

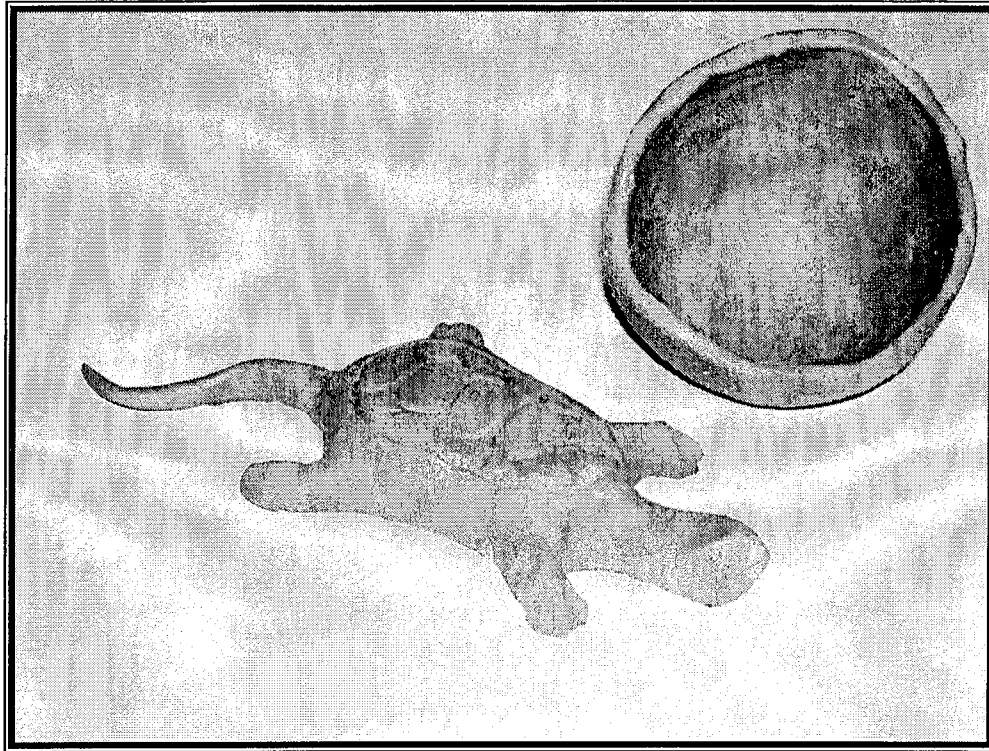


Native American Ceramics Lesson

For Elementary School Students

*Prepared by Dr. Danielle Moretti-Langholtz and Patrick Burke,
the College of William and Mary, 2004*

Image © Tara Prindle, 2004



Completed turtle sculpture and coil pot, drying

All words and images by Patrick Burke unless otherwise noted. Thanks to Dr. Martin Gallivan for use of images from the Werowocomoco project and to Tara Prindle at NativeTech: Native American Technology and Art.

Native American Ceramics Lesson

How to build a coil pot using the traditional methods of the Virginia Indians.

Grade Level: 1st thru 5th

Objective: The students will...

Develop an understanding of Native American culture through an experimental reconstruction of material culture.

Demonstrate craftsmanship and creativity with the clay medium.

Activities:

Learn techniques for building Eastern Woodlands coil pottery.

Vocabulary:

Ceramics, culture, clay, pot shard, archeological site, artifact, sculpture, function, coil, pinch, slip, score/incise, temper

Materials:

Clay source (terra cotta, stoneware, or naturally occurring clay which can be obtained in quantity from construction sites)

