



National Park Service
with **Teaching MUSEUM** Collections
Management Program
<http://www.cr.nps.gov/museum>

- **Title:** Ancestral Pueblo Tools
- **Developers:**
Barbara McDonald, El Dorado Elementary School, Santa Fe, New Mexico
Marilyn K. Smith, Piñon Elementary School, Los Alamos, New Mexico
- **Grade Level:** Grade 4, adjustable up or down
- **Length of Lesson:**

□ **Overview of this Collection-Based Lesson Plan**

- **Park Name:** Bandelier National Monument
- **Theme:**
 - The survival of the Ancestral Pueblo people was dependent on their knowledge and use of natural resources.
- **Essential question.**
 - How did the ancestral people acquire the tools needed for survival?
]
- **Relevance**
 - This lesson will help students understand how Ancestral Pueblo people used natural resources to obtain the tools they needed.
- **Museum Collections Used in this Lesson Plan**
Archeological tools, implements and a ceramic pot in the Bandelier NM collections. [See below for detailed description]

□ **National Educational Standards**

History

Topic 1 Living and Working Together in Families and Communities, Now and Long Ago

Standard 2A A student understands the history of his or her local community.

Topic 2 The History of Students' Own State or Region

Standard 3A The student understands the history of indigenous peoples who first lived in his or her state or region.

○ **New Mexico Standards**

- Art Content Standard 6: A1: Determine the function of various works of art and artifacts within a specific culture.
- Social Studies, Strand: History: K-4 Benchmark III-C, 2: Describe how environments, both natural and man-made, have influenced people and events over time.
- Language Arts, K-4 Benchmark III-B,1: Identify beginning, middle and end of a story.
- Language Arts, K-4 Benchmark III-B-4: Compose fiction, non-fiction, poetry, and drama using self-selected and/or assigned topics and forms.

□ **Student Learning Objectives**

After these lessons, students will be able to:

- Critically analyze objects from Bandelier National Monument museum collections.
- Use the analysis to develop an understanding of the function of tools used by Ancestral Pueblo people and the natural resources used to make them.
- Communicate their ideas through an oral presentation of their classroom museum and through a written story of ancient times.
- Have a better understanding of the lives of ancient pueblo people.



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□ **Background and Historical Context**

Bandelier National Monument was established in 1916 primarily to preserve the several thousand archeological sites contained within its boundaries. The vast majority of these sites pertain to the Ancestral Pueblo people, who inhabited the area mainly from the mid-1100s through the mid-1500s; their ancestors had lived here for thousands of years. They moved away before they had contact with the Spanish, and their descendents live today in nearby pueblos including San Ildefonso and Cochiti. San Felipe, Santo Domingo, and Zuni also recognize cultural connection with the area.

Throughout the time that the Ancestral Pueblo people lived in the Bandelier area, they had none of the materials that would later come with Europeans, including metal, wheels, horses, sheep, wheat, and glass. The area did provide them with good materials for making items they needed, including animal parts such as bones, sinew, rawhide, and feathers; various kinds of wood; and many types of stone. Their location on the slopes of the Jemez Volcano meant that they had access to basalt, obsidian, and tuff (compacted volcanic ash), while they could also get limited amounts of granite and chert through trade or by finding cobbles in the Rio Grande.

By the time these people settled in the Bandelier area, they already had well-developed skills including farming in arid locations, tool making, weaving, pottery making, and building stone homes, as well as far-flung trade connections.

□ **Museum Collections Used in this Lesson Plan**

- [Corn Grinding Tools \(Mano and Metate\), BAND 1482](#)
- [Axe, Quartzite, wood. BAND 17054](#)
- [Pot, Smear Indented Corrugated Ware, BAND 5144](#)
- [Bowl, Bandelier Black-on-grey, BAND 1574](#)
- [Spear Point, Jemez obsidian. BAND 138](#)
- [Arrowshafts, Reed, BAND 174](#)
- [Bone awl, BAND 228](#)

□ **Materials Used in this Lesson Plan**

- *Similar present-day items:* mortar and pestle, stones, hatchet, cooking pan, ceramic mixing bowl, present-day arrow, awl or ice pick.
- *Writing materials* including paper and pencils for story writing.
- *Tool-making materials* including self-hardening or potter's clay for bowl and cooking pot, stones (flat for metate and mano, pointed for spear point, rectangular or rounded for axe), pliable small twigs or small stones and stiff pipe cleaners for axe
- KWL (Know, Want to Know, Learned) class chart and/or individual KWL charts
- Chalkboard, white board, or chart tablet for "Think, Pair, Share" activity and Vocabulary
- Photos printed from Bandelier National Monument Museum Collection, www.cr.nps.gov/museum
- Index cards and measuring tools for museum displays
- Recycled materials, such as tubes from toilet paper or paper towels, Styrofoam peanuts, cardboard, small boxes, lids, pliable wire, twisty ties, ribbon, string, buttons, etc.
- "Plus-Minus-Interesting (PMI)" Chart
- Writing rubric for student stories.

