INTRODUCTION TO PETROGLYPHS AND PICTOGRAPHS*

OBJECTIVES

✓ Students will be able to differentiate between a petroglyph and a pictograph.
✓ Students will discover that the study of petroglyphs can be a tool for learning about the past.
✓ Students will understand that different groups of people created the petroglyphs on Mesa Prieta.
✓ Students will understand the use of a timeline.


SUGGESTED TIME: Two class periods.

MATERIALS:

Copy for students: Petroglyphs and Pictographs student information sheet (5 - 6).

From the trunk: Photos of petroglyphs and pictographs.

From the teacher: For each student: Modeling clay, tooth pick, water color paint set, cup for water, paper towels, waxed paper, pencil, drawing paper. For the class: two buckets (may be checked out from the MPPP office)


BACKGROUND: There is detailed information about the early peoples of New Mexico in Intrigue of the Past: Discovering Archaeology in New Mexico, which is located in the Discovering Mesa Prieta resource trunk.

SETTING THE STAGE: Write on cards or the board the words petroglyph and pictograph. Discuss the definitions and explain that both design methods are classified as rock art. Explain that rock art is a misleading term because it is believed that petroglyphs and pictographs are neither art nor writing, but a form of religious expression. Write on cards or the board the root words and their meanings. Discuss the meanings of the words and how they are formed.

picto = to paint (Latin) graph = to write (Greek)
petro = rock (Latin) glyph = carved work (Greek)

Pass out to each student Petroglyphs and Pictographs student information sheet. Have students read the first paragraph as a class.

*Adapted from Intrigue of the Past: A Teacher’s Activity Guide for Fourth through Seventh Grades, Bureau of Land Management, 1993, pp. 95-96.
Unit 5: Introduction to Petroglyphs and Pictographs

VOCABULARY

- **Agriculture**: The raising and caring for plants and/or animals for food and/or other materials.
- **Ancestral Pueblo**: Ancient Pueblo people who lived from about 1200-1540 AD. Sometimes referred to as “Anasazi”. It is a Navajo word for enemy ancestor. The Pueblo people did not want their ancestors referred to as enemies.
- **Archaeologist**: A scientist who studies ancient peoples and cultures.
- **Archaic Period**: (ar-KAY-ik) Ancient people or culture. The people who first started making petroglyphs on Mesa Prieta have been designated Archaic.
- **Atlatl**: (A-tul-A-tul) Also called a spear thrower. A short stick which extends the length of the arm, for hunting large animals with a spear. First used by Paleo-Indian peoples before the development of the bow and arrow.
- **Genísaros**: (hay-NEE-sa-ros) Native people who were taken as slaves by the Spanish and later became free.
- **Graffiti**: Recent markings on walls, rocks or other surfaces, often considered to be vandalism when it affects petroglyphs.
- **Historic Period**: Time period after the first Europeans arrived in what is now New Mexico, beginning about 500 years ago.
- **Hunters/gatherers**: Nomadic people who lived on the plants they gathered and animals they hunted. The earliest hunter-gatherers lived in the Southwest from about 10,000 to 5,500 BC. and this way of life was lived by some peoples into Historic times.
- **Modern**: The time period after 1950.
- **Panel**: a group of pictographs and/or petroglyphs on a single rock surface.
- **Patina**: the dark coating that forms on rocks over hundreds of years in an arid climate. Sometimes called desert varnish.
- **Paleo-Indian**: New Mexico’s earliest people were nomadic families who lived during the Ice Age and hunted large mammals such as giant bison, antelopes and horses.
- **Pecking**: marks made by hitting the basalt rock with another hard rock or antler. Sometimes a hammer stone was used.
- **Petroglyph**: a design pecked, chipped, scratched or abraded into a rock surface.
- **Pictograph**: a design painted or drawn on a rock surface.
- **Post European Contact**: the time after the Spanish arrived in northern NM in 1540 AD.
- **Rio Grande style**: A particular style of petroglyph found along the Northern Rio Grande drainage that was made by Ancestral Pueblo people.
- **Rock art**: a misleading term for the pecking or painting of designs onto rock surfaces. It is believed that this was not an art form but was done for religious purposes.
- **Repatination**: the return of patina over many hundreds of years, darkening the petroglyphs.
- **Symbol**: a design which represents a concept or idea.
Activity 1: Pictographs

Explain that some of the paints were made by grinding different colored minerals or clays and mixing them with animal fat. Other paints were made from colored berries or other parts of plants and mixed with egg white as a binder. Charcoal wands were also used. Students can experiment with different materials to create their own paints that they can paint onto rocks. Paint brushes were made from yucca leaves. Only one pictograph has been found on Mesa Prieta, perhaps because there are very few caves or overhangs to protect them from the weather.

Pictographs are usually found in caves or under rock overhangs. In Utah, 7000 year old pictographs have been found, while many famous examples 35,000 years old have been found in caves in France and Spain.

1. Have the students look at different photographs of petroglyphs and pictographs and discuss what they know about them. Discuss the terms panel and symbol.

