



**Simulated Archeology Dig**  
**Field Trip Program**  
*Revised September, 2017*

**Petrified Forest Focus:** Archeology and Human History  
**School Subjects:** Social Studies, Science, & Math  
**Grade Levels:** 1<sup>st</sup> – 5<sup>th</sup>  
**Duration:** 90 – 120 minutes; 90 minutes in-park time

**AZ Science Standards**

- **SC01-S1C1:** compare common objects using multiple senses
- **SC01-S1C2:** Ask questions based on experiences with objects, organisms, and events in the environment.
- **SC01-S1C2:** Scientific testing (investigating and Modeling) Participate in planning and conducting investigations and recording data.
- **SC01-S1C4, SC02-S1C4, SC03-S1C4, SC04-S1C4, SC05-S1C4:** Communication; communicate results of investigations
- **SC01-S1C2, SC02-S2C2, SC03-S2C2, SC04-S2C2, SC05-S2C2:** Nature of scientific knowledge; Understand how science is a process for generating knowledge.
- **SC01 – S3C2, SC02-S3C2, SC03-S3C2, SC04-S3C2:** Science and Technology in Society; Understand the impact of technology
- **SC01 – S3C2-02:** Describe how suitable tools (e.g. magnifiers, thermometers) help make better observations.
- **SC01-S1C2-01, SC02-S1C2-01, SC03-S1C2-01, SC04-S1C2-01, SC05-S1C2-01:** Demonstrate safe behavior and appropriate procedures.
- **SC02-S1C1, SC03-S2C1-02, SC04-S1C1:** Observations, Questions, and Hypotheses: Observe, ask questions, and make predictions.
- **SC02-S2C1-02, SC03-S2C1-02, SC04-S2C1-02:** Identify science related career opportunities
- **SC02-S3C1-03:** Identify a simple problem that could be solved by using a simple tool.
- **SC03-S1C2-04, SC04-S1C1, SC05-S1C2-04:** Use metric and U.S. customary units to measure objects; measure using appropriate tools and units of measure.
- **SC03-S1C2-05, SC04-S1C2-05, SC05-S1C2-05:** Record data in an organized and appropriate format.
- **SC03-S1C4-03, SC04-S1C4-03, SC05-S1C4-03:** Communicate with other groups or individuals to compare the results of a common investigation.
- **SC01-S6C1-05:** Identify ways to conserve natural resources (eg. Reduce, reuse, recycle, find alternatives.)

- **SC01-S5C1-01:** Classify objects using the following observable properties; shape, texture, size, color, weight

### **AZCCR Standards**

- (3.MP.7) Look for and make use of pattern.
- (3.MD.B.4) Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch.
- For Informational Text:
  - (3.SL.3) Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
  - (3.SL.1) Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
  - (3.SL.6) Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

### **Lesson Overview**

Students engage in archeological field techniques while learning to measure, map, and identify artifacts from past cultures of the Southwest. In this lesson, students will be exposed to the skills and concepts used by archeologists by participating in a field exploration at Petrified Forest National Park.

### **Pre-visit Activities:**

1. Students will read about the human history in Petrified Forest and watch a video about archeology
2. Students will read background text about Southwestern archeological time periods and complete an activity reinforcing the cultural differences between them.
3. Students will learn and practice basic concepts for mapping artifacts in an archeology site.

### **In-park Program:**

Students will participate in a simulated archeological field exercise discovering replica artifacts in a prepared site. They will map, measure, and identify artifacts of human history associated with southwestern ancestral pueblo cultures. Students will also take field notes and make hypotheses and conclusions about their discoveries. Group size is limited to 25 students.

### **Lesson Goals**

In this lesson students will:

- develop an understanding of the science of archeology by learning the skills and concepts involved

- be introduced to a broad overview of the archeological time periods represented at the park
- explore an aspect of archeology through participation in a field exploration
- become aware of the importance of preservation of cultural resources
- understand the role of the National Park Service in preservation and protection of cultural and natural resources.

