket probably held less than half a bushel, this would mean countless trips. Some of the mounds show signs that they were shaped during several building stages, probably spread over the time the site was occupied. Even with this in mind mound building required a tremendous effort. People from the smaller surrounding villages may have come to help.

Mound A, the largest mound at Angel, is located in the approximate center of the town. Test excavations in this three-terraced mound show that a large structure was located on the upper terrace. It is believed that this was the house of the chief. A structure also stood on the lower terrace of Mound A. It is suspected that this was the location of the town council house or possibly a storehouse and dwelling for the chiefs assistants. The conical projection at the southeast corner of Mound A was possibly the location of a daily ceremony

to the sun.

The view from Mound A would have allowed the chief to look over the entire town when there were no trees to obstruct the view. Looking to the northeast the chief would have glimpsed upon the homes of the people. These homes were square structures ranging from 15 to 30 feet a side. To construct their homes the Angel Mounds Indians cut numerous large posts and planted into the earth. Next the Indians wove sticks in between these posts and covered them with a mud plaster, using a technique called wattle and daub. A roof would be built on top, probably with a hole in the center for smoke to escape. The roof would be thatched with local reeds and grasses. Cane mats may have been placed on the walls while the mud was still wet. It is estimated that such a structure would last no more than ten years. The interior of the home would be stark and simple. In the center would be a pit for fire. Along the walls would be bunks for sleeping. These bunks were made of a frame of poles covered with a cane mat or animal skin.

Near the home the Indians built their summer house, which would simply be a roof supported by four poles. Summer homes may not have been necessary however, due to the coolness of winter homes when no fire was kept inside. Also located near the home would have been a form of storage shed, elevated upon four poles to keep small animals out of the food supply.

Two round patterns of post holes have been found at Angel

and are yet to be explained. However, this type of structure was usually connected with healing practices or with ceremonial occasions. These structures would not have been common and it is unlikely that more than two will be found at Angel Mounds.

To the west of Mound A is Mound F, more commonly known as the Temple Mound. Most Mississippian towns the size of Angel would have possessed a Temple such as the one reconstructed here. The remains of the elite members of Indian society were often kept in the temple.

One of the most interesting artifacts found at Angel Mounds is the fluorspar figurine that was discovered in the Temple Mound. Such figurines or "idols" were usually part of Mississippian culture. Figurines such as the one found at Angel have been found from Virginia to Mississippi.

Located between the Temple and Mound A is a large depressed area that archaeologists believe was the site of the town square or plaza. Most plazas were level and were sunk two or three feet below the surrounding areas. Often banks or terraces bordered the plaza, serving as seats for spectators. The location believed to be the plaza at Angel is depressed, but only slightly. This decrease in depth could have been caused by plowing. Most of the Angel Mounds site was farmed for several years. This long period of plowing has made many of the features at the site much less distinct than they would otherwise be.

The structures around a plaza were usually of greater importance than other structures. The plaza served a variety of purposes, most of which we know little about. One purpose however, was to serve as the playing field for the game of Chunky. The game was widely played. The players used a stone roller (a discoidal) that is shaped somewhat like a hockey puck, often having a hole in the center. In the game, the chunky stone was rolled and the players threw spears at it. The player coming the closest to where the stone stopped scored a point.

Surrounding the town, except on the river side, was a large stockade. Only a few feet of the stockade have been reconstructed, but one can imagine what Angel Mounds must have looked like when it was surrounded by a large defensive wall. The wall once stood about twelve feet high, was a foot thick, and was close to 6,300 feet long. Fifty-one bastions helped the Indians to protect the stockade. In all, over 4,500 trees were required to construct the stockade.

If the stockade was a necessity then it was probably not erected in stages like the mounds. The amount of labor required to dig the trench, cut the posts, weave the wattle, and plaster the wall required the collective, well organized effort of many people, probably more people than actually lived at Angel. Angel Mounds may have been the "capital" of the area. It is likely that the manpower to defend the wall came from smaller surrounding villages.

