
Lesson 4.3

NAME THAT POINT!

Subjects: science, mathematics, language arts.
Skills: application, analysis, evaluation, knowledge.
Strategies: scientific inquiry, research skills, classification, role play.
Duration: 45 to 60 minutes.
Class Size: any; groups of 4 to 5.



Spear point from Stanly County, North Carolina, 7000–6000 BC.

Objectives

In their study of projectile points (i.e., spear points or “arrowheads”) dating to the Archaic period in North Carolina, students use activity sheets to:

- compare projectile point *attributes*;
- identify and classify points based on clearly defined variables;
- match projectile points to a chronology and determine when the points were made and why the information is important to archaeologists.

Materials

For the teacher, transparencies of “Big Oak Site Profile Answer Sheet,” “Big Oak Site Profile,” and “Chronology of Archaic Projectile Points” activity sheets for projection. For each student, copies of “Chronology of Archaic Projectile Points,” and “Identifying Projectile Points” activity sheets. For each group of 4 to 5 students, a copy of the “Big Oak Site Profile” and “Big Oak Site Artifact Bags” activity sheets, pencil, and paper.

Vocabulary

Archaic period: the period in North Carolina between 8000 BC and 1000 BC. During this period, Native Americans lived in small nomadic bands and made their living principally by hunting, fishing, and gathering wild foods.

Artifact: any object made, modified, or used by humans; usually this term refers to a portable item.

Atlatl: a tool used to throw spears faster and with more accuracy; also called a spearthrower. It consists of a short pole with a handle at one end and a hook (for engaging the spear) at the other.

Attribute: a characteristic or property of an object, such as size, color, or shape.

Chronology: an arrangement of events or periods in the order in which they occurred.

Cross-dating: the principle that a diagnostic artifact dated at one archaeological site will be of the same approximate age when found elsewhere.

Classification: a systematic arrangement in groups or categories according to established criteria.

Context: the relationship artifacts have to one another and the situation in which they are found.

Haft: a handle, especially of an edged tool.

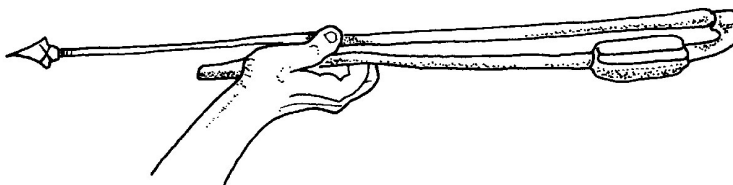
Projectile point: a pointed implement (usually made from chipped stone) that was attached to the

end of a spear or an arrow. This is a general term that includes both spear points and arrowheads.

Background

Archaeologists identify the *Archaic period* in North Carolina as the time between 8000 BC and 1000 BC. The Ice Age had ended and the modern climatic era had settled in. Native Americans lived all over North Carolina by then. They were nonagricultural people who traveled through large territories to hunt, fish, and gather wild plant foods. They did not live in permanent villages or make pottery.

The *projectile point* was a major hunting tool for Archaic people. Made by chipping off pieces of rock to the desired shape, the stone points were attached to wood or bone shafts that were set in the hollowed-out ends of spears. People could hurl spears forcefully over great distances by putting them on throwing sticks, called *atlatls*. An atlatl consisted of a stick measuring about 2 feet long, with a handle on one end and a groove or hook at the opposite end. The hunter fit the spear shaft into the groove and then, while holding onto both pieces, would thrust the atlatl and spear forward. The hunter would release his hold on the spear, but remain holding the atlatl.



Atlatl (throwing stick) and spear in use.

Native Americans used many different types of rocks to make projectile points, although some types of stone were preferred. Stones that easily flaked into tools and that held sharp edges were valued and often traded over long distances. Archaeologists can determine ancient trade routes by looking at the variety of stones recovered from sites. Native Americans used different tools to make stone projectile points, including deer antlers, wooden sticks, and fist-sized rocks called hammerstones.