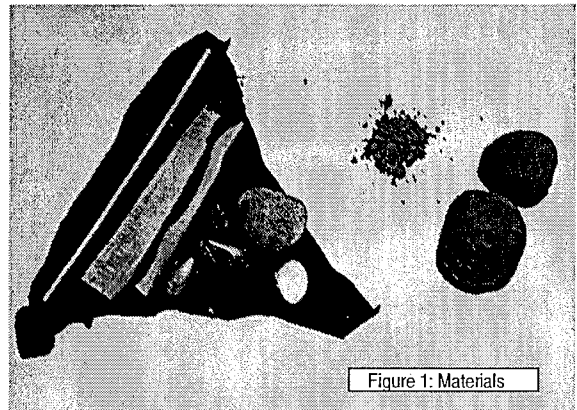
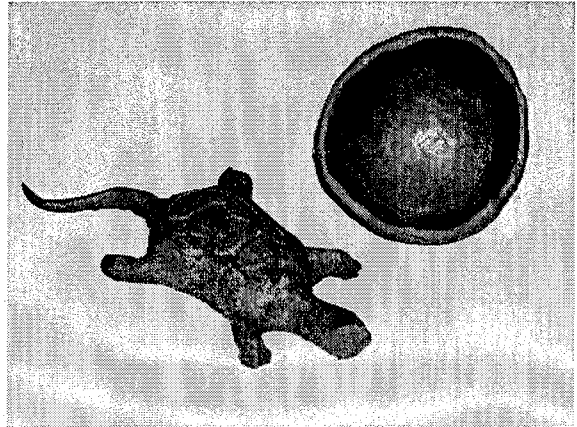
Temper (grasses, sand, or ceramic grog)

Scraping tool (shell or metal/wood rib)

Anvil (stone)

Decorative tools (sharpened wooden stick, corn cob, shells, knife, pin-tool, etc.)

Slip and water dishes (any plastic container)



Time Required:

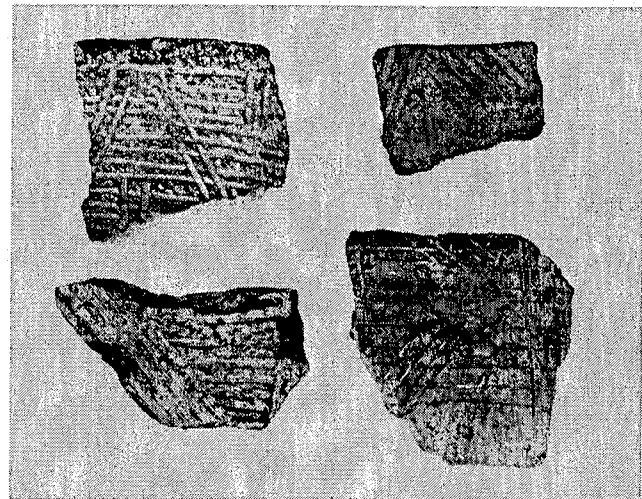
About an hour.

I. Background: Native American history and ceramic use

History:

Ceramics played a very important role in historical Native American *culture*, and they are still important today. Native Americans used *clay* to make pots for cooking and storage, bowls for eating, and to create artistic *sculpture*.

Scientists are able to find *pot shards*—pieces of ancient pottery—at *archeological sites*. Archeologists dig into the earth at these sites in search of *artifacts*. The image to the right shows four pot shards found by Dr. Martin Gallivan at the Werowocomoco site on the York River in Virginia. By examining such artifacts, archeologists are able to understand how these items were used by Native Americans.



Pot shards from the Werowocomoco site © Dr. Martin Gallivan, the College of William and Mary (Note the incised decoration on these artifacts)

The earliest use of pottery in Virginia appeared on the coastal plain about 3000 years ago.¹ The most common ceramic object used by the Virginia Indians, such as the Powhatans, were round-bottomed vessels with shell-*temper* and fabric impressed or *incised* decoration (see cover page image).² These large, round-bottomed vessels were probably stewpots that were used continuously everyday for boiling various meats, grains, and vegetables.

Virginia Indians continue to follow the tradition of their ancestors by building coil pottery today. Women from the Pamunkey Indian Tribe collect clay from the banks of the Pamunkey River, prepare the clay and build coil pots in the method described below.