C

We can learn much about the people of Angel Mounds through the examination of their burials and historical documentation of similar peoples. The infant mortality rate was high. Those who survived their early years lived a good life, for their time. Males could expect live to fifty, some even to sixty. The women did not live as long.

We know that the inhabitants of Angel Mounds were plagued with arthritis just as we are today. Approximately seventy percent of the burials showed signs of arthritis. There was also a very high incidence of diseased teeth.

The Indians of Angel Mounds were farmers. Corn and beans were the basic annual food stuff. The chute and river would have provided an ample supply of fish and mussels. From the surrounding forest the Angel inhabitants gathered many different plants, such as persimmon, hickory nuts, pecans, and walnuts,.

Most of the cooking would have been done with clay pots over fire or in the case of game on spits over fire. White-tailed deer was the most common mammal, while wild turkey was the most common bird. Other animals used by the Indians as food were raccoon, badger, fox, coyote, rabbit, and squirrel. One would naturally assume that the Indians also ate a great deal of bison, which were supposed to be numerous in the area in early historical times, but strangely enough not one single bison bone has been found.

The many small triangular points found at Angel Mounds

suggests the use of the bow and arrow. Larger projectile points indicate that the spear was also used.

The Angel Indians made and used their own pottery such as bowls, jars, bottles, plates, and pans. They also made their own tools. Most of the tools were made of flint, chert, or stone. Flint and chert tools such as projectile points were made by flaking off bits until the desired shape was acquired. Stone tools such as mortars and pestles were made by chipping and grinding the stone into the desired shape. Only a few scrapers and flake knives were found at Angel. The celts were the primary chopping tool of the Angel group as they possessed no axes. Some artifacts represented decorative items, such as ear pins, beads, rings, pendants, and gorgets.

One of the biggest unanswered questions about the Angel Mounds Inhabitants is why did they leave their town? The first reason that comes to mind is warfare, the Indians were driven out or destroyed by an enemy group. The only problem with this idea is that there is no evidence to back it up.

The most acceptable theory is that a combination of factors gradually forced the Angel group to look for another place to live. At about the same time as the inhabitants of Angel Mounds were leaving hunting and gathering groups were moving into the area. There would certainly have been friction between these two groups. Another factor may have been the exhaustion of the wood supply. Thousands of trees were used in the initial

8

building of the homes, sheds, public buildings, and stockade, as well as the continual use of wood for fire. It becomes apparent that the wood supply would eventually become depleted.

The inhabitants of Angel Mounds depended largely on corn for survival. Having no fertilizer the soil soon became exhausted. A new field would then be cleared. After decades it would be necessary to locate the fields very far from the town. The problem would at first be an inconvenience, but the distances would eventually become great enough that it would be easier to just move the town.

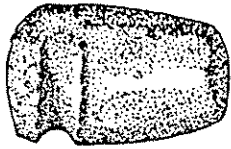
There were other factors that may have played a part as well. When all these factors are considered as a whole it becomes apparent that they could have been the reason for the departure of the Indians from Angel Mounds.

VOCABULARY LIST

archaeology	The scientific study of material remains of past human life and activities. <i>Through archaeology, we learned much about the people who lived at Angel Mounds.</i>
bastion	A projecting part of a stockade for defense of the wall. <i>Bastions at Angel Mounds were placed at regular intervals.</i>
mound	A man-made hill of earth. <i>The eleven mounds on Angel Site served as elevated platforms for important buildings in the community.</i>
plaza	A town square. <i>The plaza at Angel Mounds was a large open area used for competitive games, town meetings and rituals.</i>
prehistoric	Existing before written history. (The Indians at Angel Mounds had no written language so they could not leave any written records describing their culture. Also, they were not observed by any people who did have a written language, so there are no written descriptions of their culture.) <i>Angel Mounds is one of the best preserved prehistoric Native American sites in the United States.</i>
reconstruction	Rebuilding of structures following guidelines established through archaeological excavations. <i>The reconstructions at Angel Mounds are made of modern materials to resist damage from weather and visitor traffic.</i>
slough	An inlet from a river. <i>The slough surrounding the Angel Site may have served as a source of fresh water for the people of Angel Mounds.</i>
stockade wall	A line of stout posts set firmly to form a defense. <i>Angel Site was surrounded on three sides by a stockade.</i>
thatch	A plant material, such as straw, used to roof buildings. <i>Thatch is replaced every two years at Angel Mounds.</i>
wattle and daub construction	A building process in which twigs and cane are interwoven between upright log posts and then plastered with a mixture of mud and grass. <i>Wattle and daub construction was the only known form of construction used at Angel Mounds.</i>

"A" is for

Axe —



A

"First Reader"

about some



Indian Artifacts.