□ **Vocabulary**

On a large chart, create a word and concept list with students as lesson unfolds. Write definitions with student input as words come into use during the lesson. For reference:

Ancestors - someone's relatives who were born before he/she was, whether recently or eons ago



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Ancestral Pueblo people - the ancestors of the present-day Pueblo Indians. Formerly called Anasazi, a Navajo word often translated as Ancient Enemies; it is offensive to many Pueblo people, and Ancestral Pueblo is preferred.

Artifact - anything made or used by a human

Ceramic - something related to making things out of clay

Cobble - a rounded piece of stone found in a stream or river, which has washed down from hills or mountains sometimes quite a distance away

Coil - a strip of clay used to build a pot

Corrugated - pottery in which the marks from pinching the coils together are not polished away on the outside (the inside is smooth)

Mano - stone tool held in the hand to grind corn on a metate

Metate - flat stone tool on which corn kernels were placed for grinding

Obsidian - glassy black volcanic stone used for making extremely sharp tools

Pueblo - the Spanish word for a town; in the American southwest it is used to refer to particular groups of people living in settled towns and sharing a culture characterized by farming, weaving, pottery-making, and particular religious practices

Spear point - or projectile point - piece of stone (or, sometimes, bone) shaped to a sharp point to be attached to a spear or arrow for hunting

Survival - things done to stay alive

Yucca - plant with long, stiff, sharp-pointed leaves, found in dry areas, related to lilies although often mistakenly identified as a cactus

Teacher Tips

- Print out copies of all museum collection objects included in this lesson plan; consider laminating for reuse.
- Make copies of the “Reading a Museum Object”, KWL, and PMI charts.
- Buy clay, or make substitutes, for tool making (see lesson, Passing Traditions Through Time, for recipes for play-doh-type clay)
- Obtain recycled materials and natural resource materials for tool making
- Call Bandelier National Monument (1-505-672-3861, ext. 517) or check the Bandelier National Monument website (www.nps.gov/band) for information and/or brochure. There are also general scenery photos of Bandelier on the web at photo.itc.nps.gov/storage/images/index.html.
- Collect books from library or borrow from Bandelier, (505) 672-3861 x 513

□ Lesson Implementation Procedures

Activity 1: Introduction and Warm Up

Use a “Think, Pair, Share” activity to determine what tools children know. Begin with the children individually thinking silently for one minute of all the tools they know. Second, have children find partners; have each share their tool list orally with their partner for one minute. Third, reconvene the class and record a brainstormed list of tools on a KWL (What I Know, What I Want to Know, What I Learned) chart in the “What I Know” column.

Activity 2. Use ‘Reading a Museum Object’ activity to engage students and introduce them to the idea of learning through museum collections. Tell students they will be using objects from a National Park Service site as a source of learning and information. Explain that they will learn to look very closely at pictures of objects to deduce historical, cultural, and social information and to draw inferences about people, events, and life. Ask questions that draw on observational skills, and exercise powers of deduction, inference, and creativity based on this lesson. Share student learning objectives with students.

- Organize students into 5 groups
- Give each group a picture from the museum collection and “Reading a Museum Object” chart



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- Give students 10-15 minutes to look at museum collection pictures in their small groups and record their responses to the questions
- Have each group share their written responses and state what they think they have.
- To create curiosity, tell class they class will learn what the objects are the next day.

Activity 3: Share with the class the names and purposes of the museum collection objects. Have students complete the “What I Want to Learn” column on the KWL chart about the ancestral tools.

Activity 4: Determine if students will work independently or cooperatively to recreate an ancestral tool. If possible, take a nature walk or field trip to locate natural resources that could be utilized to replicate the Ancestral Pueblo people’s tools. If the decision is made to make Ancestral Pueblo-style pottery, see Lesson Plan “Passing Traditions Through Time” for a description of class pottery activities.

Activity 5: As individuals, partners, or in groups, have children make their ancestral tool with items collected on nature walk or provided by the teacher if necessary. (Teacher may have to provide some materials.) Completed tools will be displayed in a classroom “museum”. Students create a museum label on a 3” x 5” card for their tool. On the card, record a description of each artifact by name, size, color, shape, material, time period, and museum name. Invite other classes or family members to visit the class museum. Students act as museum docents.

Activity 6: Read and discuss information about Ancestral Pueblo people and life. Recommended readings from resource list:

***available for loan from Bandelier, (505) 672-3861 x 513

- CHILDREN OF CLAY, A FAMILY OF PUEBLO POTTERS, by Rina Swentzell (ISBN 0-8225-9627-X)***
- CHILDREN OF EARTH AND SKY, by Stephen Krensky (ISBN 0590428535)
- EXPLORING BANDELIER NATIONAL MONUMENT (excellent resource for kids) (ISBN 1-87785-658-4, by Sarah Gustafson***
- HERE, NOW, AND ALWAYS - VOICES OF THE FIRST PEOPLES OF THE SOUTHWEST, ed. Joan K. O'Donnell (ISBN 0-89013-387-5)
- WHEN CLAY SINGS, by Byrd Baylor, (SBN684-12807-1)

Activity 7: As individuals or in small groups, have students create a story around their ancestral tool written as if they were living during ancestral times. Follow story writing process that includes a beginning, middle, and ending for the story. Share story rubric with students before they begin story.