### **Learning Objectives**

By the end of this module students will be able to:

- describe archeology as the study and interpretation of past human cultures
- list two archeological time periods represented at the park
- use the scientific methods adopted by archeologists
- recognize that archeological resources are nonrenewable
- document threats to archeological resources and suggest ways to protect them
- describe at least one thing they learned about Petrified Forest National Park and/or the National Park Service.

**Materials** - All materials for the In-park program will be provided by the park. Pre-visit lesson materials are listed in each lesson description.

### **Student Assessment Questions**

Use the following questions to help your students prepare for their trip and to assess what they learned after visiting the park.

1. Can you think of two facts you know about Petrified Forest or the National Park Service?
2. Scientists who study ancient people are called archeologists. They study artifacts, or objects left behind by these people, to learn about their lifestyle. Give two examples of artifacts that might be found at Petrified Forest National Park.
3. It is important to protect our natural resources. Artifacts are an example of resources that are in danger of being destroyed. Can you list two ways that archeological sites are being destroyed?
4. With any job, most people will do a variety of tasks. Think about all the jobs your teacher does. The same is true of archeologists. List two jobs you think an archeologist might do.
5. Petrified Forest National Park has evidence of ancient people going back over 13,000 years. Can you list at least two things you know about the ancient people of the southwest?
6. National parks were created to protect natural and cultural resources for future generations. Can you explain why this is important?

## **Pre-visit Lesson #1 – Introduction to Archeology at Petrified Forest**

### **Learning Objectives**

The students will be able to:

- Describe the science of archeology and some methods used in the study.
- Articulate why it is important for archeological sites to be preserved.
- Identify some of the contemporary cultures that have ancestral ties to archeological sites in the Southwest.

**Duration** - 45 minutes

**Location** - Classroom

### **Materials**

- Computer or smartboard with internet to play videos

### **Related Vocabulary**

- **Anthropology** - a science that holistically studies human cultures, behavior, and technology, both currently existing and extinct.
- **ancestral Puebloan** - a term given to people living in the Four Corners region of the Southwest from approximately 1,200-600 years ago (A.D. 800-A.D. 1400); formerly called Anasazi, a Navajo word often translated as ancient enemies, the name has changed out of respect for the modern descendants of these ancient people.
- **Archaic Period** - an archeological time period assigned to nomadic hunting and gathering people. In the Southwest this time period dates from 8,000-2,500 years ago (6000 B.C.-500 B.C); marks the development of agriculture in the Southwest.
- **Archeology** - a science that investigates past human cultures through examination of artifacts and other evidence of life within their context
- **Archeological research methods** - examining written research records, conducting interviews, surveying, excavating, preparing, conserving, and cataloging artifacts, analyzing and comparing artifacts, and preserving archeological resources
- **Artifact** - any object made or used by humans
- **Basketmaker Period** - an archeological time period assigned to prehistoric cultures of the Southwest dating from 2,500-1,200 years ago (500 B.C.-A.D. 800), named for the basketry found; people lived in pithouses and other forms of semi-permanent housing, primarily making their living from agriculture, hunting, and gathering.
- **Ceramic styles** - recognizable patterns on prehistoric pottery or ceramics that can be assigned to archeological time periods of popular use.
- **Context** - refers to both a physical and interpretive state of archeological resources; physical context is in situ or the matrix in which resources are found; interpretive context is the intellectual frame-work in which resources are interpreted