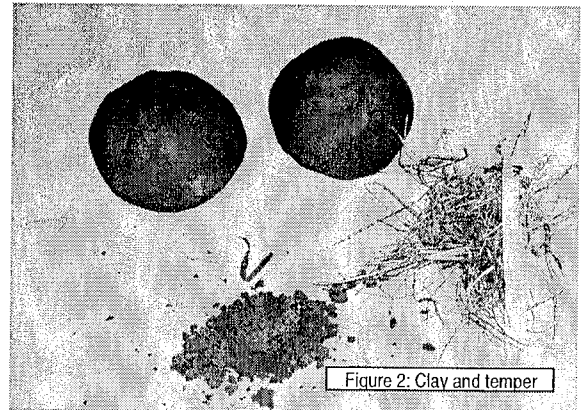
¹ 1100 BC: Shallow bowls, called Bushell Ware. Egloff, "The early and middle archaic periods"

² Rountree and Turner, *Before and After Jamestown* (23)

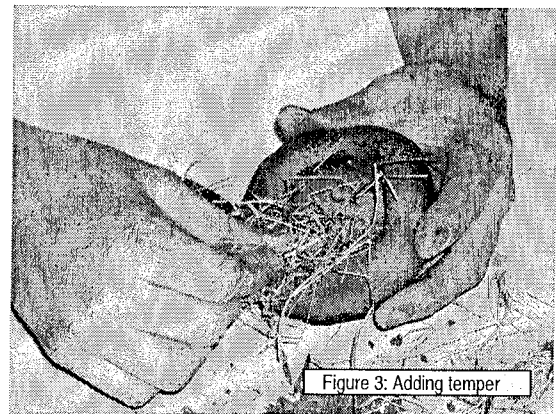
II. Procedure: Building the Coiled Bowl

1) *Demonstrate wedge*: Begin by wedging the clay (similar to kneading dough). The objective here is to press out any air bubbles, to mix the clay, and to work it, making the clay more plastic.

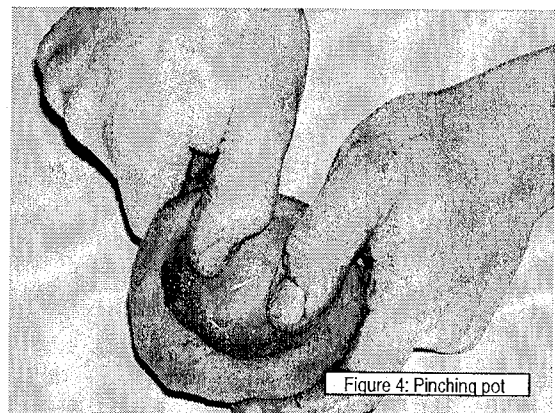
2) *Divide the clay* [Figure 2]: cut out one fist-sized ball of clay for each student (approx. 1½lbs). You may want to add temper to the clay if you're going to pitfire your pieces. Tempers include dried grasses or fine bark, quartzite sand, fired and crushed shell, even old crushed pottery shards. Temper acts as a stabilizing agent for the clay during the drying and, especially, the firing stages. Temper may also be used in the bisque kiln, although fiber temper may smoke a bit as it burns off. If bisque firing, you may consider fine ceramic grog.



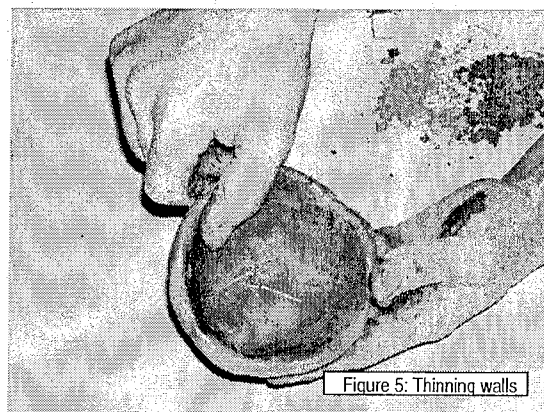
3) *Mix temper into clay* [Figure 3]: Have students practice wedging by kneading their temper into the clay. You may add the temper by pushing your thumb into the ball of clay and opening it into a bowl shape. Then add the temper inside of the bowl, close the rim around the temper, and thoroughly mix the temper into the clay by wedging.



