
Lesson 2.11

INFERENCE BY ANALOGY

Subjects: science, social studies, language arts.

Skills: analysis, synthesis, evaluation, knowledge.

Strategies: role play, reading, mapping, analogy, scientific inquiry, research skills.

Duration: 45 to 60 minutes.

Class Size: groups of 2.



Pottery vessel from Carteret County, North Carolina, AD 800–1600.

Objectives

In their study of inference by analogy, students will use historical sources and an archaeological site map to:

- infer the use or meaning of items recovered from a North Carolina Native American site based on 17th-century European settlers' accounts and illustrations;
- describe prehistoric lifeways based on archaeological and ethnohistoric information;
- explain why archaeologists use ethnohistoric analogy.

Materials

For the teacher, a transparency of John White's watercolor "Cooking in a Pot" for projection. For each student or team, "Broad Reach Site Plan," "European Accounts of Coastal Villages," "Pomeioc Village," and "Broad Reach Site" activity sheets; pens or pencils.

Vocabulary

Culture: the set of learned beliefs, values, styles, and behaviors generally shared by members of a society or group.

Ethnographic analogy: a method for inferring the use or meaning of an ancient site or artifact based on observations and accounts of its use by living people.

Ethnography: the study or description of cultures based on observation of and interaction with living people.

Ethnohistoric analogy: a method for inferring the use or meaning of an ancient site or artifact based on information from ethnohistoric sources.

Ethnohistory: the study of past cultures using oral traditions and written documents, particularly documents written by outside observers (e.g., European descriptions of 18th-century Indian tribes).

Kinship: the way in which a society defines how people are related to each other and which people make up a family. Kinship systems vary greatly from one society to another.

Naturalist: a person who studies plants or animals.

Palisade: a walled enclosure built around a village or town; a stockade.

Posthole: a circular soil discoloration caused by decay of a wooden post where it had been buried upright in the ground.

Subsistence: the means of supporting life, usually referring to food and other basic commodities.

Background

Archaeologists sometimes use information from a variety of sources to help them interpret life in the past. When they combine sources from history, archaeology, oral traditions, and *ethnography* in their search for answers about past peoples, they are using a method called *ethnohistory*. While ethnohistoric information does not provide direct proof of the function of archaeological materials, it offers invaluable assistance in determining how certain artifacts and structures may have been used by their makers. When researchers infer the use or meaning of an ancient site or artifact based on information from ethnohistoric sources, they are making an *ethnohistoric analogy*. If they use only information gained by studying living peoples to interpret items from an ancient site, they are making an ethnographic analogy.

Archaeologists use historic drawings and other illustrations to find clues about the uses of artifacts and features. The watercolors John White made in the 1580s of the Native peoples of North Carolina and Virginia help us understand what life was like then. White painted many things he saw, from how *palisaded* villages looked down to individual people and the clothes they wore. Some of his watercolors are especially helpful to archaeologists. These show how the Native North Carolinians he met caught fish, prepared food, and conducted other aspects of daily life. While scholars agree that such drawings are good sources of information, they keep in mind that White was an Englishman. Subconsciously, he may have made the Native people he portrayed look more like Europeans than they actually did.

Other sources archaeologists use to help them determine what Native American life was like are unwritten traditions and legends. Anthropologist James Mooney, for example, collected Cherokee stories explaining the origins of many things in Cherokee life, including how the world was made, the first fire, and the appearance of corn. Such accounts help archaeologists and others interested in the Cherokee people understand their beliefs and *culture*.

Ethnographies, or descriptions of living groups of people, written by cultural anthropologists are also key sources. An ethnography usually includes information about kinship, *subsistence*, religion, and other aspects of a culture. Sometimes ethnographies tell how people use certain artifacts or buildings. Such detail can help archaeologists interpret how artifacts and sites may have been used by ancient people. For example, when archaeologists find an object similar in appearance to something described or pictured in ethnographic accounts, they can make inferences about its use or meaning.