- **Culture** - a socially shared knowledge of beliefs, customs, technology, and rules of behavior of a group of people.
- **Excavation** - the systematic, careful digging of cultural resources for the purposes of research or gaining information about the people responsible for its deposition
- **Feature** - non-portable physical resource that typically refers to fire hearths, architectural elements, artifact clusters, soil stains, and garbage pits
- **Hypothesis** - a testable statement that attempts to explain or suggest an observation
- **kiva** - an underground ceremonial chamber used by ancestral Puebloan people for meetings, rituals, weaving, making tools and clothing, storytelling, and instruction of children
- **mano** - a stone object held in the hands that is used to grind corn or other seeds into meal.
- **metate** - the grindstone upon which plant material and corn is ground with a mano.
- **Paleo-Indian Period** - an archeological time period assigned to prehistoric cultures from 11,500-8,000 years ago (9500 BC-6000 BC) when people were hunting big game (mammoths, etc.) and gathering wild plants.
- **pithouse** - a structure with a foundation built into the ground with walls and roof reinforced by small tree trunks, branches, and mud; entry was either through a hole in the roof or through a long, narrow entry ramp.
- **pueblo** - masonry structure or group of structures, from the Spanish term meaning town or village; refers to a specific culture or site when capitalized.
- **quarry** - in an archeological context, a place where stone was obtained for the purpose of manufacturing stone tools; tools were often started at the quarry so that they would be easier to carry to another site for completion.
- **Site** - a place where cultural resources are found, including habitation, ceremonial, agricultural, kill, camp, and quarry sites
- **Structure** - a cultural resource that cannot be removed from its context, such as walls of a pueblo, a pit house, or building
- **Survey** - techniques used in archeological research in which the ground is systematically observed for the purpose of locating artifacts, features and structures, followed by mapping, dating, interpreting, and correlating with regional cultural history
- **Theory** - a principle devised to explain a group of facts or phenomena, especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena

**Background Knowledge** - Can be read by students aloud in turns or individually.

Archeology is an interdisciplinary science that investigates past human cultures through examination of artifacts and other evidence of life within their context. Through observation and analysis, theories are developed about past human behavior, culture, and technology. Because the past can never be recreated, cultural resources are considered to be nonrenewable and in need of protection and preservation. While studying archeology, students should understand that they are studying people who lived in a different time and place. Culture should be studied with respect and without judgment. This is especially important within today's multicultural society.

Archeologists use the scientific method of investigation by posing questions, making hypotheses, gathering data, and assessing and reporting their findings. Excavation is only one way to gather information about the past. Because of its destructive nature, excavation is not usually conducted unless an area is in danger of being destroyed by construction, development, or for education and research purposes. Other ways to study the past include interviewing elders, reading historic documents such as ethnographic and research reports, surveying an area to record and map any evidence of past human use, or by re-analyzing artifacts in museums and other collections.

Why do we study the life of humans who lived in the past? One reason is that understanding how people lived before the present provides us with perspective, appreciation, and respect for the development and differences of modern cultures. Our knowledge of the past helps us realize how the present came to be and helps to guide our future.

Pottery (ceramics) is one of the few items left behind by ancient cultures that give archeologists an idea of how the people lived their daily lives. A variety of techniques, painting styles, and images are tell-tale markers of a particular culture or time period. Archaeologists can use this information to learn how the pottery was used, where it may have come from, and some of the meanings behind the painted images.

Like pottery, pictographs and petroglyphs are cultural representations of many different ideas. Pictographs are painted images while petroglyphs are images which are carved into a rock or wall face. These images often are used to tell stories, record events, and mark special times. Some of the meanings of these images remain unknown, but others are still used by the descendants of prehistoric cultures.

Arizona's climate 500-1000 years ago was very similar to today. The people of that time period experienced a massive drought, which is often associated with the abandonment of a variety of villages which are now archaeological sites. During these times of great stress, pueblos such as Puerco Pueblo in Petrified Forest, Montezuma's Castle in Camp Verde, AZ and Wupatki Pueblo near Flagstaff, AZ could not support a large number of people so the people broke into groups and left these areas.

The present protection of natural and cultural resources such as those preserved by National Parks depends on the public. Through education and experience, the National Park Service

hopes to instill a sense of value in the public about natural and cultural resources for today and future generations.

### **Evidence of Humans in Petrified Forest National Park**

Petrified Forest National Park contains a complex array of archeological resources, including petroglyphs that illustrate a 13,000-year continuum of human land use. Subtle but challenging landforms influenced human movements on both north-south and east-west routes from prehistoric times to the present, affecting regional patterns of settlement, trade and migration. Shifting cultural boundaries in this area created a high diversity of cultural sites and features still important to American Indians of the region today.