Prepared by
Glenn A. Bleck, Archaeological Field Director
Indiana Historical Society
1958

SOME TYPICAL ARTIFACTS OF INDIANA PREHISTORY

Evidence of the former presence of the Indian is all about us. We walk over it every day, usually without realizing it. It takes a trained eye and an awareness of the ways of the Indian to find the camps, work-shops, villages, and burial places of the remote past. Few of us, in our ordinary walks of life, have occasion to note that in some cultivated fields there are unnaturally dark spots, the alteration of natural soils by the life habits of man. Nor do we all recognize the fact that rocks and minerals not natural to the area are also often present upon these same spots. These, since rocks don't blow from place to place, nor does their specific gravity permit of floating in rivers and streams, must have been carried there by man. Most of us do not now have time to become sufficiently conversant with the life patterns of early man to know where to look for signs of the "Shell Mound People," or, in contrast, the large villages of the "Middle Mississippi" folk. For these shortcomings, since such knowledge depends upon specialized studies, we can be forgiven. But the evidence of prehistory is not all of such tenuous nature. Most museums, many libraries, some antique shops, private homes, and nearly every farm will have some of the objects made, used, and lost by aboriginal man. Some of these are readily recognizable, while the significance of others is obscure. This pamphlet will attempt to describe and define some of the very basic artifacts of the prehistoric Indian. A warning should be inserted here - the drawings are idealized and not always to comparative scale.

"A" is for Axe

The Axe is one of the more common tools of aboriginal man's kit. Although not used by all people of prehistory, it is found in large numbers in Indiana. Sometimes incorrectly called a "tomahawk," the Axe can be identified by its wedge shape, its sharpened bit, and its flattened poll which sometimes is battered from use as a hammer. The Groove worked into the body identifies this tool beyond question. The Axe was probably halted in a variety of ways but it seems obvious that the method of attaching the handle regulated the type of groove. There are three basic forms - the *full grooved*, the *three-quarter grooved*, and the *notched*.

Through long years of trial and error the Indian became very clever at picking the right stone for the job at hand. Thus most Axes are made of a granitic material - it was tough, hard enough, sufficiently easy to work and, perhaps even more important, was to be found in quantity over much of glaciated territory. Upon occasion an Axe will

be found to have been made from hematite, copper, slate, or chert, but these are the exception.



The letter "A" could also, of course, stand for Anvils, Adzes, Awls, or Arrowheads. But the Axe has been so important a part of human history and is so old and basic that it commands preference. Arrowheads will be found under "P" where they rightfully belong as Projectile Points.

"B" is for Banner Stone

And what, you may very well ask - is a Banner Stone? Well, it is one of those aboriginal items found in Indiana that used to be grouped together under the term, "Problematical Forms." This, of course, was a polite way of saying - "we don't know what they were used for!" Boatstones and Birdstones were in this group, too. It seems strange that all three should be grouped under "B." But to get back to Banner Stones



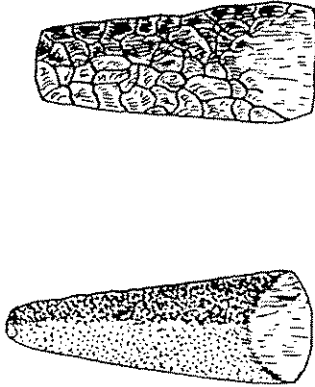
Sometimes the Banner Stone is called a "Butterfly" stone and the shape does suggest a winged insect or object. It has also been called bi-pennate which simply means "two winged." All manner of theories have been advanced to explain its use. Since most Banner Stones are drilled, it is obvious that they were meant to be mounted upon a handle. It has been thought that they were "badges of office or rank," parts of ceremonial regalia, etc. As a result of methodical exploration of many

sites of the so-called "Archaic" period of prehistory, evidence has been produced suggesting that they were used as weights upon the shafts of spear casters or throwing sticks.