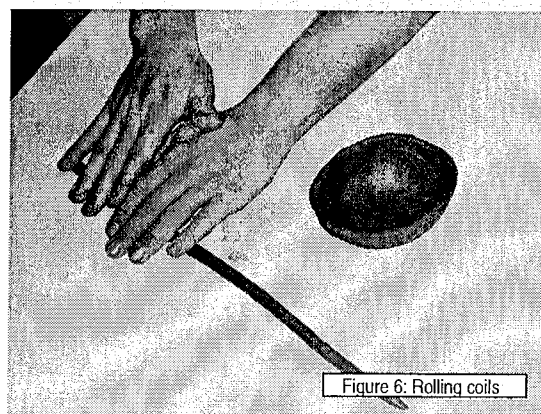
4) *Begin pinch pot* [Figure 4]: Now that the temper is mixed evenly throughout the clay, have students divide their clay into two equal-sized lumps and roll them into small round balls. Then, have them carefully push their thumbs into one ball of clay, without pushing a hole all the way through, and stretch the clay out into a thick-walled bowl (see image to right). It helps to pinch the clay, drawing with the thumb, from the inside. As you pinch, rotate the bowl 360° to ensure even wall thickness. Set the other piece of clay aside for the moment.



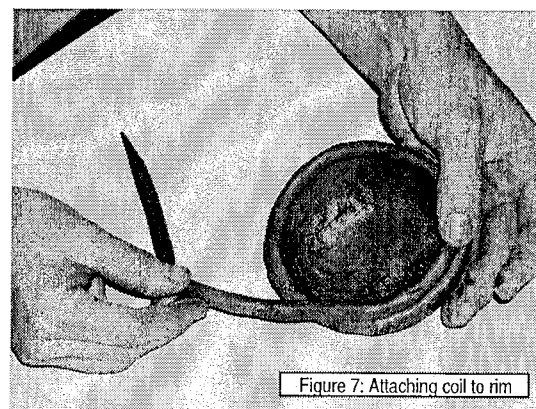
5) *Thinning and pulling walls* [Figure 5]: The next step is to thin the walls by pulling/pinching them in an upwards motion. Think of the inside of the bowl as a “U” in cross section. You will want every part of the “U” to have a similar thickness. Starting from the base of the bowl, pinch the clay between your fingers. This will displace the clay in all directions, but you can manipulate the pinch to direct the clay upwards. Then move your hand a little higher up the wall of the bowl and repeat an upward series of pinches until you have reached the rim (follow the line of the “U” to the rim). At this point, the rim of the bowl will be lopsided, with a little bulge where you just pulled. Then move your hand back down into the bowl, and pinch/pull upwards about a half an inch beside your last pull. Repeat this process until you have pulled the wall on all sides of the bowl and your walls are relatively even (approx. $\frac{1}{4}$ ” to $\frac{1}{2}$ ”).



6) *Rolling coils* [Figure 6]: On a flat table, preferably a large, wide table covered in canvas, divide the second ball of clay into smaller pieces, and have the students roll long coils approximately one-half inch in diameter. Although it is tricky to roll even coils, it helps greatly when attaching them to the rim. To roll an even coil, the best method is to roll the coil in between the palm of your hand and the tabletop, with your fingertips and the heel of your hand sliding across the table. Roll lengthwise along the coil, maintaining even pressure, and taper the ends of the coil into points.