Evidence of ongoing use and occupation spans paleo-Indian culture to American Indian culture today. Types of resources include hunter/gatherer sites and early large pit-house villages with an outstanding collection of the earliest pottery in the region. Evidence also illustrates the interaction between people and their environment, for example cultural landscapes, utilization and trade of petrified wood as lithic material, and human relationships to ephemeral sources of water. Examples of archeological resources that are on the National Register of Historic Places include Agate House Pueblo, Puerco Ruins and Petroglyphs, Flattops Site, Newspaper Rock Petroglyphs Archeological District, and Twin Buttes Archeological District.

The park encompasses thousands of documented petroglyphs and hundreds of pictographs of high integrity. Many petroglyphs are related to sociopolitical boundaries of the overlapping cultures, and also include a wide variety of solar calendars, which illustrate human interaction with the landscape and awareness of astronomy. Examples of petroglyphs that are on the National Register of Historic Places include Painted Desert Petroglyphs and Ruins Archeological District, Newspaper Rock Petroglyphs Archeological District, and Puerco Ruins and Petroglyphs.

The area is a crossroads of trade routes, as evidenced by one of most diverse array of ceramics in the U.S., as well as the presence of marine shell, obsidian, and varied architectural styles. The cultural significance of this landscape extends from ancestral peoples through modern day native peoples (Hopi, Zuni, Navajo, and Apache), and relates to concepts of “homeland” and ancestral territory.

The continuing importance of the park’s heritage resources to associated people – the abundant evidence of use and occupancy in what might seem to some as an uninhabitable land – offers opportunities to explore the powerful and complex concept of “homeland.”

**Watch this video about archeology with your students to learn more!**

<https://www.youtube.com/watch?v=zOJICdMvWAI>

## **Pre-visit Lesson #2 - It's a Matter of Time**

### **Learning Objectives**

The students will be able to:

- Compare various ancient Native cultures to contemporary Native cultures.
- Identify the different cultural time periods of the American Southwest
- Discuss different living aspects (lifestyle, living area, food, tools) of Native cultures.
- Discuss how new behaviors, such as agriculture and trade, affected Native cultures.

**Duration** - 60 minutes

**Location** - Classroom

### **Materials**

- Computer or smartboard with internet to play videos
- Cultural Characteristics worksheet
- Page with Culture Items
- 5 pieces of large Poster paper
- Class set of Cultural Characteristics worksheet
- Markers
- Scissors

### **Suggested Procedures**

1. Divide the class into groups of five and provide copies of the reading assignment to each group. Each student in the group can read about a different cultural time period and share it with the rest of the group. Attention should be paid to what artifacts and features represent each time period.
2. Cultural Match-Up : Students can work in their groups or further divide into pairs for this activity.
  - Using the information they learned during the reading assignment, students will fill in the Culture Characteristics table from the lists given on the Culture Items page.
  - All items should be used and all boxes be filled.
  - Several items will often be included in a box.
  - More than one item may apply to more than one box. (An example of appropriate answers is given on page 17). These answers are not conclusive, but merely suggested. Some items on the list are not mentioned in the reading material. Tell students to make their best educated guesses.
  - Conduct a class discussion of the completed tables in the context of cultural change. Here are some questions to get you started.
    - What artifacts are different between Archaic and Paleo-Indian times?
    - What difference in lifestyle (behavior) separates Basketmaker time from Archaic time?
    - What technology was most advanced in Pueblo time?



- During which time period did agriculture (farming) become an important part of the ancient people's lifestyle?
- During which time period did trade become an important part of the ancient people's lifestyle?

Alternate Procedure:

1. Before the activity, provide enough copies of the "Archaeological Time Periods" and "Culture Characteristics" for the students to work in pairs. On the 5 pieces of large poster paper included, write a name of each of the 5 cultures (Paleo-Indian, Archaic, Basketmaker, Pueblo, Modern). On each poster, write 5 subheadings: Lifestyle, Living Area, Food stuff, Stone Tools, and Other Materials. Place these around the room with markers near them.
2. Have each pair of students read "Archaeological Time Periods". After reading these pages, provide each pair of students with a copy of "Culture Characteristics". Have the students work together to classify the various Culture Items using the reading material "Archaeological Time Periods" as a guide. NOTE: All boxes should have at least one item, but may have more than one item AND some items may be used more than once.
3. After the students have completed their "Culture Characteristics" page, send one pair to each of the 5 different posters. Have each pair of students write ONE fact from their "Culture Characteristics" page onto ONE section of the poster, then rotate those pairs through the poster. Continue to send up and rotate all student pairs until all pairs have been to each poster, then lead into discussion.

