UNIT 9: PETROGLYPH CLASSIFICATION

OBJECTIVES
✓ Students will be able to describe some of the common petroglyph designs from Mesa Prieta.
✓ Students will be able to classify some of the common petroglyph designs.
✓ Students will be able to create and interpret a bar graph from data.

SUBJECTS: Math, Social Studies, Critical Thinking Skills.
SUGGESTED TIME: Two class periods.
MATERIALS:
Activity 1:
Copy for students: Common Petroglyph Categories recording activity sheet (9 - 5), Petroglyph Designs activity sheet (9 - 7), Frequency of Petroglyph Categories activity sheet (Bar Graph Template) (9 - 8).
From the teacher: Glue sticks, scissors.
Activity 2:
Copy for each group: one Common Petroglyph Categories on Mesa Prieta - Activity 2 student information sheet (9 - 10) (cutting and drawing options), one drawing of a petroglyph panel (9-11 – 9-22).
From the trunk: DVDs Santa Fe Community Foundation - Piñon Award (2 min.), The Petroglyph Recording Project (25 min.)
From the teacher: For each group: rulers, 11” x 17” white copy paper.
For the teacher: Common Petroglyph Categories - Activity 1 teacher’s resource sheet (9 - 6), Design Element Inventory (Illustrated) teacher resource sheets (9-24 – 9-28), Activity 2 - Demonstrating the Categorization of Elements teacher resource sheet (9 - 23).

VOCABULARY
◆ Element: the individual petroglyph on a panel. (Five turkey tracks equal five elements)
◆ Panel: a group of petroglyphs on one rock face (side).
Unit 9: Petroglyph Classification

BACKGROUND:

The petroglyphs of the Southwest have been classified by archaeologists into different categories in order to better understand the people who made them. The petroglyphs of Mesa Prieta are being recorded by archaeologists, adult and youth volunteers, students and other interested people through the Mesa Prieta Petroglyph Project. Classification of the petroglyphs is an important part of the recording, along with sketching, photographing, writing and using the Global Positioning System (GPS). The person who is doing the recording must decide which category to put the petroglyph in. Sometimes it is not clear which category to place it in, so the recording team must decide how to categorize the petroglyph. The students will also be making judgments that may vary from one another. The teacher may wish to ask questions that will help the student make a decision. For example, if the student placed the animal flute player in the animal category, you may ask what the animal is holding and if it could go in another category. The ten categories we are using here were simplified by combining some of the categories from the Design Element Inventory (Illustrated). For the students, we have included petroglyphs from only the Ancestral Pueblo period so there are no Christian crosses.

Activity 1

1. Explain that every summer, local mid and high school students serve as summer interns in the recording of the petroglyphs on Mesa Prieta. In order to analyze the data, the petroglyphs are put into different groups that seem to have something in common. Show DVDs Santa Fe Community Foundation - Piñon Award, The Petroglyph Recording Project.

2. Hand out the Common Petroglyph Categories recording student activity sheet (9 - 5) to each student. Discuss the different categories and draw examples on the board from the design sheet. Refer to Common Petroglyphs Categories teacher’s resource sheet in the teacher’s guide. (9 - 6)

3. Pass out the Petroglyph Designs student activity sheet (9 - 7). Have the students cut out the petroglyph squares and place them on their Common Petroglyph Categories recording student activity sheet. (9 - 5) You may wish to discuss why the students placed the petroglyphs where they did. Pass out glue sticks and have the students glue the petroglyph squares in place.

4. Count all the elements in each category and write the amount at the end of the row under the word TOTAL. If there is more than one element in a square, such as five turkey tracks, count them as five elements.
5. Pass out the Frequency of Petroglyph Categories bar graph student activity sheet. (9 - 8 ) Students each create a bar graph using the data that they have compiled. For example, if there are five tracks and prints elements, extend the bar for “tracks and prints” up to the number five. Student graphs will vary because of differing interpretations.

**INTERPRETING THE DATA:** Ask questions to help students understand the graph. Note that there are two types of questions. The first eight are objective questions, the last three are inferential. Re-examine the differences between observation and inference with your students. (Refer to Unit 7. Observation and Inference (7 - 1).

1. What was the most common petroglyph category on your graph? (Answers will vary.)
2. Who else had this as the most common petroglyph? (Answers will vary.)
3. What petroglyph category had the smallest number? (Answers will vary.)
4. What is the title of the graph? (Frequency of Petroglyph Categories.)
5. What is the title of the x axis? (Petroglyph Categories.)
6. What is the title of the y axis? (Number of Elements. Remembering tip for students: “Y to the Sky!”)
7. How many elements were there total? (57 elements.)
8. Tell me something about your graph. (Answers will vary.)
9. Why do you think there are so many animal and bird petroglyphs? (Answers will vary.)
10. Why do you think we find petroglyphs of shields, spears, clubs and arrows on the Mesa? (Answers will vary.)
11. How can you tell that the makers observed the sky? (Symbols for sun, stars, moon and lightning.)
Unit 9: Petroglyph Classification

Activity 2: Petroglyph Hunt (this may be used as an assessment)

1. To each group of two students pass out a different Petroglyph Panel drawing (9-11 – 9-22) and a Common Petroglyph Categories on Mesa Prieta student information sheet (9 - 9 or 9 - 10). Students will copy the category headings across the top of their 11” x 17” copy paper in large print. You have two options: students may cut out the elements and glue them on under the appropriate headings, or they may draw each element under its category. They will write the number of individual elements (designs) under the category heading. Remember to count every element, such as: 5 turkey tracks equals five elements. Refer to (9 - 21) for an example.