7) *Attaching coil to rim* [Figure 7]: An effort should be made to keep the rim of the pot moist throughout the coil rolling process. This makes attaching the coil much easier. If the coil or the rim of the bowl does dry out, simply add a little water. When attaching the coil, begin by pressing the tapered end of the coil gently into the rim and laying the coil out lengthwise around the rim. As you lay the coil around, gently press down onto the coil to secure it to the rim.



8) *Attaching second coil to rim* [Figure 8]: As the coils are added, the best method for making a strong bowl is to attach coils in the method shown in the photo—you want to coil them so that are cone-shaped, tapering into the middle of the bowl. This allows you to pull and stretch the walls outward into the “U” shape when smoothing and thinning the walls. Using this procedure, you can add any number of coils and build the walls of your bowl very high.

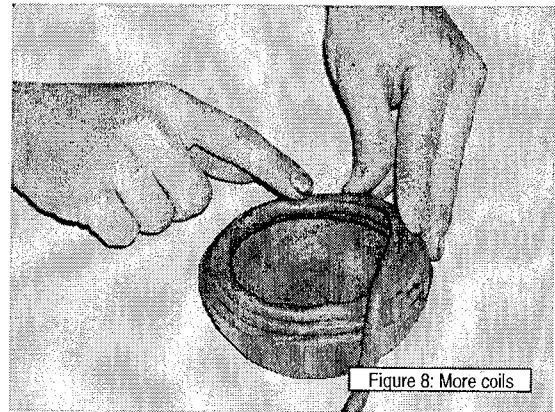


Figure 8: More coils

9) *Smoothing the coils* [Figure 9]: Now, smooth the coils out using fingertip or flat-sided shell (like a mussel shell). As the inside walls of the bowl are smoothed, the student will be pushing outward, maintaining the open bowl shape. When all coils are smoothed, the walls should be an even thickness (about $\frac{1}{2}$ " to $\frac{1}{4}$ ") and sturdy enough to hold their own weight. The bowl should not be slouching in any direction. If some of the walls have bulges and are too thick, the student may take a shell and scrape the inside walls smooth.

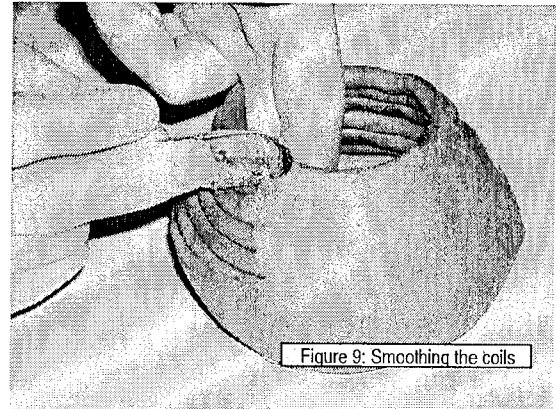


Figure 9: Smoothing the coils

10) *Paddling bowl (optional)* [Figure 10]: One traditional method of thinning the walls and attaining desired shape is through the paddle and anvil method. This procedure is fairly difficult to do successfully and may ruin an entire pot if you're not careful. A flat wooden paddle, often wrapped with cordage, is used to paddle the outside of the bowl, while an anvil (or your fingertips) presses out from the inside. This technique takes a bit of practice, but helps to work the clay into proper shape. With a bowl this small, however, it is hardly necessary.