The accounts archaeologists use as interpretive aids are not limited to those written by modern-day anthropologists. The journals and letters written by early European settlers and explorers about the Native peoples they encountered can be thought of as ethnographies. For example, *naturalist* John Lawson traveled throughout North Carolina in 1701. Although he was primarily interested in studying the plant and animal life of this area, he took time to write down his impressions of the Native Americans he met along the way. Today, almost 300 years later, his observations are important clues for archaeologists, historians, and contemporary American Indians interested in learning about how people lived then.

Setting the Stage

Share the background information with students. Project the transparency of John White's watercolor "Cooking in a Pot" and discuss with students the types of information archaeologists could gain from this illustration.

Procedure

1. Have students form teams of two. Distribute copies of the activity sheets to each team. Tell them to imagine they are archaeologists studying the site represented by the map on the “Broad Reach Site Plan.” The Broad Reach excavation uncovered the remains of only a part of a coastal village. Tell them that the small dots on the Broad Reach map represent places where wooden posts were placed upright in the ground. Using pencils or pens, they can connect the closely spaced *postholes* to see the shapes of structures.

2. Have students read the ethnohistoric information provided on the “European Accounts of Coastal Villages” and “Pomeioc Village” activity sheets. (Note that each passage has been revised for modern English spelling and phrasing.)

Instruct students to fill in the “Broad Reach Site” activity sheet using this ethnohistoric information. For example, to identify what activities went on in the structures at Broad Reach, students should compare the site plan with the structures on the “Pomeioc Village” activity sheet and the descriptions of Native American houses.

3. Ask students: What were you able to infer about the archaeological site using the ethnohistoric information? Were you able to find out how the Native American inhabitants must have built their homes?

4. How might you check the validity of your interpretations? Additional archaeological information might strengthen conclusions based on ethnohistoric information. For example, if you find shallow pits filled with animal bones, charcoal, and ash, you might conclude that they were pits for roasting deer, as described by Reverend John Clayton in 1687. To test this conclusion, you can examine the animal bones recovered from the pits to see if they are deer bone. Such evidence may indicate that people used the pit to roast deer.

5. Sometimes ethnohistoric information can lead archaeologists down incorrect paths, so they need to be cautious when making interpretations. For example, in England a man named Theodore De Bry made engraved copies of John White’s watercolors of Virginia and North Carolina Native peoples. Instead of copying White’s work exactly, he changed some details. In one engraving, he drew pointed-toed shoes on a Native American man whom White had depicted as barefoot. If an archaeologist was not careful to look at the original watercolors of John White, he might have concluded that Native Americans wore such shoes.

Closure

Give reasons why ethnohistoric information is useful in interpreting archaeological sites.

Evaluation

Students turn in their activity sheets for evaluation.

Extensions

Have students examine the John White illustration of Pomeioc. Ask them which activities or physical objects in the illustration would be present in an undisturbed archaeological site. Which of these traces might be destroyed when farmers plow undisturbed soil layers to a depth of 12 inches? What types of material objects are present in the illustration? Which of these would survive to be found as archaeological artifacts or features?

Links

Lesson 1.7: “Scientific Inquiry.”

Lesson 4.5: “A Siouan Village.”

Sources

- Bushnell, David I. 1907. “Virginia From Early Records.” *American Anthropologist* 9, pp. 31–44.
- Hulton, Paul. 1984. *America 1585: The Complete Drawings of John White*. Chapel Hill: University of North Carolina Press.
- Lofffield, Thomas C., and David C. Jones. 1995. “Late Woodland Architecture on the Coast of North Carolina: Structural Meaning and Environmental Adaptation.” *Southeastern Archaeology* 14(2), pp. 120–135.
- Mooney, James. 1982 [orig. 1900, 1891]. *Myths of the Cherokee and Sacred Formulas of the Cherokees*. Reprint. Nashville, Tenn.: Charles Elder.
- Lawson, John. 1967 [orig. 1709]. *A New Voyage to Carolina*, edited by Hugh Talmage Lefler. Chapel Hill: University of North Carolina Press.
- Quinn, David Beers, ed. 1991. *The Roanoke Voyages: 1584–1590*. 2 vols. Reprint of 1955 edition published by the Hakluyt Society, London. New York: Dover.
- Smith, Shelley J., Jeanne M. Moe, Kelly A. Letts, and Danielle M. Paterson. 1993. *Intrigue of the Past: A Teacher’s Activity Guide for Fourth through Seventh Grades*. Washington, D.C.: Bureau of Land Management, U.S. Department of the Interior. [This lesson is adapted from “Archaeology and Ethnographic Analogy: The Anasazi and the Hopi” on pp. 73–80, courtesy of the Bureau of Land Management.]
- Ward, H. Trawick, and R. P. Stephen Davis, Jr. 1999. *Time Before History: The Archaeology of North Carolina*. Chapel Hill: University of North Carolina Press. [The image in this lesson’s main heading is taken from Figure 6.2.]