They were made in a variety of forms and, in some, in place of the axial perforation, there are grooves abraded into each face. A variation in form in relation to geographical distribution has been noted, and form may also have some time significance. But, no matter what the form, they are consistently made of stones which were pleasing to the eye - banded slate, marble, jasper, and other similarly colorful materials.

"C" is for Celt

Chisels, Cones, Cupstones, and Chert could be covered here but the distribution of the first three is somewhat limited and chert should be included with flint since the two are so often confused.

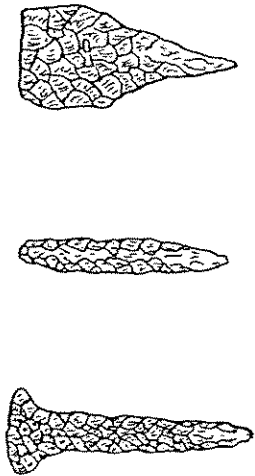


The Celt and the Axe are actually much alike. The basic difference lies in the fact that the Celt is rarely grooved and, therefore, must have been normally hand held, with the arm providing the haft-leverage. Also, the Celt is smaller and tapers to a sharper point than does the Axe. A few Celts, buried under conditions conducive to the preservation of wood, have been found with the haft preserved. In these cases the blade was inserted into a cavity in the haft rather than the haft being wrapped around the blade.

Like Axes, Celts are normally made of granite or similar stone. Within some culture groups the tendency was to chip the Celt from chert or flint as the nature of this material made possible a far more efficiently sharpened bit than could be achieved with granitic materials. Hematite was often used for Celts as was native copper.

"D" is for Drill

The only Drills used by aboriginal men in Indiana that we know of for certain are those made of flint. By way of explanation we should say that Tube Drills were also used but these were made of reed or cane, both of which are perishable, and are not found in prehistoric sites. It is also possible that some drilling was carried out by a solid stick but this is not known for certain.



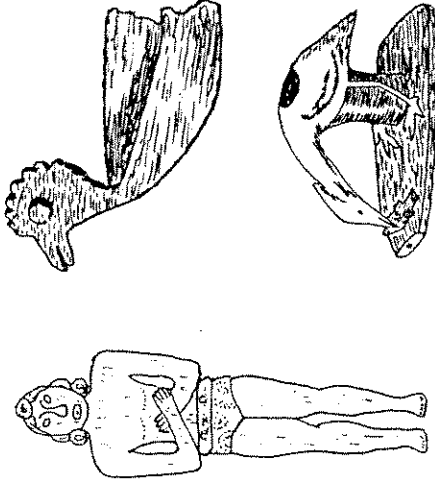
The Drills chipped from flint often look very much like long, slender projectile points. As a rule, though, the Drill is squarish or diamond shaped in cross section rather than elliptical or flat as are most points. Some Drills are slender, unspecialized, spiculelike, whereas others have expanding bases and may even be notched at the base. It is obvious that some Drills were made from broken points or blades, while others were fabricated purposely as Drills. Some have such a decided expansion from point to base as to suggest that they were used as reamers to enlarge a hole previously drilled through.

It is possible that some drilling was accomplished simply by holding the Drill in the fingers and turning it - this would hold, perhaps, for use in wood. But most drilling was done either by use of a "Strap Drill," "Pump Drill," or "Bow Drill," mechanical devices permitting the exertion of pressure and revolving of the drill stick at high speed. Some such device was necessary for drilling through stones such as slate, quartz, or granite.