Just as modern people change the styles of things they use today, people living during the 7,000-year-long Archaic period changed how their projectile points looked. Throughout the Southeast, dozens of different projectile-point shapes, or types, exist. In North Carolina alone, archaeologists have identified at least 11 distinct point types that date to Archaic times. The names they gave these types often indicate the name of the place at which they were first found or identified. For example, the Hardaway point was named for a site in Stanly County where many of these points were excavated. Projectile points are usually given their names by archaeologists or collectors, and not by the Native American people who used them. The names given to them by the people who made them are forever lost.

Why people changed projectile point shapes is something archaeologists can only make hypotheses about. Perhaps ancient people noticed that spears flew straighter if the point's shape was altered. Or, maybe a point could be secured more tightly on the spear by modifying its *hafting* end. Then again, maybe it was simply a matter of changing styles.

Archaeologists divide the Archaic period into three parts: Early, Middle, and Late Archaic.

During the first part of the Early Archaic, which lasted from 8000 BC to 6000 BC, big Ice Age animals, such as the mastodon, had already died out as the climate grew warmer. Native North Carolinians were hunting deer and other small animals with small-to-medium-sized stone projectile points. Hardaway, Kirk, and Palmer points date to the Early Archaic.

The years between 6000 and 3000 BC are called the Middle Archaic. The climate was drier than it had been in the Early Archaic, and because of this change, there was more grassland than before. Bison and other grassland animals became more common than deer during this time, and people hunted them for food and skins. Native American groups began to become more territorial in the Middle Archaic, and archaeologists find a growing variety of projectile point types. Some of the point types from the Middle Archaic are called Morrow Mountain, Stanly, and Guilford.

In the Late Archaic (3000–1000 BC), the climate changed to cooler, wetter weather, and forests and swamps became more numerous. Forest animals such as deer, rabbits, and raccoons again became important in the diet. Some of the projectile points Late Archaic people made and used during this time included Savannah River and Halifax.

Even though archaeologists can never really know the reasons people changed projectile point shapes, they have chronicled the varying styles so that approximate dates are known for them. This work began in the 1950s. Before then, no stratified (layered) sites had been excavated in North Carolina. Archaeologists can date projectile points when they are found in *context*, or association, with other artifacts which can be given a date. Archaeologists have used this method to construct a *chronology*, or timeline for North Carolina projectile point styles.

Setting the Stage

To help them think about how the styles of objects change over time, direct the students to think of examples of products or objects that have changed. You might suggest they think of ways that computers have changed over the last few years (gotten smaller, more memory, greater speed, color screens, development of the internet, etc.). Why have these changes occurred? Which changes are related to technological advances and making the product more efficient at its job? Which changes are related to fashion or with the desire of the manufacturer to sell more objects? Which of these ways of thinking about change do students consider to be relevant when thinking about why projectile point styles changed?

Procedure

1. Share background information with the students.
2. Distribute the “Chronology of Archaic Projectile Points” activity sheet to each student, and project this transparency. Go over types of projectile points found in North Carolina dating to the Archaic period and discuss the differences in point shapes and sizes. Instruct students to focus on differences in various attributes. For example, direct them to determine if the points’ bases are flat or concave, or if the blade edges are serrated (i.e., have a saw-tooth pattern) or not.
3. Distribute the “Identifying Projectile Points” activity sheets to students. Direct them to use the “Chronology of Archaic Projectile Points” sheet to identify each point based on artifact size and shape.
4. Divide students into groups of 4 or 5. Distribute to each group one “Big Oak Site Profile” and one “Big Oak Site Artifact Bags” activity sheet. Tell them that they are students in an archaeological field school and are being tested on their knowledge of Archaic period projectile points and site stratigraphy. Explain that the “Big Oak Site Profile” activity sheet represents a profile map of a stratified Archaic site. Review the concepts of stratigraphy and chronology

learned in the earlier lessons (see Links, below). Remind the students that archaeological soils build up through time, with each layer representing a distinct time period on the site. The latest, or most recently deposited soil layer is the first that the archaeologist removes, and the layer deposited earliest is the last removed.