2. Students choose one pictograph photograph each or pass them out randomly. Ask the students to imagine that they are living during the time of the Ancestral Pueblo people and pretend that the paper is the surface of a basalt boulder. Have them write their name and also the word “pictograph” on their paper. Ask the students to draw with pencil and then paint one or more designs from the photographs or a symbolic design of their own on the paper. (Instead of drawing paper you could use paper bags cut in a roundish shape and crumpled to represent the rock.) Students may share cups of water and should clean their brushes every time they change to a new color. The lid of the paint set may be used for mixing new colors. Have one bucket filled with clean water and an empty bucket for the students’ dirty water. When the students’ water cups get dirty, they may dump them into one bucket and get clean water from the other one. During clean-up be sure that they clean each color and then the lid with paper towels.

OPTIONAL: Teacher or class cut narrow yucca leaves to make into brushes. Cut off the point so no one will get poked. Chew or pound with a rock the other end of the leaf until the fibers separate. It is important to show respect for the yucca plant. Cut only the number of leaves that you need and when you are finished with them, return them to the earth.
Activity 2: Petroglyphs

Explain to students that petroglyphs are found on many rock surfaces such as basalt, sandstone, limestone, granite and volcanic ash. All of the petroglyphs on Mesa Prieta were made on basalt boulders that are the hardened lava from the three million year old lava flow. These basalt boulders weren’t always black. As the red hot lava cooled, most of the rocks turned gray. Over hundreds of years in an arid climate a black coating called patina formed on the basalt. The early people who lived here discovered that if they pecked through the patina, the gray rock showed and it was possible to make designs on the boulders. Over hundreds of years the patina comes back, darkening the pecked out petroglyphs. This is called repatination. Archaeologists can tell by the repatination if one petroglyph is younger or older than another.

(For advanced students) Several different techniques were used to create petroglyphs.

- **Pecking:** The technique of using a hammer rock with a harder rock or antler to chip out little pieces of rock in order to create petroglyphs. Sometimes a hammer stone was used. Also refers to the marks made with this technique.

- **Abrading:** Marks made by rubbing a stone against a rock face, often until it was smooth.

- **Scratching:** The technique of rubbing a sharp hard rock or metal against the patina on the basalt. The lines are usually thin, shallow and sometimes very faint.

- **Incising:** The technique of using a sharp rock edge to make lines in a rock surface. After the coming of the Europeans, some petroglyphs were incised using metal.

1. If your students haven’t examined basalt rocks before, this would be a good time to pass them around.

2. Explain that the students will now pretend that a slab of clay is the basalt boulder and they will create petroglyphs with a toothpick. Be sure to tell them that the clay must be returned at the end of the activity. Pass out a piece of waxed paper, toothpick and a piece of clay to each student. They should soften the clay by squeezing it and then form it into a “tortilla” or slab. Using the toothpick, they may draw a design and then peck it to enlarge or thicken the lines. They may also use the back of the slab.

3. You may want to have the class quietly move around the room to look at each other’s designs. Then ask for positive comments.

4. To clean up, ask students to fold their slabs in half and then in half again. Pound them on the waxed paper to form columns and then collect them.

5. Review the difference between pictographs and petroglyphs and what else they have learned.
Activity 3: Day 2

Have the students read the second part of the student information sheet *Who Made the Petroglyphs?* (5 - 6) in groups or as a class and discuss. Create a simple timeline on the board and have students copy it:

<table>
<thead>
<tr>
<th>10,000-5,500 BC</th>
<th>5,500 BC-700 AD</th>
<th>700-1200 AD</th>
<th>1200-1540 AD</th>
<th>1540-1950 AD</th>
<th>1950 - Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paleo-Indian</td>
<td>Archaic</td>
<td>Early Agricultural</td>
<td>Ancestral Pueblo</td>
<td>Historic (Post European Contact)</td>
<td>Modern</td>
</tr>
</tbody>
</table>
PETROGLYPHS AND PICTOGRAPHS: Student Information Sheet

From prehistoric times up to the present Native Americans as well as peoples from all over the world have created designs on rock.

Archaeologists analyze these figures and designs, and often find that different groups of people made different styles of designs. The most common petroglyphs on Mesa Prieta are called "Rio Grande Style". There has been one pictograph found on Mesa Prieta. While all of the petroglyphs found on Mesa Prieta are on basalt boulders, in other places petroglyphs are found carved into sandstone, volcanic ash and granite.

The meanings of the symbols are often mysterious and unknown. Some Native American tribes have ancient stories that tell about the designs and their meanings but sometimes the meanings are a mystery to everyone.

Many native people believe that the spirit of the artist is connected with the work; therefore, petroglyphs and pictographs are sacred and must be treated with respect. We can all enjoy, appreciate and respect the designs that we find on the rocks.

WHO MADE THE PETROGLYPHS?

Paleo-Indian Period: 10,000 BC to 5,500 BC.

The earliest people who are known to have lived in the area of Mesa Prieta were hunters and gatherers. Spear points called Folsom points were found on Mesa Prieta. These people lived during the last ice age and were nomadic. They hunted large mammals such as giant bison and horses with spears and spear-throwers called atlatls.