“Broad Reach Site” Activity Sheet Answers:

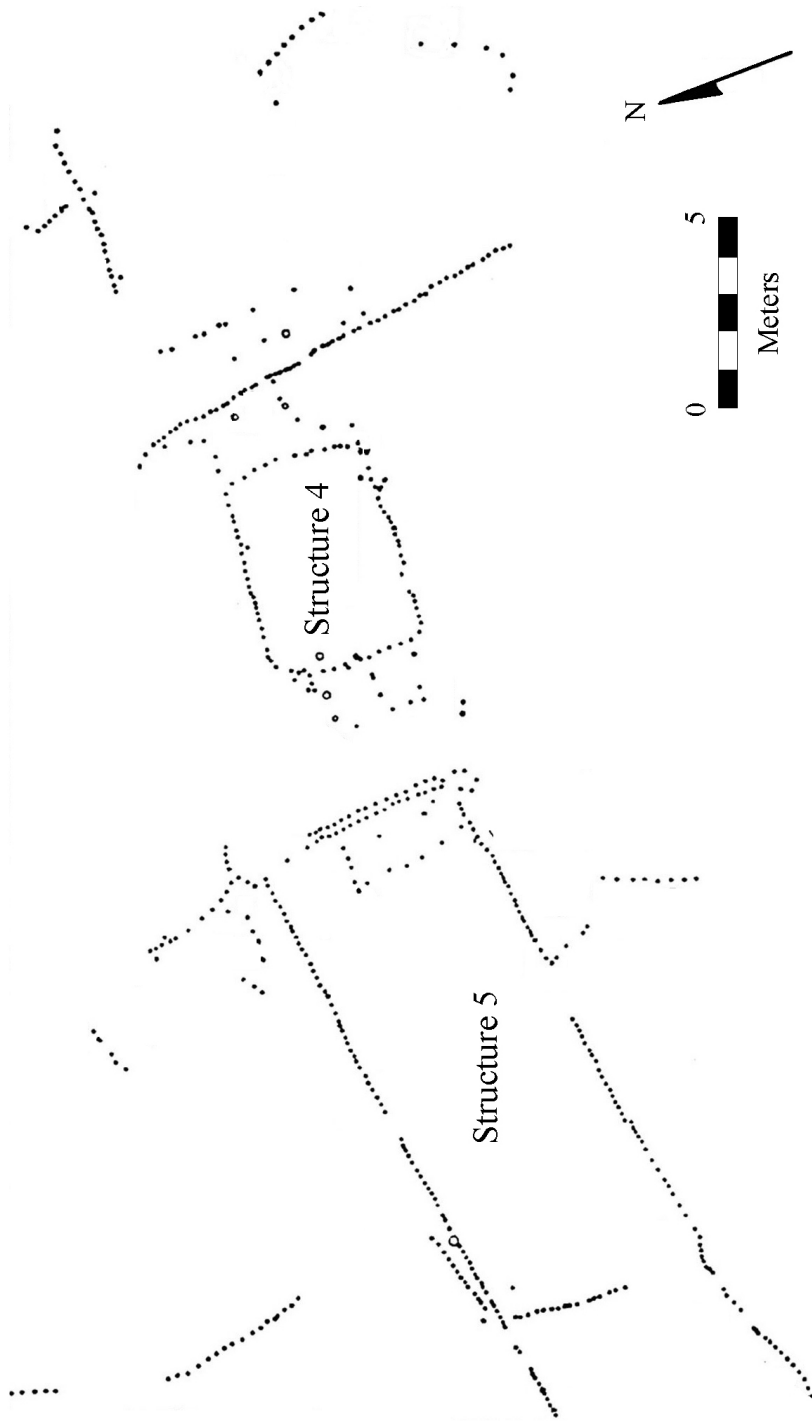
1. Structure 5 is similar to the longhouse shown on the left side of the village. Structure 4 is most like the smaller buildings shown in the village.
2. There is no evidence of a palisade around Broad Reach, but there is a line of posts which may represent the location of a windscreen to the right of Structure 4.
3. The houses were constructed of poles stuck upright into the ground in an oval or rectangular shape. These poles were tied together at the top, and covered with bark or woven mats.
4. Because the villages were surrounded by walls made of poles, perhaps the people who lived there were trying to keep enemies or wild animals out of the village. Or perhaps the wall may have kept children or animals inside the village. There were 18 buildings in Pomeioc, and the villagers probably lived in the 17 houses. The building with the pointed roof was a temple. The painting shows furniture, perhaps used as seats or beds, inside the houses, which had mat walls that could be rolled up or down. Structure 5 at Broad Reach has a line of small posts at the eastern end which may have been posts for supporting a bench similar to those shown in the Pomeioc Village illustration.