5. Project the transparency of “Big Oak Site Profile” and go over it with the students. Help them decide in what order an archaeologist would excavate the layers. (Answer: the top layer with the grass would be the first excavated, working down consecutively until the lowest layer is reached.) Discuss with the students the order in which the soil layers were deposited on the site. (Answer: the lowest layer was the first deposited, and the uppermost layer was the last deposited.)

6. Explain the instructions for the activity. The “Big Oak Site Artifact Bags” activity sheet lists artifacts archaeologists recovered from each soil layer on the site, as well as each layer’s soil color and type. Students use illustrations of the projectile points from each bag and the “Chronology of Archaic Projectile Points” activity sheet to complete the profile map by filling in the blanks for soils, points, and dates. First, they should determine the dates of the projectile points. This tells them when the soil layers formed. Then, using their knowledge of the rules of stratigraphy, they label the position of each soil layer on the profile map based on the projectile points’ dates. Remind them that the oldest points are found on the lowest level. They may find it helpful to take notes as they work.

7. After students have completed the exercise, project the “Big Oak Site Profile Answer Sheet” transparency. Have them go over their own sheets and tell how they arrived at their answers.

Closure

Discuss why it is important that archaeologists use changing artifact styles and stratigraphy to help them understand archaeological sites. Stress the importance of *cross-dating*; the principle that a diagnostic artifact dated at one archaeological site will be of the same approximate age when found elsewhere. For example, if Savannah River points were found in the second level of a camp site located 50 miles away, when was that layer deposited?

Evaluation

Have students turn in their activity sheets for evaluation.

Links

Lesson 1.5: “Chronology: The Time of My Life.”

Lesson 2.2: “Stratigraphy and Cross-Dating.”

Sources

Coe, Joffre L. 1964. *The Formative Cultures of the Carolina Piedmont*. Transactions 54(5).

Philadelphia: American Philosophical Society.

Culberson, Linda Crawford. 1993. *Arrowheads and Spear Points in the Prehistoric Southeast*.

Jackson: University Press of Mississippi.

Henry, Vernon G. 1991. “Key to the Projectile Points of the Appalachian Mountains of North Carolina.” *Southern Indian Studies* 40, pp. 31-63.






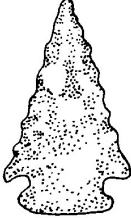
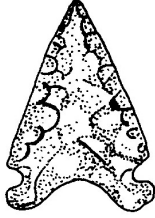

Justice, Noel D. 1987. *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States*. Bloomington and Indianapolis: Indiana University Press.

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 3.4.]

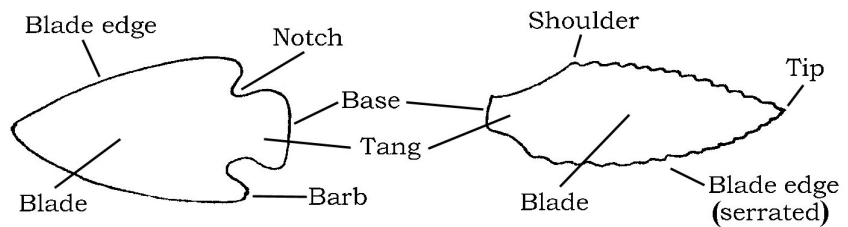
“Identifying Projectile Points” Activity Sheet Answers:

A, Savannah River; Late Archaic period (3000–1000 BC); B, Palmer, Early Archaic period (8000–6000 BC); C, Morrow Mountain, Middle Archaic period (6000–3000 BC); D, Stanly, Middle Archaic period (6000–3000 BC); E, Hardaway, Early Archaic period (8000–6000 BC); F, Guilford, Middle Archaic period (6000–3000 BC).

