

Lesson Plan Eight: Making Pueblo Pottery



Students use pottery making to learn about traditional Pueblo pottery methods and also the importance of maintaining cultural practices through the oral tradition.



Location: classroom

Suggested group size: whole class, small groups, individuals

Subject(s): history, social studies, art

Concepts covered: coil-building pottery, oral tradition, maintaining cultural identity

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Last updated: 2/2007

Student outcomes: At the end of this activity, students will know the steps in making and firing hand-coiled Pueblo pottery, will understand that Pueblo people may feel that for some kinds of skills and knowledge the best way of passing it along is by oral tradition, and will know why it is important to them to keep a strong connection to their traditions.



EDUCATIONAL STANDARDS

New Mexico State Standards

Art

Content Standard 1: Learn and develop the essential skills and technical demands unique to dance, music, theatre/drama, and visual arts.

Visual Arts

Grade 5-8

B. Explore and understand the use of art materials and techniques by culturally diverse artists locally and globally.

1. Research and discuss the relationship between art and artifact and their historical, geographical, cultural and political contexts.

Content Standard 4: Demonstrate an understanding of the dynamics of the creative process.

Visual Arts

Grade K-4

A. Understand that works of art come from diverse personal and cultural experiences and inspirations.

Content Standard 1. Listen and develop the essential skills and technical demands unique to dance, music, theatre/drama and visual arts.

- B.1. Research and discuss the relationship between art and artifact and their historical, geographic, cultural and political contexts.

Social Studies

Strand: History

K-4 Benchmark I-A: Describe how contemporary and historical people and events have influenced New Mexico communities and regions

Grade 4

1. Identify important issues, events, and individuals from New Mexico pre-history to the present.

K-4 Benchmark III-B: Identify and describe the symbols, icons, songs, traditions, and leaders of local, state, tribal, and national levels that exemplify ideals and provide continuity and a sense of community across time.



Grade 4

1. Describe various cultures and the communities they represent, and explain how they have evolved over time.

NATIONAL STANDARDS

History

Topic 1: Living and Working Together in Families and Communities, now and long ago

Standard 1A, Grades K-4: The student understands family life now and in the recent past; family life in various places long ago

Standard 1B Grades K-4: The student understands the different ways people of diverse racial, religious, and ethnic groups, and of various national origins, have transmitted their beliefs and values

Standard 2 Grades K-4: The history of students' own local community and how communities in North America varied long ago

2A: The student understands the history of his or her local community

Grade K-4: Describe local community life long ago, including jobs, schooling, transportation, communication, religious observances, and recreation (obtain historical data)

Topic 3: The History of the United States: Democratic Principles and Values and the People from Many Cultures Who Contributed to its Cultural, Economic, and Political Heritage

Standard 6A: The student understands folklore and other cultural contributions from various regions of the United States and how they help to form a national heritage

Grade 3-4: Examine art, crafts, music, and language of people from a variety of regions long ago and describe their influence on the nation (Draw upon visual and other historical data)



Social Studies

I. Culture

Early Grades

- a. explore and describe similarities and differences in the ways groups, societies, and cultures address similar human needs and concerns
- c. describe ways in which language, stories, folktales, music, and artistic creations serve as expressions of culture and influence behavior of people living in a particular culture

Middle Grades

- a. compare similarities and differences in the ways groups, societies, and cultures meet human needs and concerns
- c. explain and give examples of how language, literature, the arts, architecture, other artifacts, traditions, beliefs, values, and behaviors contribute to the development and transmission of culture

Art

Visual Art

Content Standard 4: Understanding the visual arts in relation to history and cultures

Achievement Standards:

Students know and compare the characteristics of artworks in various eras and cultures

Students describe and place a variety of art objects in historical and cultural contexts

Students analyze, describe, and demonstrate how factors of time and place (such as climate, resources, ideas, and technology) influence visual characteristics that give meaning and value to a work of art.