2. Draw a bar graph template with x and y axis and titles on butcher paper or on the chalk board. The groups will combine their data and create a class bar graph. Students from each group will come to the board with the data for each category. (how many elements in each category of petroglyphs) They will extend the bars on the graph according to their data.

INTERPRETING THE DATA: Ask questions to help students understand the class bar graph. A few questions are listed below.

- What was the most common petroglyph category on the class bar graph?
- Which petroglyph category had the smallest number?
- What are the differences between your individual graph and the class graph? (Answers may vary.)
- What elements were difficult to classify? (Answers may vary.)
- How did your group decide how to classify difficult elements? (Answers may vary.)

CONCLUSION: Have a class discussion about why it is important to record the petroglyphs. Some reasons are: They help us understand the people who made them, what animals and plants were important, what they knew about astronomy, what technology they used, etc. Unfortunately some petroglyphs are vandalized or are weathered by nature. Recording the petroglyphs now will enable future people to know what was there. Ask the students if their understanding of petroglyphs has changed since they began studying about them. Through increased understanding, has their respect for the petroglyphs increased?

ASSESSMENT: Have the students answer the question, “Why are petroglyphs important?” using a story, poem, essay or song.

Note: If you know students aged 13-18 years who would be interested in participating as summer interns in the Mesa Prieta Petroglyph Recording Project, please submit their names to Mesa Prieta Petroglyph Project, PO Box 407, Velarde, NM 87582 or call 852-1351.
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<td>2. animals and birds</td>
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<td>3. humans</td>
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<td>4. circles, spirals and lines</td>
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<td>7. sky images</td>
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<td>8. shields and shield people</td>
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Unit 9. Petroglyph Classification

PETROGLYPH DESIGNS
Student Activity Sheet - Activity 1

Cut out the petroglyph squares and place them on your classification recording chart.

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FREQUENCY OF PETROGLYPH CATEGORIES Student Activity Sheet- Activity 1

<table>
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<tr>
<th>Number of Elements</th>
<th>Petroglyph Categories</th>
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<td>tracks</td>
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<td>11</td>
<td>animals</td>
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<td>humans</td>
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<td>9</td>
<td>circles</td>
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<td>8</td>
<td>serpents</td>
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<td>sky images</td>
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<td>5</td>
<td>shields</td>
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<td>4</td>
<td>flute players</td>
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In your group, cut out all the petroglyph designs from your panel. Write the category headings across the top of the large copy paper. Group similar petroglyphs under their category name and then glue them down. Count the number of elements (individual designs) and write the number under the category name. As you tally each category, one student in your group will go to the bar graph on the board and extend the bar for that category.

**TRACKS AND PRINTS**

**ANIMALS AND BIRDS**

**HUMANS**

**CIRCLES, SPIRALS AND LINES**

**SERPENTS**

**WEAPONS**

**SKY IMAGES**

**SHEilds AND SHIELD PEOPLE**

**FLUTE PLAYERS**

**UNIDENTIFIED PETROGLYPHS**
Unit 9: Petroglyph Classification

COMMON PETROGLYPH CATEGORIES ON MESA PRIETA

Student Information Sheet: Activity 2: Drawing Option

Write the category headings across the top of the large copy paper. Draw petroglyphs under their category name. Count the number of elements (individual designs) and write the number under the category name. As you tally each category, one student in your group will go to the bar graph on the board and extend the bar for that category.

TRACKS AND PRINTS

ANIMALS AND BIRDS

HUMANS

CIRCLES, SPIRALS AND LINES

SERPENTS

WEAPONS

SKY IMAGES

SHIELDS AND SHIELD PEOPLE

FLUTE PLAYERS

UNIDENTIFIED PETROGLYPHS
Unit 9: Petroglyph Classification

Unit 9. Petroglyph Classification - Activity 2

Petroglyph Panel 1
Unit 9: Petroglyph Classification
Unit 9: Petroglyph Classification

Unit 9. Petroglyph Classification - Activity 2
**ACTIVITY 2: PETROGLYPH HUNT**

Teacher Resource Sheet

demonstrating the categorization of elements from Petroglyph Panel 1

<table>
<thead>
<tr>
<th>Tracks &amp; Prints</th>
<th>Animals &amp; Birds</th>
<th>Humans</th>
<th>Circles &amp; Spirals Lines</th>
<th>Serpents</th>
<th>Weapons</th>
<th>Sky Images</th>
<th>Shields &amp; Shield People</th>
<th>Flute Players</th>
<th>Unidentified Petroglyphs</th>
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![Petroglyphs](image)
### Unit 9: Petroglyph Classification