## Reading Assignment

### Archeological Time Periods

The region along the lower Puerco River is considered by archeologists to be a contact area for the ancestral Pueblo people and the Mogollon cultures. This interaction among people is based on pottery designs, ceramic styles and petroglyphs that have been found in and around the park. Archeological time periods represented at the park include:

- Paleo-Indian (9500 B.C.-6000 B.C.)
- Archaic (6000 B.C.-500 B.C.)
- Basketmaker (500 B.C.-A.D. 800)
- Pueblo (A.D. 800-A.D. 1400)
- Modern American Indian (A.D. 1400-present)

**Paleo-Indian** – The Paleo-Indian time period dates from 11,500-8,000 years ago (9500 B.C.-6000 B.C.) and marks a time of great migrations. Paleo-Indians traveled in groups gathering wild food and hunting big game animals such as mammoth, giant sloth, and large bison. Hunting was done with spears tipped with long, fluted projectile points which archeologists call Folsom points. Little evidence of Paleo-Indian life exists because of their migratory lifestyle. Archeological sites include kill sites and camps in natural rock shelters or tents made of hides or brush. At this time, no kill or camp sites have been documented at Petrified Forest National Park. However, several Folsom points have been found in the park, including at least one made of petrified wood dating to over 10,000 years ago (before 8000 B.C.).

**Archaic** - The Archaic time period dates from 8,000-2,500 years ago (6000 B.C.-500 B.C.) and marks a change in how people used the land. The Archaic people used a wide variety of native plant resources and began to hunt smaller animals. Instead of following big game during migrations, the people moved by the seasons, when plants like ricegrass, prickly pear, and piñon pine were available and ripe. Smaller spears and points were made to hunt smaller game such as pronghorn, rabbits, and birds. Hunters also began using a spear thrower called an atlatl that helped them throw farther and with better accuracy. People returned to the same areas year after year to gather plant resources. Several Archaic camps have been found at Petrified Forest National Park.

**Basketmaker** - The Basketmaker time period dates from 2,500-1,200 years ago (500 B.C.-A.D. 800) and marks a time of rapid population growth in the Southwest due to the introduction of agriculture (farming). Farming requires planting, care, harvest, and storage of products. People lived in semi-permanent structures, such as pithouses, built close to farm land. Pithouses were homes built into shallow or deep pits in the ground, roofed with poles tied together, and covered with thick brush and mud. They contained the tools and features necessary to plant, care for, harvest, cook, and store domesticated corn, beans, squash, and wild plant foods. The term

Basketmaker comes from the finely woven baskets found at archeological sites. Their baskets were used for cooking and storing harvested and farmed plant products. Early forms of pottery were also developed during this time period.

**Pueblo** - The Pueblo time period dates from 1,200-600 years ago (A.D. 800-A.D. 1400) and marks the continued growth and development of a culture based on farming. Pottery also became much more complex. People began to construct pueblos as year-round dwelling structures. These above ground, stone-walled rooms were arranged like villages, with storage rooms for storing food, an open activity area in the middle called the plaza, underground rooms called kivas, and outer-lying field houses for shelter and tool storage. Most pueblo dwellings at Petrified Forest National Park face the south or southeast and are found on hilltops and ridgelines.

During Pueblo times there was more contact with other people living throughout the Southwest. This was in the form of trade for information, pottery, food, and raw materials such as petrified wood, shell, and turquoise. Archeologists study trade patterns and objects to better understand prehistoric social interactions and economic systems. A popular pueblo within the park is Agate House in the Rainbow Forest. This structure was partially reconstructed in the 1930's by the Civilian Conservation Corps under the guidance of an archeologist and is listed on the National Register of Historic Places for its significance in understanding prehistory in the area. The walls in the eight room pueblo are unique - they are made of petrified wood. Another structure in the park is Puerco Pueblo, listed on the National Register of Historic Places for its significance in understanding prehistory in the area. Puerco Pueblo may have had 100 rooms. It was one story tall, but sometimes two to three rooms deep, with at least three kivas. The entire Pueblo was not built at the same time. Evidence shows a time of rapid population growth, perhaps through immigration, resulting in the final size of the village. The rooms surround a large plaza. Up to 200 people could have lived in this village. Near the Pueblo are trash deposits, petroglyph panels, and a petrified wood quarry.