"E" is for Effigy

Least common of all the artifacts discussed here are the Effigies. But they are found in Indiana and were made by several groups over a long period of time. The earliest are the superb likenesses of animals carved upon the bowls of pipes of the Hopewell Culture. Faithfulness

of detail is carried out to the extent that the animal depicted can be identified with ease and assurance. These same people made models of the human figure in clay and fired them. These provide us, since they are so faithfully executed, with details as to method of hairdress, types of garments worn, sitting posture, and even design motifs placed upon clothing.

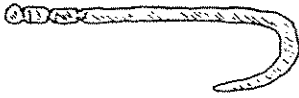


The last prehistoric occupants of Indiana also made Effigies, and in far greater quantity. Most of these were used as handles on pottery bowls, as fired-clay rattles, or as effigy bottles and bowls. The human head and body, fish, ducks, pileated woodpeckers, and frogs were favorite subjects for depiction. In one culture group of this late time period, human likenesses were carved of stone. One of these, carved of fluorspar, came from the Temple Mound at Angel Site and represents the finest bit of stone carving ever found in this part of the Ohio Valley, if not in the entire valley.

Some Effigies may be caricatures; some may have mystical significance; most of them, though, appear to represent the artisan's best efforts at realism.

"F" is for Fishhooks

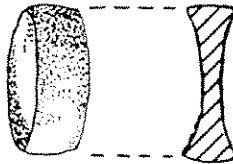
For some reason the lay visitor to a display of aboriginal artifacts is always surprised to see Fishhooks as a part of the Indian's kit of tools. Most fishing may very well have been done by nets, traps, and weirs, but most of the occupants of Indiana did, in prehistoric times, use the hook. These are made of bone in a variety of sizes from small ones of about one-quarter inch in length to very large and heavy ones. They are never barbed nor do they have perforations in the shank for attaching a line. Rather they are grooved so the line could be wrapped several times around the shank for firm attachment.



How two Fishhooks were made from one Bone Blank

In some parts of the country shell was used for making Fishhooks, but we have never seen a shell one from Indiana. In many collections there will be Fishhooks chipped from flint, but so far as this writer knows no flint hook has ever been found in the Ohio Valley by an archaeologist while excavating a prehistoric site. It is probable, therefore, that flint Fishhooks are spurious and of recent manufacture - and not by Indians.

"G" is for Gamestones



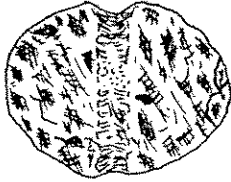
About the only aboriginal object we have in Indiana which is clearly recognizable as a gamestone is the Discoidal. As the name implies, this is a circular disc which, in typical form, is that of a double-concave lens. Sometimes the concavities are so pronounced as to form a perforation in the center of the disc. They vary in size from about two inches to as much as ten and thickness is equally variable. There seems to be little relationship between diameter and thickness.

Material used for making Discoidals can be granite, quartz, porphyry, jasper, and other similar hard and compact materials. Within historical times such stones as these were used by the Indians of the Southeast in playing a game called "Chunkey." In Indiana they are found predominantly in an area close to the Ohio River in sites which contain other items which have a "southern Indian" background.

Many other games were played by the Indians of prehistory. Certain objects of bone are found which may have been counters in the many hand games played. Cut and perforated deer toes may have been used as a part of the "cup and pin game," etc. Pottery discs have a wide distribution and may very well have served as game counters. Spherical stone balls are found which may have been used in some sort of game, but more probably were spherical hammers.

"H" is for Hammerstone

If one were to save everything picked up on occupied areas in Indiana, by far the greatest amount of "tonnage" would consist of Hammerstones. All prehistoric peoples used them in one form or another from the very earliest times. They take all manner of forms from simple water-worn boulders exhibiting a few peck marks to very methodically formed tools. In spite of their simplicity and homely nature they were one of man's most important implements. As a weapon they could be hand held to crush or stun, could be thrown, or even hafted as in the manner of the Indians Plains. They could be used to crack bones to obtain marrow, for grinding and mashing seeds and roots, and for shredding bark in the manufacture of cordage.



Heavy Hammers, perhaps more properly called Mauls, were grooved for attachment of a haft, and their presence in areas where flint and copper were mined indicates that they were used in extracting these important minerals from the earth.