MATERIALS

Evaluation Activity

Legoria Tafoya pottery-making image series (www.nps.gov/band, click on collections icon, look under contemporary pottery, #692-705))

Activity 1

Book: *Children of Clay* (see complete citation under Resources at the end of this lesson plan)



Activity 2

Writing or art materials

Activity 3

Images from Bandelier museum collection, available for loan or can be printed from the internet, www.nps.gov/band, click on “collections” icon:

Series of pottery stages, by Legoria Tafoya, #692-705

Pottery by Maria Martinez, especially #1667

Paintings by Pablita Velarde, especially #3098 (Woman Making Pottery) and #672 (Pueblo Views)

Optional: Portrait of Maria Martinez; check www.mariapottery.com

Maria Martinez video/DVD (see Resources) available for loan from Bandelier, (505) 672-3861 x 517

Activity 4

Guest speaker

Activity 5

Enough for each student: clay or equivalent, smooth stone for polishing, bowl of water, slender sticks or brushes for putting designs on pot, burlap to keep the clay moist, colored slip or acrylic paints, popsicle sticks or rounded pieces of dried gourd or cardboard for scraping, newspaper or newsprint, small bowls. Camera, drawing materials, writing materials.

Optional: borrow authentic Pueblo pottery from Bandelier

Activity 6

Drawing materials

Extension 1

Images as in Activity 3

Extension 2

Cookbooks, ingredients for chosen recipes, pans

Extensions 3 and 4

Guest speaker



VOCABULARY

Archeological excavation: a location where scientists use careful, painstaking methods to learn about past people by digging into places they lived and used

Archeologist: a scientist who studies people, usually from the past, by looking at things and places that they used

Artifact: any object that has been made or used by humans

Clay pit: place where soil suitable for making pottery can be found and dug up

Coiling: method of making pottery in which the prepared clay is pulled and rolled out into long strips, which are then placed around and around the growing vessel to build its walls. Each strip is pinched onto the one below it, and the seam is usually smoothed out. No wheel is used.

Culture: a group of people who share traditions, beliefs, and customs. Sometimes the word is used to mean the traditions, beliefs, and customs themselves, and things or activities related to them.

Dig: an archeological excavation

Firing: the process in which pottery pieces are made hard and strong by exposing them to high heat.

Glaze: a mineral paint, used to decorate or coat pieces of pottery, which melts and becomes vitreous when the pot is fired

Gourds: relatives of squash which develop a hard or leathery outside; when they are dried out, the seeds can be removed from the inside and the hard rind used for such things as bowls, dippers, and clay scrapers

Olla: a large pottery vessel with a wide body and narrower neck, often used for carrying or storing water; sometimes they could hold as much as two gallons

Oral tradition: information and knowledge being passed from person to person by word-of-mouth

Polishing stone: a very smooth, rounded stone used for polishing a piece of pottery

Pot sherd: a piece of a broken pot

Pueblo: Spanish word for village, used to mean a community of people with particular customs, including farming, weaving, and making pottery, and their

THE ANCESTRAL PUEBLO PEOPLE OF BANDELIER



settlement. There are presently 19 pueblos in New Mexico, plus the Hopis in Arizona and Isleta del Sur outside of El Paso, Texas.

Puki: a Tewa term meaning a dish, often made from the bottom of a broken pot, on which a potter puts the clay as she builds a pot. The puki supports the growing pot and allows it to be turned without sticking to the table. Some potters make pukis specially for different sizes and shapes of pots.

Slip: clay thinned with water to the consistency of paint, often used to make designs on unfired pottery

BACKGROUND AND HISTORICAL CONTEXT

Pueblo people and their ancestors have lived in what is now the American southwest for thousands of years. For millennia the early people were hunters and gatherers, obtaining their needs by gaining exhaustive knowledge of what resources were to be found where, and at which times of year. Well over a thousand years ago they began to be involved in farming, eventually learning to raise corn, beans, and squash in this arid land. For all those years, until the Spanish came into the area in the 1500s, the people had passed on their knowledge, beliefs, and experience without the use of writing, relying on word of mouth from generation to generation.