**American Indians Today** - The Modern American Indian tradition includes likely descendants of the ancestral Puebloan people, including the Hopi, Zuni, and Rio Grande people. These modern people have stories and traditions that include their emergence into this world and clan migrations. The tribes consider prehistoric dwellings in the Southwest to be the remains of their ancient migrations. The sites of the ancestral Puebloan people still have meaning for modern Pueblo people. These places are sacred and on traditional land and should be respected and preserved. The Navajo, or Diné, are different from the Pueblo people. During prehistoric time they lived as hunter-gatherers. However, they learned new technologies, such as weaving and farming, from their neighbors. The Navajo have sacred and traditional land and stories about their people and the journeys they made. Some stories include the region around Petrified Forest National Park. Current archeological evidence indicates that the earliest Navajo site in the park was used as a seasonal winter home during the 1700s.

**Watch this video about Ancestral Puebloan culture to learn more!**

<https://www.youtube.com/watch?v=eauhxTxPhIE>

# Culture Items

## Lifestyle

Big Game Hunters  
Hunters & Gatherers  
Weavers  
Potters  
Basketmakers  
Farmers  
Government Workers  
Miners  
Builders  
Ceremonial Participants  
Traders

## Stone Tools

Spears  
Folsom Points  
Small Projectile Points  
Electric Drills  
Hammerstones  
Axes  
Hoes  
Atlatl  
Petrified Wood Scrapers  
Stone Knives  
Manos & Metates

## Living Areas

Cave Shelters  
Stone-walled Pueblos  
Kill Sites  
Hogans  
Pithouses  
Camp Sites  
Mobile Homes  
Petrified Wood Quarries  
Brick Houses  
Wood Houses

## Food Stuff

### PLANTS

Grass Seeds  
(Rice Grass, Amaranth)  
Roots, Tubers (Cattail Reed, Onion)  
Leaves(Lambsquarters, Goosefoot)  
Pronghorn  
Fruits (Berries, Currants, Cactus)  
Nuts (Pinyon, Walnut, Acorn)  
Beans  
Corn  
Squash  
Grocery Store Foods

### ANIMALS

Mule Deer  
Wild Turkey  
Bison  
Mammoths  
Rabbits  
Lizards  
Snake  
Birds  
Prairie Dogs  
Processed Meats  
(Hamburger Sausage)  
Horses  
Giant Sloth

## Other Materials

Fire Starting Kits  
Baskets  
Bone Awls for Sewing  
Steel & Plastic Tools  
Grass Mats  
Looms for Weaving  
Clay Figurines  
Rope  
Store-bought Clothes  
Machinery  
Animal Skins  
Pottery  
Antlers, Horns, & Claws  
Woven Sandals  
Moccasins  
Shell Jewelry  
Turquoise  
Bows & Arrows  
Furniture & Appliances  
Electricity & Plumbing

## Culture Characteristics

	<b>Lifestyle</b>	<b>Living Areas</b>	<b>Food Stuff</b>	<b>Stone Tools</b>	<b>Other Materials</b>
<b>Paleo-Indian</b>					
<b>Archaic</b>					
<b>Basket-maker</b>					
<b>Peublo</b>					
<b>Modern American Indian</b>					