In chipping flint the Hammerstone was an important tool. True, the finer chipping was done by pressure exerted by a wood or bone chipping tool, but the coarse work - the roughing out - was done by percussion with Hammerstone and Anvil. And some of our aboriginal dwellers never chipped flint any other way than by percussion. Next to the Axe or Celt the Hammerstone was probably early man's most important possession.

"K" is for Knife

As a cutting tool the Knife was almost indispensable to man. Most Knives were made of flint or similar stone and these will be mentioned under Projectile Points. But some Knives were made of material other than flint.

As an example, in the Arctic, most Knives were made of slate and in some parts of the Ohio Valley similar objects are found of the same material. It is probable that, among the southern Indians and in Indiana, native cane or American Bamboo was split and used to make Knives. From experience we know the cutting power of the stalk of this plant.

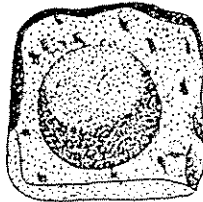
Bone would also serve as a material for Knife making and specimens of bone are found which were probably used as Knives. The same would be true for wood but only upon rare occasions have such wooden objects been preserved. Shell of the fresh water mussel (*Unionia*) could have been converted into a most effective Knife with a minimum of sharpening. Teeth are nature's cutting tools, and the incisor teeth of the beaver were so used by the Indians. Copper was hammered into Knife shapes, but such Knives are rare if present at all in Indiana.



"M" is for Mortar

Mortars made of stone are limited pretty much to the earlier prehistoric peoples. Since the stone Mortar is a part of the grinding complex, most of us immediately associate this artifact with cultivated cereals, i.e., corn or maize. Since, however, the earlier folk did not have maize but did have the Mortar in quantities, it is pretty obvious that this tool was used for grinding or mashing natural foods such as roots and seeds. It is also apparent that those Indians whose life pattern was based upon growing of maize, did not use the stone Mortar, for they are rarely found on sites of these agricultural, sedentary folk. They, then, must have used wooden Mortars which have long since rotted away.

Most Mortars found today consist of a shallow basin-shaped cavity pecked and worn



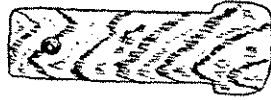
into the face of a natural boulder. A few show some deliberate shaping. Sometimes both faces of a flatish boulder will have been used as a grinding surface and, upon occasion, a Mortar will be found which was used so long that the "basin" became a hole and the artifact was then discarded.

Grinding depressions are sometimes found in boulders the weight of which precluded moving them about - they were probably community property. Also, in connection with the rock shelters of southern Indians, deep and long-used Mortars are found in bed rock.

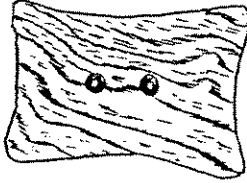
A Pestle was used as the hand-held portion of the grinding device.

"O" is for Ornament

One of the most "human" traits of man is the habit of assembling objects designed to please his fancy and decorate his person. The prehistoric Indian indulged in skin painting, tattooing, scarification, and tooth filing. In addition he decked himself out in Ornaments made specifically for that purpose. Only those which were made of stone, bone, shell, pottery, and copper are left in any quantity. Textiles, feathers, and objects of skin and wood have long ago wasted away.



Pendant



Gorget

Beads of bone, stone, shell, and pottery are the most numerous objects in the Ornament category. To these must be added such items as Gorgets of stone, bone, shell, and copper which presumably were of an ornamental nature. Pendants of stone and shell are quite obviously ornamental and the same is true of bracelets of copper. Mica was mined for the purpose of cutting out life and geometric forms to be used as attachments to garments. Copper was hammered into sheet form and cut into rectangular plates upon which geometric and life patterns were cut and impressed. Even helmets were made from this native metal. And one of the most ingenious fabrications was achieved by aboriginal metalworkers when they made bi-cymbal ear spools of copper, often overlaid with silver and meteoric iron foil.

