

Clues From the Past



SUBJECTS: Social Studies and Archaeology

GRADES: 2-7

ACTIVITY SUMMARY: Students will simulate the work of archaeologists as they look for artifacts to describe the types of communities that different prehistoric groups lived in.

DURATION: Approximately two 50-minute periods

OBJECTIVES:

Students will be able to:

1. Compare their simulated excavations to the work of real archaeologists in the field.
2. Use clues from an archaeological dig to determine the types of communities different prehistoric groups lived in.

TEKS ADDRESSED:

Social Studies

2nd grade

2.7B-explain how people depend on the physical environment and its natural resources to satisfy their basic needs.

2.8A-identify ways in which people depend on the physical environment, including natural resources, to meet basic needs.

3rd grade

3.4B-compare how people in different communities adapt to or modify the physical environment.

4th grade

4.1A-identify Native American groups in Texas and the Western Hemisphere before European exploration and describe the regions in which they lived.

4.1B-compare the ways of life of Native American groups in Texas and the Western Hemisphere before European exploration.

4.9A-describe ways people have adapted to and modified their environment in Texas, past and present.

4.9B-identify reasons why people have adapted to and modified their environment in Texas, past and present, such as the use of natural resources to meet basic needs.

5th grade

5.9A-describe ways people have adapted to and modified their environment in the United States, past and present.

5.9B-identify reasons why people have adapted to and modified their environment in the United States, past and present, such as the use of natural resources to meet human needs.

6th grade

6.7A-identify and analyze ways people have adapted to the physical environment in selected places and regions.

7th grade

7.2A-compare the cultures of Native Americans in Texas prior to European colonization such as Gulf, Plains, Puebloan, and Southeastern.

MATERIALS:

Part 1: (per student) chocolate chip cookie, paper towel, paper clip.

Part 2: (per group) plastic shoe box with artifacts buried in sand, small brushes, plastic spoons (to serve as shovels) and paper clips.

*Materials for teacher to bury:

Hunter-gatherer: bones, bit of animal pelt, leather thongs, animal drawings on hide or rock, arrowheads, dried roots, basket pieces

Farming: kernels of corn, wool cloth, statues of gods, iron or stone tools

Fishing: jewelry made of shells, fishing lines, sinkers, scraps of net

Trading: old coins, various items that may have been traded, tally stones

Herders: evidence of fences, animal skins, clubs

**These are all just ideas. Use whatever you have on hand to give clues as to the type of community. Don't have the objects? Bury pictures from the internet and other resources.*

BACKGROUND:

Scientists and historians try to learn as much as they can about people who have lived here before us. But how do we learn about the cultures of people who are no longer living? The answer lies in the science of archaeology.

Archaeology is the study of artifacts that people centuries ago may have left behind. Archaeologists do not study individual people; they study the objects they used to gain insight into how that group of people may have lived. When archaeologists

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have a pretty good idea of where an ancient group of people may have lived, they excavate in that place. They may find pieces of pottery, baskets, tools, arrowheads and spear points, or evidence of hearths. Sometimes bones of animals are found that give clues to what the people ate. Items that were left behind give clues to the past and help archaeologists better understand what life was like for those prehistoric people.

In 2003, a team of archaeologists from UTSA received land owner permission to excavate in the sinkhole of Natural Bridge Caverns. During cavern development back in 1963, the crew had found various arrowheads and other bones to indicate that the area under the Natural Bridge had possibly served as a shelter for people at some time. The team from the Center for Archaeological Research at UTSA confirmed this idea in the fall of 2003 when they excavated a three by three meter area directly under the Natural Bridge. The site was about 2.5 meters deep. Excavations recovered a variety of stone tools, animal bones and the remains of ancient campfires. Usually the more deeply the artifacts are buried, the older they are. Therefore, the deeper the archaeologists dig, the farther back in time they go.

The lifestyles of people change over time when they meet other people and are introduced to new technologies and ideas. These changes are revealed by differences in the types and shapes of tools present at a dig site. These changes allow the prehistory of North America to be divided into long periods of time dated in years Before Present (B.P.). The stone tools found by the UTSA team in 2003 show that three periods of time are represented at Natural Bridge Caverns: Middle Archaic (6000-4000 B.P.), Late Archaic (4000-1200 B.P.), and Late Prehistoric (750-450 B.P.).

In this two-part activity, students will simulate the work of archaeologists. During part 1, students will attempt to “excavate” a chip from a chocolate chip cookie. In part 2, students will use a shoebox of sand prepared ahead of time by the teacher as their dig site. Based on the artifacts they find, they will determine if the people who once lived there were members of the following types of communities: hunter-gatherer, farming, fishing, trading, or herders. They will also discuss what characteristics of the physical environment promoted each type of community. Fourth or seventh grade students can then discuss which types of Native American tribes found in Texas were thought to have this type of lifestyle.

PROCEDURE:

Part 1: Cookie Excavation

1. Pass out a chocolate chip cookie, paper towel, and paperclip to each student.
2. Have students unfold the paperclip so it can be used as the “excavation tool.”
3. Have students try to dig out a chocolate chip from the side of the cookie. The goal is to keep the chip intact.
4. Now have students try to dig out a chocolate chip from the middle of the cookie. Again, the goal is to keep the chip intact.
5. Discuss the following with the students:
 - a. Which was easier to excavate, the chip on the side of the cookie or in the middle of the cookie? Why?
 - b. How is this simulation similar to the work of an archaeologist? How is it different?

Part 2: Shoebox Excavation

1. Prepare each shoebox ahead of time by burying the artifacts for each community in a separate box.
2. Give each group their prepared shoebox and excavation tools (small brush, plastic spoon, paper clip).
3. Tell the students they will be working on a site where it is believed a prehistoric group of people once lived. They need to work carefully to be sure they do not damage any of the artifacts they may find.
4. Once students have finished their excavations they should look at their artifacts and any other resources available to determine if the people who once lived there were hunter-gatherers, farmers, fishermen, traders, or herders. Determine what characteristics of their physical environment would have been conducive to that lifestyle. (Remind students that this is a simulation—not all dig sites are going to be in loose sand.)
5. Have students present the artifacts they found and they type of community they believe their prehistoric group to be. Discuss the physical features of the environment as well.
6. Fourth or seventh grade: Discuss with students which of the Native American tribes that lived in Texas most likely had this lifestyle. What artifacts provide the strongest evidence for this type of lifestyle?

ASSESSMENT: Students can be assessed based on their answers to the discussion questions as well as their participation in the activity.