## Culture Characteristics Answers

	<b>Lifestyle</b>	<b>Living Areas</b>	<b>Food Stuff</b>	<b>Stone Tools</b>	<b>Other Materials</b>
<b>Paleo-Indian</b>	big game hunters	cave shelters kill sites camp sites quarries	fruits, nuts mammoths bison giant sloth	petrified wood scrapers stone knives spears hammerstones Folsom points	fire starting kits bone awls for sewing animal skins antlers, horns, claws
<b>Archaic</b>	hunter/gatherers	cave shelters kill sites camp sites quarries	grass seeds rots, tubers leaves, fruits, nuts pronghorn rabbits birds prairie dogs	petrified wood scrapers stone knives spears hammerstones projectile points atlatl manos & metates	fire starting kits bone awls for sewing animal skins antlers, horns, claws bows and arrows
<b>Basket-maker</b>	basketmakers potters farmers builders	pithouses quarries	grass seeds roots, tubers, leaves, fruits, nuts, corn, beans, squash, mule deer pronghorn, rabbits lizards, snakes birds, prairie dogs	petrified wood scrapers stone knives spears hammerstones projectile points atlatl manos & metates	fire starting kits bone awls for sewing animal skins antlers, horns, claws bows and arrows baskets grass mats pottery, rope woven sandals
<b>Peublo</b>	potters farmers basketmakers traders builders	stone-wall pueblos quarries	grass seeds roots, tubers, leaves, fruits, nuts, corn, beans, squash, mule deer pronghorn, rabbits, lizards, snakes, birds, horses, prairie dogs wild turkey	petrified wood scrapers stone knives spears hammerstones projectile points atlatl manos & mutates axes hoes	fire starting kits bone awls for sewing animal skins antlers, horns, claws moccasins bows and arrows baskets, grass mats pottery, rope shell jewelry turquoise clay figurines woven sandal
<b>Today's American Indian</b>	potters farmers basketmakers weavers builders government workers miners ceremonial part. traders	hogans brick & wood houses mobile homes	roots, tubers fruits, nuts corn, beans squash grocery store foods mule deer pronghorn rabbits, wild turkey processed meat	electric drills axes hoes manos & mutates	store-bought clothes furniture & appliances electricity and plumbing looms for weaving steel & plastic tools machinery animal skins baskets, shell jewelry turquoise, pottery clay figurines

## **Pre-visit Activity #3 – Mapping an archeology site**

### **Learning Objectives**

The students will be able to:

- Describe why context is important in the study of archeology.
- Accurately map the location of artifacts in an area using symbols to represent different types of objects.

**Duration** – 45 minutes

**Location** - Classroom

### **Materials**

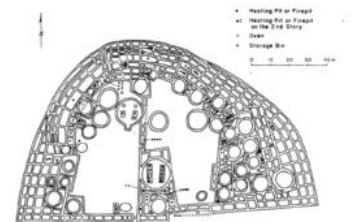
- Computer or smartboard with internet to play videos
- Copies of archeology site photos
- Blank paper and pencil
- Archeological symbols sheet

### **Suggested Procedures:**


- Divide the class into 5 groups. Each group will be given a different archeology photo to map.
- Pass out paper and archeology site photos to each group
- Have the students inspect the photos and identify the artifacts. They will list these artifacts on the side of their paper. (5 minutes)
- Using the map symbol key, students will create a map on their paper drawing each artifact in their approximate location within the archeology site. (20 minutes)
- Have the students find the north arrow on the artifact photo and orient north to the top of their blank page.
- Group discussion – Based on the types of artifacts found in each site, what do you think we can learn about the people that used to live there? Were certain areas used for certain activities like cooking or tool making? How can we tell?
- Optional class discussion - Students will look at their artifact photo and choose four artifacts to ‘remove’ from the site by coloring over them with pencil. Without the presence of these artifacts, does the information you can learn change? Can you still come to the same conclusions about the site’s use?
- Extension: have the groups switch photos and draw another map.

**Watch this video of an archeological excavation to learn more!**


**<https://www.nps.gov/media/video/view.htm?id=DAB2D2E4-1DD8-B71B-0B1BFD37085399DF>**




### Mapping Symbol Key


Pottery 

Wall Stones 


Burnt Wood 


Food Remains 


Antlers 

Arrowheads or spear points 

Fireplace (hearth) stones 

Broken petrified wood pieces 

Stone tools  
(hammer stone) 

Grinding stone set  
(mano & metate) 

### Artifact Examples:



Petrified Wood Arrowhead



Pottery Sherd



Grinding stones  
(Mano & Metate)



