Chronology of Archaic Projectile Points


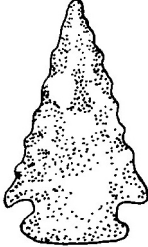


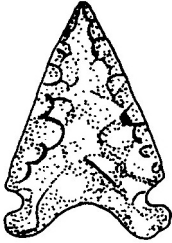

<p>Late Archaic Period (3000–1000 BC)</p>	<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <p>Savannah River</p> <p>Halifax</p> </div>
<p>Middle Archaic Period (6000–3000 BC)</p>	<div style="display: flex; justify-content: space-around; align-items: center;">    </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <p>Morrow Mountain</p> <p>Guilford</p> <p>Stanly</p> </div>
<p>Early Archaic Period (8000–6000 BC)</p>	<div style="display: flex; justify-content: space-around; align-items: center;">    </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <p>Kirk Corner Notched</p> <p>Hardaway</p> <p>Palmer</p> </div>

Key Terms:



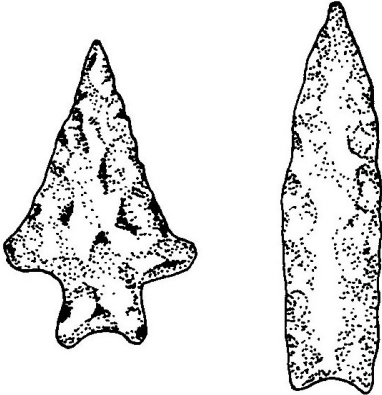
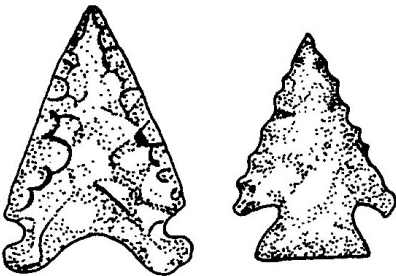
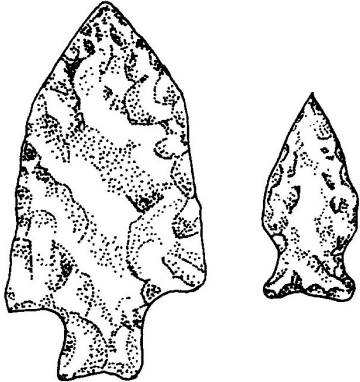
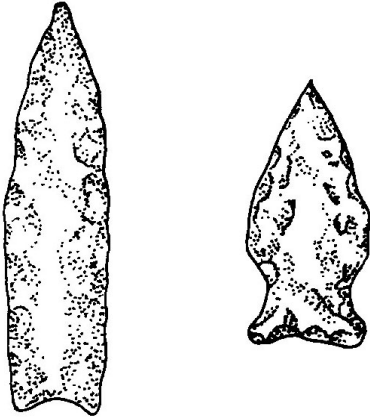
Identifying Projectile Points

Name: _____

<p>A.</p>  <p>Point Type: Period/Date:</p>	<p>B.</p>  <p>Point Type: Period/Date:</p>
<p>C.</p>  <p>Point Type: Period/Date:</p>	<p>D.</p>  <p>Point Type: Period/Date:</p>
<p>E.</p>  <p>Point Type: Period/Date:</p>	<p>F.</p>  <p>Point Type: Period/Date:</p>