Cooking in a Pot



Detail from an engraving originally published by Theodor De Bry in 1590, based a painting by John White made in 1585. The caption on the original painting reads: “The seething of their meat in pots of earth.” (The name “G Veen” at the bottom of the picture is that of the engraver.)

Broad Reach Site Plan



Map of postholes at the Broad Reach site, showing the outlines of Structures 4 and 5. Each black dot represents the former location of a wooden post. (Courtesy of Mark A. Mathis, North Carolina Office of State Archaeology.)

European Accounts of Coastal Indian Villages

Barlowe's Description of a Palisaded Village on Roanoke Island, 1584

The village contained nine houses constructed of cedar and was “fortified round about with sharp trees, to keep out their enemies, and the entrance into it made like a turnpike very artificially [artfully]” (Quinn 1991, pp. 106–108).

Caption of Theodor De Bry's Engraving of Pomeioc Village

“The towns of this country are not unlike those in Florida, but they are neither so well built nor so carefully looked after. They are surrounded with poles stuck into the ground and have only a narrow entrance. Only the chief and his principal men live in houses. On the right in the picture is the temple . . . On the opposite side is the King's house. These dwellings are made with posts joined to each other and covered with matting, which can be rolled up to let in light and air” (Hulton 1984, p. 125).

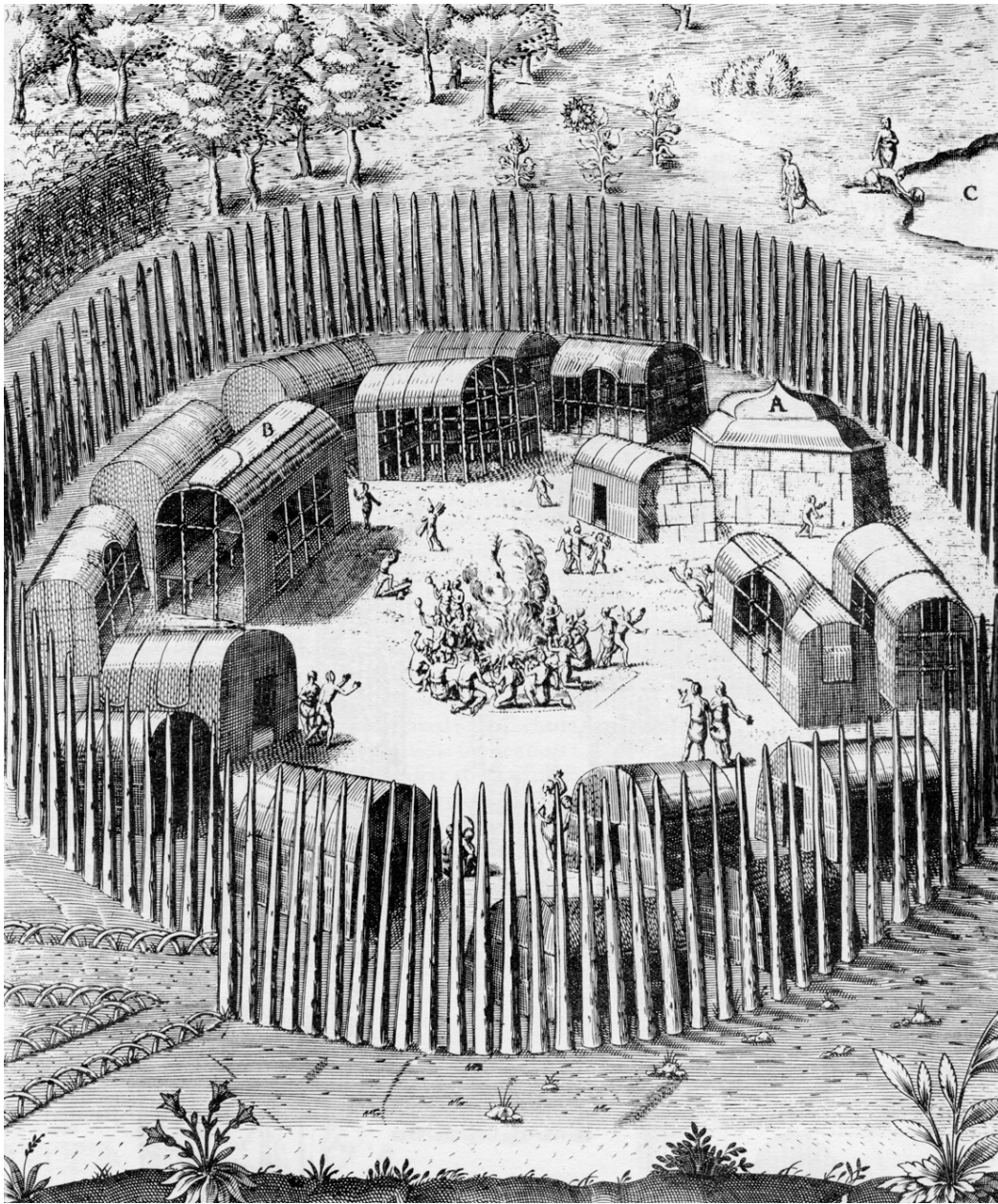
Thomas Hariot's Description of North Carolina Villages, circa 1585

“Their towns are small . . . where a village may contain but ten or twelve houses—some perhaps as many as twenty. The largest town we saw had thirty houses. In many cases the villages are walled with stakes covered with the bark of trees or with poles set close together. The houses are built of small poles attached at the top . . . The poles are covered from top to bottom either with bark or with mats woven of long rushes. The dwellings are usually twice as long as they are wide” (Quinn 1991, pp. 369–370).