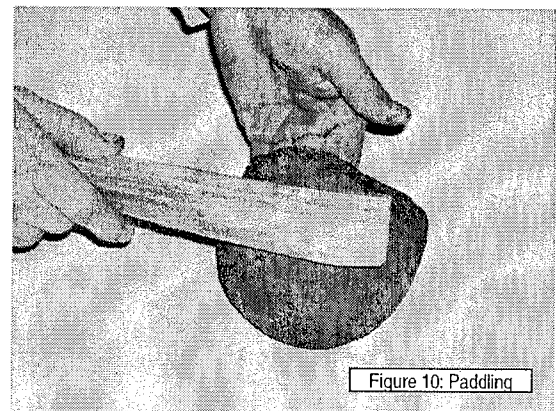
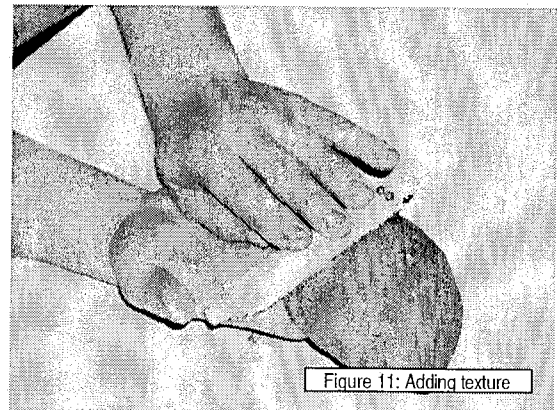
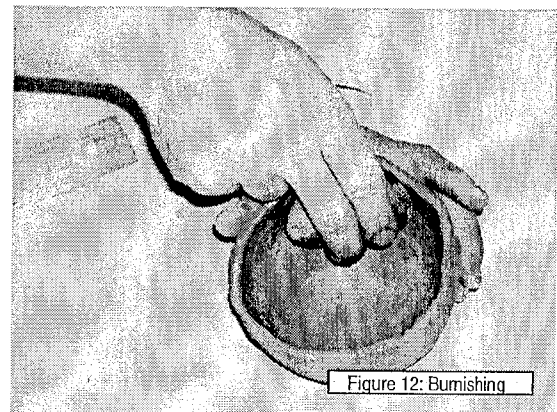


Figure 10: Paddling

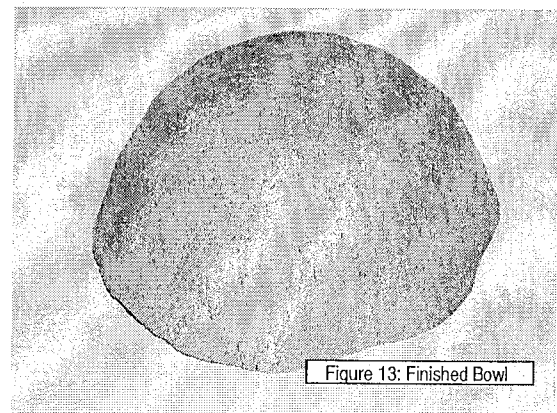
11) *Adding texture (optional)* [Figure 11]: Many Native American pots were decorated with textured relief on the outer walls. The decorations were made by cord-wrapped paddling, pressing nets into the wet clay, or by rolling textured items across the surface of the pot, such as a corn cob.



12) *Burnishing (optional)* [Figure 12]: After the clay has dried a bit, the students can smooth the inside surface of their bowl with a smooth river stone. Called burnishing, this compresses the clay, gives the surface a shine, and makes the item more food-safe (by decreasing porosity).



13) *Finished Bowl!* [Figure 13]: This is the finished bowl, drying upside-down. As the bowl dries and the clay becomes more stiff, final adjustments to rim shape and overall size can be made. Just be careful not to break the walls when they become dry and brittle.



A note on firing: Virginia Indians traditionally pit-fired their ceramics, in open bonfires reaching 700°F. This is a difficult procedure, often with many pots breaking due to rapidly changing temperatures. Depending on the type of clay and temper you use, bisque kilns work well to fire coil pots.

IV. Higher Order Thinking Skills (Closure):

Evaluation:

Did student demonstrate an understanding of Native American culture?

Did student demonstrate skill and craftsmanship using the ceramic medium?

Discussion questions for students:

1. Why did Native Americans use ceramics historically? Why do Virginia Indians still practice these traditions?
2. What is an artifact and why is it important?
3. Describe how your coil pot looked when you were finished.
4. How does Native American ceramics differ from the ceramics that we all use everyday?

Other Resources and Works Cited:

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