Big Oak Site Artifact Bags

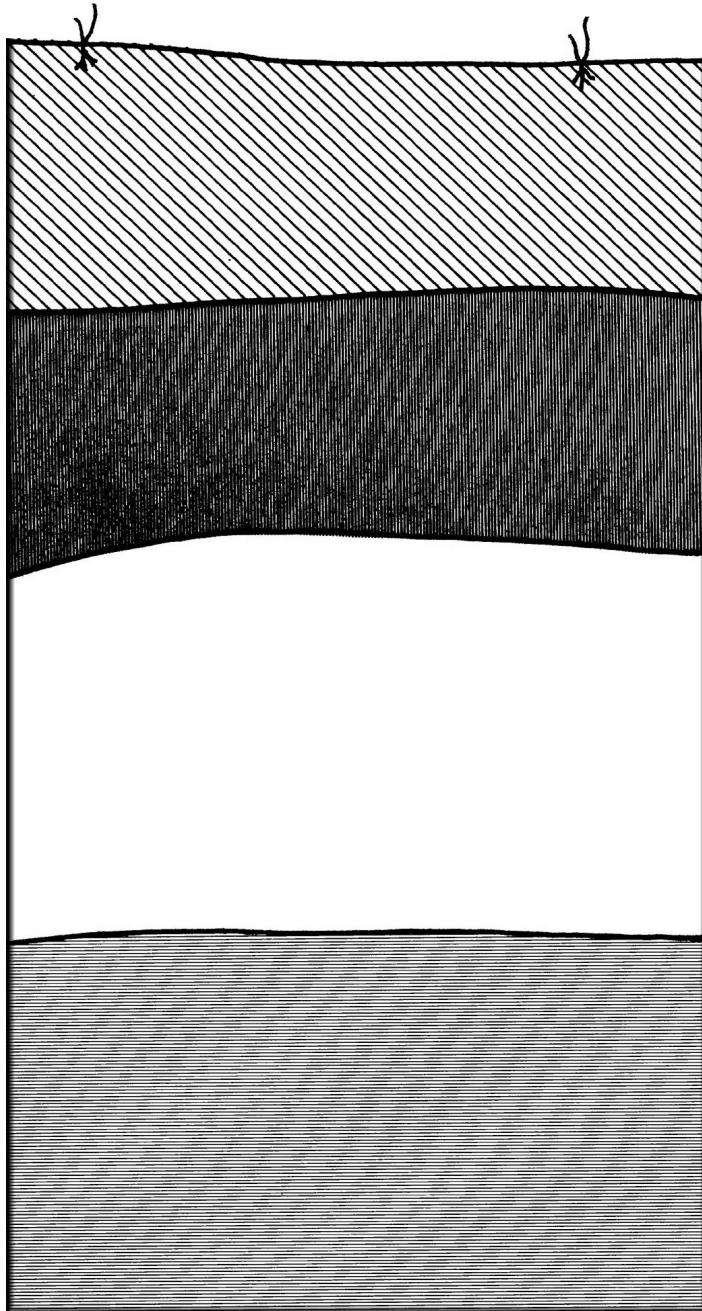
Each of the squares below represents the contents of an artifact bag from a distinct soil layer at the Big Oak site. Use this activity sheet along with the “Chronology of Archaic Projectile Points” activity sheet to complete the “Big Oak Site Profile” activity sheet.

<p>Soil: Dark Brown Sandy Loam</p>  <p>Also includes chipped stone tools and deer bone.</p>	<p>Soil: Light Brown Sand</p>  <p>Also includes deer and turtle bone, chipped stone flakes, and a hammerstone.</p>
<p>Soil: Black Loam</p>  <p>Also includes chipped stone flakes, stone beads, a stone axe, deer and rabbit bone.</p>	<p>Soil: Reddish Brown Sandy Loam</p>  <p>Also includes deer bone and chipped stone flakes.</p>

Big Oak Site Profile

Name: _____

Using the “Chronology of Archaic Projectile Points” and the “Big Oak Site Artifact Bags” activity sheets, fill in the projectile point types and dates for each soil layer. Note that some soil layers may span more than one period; in such cases write both periods in the space provided.