"P" is for Projectile Points

Let us understand immediately that several books could be written about objects in the aboriginal's tool kit that begin with the letter "p". There is Pottery (several volumes on this alone), Pipes (another volume or two), Pins, Plumets, and Problematical Forms (which, as the term problematical should imply, include about everything for which little or nothing is known exactly).

The category Projectile Points could fill several volumes too, so it will be possible here to deal only in generalities. The term includes both Arrowheads and Spears or Lances - all are, in the strictest sense, Projectiles. Saying which chipped blade is a Spear and which is an Arrowhead is difficult if not impossible. Actually it is a matter of size. So far as form is concerned the two are practically identical.



Earliest



Latest

All aboriginal people made and used Projectile Points up until the time they obtained the gun from European traders. Some of the Points are distinctive in shape and character. They were usually chipped from stone having a conchoidal fracture-- flint, chert, chalcedony, obsidian, quartz, and similar minerals. But Points were also made from bone, cane, wood, and the scales of certain fish.

By and large, most of the Points found in Indiana are chipped of chert or flint. Indiana was a popular source for one type of chert as is attested by the well-worked quarries of Harrison County. This material was used by many unrelated people over a long period of time and its distribution in terms of finished pieces offers some interesting ideas as to the directional movements of certain tribes.

The bow-propelled Arrow is a fairly recent addition to the Indian's armament. The earliest cultural complexes lack Points of a size which could have been used on anything other than a Spear or Lance. The latest of all Projectile Points is basically triangular either of the deltoid or isosceles variety. The earliest Points are distinguished somewhat by shape but more precisely by the removal of a flake from each

face to form a "fluted" effect. In between the earliest and latest are many, many forms and variations of basic types. Mainly these break down into, so far as form is concerned, ovate-shaped, lanceolate-shaped, or trianguloid Points. Modification of basic shape takes the



Corner Notched



Stemmed



Side Notched

form of stems, relative position of notches if notched, treatment of the edges, etc. Some of the more common types only are illustrated and all of these would be found in any large collection of artifacts of the pre-historic period found in Indiana.

"S" is for Scraper

The Scraper in one form or another was a most necessary adjunct to aboriginal life. Scrapers take varied forms and were made of every available material - animal, vegetable, and mineral. By far the most common scrapers were made of minerals having a conchoidal fracture such as flint, chert, and other quartz minerals.

Some scrapers are ovate shaped and as such, unless use scars are evident along the edges, are hardly distinguishable from quarry blanks. Other types are deliberately made with some specific function in mind. These are the stemmed types and the so-called "Thumb Nail" variety. Most scrapers apparently were made to be hafted rather than hand held. The small Scrapers may have been set into "tool sockets"



of wood, a practice prevailing among the Eskimos. Bone might also have been used for sockets, but no bone sockets are found in aboriginal sites in Indiana.

Some Scrapers are found which must have been used in a manner similar to a modern spoke shave. Such were no doubt used in smoothing and shaping shafts for arrows and spear. Scrapers were also used for fleshing hides as well as the shaping of wood, bone, and even stone, providing the last material was softer than the scraper stock.

The *Unio* shell made a good scraper, and certain bones of the deer and elk were converted easily into efficient tools by reason of their natural shape.

"X" is for the Unknown

We take advantage of the recognized use of "X" to equal the unknown factor to close this primer. This work is far from complete but, as the title should indicate, only "some" of the aboriginal artifacts of Indians were to be considered.

We have included only those items which are most common - the things which might be found around almost any farmhouse, or small museum, or private collection. Some of these, even, are not too common and only turn up during excavations.

It should be remembered that these items were made and used by people of prehistory about which there is no written record. The significance and use of the objects is, then, largely conjectural and inferential. Of some items, such as the Axe, the chipped Blades and Points, the Mortars, there can be little doubt as to their function. But there are others, such as the Plummetts, Birdstones, Bannerstones, Gorgets, Boatstones, Cones, to mention only a few, whose purpose and use may always remain in doubt. The archaeologist is a conservative who, as a rule, hesitates to assign a use to an object of prehistory without good substantial reason for so doing. All too often these reasons are missing from the sites which he explores.