(Adapted from Intrigues of the Past: Discovering Archaeology in New Mexico, Ch. 2)

Bureau of Land Management, Ewa Krakoska, Illustrator.
Archaic Period: 5,500 BC to 700 AD.

It is believed that the Archaic people created the first petroglyphs on Mesa Prieta. They made mostly geometric designs such as circles, lines, diamonds, and other polygons. These patterns are often very difficult to see because of heavy re-patination.

Archaic people were nomadic hunters who used atlatls. They also gathered plants and roots to eat. By the end of this time period, the Archaic people were planting seeds and returning to their fields every so often to care for them.

Early Agricultural Period: 700 AD to 1200 AD.

As people began to grow more crops such as corn (maize), beans and squash, they saved the seeds to plant the next year. The food produced by agriculture allowed extended family groups to make permanent homes and live in small villages.

Ancestral Pueblo Period: 1200 AD to 1540 AD.

The ancestors of the modern Pueblo people lived in large pueblo villages and agriculture was very important in order to feed many people.

Most of the petroglyphs that we find on Mesa Prieta were made by these people. The designs were often of animals, people, shields, plants, and sky symbols.

Many flute players were made during this time.
Unit 5: Introduction to Petroglyphs and Pictographs

Historic Period (Post European Contact): 1540 AD to about 50 years ago.

During this time period the petroglyphs were made by four different groups of people:

1. Pueblo
2. Spanish
3. Genisaros
4. Anglos

There are many petroglyphs of crosses and other religious symbols, horses and riders and Spanish lions that were made during this time. Sheep herders made many of these petroglyphs while caring for their flocks as they grazed on the Mesa.

Modern Period: 1950 to the present.

Markings made after 1950 might be a new image, a date, or a person’s name or initials.

Recently made petroglyphs have been found on Mesa Prieta.

Modern markings on top of an existing petroglyph are relatively rare. Most recent additions are respectfully made off to one side.
Vocabulario Unidad 5: Introducción a los petrográficos y pictográficos.

- **Agricultura**: el cultivo de plantas o matas para conseguir comida para la gente o los animales. Se dice “granjería” cuando uno cultiva o cria animales.
- **Pueblo ancestral**: la gente de los pueblos tempranos que vivieron aproximadamente desde el 1200 al 1500 antes de Cristo. A veces nos referimos a ellos como “Anasazi”, un término que no se usa actualmente. Es una palabra Navaja para los enemigos ancestrales. La gente Pueblo no querían que sus ancestros se refieran a ellos como enemigos.
- **Arqueólogo**: un científico que estudia las gentes y las culturas antiguas.
- **Arcaico**: cultura o gente antigua. Las gentes que primero empezaron a hacer petrográficos en Mesa Prieta son llamados arcaicos.
- **Atlatl (A-tul-A-tul)**: también llamados tiradores de lanzas- un palo corto que se extendía a lo largo del brazo, para cazar animales grandes con arpones. Primero fueron usados por las gentes Paleo-indias, también conocidos como tiradores de lanzas.
- **Genizarios (hay-NEE-sa-ros)**: los nativos que eran llevados como esclavos por los españoles y después consiguieron la libertad.
- **Graffiti**: garabatos, dibujos e inscripciones en los muros, rocas u otras superficies hechos sin permiso y violando la propiedad privada. Muchas veces considerado vandalismo.
- **Época histórica**: período que va después de que los Europeos llegasen en lo que ahora se conoce como Nuevo México, empezando hace 500 años.
- **Cazadores/agricultores**: nómadas que vivían de las plantas que cultivaban y de los animales que cazaban. Los tempranos cazadores y agricultores vivían en el Sur Oeste desde el 10.000 hasta el 5.500 antes de Cristo y este modo de vida ha sido vivida por muchas gentes en el periodo histórico.
- **Moderno**: la época que sigue el año 1950.
- **Panel**: un grupo de pictográficos y/o pictográficos en una misma superficie rocosa.
- **Patina**: la capa oscura que se forma en las rocas durante cientos de años en los climas áridos. A veces llamado desierto barnizado.
- **Paleo-indios**: los primeros habitantes de Nuevo México eran familias nómadas que existieron durante la edad del hielo y cazaban grandes mamíferos, como bisontes enormes, antílopes y caballos.
- **Picoteos**: macas hechas por golpes en las piedras de basalto con otra roca o una piedra mas dura o con un cuero.
- **Pictográfico**: un diseño pintado o dibujado sobre una superficie rocosa. Contacto post-europeo-la época después de que los españoles llegasen a Nuevo México en 1540.
- **Estilo de Rio Grande**: un estilo particular de petrográfico encontrado a lo largo de la canalización del norte de Rio Grande que había sido hecho por los primeros pobladores.
- **Arte en las rocas**: un término erróneo para denominar a los picoteos o diseños pintados en las superficies rocosas. Se cree que no fue una forma de arte sino que los dibujos fueron hechos con propósitos religiosos.
- **Repaginación**: la vuelta de la pátina después de cientos de años, oscureciendo los petrográficos.
- **Símbolo**: un dibujo que representa algo más.