Prehistoric Native American Lesson Plan: Pottery-making Methods

Oneota pottery jar from the Norris Farms #36 site

Introduction: Experimental Archaeologists learn how ancient people made things by using ancient technologies to reproduce their tools, pottery, weapons, clothing, ornaments, and structures. Students can become experimental archaeologists on a small scale by using three methods ancient people used to make pottery before the invention of the pottery wheel. We do not have the exact types of clays and tempers (additives to strengthen clay); however, we can build pots using hand methods and compare the results for strength, durability, and appearance.

Illinois State Museum Web site used:
Museumlink Prehistoric Native American http://www.museum.state.il.us/muslink/nat_amer/pre/index.html (Early Woodland to Mississippian pottery sections.)

Museumlink Historic Native American http://www.museum.state.il.us/muslink/nat_amer/post/htmls/te_contain.html section on containers and the illustration on http://www.museum.state.il.us/muslink/nat_amer/post/htmls/arch_anc.html.

Objective: After reading the pertinent Web site sections, the introduction to techniques, and doing the activity, students will be able to produce pottery using ancient methods of construction. They will be able to explain and demonstrate the three methods (modeling, coiling, and molding) and pottery's advantage over skins, gourds, and woven reeds.

Time Required: Two class periods

Grade Levels: 3-12

Motivation: Discuss the fact that Native Americans in Illinois did not have pottery until the Early Woodland period and explore what living conditions favored this development. Summarize the methods used (handout sheet) and predict the advantages and disadvantages of each.
Discuss how we know about these ancient methods, referring to the specialists in the *With a Little Help from Our Friends* Activity.

Materials:

- clay (if possible, the kind that can be fired in a kiln so students will see differences between air-dried and kiln-dried ware)
- access to a kiln (optimal), perhaps at the local high school or at a ceramics studio.
- simple tools such as a popsicle stick or cuticle stick
- molds such as ceramic or wooden bowls (wax-paper lined, or smeared with dish detergent so the clay can be easily removed)

Procedure: see attached instruction sheet

Assessment: Have students fill out the comparison form for the three pottery-making methods. Younger children can form a pot with one method and be able to tell what they did.

Resources:

Rice, Prudence M. *Pottery Analysis: a sourcebook*. University of Chicago Press, Publication 609. 1987.

Shepard, Anna C. *Ceramics for the Archaeologist.* Carnegie Institute of Washington, Publication 609, 1980.

Illinois Goals and Standards addressed:
Science: Goal 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments, and solve problems.
Social Studies: Goal 16: Understand events, trends, individuals, and movements shaping the history of Illinois, the United States, and other nations.

Standard E: Understand Illinois, United States, and world environmental history.

Late Elementary: 16:E.2a: Describe how people in hunting and gathering and early pastoral societies adapted to their respective environments.

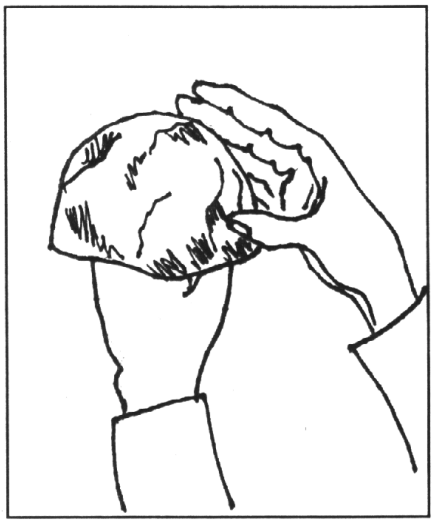
Late High School: 16.E.5a: Analyze how technological and scientific developments have affected human productivity, human comfort, and the environment.

Pottery-making Methods

Try making a small container using each of the methods described below.

Method #1: Modeling

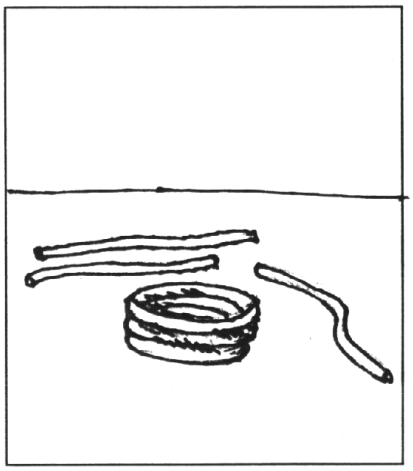
- Take a three-inch diameter lump of clay, roll it ou flat like pie crust 1/4 to 1/2" thick, drape it aroun your fist, and tap it with a flat stick to mold it int a jar shape.
- Turn your fist inside the clay so that all sides are modeled. The walls should be of an even thickness; the bottom will be flat or slightly curved.



Are there limits to the size and shape of the pot with this metho

Method #2: Coiling

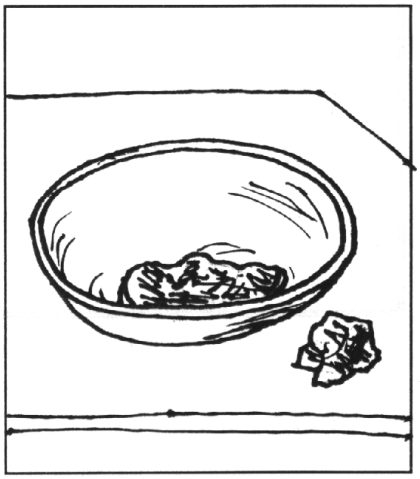
- Take a lump of clay and separate it into several smaller lumps.
- Flatten one lump of clay to make a flat base of a container, perhaps 2-3 inches across and about 1/ inch thick.
- Roll the other lumps into long 'snakes' of equal thickness.
- Press the first snake on the edge of the base to make the first row of coiling. Each row of coils is pressed or pinched on to the row below it to bond them together.
- It is also possible to coil longer lengths of clay in a spiral coiling with the same pinching method.
- Keeping the clay moist while adding coils is important for bonding.



Is it possible to form a larger variety of shapes using this metho than with the modeling method? Why or why not?

Method #3: Molding

- Take a lump of clay and press it into a mold, such as another container, and smooth the clay so it is the same thickness.
- Remove the new container from its mold.



What shapes can and cannot be formed using this method? Why

Lesson Extension: Mississippian Incised Pottery and Effigy Pottery

Procedure: Students will have looked at samples of incised pottery and effigy pottery in the Mississippian and Oneota sections of the Prehistoric Native American Web module, noticing or making sketches of types of incised designs (lines of feathers, geometric slashes and shapes, dots, etc.) and the shapes of animal effigy pottery.

Effigy Pottery

Effigy pottery has the shape of an animals attached to it (perhaps on one side of the rim) or in some cases the vessel itself is in the shape of an animal.

Choose an animal you would like to use to make your effigy pot. Form a pot in one of the three ways detailed in this lesson. Use your fingers to form the head of an animal with a small lump of clay. Pinch it securely to the rim of the pot, smoothing the clay to remove the seam.

Duck effigy bowl from Dickson Mounds Museum

Incised Pottery

Incised designs were made when the clay was still wet, when it was dry before it was fired, or even after it was fired. Popular areas of the vessels to incise were: rims, outside walls of bowls, necks and shoulders of urn-like vessels.

Use the wooden sticks or your fingernails to incise designs into the wet clay. The Oneota, like people of many other world cultures, made their incised designs symmetrical, and repeated in rows. The tools should cut deep enough to make visible impressions, but not so deep as to cut through the clay or weaken the walls of the vessel.

MB#7- incised Oneota jar from Norris Farms #36