In many ways, the oral tradition is such an integral part of the Pueblo culture that it is still the preferred way of transmitting some skills, such as pottery making. Children are expected to learn by watching, with varying amounts of instruction provided by the skilled potter. Other crafts, ceremonial dances and songs, stories, and even such workaday skills as cooking, are usually passed along the same way. Even though books and reading have been a common part of Pueblo life for centuries, the people choose to keep the old way to pass along many of the old customs. In a culture that values community and family among the highest priorities, the process of oral teaching is important not only for what is passed along, but also for the personal contact and relationships that are built and strengthened.

To many people, pottery is the craft most strongly associated with the Pueblo culture. In archeological sites, pottery pieces are much less vulnerable to the processes that, over centuries, destroy other artifacts. Often all we see of the work of early people is sherds of broken pottery or, sometimes, an intact bowl, jar, or olla. Their shapes and designs speak across the years of the talents of people who inhabited this land so long ago. And, although design motifs change over generations, the way the pottery is made is still the same, from the hand-shaping without use of a wheel, the smoothing and polishing, and the painting of designs applied with a yucca-leaf brush, through the outdoor firing.





Maria Martinez and Pablita Velarde, well-known Pueblo artists, are both associated with Bandelier history. Maria met archeologist Edgar Lee Hewett in the early 1900s when her husband was working as a laborer in Hewett's excavations in Frijoles Canyon. It was with his encouragement that she began selling her pottery outside her village. Over the years she came to be, by far, the most famous of the Pueblo potters, and her work is in museums and collections all over the world. She passed away in 1980. Pablita's first paying job as an artist was at Bandelier, working on a project to make illustrations for the park museum as part of the Works Progress Administration in the late 1930s. She went on to become a very accomplished and praised painter. Both of them were instrumental in opening doors for other Pueblo people to be known in the world outside of their villages, and had important roles in improving the economic conditions in their home pueblos due to visitors' interest in purchasing pottery and paintings. (see also the articles on pottery, Maria Martinez, and Pablita Velarde in the Bandelier newspaper in the curriculum guide, and the lesson plan "Learning from Oral Traditions.")

PRE- AND POST-EVALUATION

Pre-Evaluation:

1. Ask the students if they have ever made pottery, and what steps you have to go through to make it. Write the steps on a flipchart sheet and save for later.
2. Ask the students if they like learning from books or learning from people, and if they can think of some subjects or skills that would work better in each of those modes. Write the list on a flipchart sheet and save for later.

Post-Evaluation:

1. Put the Legoria Tafoya pottery series photos on the board out of order, and have the class, either individually or as a group, put them in the right sequence, identifying each step. Get out the flipchart sheet from the pre-evaluation and ask them to look at the steps listed and add any that they had not previously included, or see if there are steps listed that are from other styles of pottery-making but not needed here.
2. Ask the students if they think it would work better to learn pottery-making by watching and talking with a teacher, or by learning it from a book. Ask them to explain, verbally or in writing, which way they would prefer and why. Get out the flipchart sheet from the pre-evaluation and ask them if they still agree with it and if they would add or subtract any listed skills or subjects. If the idea of oral traditions is of interest, look at the lesson plan, "Learning from Oral Traditions."



PROCEDURES: ACTIVITIES TO CHOOSE FROM

- 1A. Use the book, *Children of Clay*. In it the author, from Santa Clara Pueblo, tells how her family passes along the skills and traditions of making pottery. Some of the customs are very old, while new ones have been added over the years. Ask the students, individually or in a whole-class setting, to decide which parts of the pottery traditions are from long-ago and which ones are from nowadays, and ask them to tell how they know.
- 1B. Have the students, as a class, in small groups, or as individuals, re-tell orally, in writing, or as a play, the story in *Children of Clay* but set in Ancestral Pueblo times.
2. Have the students, individually or as a class, write a story or do a mural or series of drawings showing the steps in a skill that they know. Ask them to tell why they hope that this skill will be passed along to other generations, and what they think would be the best way to teach it.
- 3A. Initiate a discussion on pottery making by asking if any of the students have worked with clay in a ceramics class or elsewhere. Show the class some of the prints of old and new pottery from the Bandelier collection, and ask them how old they think the pieces are, and if they have ideas about how they were made. Talk about differences and similarities they notice between old and new pieces.
- 3B. Show the Maria video; introduce it by showing or putting on the board the picture of her and giving a short biography of Maria and her family (see the article on Maria in the newspaper “Pueblo People Past and Present” in this curriculum guide) and their connection with present-day pottery-making. Explain that the methods shown in the film are ones that have been used in this area for over a thousand years, (except for using cow and horse manure for fuel and firing for the black finish, since cows and horses weren’t in the area until the Spanish came). In the film she mentions that she learned from her Aunt Nicolasa; she doesn’t mention that she taught many others, passing the skill along in the traditional manner. Tell the class that, although Maria has passed away, they will also be learning from her, by watching her techniques in the film, and that they will be using this knowledge to make their own pottery. If making pottery is not an option, see Activities 3 and 4 below.
- 3C. Discuss the traditional process and how it might need to be adapted in order to make pots in the classroom. For example, will you be able to go out and dig clay, or will you need to use commercial clay? How will you need to do the firing? At the end of the video, Popovi Da mentions that they sometimes