Wrap Up Activity and Discussion

- Students will share the stories and tools they created, and any evaluative comments, with the class.
- Students will act as docents to share their museum collection and their knowledge with invited guests.

□ **Evaluation/Assessment for Measurable Results**

- Observe student cooperation and effort throughout the construction of the tool
- Complete the KWL chart “What I Learned” column with the class or individually
- Use rubric to evaluate student story.
- Use a PMI (Plus, Minus, Interesting) Chart (class or individual) to analyze and evaluate what it was like to make the ancestral tool. Under the “Plus” column list ideas that are positive about making the ancestral tool, put ideas that are negative under “Minus”, and put ideas that are interesting under “Interesting”. The number of items listed in each column needs to be equal.
- Observe each student in their role as museum docent.



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□ **Extension and Enrichment Activities**

- Using natural resources or recycled materials, have students invent a tool that will serve a purpose or improve present-day life.
- Have the students think about present-day equivalents to ancient tools. Consider having either the teacher, the students, or both, bring in some of those items. Possibly put the present-day items out on a table and have students individually or in groups decide which new items are equivalent to which old ones.
- Have the students research other Ancestral Pueblo tools that are not shown in the Bandelier collection, such as wooden digging sticks, stone griddles, fire drills, rope, string, and tools used for pottery-making.
- Set up a class museum with photos or replicas (professional or student-made) of artifacts found in the school's own area or region. Students create a museum label on a 3" x 5" card for each item. On the card describe each artifact by name, size, color, shape, material, time period, and information on uses.
- Invite a guest speaker, such as a museum docent, local toolmaker or family member to share a presentation on toolmaking past or present, related to early or present-day Pueblo people.
- Invite a park ranger or archeologist to give a presentation about artifact preservation so that 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.

□ **Site Visit :**

- Pre-visit:
- 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. .
- Other possible locations:
Visit displays of Ancestral Pueblo and/or present-day tools
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
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
Florence Hawley Ellis Anthropology Museum, Ghost Ranch Conference Center, Abiquiu, New

Mexico

- HC 77 Box 11, Abiquiu, NM 87510 505-685-4333 www.ghostranch.org
- Contact the proper office at the institution to make reservations, and find out practical matters you will need to handle ahead. Arrange for plenty of active, assertive, interested chaperones.
- Before the visit, have students visit the institution's website for an overview, or obtain brochures and other written/visual materials about the site. Have the class come up with a list of questions to guide the visit. Work with site staff to arrange the visit with challenging activities.
- *Site visit:* At the site, have students select at least two objects to analyze. Provide "How to Read an Object" sheets, which include an object sketch sheet (white space to make a detailed sketch of the objects). For younger students, develop a "scavenger hunt" object list to encourage close observation skills.
- *Post-visit:* See extension activity list for ideas for post-visit student presentation ideas.
- *Virtual visit:* If a park or institution has a website that provides a virtual visit, assign an activity that guides students in their exploration of the website, and leads them to related websites for more depth.



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□ **Resources**

- Chart: “How to Read an Object” [to be launched at www.cr.nps.gov/museum]
- Bandelier National Monument www.nps.gov/band or park information 505-672-3861, ext. 517.
- Available from Western National Parks Association, www.wnpsa.org, 12880 N. Vistoso Village Dr., Tucson, AZ, 85737. 1-888-569-7762.(or at the Bandelier bookstore, 505-672-3861 x 515)
 - Bandelier National Monument (ISBN 0-911408-88-6), by Patricia Barrey ***
 - 101 Questions about Ancient Indians of the Southwest (ISBN 1877856-87-8), by David Grant Noble ***
 - Exploring Bandelier National Monument (excellent resource for kids) (ISBN 1-87785-658-4, by Sarah Gustafson ***
- Here, Now, and Always, Voices of the First Peoples of the Southwest, by Joan K. O’Donnell (ISBN 0-89013-387-5) ***
- When Clay Sings, by Byrd Baylor, (SBN684-12807-1)
- Children of Clay, a Family of Pueblo Potters, by Rina Swentzell (ISBN 0-8225-9627-X) ***
- Children of Earth and Sky, by Stephen Krensky (ISBN 0590428535)
- Videos/DVDs:
 - Flint knapping, with Bruce Bradley, PhD *** (VHS) (also inquire about flint knapping kit)
 - Maria The Potter of San Ildefonso Pueblo *** (DVD or VHS)

***usually available for free loan from Bandelier National Monument. Call 505-672-3861 x 513

KWL Chart
 Ancestral Tools

What I K now	What I W ant to Know	What I L earned
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PMI Chart
Ancestral Tools

Plus	Minus	Interesting
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