John Lawson's Description of Native American Houses in North Carolina, 1701

“They get very long poles, of pine, cedar, hickory, or any wood that will bend; these are the thickness of the small of a man's leg . . . which they generally strip of the bark, and warm them well in the fire, which makes them tough and fit to bend; afterwards they stick the thickest ends of them in the ground, about two yards asunder, in a circular form, the distance they design the cabin to be, (which is not always round, but sometimes oval) then they bend the tops and bring them together, and bind their ends with bark of trees . . . then they brace them with other poles, to make them strong; afterwards, cover them all over with bark, so that they are very warm and tight, and will keep firm against all the weathers that blow” (Lawson 1967, pp. 180, 182).

Pomeioc Village



Engraving originally published by Theodor De Bry in 1590, based a painting by John White made in 1585. The caption on the original painting reads: “The town of Pomeioc and true form of their houses, covered and enclosed some with mats, and some with barks of trees. All compassed about with small poles stuck thick together instead of a wall.”

Broad Reach Site

Name:

1. Which of the structures on the Broad Reach Site Plan are similar to those shown on the illustration of Pomeioc Village?
2. What differences can you see between the Pomeioc Village illustration and the Broad Reach Site Plan?
3. By reading the European settlers' accounts, what can you determine about how some of the structures in the Pomeioc Village and at Broad Reach may have been built?
4. Based on the archaeological and ethnohistoric evidence, describe how coastal peoples lived at this site.