have pots that crack in the firing; should your class expect all their pots to come out perfect on their first try?

4. If possible, invite a Pueblo potter to visit the class to talk or demonstrate (also see 3 under Extensions). Possibly link with previous lesson (Potsherds)
- 5A. If the class is going to make pottery, consider borrowing an authentic piece of Pueblo pottery from Bandelier (505-672-3861 x 517). Decide on what kind of clay to provide. Is there a source of dig-it-yourself clay and temper in the vicinity? If so, would it be possible to take the class there to gather the clay themselves? Otherwise, consider buying commercially-prepared clay, or use alternatives such as modeling clay (which never really hardens), Sculpey, or play-doh-type material. Will you be able to do a real firing, or use a kiln, or would it be better to use a material that you will just air-dry, or fire in an oven? Whichever material you choose, do a trial run before trying it with the class.

Two recipes for self-hardening clay:

1 cup flour, 1 cup water, 1/2 cup salt, 2 tsp cream of tartar, 1tb salad oil. Add water gradually to dry ingredients, mix well. Cook over low heat 3 minutes; store in airtight container in the fridge until ready to use

4 cups flour, 1 1/2 cups salt, 1 1/2 cups water. Add water gradually to dry ingredients, mix well. Store in sealed plastic bag in the fridge until ready to use; allow to return to air temperature before using. When object is complete, allow it to dry at room temperature at least two days (not in direct sunlight).

Hints: Newspaper or butcher paper may be useful to protect the tables. For some kinds of clay, you will need to have a small non-tippy bowl of water for each 2 or 3 students to share. This makes it possible for them to moisten their fingers as they work with the clay, to keep the clay from drying too fast, and to help the coils stick together as the pot is built.

Consider smocks or aprons. Saucers may be useful in place of pukis to keep the growing pots from sticking to the table surface, and for keeping the pot from being damaged if it has to be moved while still wet. Popsicle sticks or rounded pieces of cardboard may work in place of gourd pieces for scraping the pots smooth.

Don't dry pots in direct sunlight, as they will dry unevenly and probably crack. Instead, dry slowly in a cool, shady place. If necessary, wrap in burlap to slow the drying. Plan to have the activity on two different days, several days apart, so the



pots can dry thoroughly before they are painted. If you plan to fire the pots and decorate them with acrylic paints, be sure to paint the pots after they are fired.

If you plan to fire the pots, be sure the students know that each coil must be very carefully attached to the previous ones, with no air bubbles, or the pot is likely to explode in the firing. In fact, be sure students know that even very skilled Pueblo potters sometimes have pots crack or explode in firing, but they work carefully to try to prevent it.

If you want the pots to be waterproof, coat the inside with a commercial product such as Verathane after they have cooled from firing. This won't work with pots that have spaces left between the coils. Remember to have good ventilation. An alternative is to put a small glass jelly jar inside the pot and put the water in the jar.