Soil: black loam

Points:

Dates:

Soil: reddish brown sandy loam

Points:

Dates:

Soil: dark brown sandy loam

Points:

Dates:

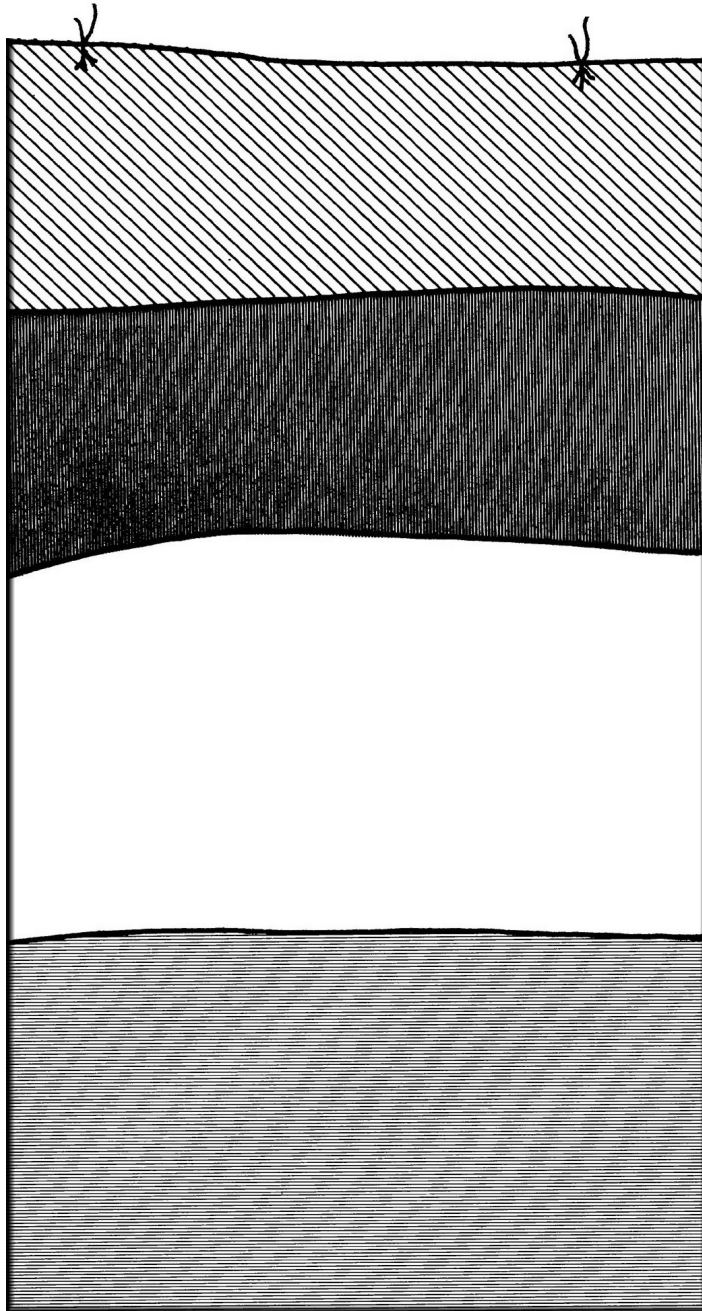
Soil: light brown sand

Points:

Dates:

Big Oak Site Profile Answer Sheet

Using the “Chronology of Archaic Projectile Points” and the “Big Oak Site Artifact Bags” activity sheets, fill in the projectile point types and dates for each soil layer. Note that some soil layers may span more than one period; in such cases write both periods in the space provided.



- Soil:** black loam
- Points:** Savannah River, Halifax
- Dates:** Late Archaic

- Soil:** reddish brown sandy loam
- Points:** Guilford, Halifax
- Dates:** Middle to Late Archaic

- Soil:** dark brown sandy loam
- Points:** Stanly, Guilford
- Dates:** Middle Archaic

- Soil:** light brown sand
- Points:** Palmer, Hardaway
- Dates:** Early Archaic