- 5B. Consider taking snapshots of the students working, to show each step in the process. Have the students divide into small groups to have each group write an explanation of what is happening in each photo. When the pots are finished, put them on display in the classroom or a display space somewhere in the school, along with the photos and captions. Alternatively, have them draw pictures of themselves doing the various steps.
6. As a substitute to making real pottery, or in addition to Activity 5: have the students draw an outline of a piece of pottery, and then encourage them to experiment with creating their own designs for it. Either way, remember that these are the students' pots, not imitation Pueblo pots.

EXTENSION IDEAS

1. Today pottery is often made to be purchased by people who will use it only as a decoration, but for centuries it was made to be used for cooking, serving, and storage. Have the students compare some Ancestral Pueblo pots with some modern ones (found in the Bandelier online collection, www.cr.nps.gov/museum, or elsewhere), considering whether their makers created them for the same or different purposes and how you can tell. For example, would you want to put a fancy decorated bowl over a cooking fire? Would you want to eat out of a pot with a tall neck? What shape would you want for :
- carrying water (large body, large mouth)
 - storing corn meal (large body, large mouth, with something for a cover)
 - storing seed corn (not as large as for storage)
 - cooking stew (wide base to sit on fire, large mouth for stirring)
 - dipping water out of a large water jar (handle, open cup at end)



PUEBLO POTTERY ACTIVITIES

- 2A. Talk about what foods the Ancestral Pueblo people cooked, and what types of pottery they needed to do it. If you are not certain what they had prior to the arrival of the Spanish, look at the lesson plan “Living in the Community.” It includes information on what items and materials were introduced into Pueblo culture by European contact. Something not expressly mentioned is that Ancestral Pueblo people, without cattle, would not have had much fat to use for frying.
- 2B. Think of a meal you might eat today, and decide what kinds of pottery you would need if metal pots and pans were not available.
- 2C. If someone associated with the class has experience in Pueblo cooking, consider actually making a traditional Pueblo meal. A present-day menu might include tortillas, green chile stew, pinto beans, and fry bread. You will probably want to use modern pots and pans. See “Resources” section at end of lesson for cookbooks.
3. To learn more about pottery making, teaching, or cooking, past or present, invite a guest speaker or skilled demonstrator to visit your classroom. To learn more about present-day Pueblo teaching or learning, do a classroom pen-pal exchange with Pueblo students. Call the pueblo’s Governor’s Office to initiate contact. Information for many New Mexico pueblos is available from the Museum of Indian Arts and Culture’s website at www.miaclab.org under “Native Communities” or at www.state.nm.us/oia/triballist.html/.
4. To learn more about Ancestral Pueblo pottery, invite a park ranger or archeologist to give a presentation. In addition to talking about the pottery itself, they can also include information on preserving Ancestral Pueblo artifacts and sites so future generations can appreciate the history of the area. This would include leaving artifacts where they are found, not moving or collecting them, and what can be learned from them. (also see previous lesson, Potsherds)
5. There are a number of museums in the Southwest that include collections of Ancestral and/or present-day Pueblo pottery (see the following list). If you are considering a visit, please also see the lesson plan “Field Trip Planning and Activities” in Unit 3 for information and ideas on planning a terrific field trip.



MUSEUMS OF INTEREST INCLUDE:

Bandelier National Monument

If planning to visit Bandelier National Monument, contact the Visitor Center (505-672-3861 x 517) to find out if any of the items you are interested in showing to the students are currently on display. Contact 505-672-3861 x 534 to make group visit reservations.

Also, Bandelier's online collection at www.cr.nps.gov/museum (or click on the "collections" icon on the Bandelier website, www.nps.gov/band) contains many more examples of Pueblo and Ancestral Pueblo pottery besides those highlighted in this lesson.

Pecos National Monument

PO Box 418, Pecos, NM 87552-0418, 505-757-6414, www.nps.gov/peco

Aztec Ruins National Monument

84 County Rd 2900, Aztec, NM 87410, 505-334-6174, www.nps.gov/azru

Chaco Culture National Historic Park

PO Box 220, Nageezi, NM 87037, 505-786-7014, www.nps.gov/chcu

Museum of Indian Arts and Culture, Santa Fe, New Mexico

710 Camino Lejo, Santa Fe, NM 87501, 505-827-6463, www.miaclab.org

Millicent Rogers Museum, Taos, New Mexico

1504 Millicent Rogers Rd, Taos, NM 87571, 505-758-2462
www.millicentrogers.com

San Ildefonso Pueblo Museum, San Ildefonso Pueblo, New Mexico

Rt 5 Box 315A, Santa Fe, NM 87501, 505-455-2273

Indian Pueblo Cultural Center, Albuquerque, New Mexico

2401 12th St, Albuquerque, NM 87104, 1-800-766-4405
www.indianpueblo.org

Florence Hawley Ellis Anthropology Museum

Ghost Ranch Conference Center

Abiquiu, NM, HC 77 Box 11, Abiquiu, NM 87510, 505-685-4333
www.ghost ranch.org

Edge of the Cedars State Park

660 West 400 North, Blanding, Utah 84511, 435-678-2238
www.utah.com/stateparks/edge-of-cedars





Southwest Museum, Los Angeles, California

234 Museum Dr, Los Angeles, CA 90065, 323-221-2164

www.southwestmuseum.org

Museum of Northern Arizona, Flagstaff, Arizona

3101 N Ft. Valley Rd, Flagstaff, AZ 86001, 928-774-5213, www.musnaz.org

RESOURCES

Books:

Albuquerque Tribune, *Green Chile Bible*, 2003 (ISBN 0-940666-35-9) ***

Barrey, Patricia, *Bandelier National Monument*, Western National Parks Association, Tucson, AZ, 1990 (ISBN 0-911408-88-6) ***

Baylor, Byrd, *When Clay Sings*, Simon and Schuster, NY, 1987 (ISBN 684-12807-1)***

Gustafson, Sarah, *Exploring Bandelier National Monument (For Kids)*, 1997 (ISBN 1-87785-658-4)***

Hughes, Phyllis, *Pueblo Indian Cookbook*, Museum of New Mexico Press, Santa Fe, NM, 1977 (ISBN 0-89013-094-9)***

Keegan, Marcia, *Pueblo Girls Growing Up in Two Worlds*, Clear Light Publishers, Santa Fe, NM, 1999 (ISBN 1-57416-020-6)***

Morris, Juddi, *Tending the Fire, The Story of Maria Martinez, A Biography for Young Readers*, Northland Press, Flagstaff, AZ 1997 (ISBN 0-87358-654-9)

Noble, David Grant, *101 Questions About Ancient Indians of the Southwest*, Western National Parks Association, Tucson, AZ, 1998 (ISBN 1877856-87-8) ***

O'Donnell, Joan K., ed. *Here, Now, and Always—Voices of the First Peoples of the Southwest*, Museum of New Mexico Press, Santa Fe, NM, 2001 (ISBN 0-89013-387-5)***

Ruch, Marcella J., *Pablita Velarde, Painting Her People*, New Mexico Magazine, Santa Fe, NM, 2001 (ISBN 0-937206-65-2) ***

Spivey, Richard L, *Maria*, Northland Press, Flagstaff, AZ 2003 (ISBN 0-89013-420-0)



Swentzell, Rina, *Children of Clay, A Family of Pueblo Potters*, Lerner Publications, Minneapolis, MN, 1992 (ISBN 0-8225-9627-X)***

Trimble, Stephen, *Talking With the Clay, The Art of Pueblo Pottery*, School of American Research Press, Santa Fe, NM, 1993 (ISBN 0-933452-18-7)***

Video/DVD:

“*Pablita Velarde*”, (DVD or video) 27 min. Emphasis on her art and her time at Bandelier ***

“*Pablita Velarde, Golden Dawn*”, (video) 24 min. Biography from KNME series “Colores!” ***

“*Maria, Indian Potter of San Ildefonso*” (video or DVD) 30 min. All the stages of making traditional San Ildefonso matte-on-black pottery

Website Resources:

Bandelier National Monument: www.nps.gov/band.

There are also general scenery photos of Bandelier on the web at: www.photo.itc.nps.gov/storage/images/index.html

Bandelier museum collections website: <http://www.cr.nps.gov/museum> or go to the Bandelier website and click on the collections icon

Library of Congress: <http://memory.loc.gov/ammem>