#### Teacher Resource Sheet 1

**Design Element Inventory (Illustrated)**

1. **Linear Designs**
   - a) single straight line
   - b) parallel straight lines
   - c) cross or X
   - d) one-pole ladder
   - e) rake
   - f) two-pole ladder
   - g) forked line
   - h) branched line
   - i) angled line / chevron
   - j) parallel angled lines
   - k) single zigzag
   - l) parallel zigzag group
   - m) rectilinear meander
   - n) rectilinear scroll
   - o) curved line / arc
   - p) parallel curved line / arcs
   - q) wavy line
   - r) grouped wavy lines
   - s) curvilinear meander
   - t) spiral or coil
   - u) rake with wavy lines
   - v) ice tongs
   - w) undent open linear
   - x) T shape
   - y) U shape
   - z) hooked line
   - 1z (not specified)

2. **Dot Patterns**
   - a) single or forked line
   - b) grouped parallel lines
   - c) clustered dots
   - d) geometric form
   - e) life form in dots
   - 2z (not specified)

3. **Geometric Forms**
   - a) CIRCLE / oval
   - b) disk
   - c) nucleated circle
   - d) bisected circle
   - e) tailed circle
   - f) spoked circle
   - g) rayed circle / sunburst
   - h) concentric circles
   - i) barred circle / oval
   - j) gridded circle/oval
   - k) grouped / joined circle
   - l) RECTANGLE / square
   - m) concentric rectangles
   - n) gridded rectangle
   - o) grouped / joined rectangles
   - p) DIAMOND
   - q) grouped / joined diamonds
   - r) simple TRIANGLE
   - s) hourglass
   - t) joined triangles / saw-tooth
   - u) stopped triangle
   - v) terraced pyramid
   - x) elaborated circle
   - y) elaborated rectangle
   - aa) outlined cross
   - bb) dumbbell
   - cc) vulva form
   - 3z (not specified)

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### Design Element Inventory (Illustrated)

**4. Human Figures**
- a) stick human
- b) lizard man
- c) outlined human figure
- d) in filled human figure
- e) ceremonial / deity figure
- f) face or mask
- g) corner mask
- h) partial human figure
- i) human limb
- j) flute player
- k) hunter
- l) shield bearer
- m) spear bearer
- n) homed human figure
- o) possible shalako

**5. Animal Figures**
- a) unident MAMMAL
- b) bighorn sheep
- c) deer / elk
- d) mountain lion
- e) canine
- f) pronghorn
- g) bison
- h) unident BIRD
- i) thunderbird
- j) raptor / parrot
- k) turkey
- l) crane / shore bird
- m) duck
- n) swallow
- o) unident REPTILE
- p) lizard
- q) snake
- r) rattlesnake
- s) turtle / tortoise
- t) frog / toad
- u) tadpole
- v) not used
- w) not used
- x) joined birds
- y) fish
- aa) unident INSECT
- bb) dragonfly
- cc) butterfly / moth
- dd) caterpillar / worm
- ee) centipede
- ff) scorpion

**6. Prints and Tracks**
- a) human hand print
- b) human foot print
- c) sandal track
- d) bird track
- e) unident mammal track
- f) bear track
- g) deer / elk track
- h) feline track
- i) canine track
- j) badger track
- k) raccoon track
- l) rabbit track

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### Design Element Inventory (Illustrated)

#### 7. Plant Forms
- a) unicent plant form
- b) corn plant
- c) yucca plant
- d) flower form
- e) seed pod
- f) treelike form

#### 8. Artifact Forms
- a) arrow
- b) bow
- c) club / ax
- d) shield
- e) projectile point
- f) throwing stick
- g) spear
- h) atlatl
- i) textile or pottery design
- j) burden basket

#### 9. Celestial Bodies and Weather Phenomena
- a) star
- b) crescent moon shape
- c) sun / moon (large disk)
- d) lightning
- e) rainbow
- f) cloud terrace

#### 10. Mythological Beings
- a) star being
- b) one horn serpent
- c) two-horned serpent
- d) composite human / animal figure
- e) composite animal
- f) big-eyed trapezoidal anthropomorph
- x) cloud terrace being
- y) composite serpent / star being

#### 11. Multiple-Element Compositions
- a) complex panel with life forms
- b) complex linear abstract
- c) complex geometric (not textile or pottery)
- d) complex continuous-line geometric
- e) complex continuous-line with life forms
- f) carefully executed, complex – but unreadable design

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Unit 9 page 26

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### Design Element Inventory (Illustrated)

#### 12. MISCELLANEOUS DESIGN ELEMENTS (ASSUMED PREHISTORIC)

- a) unident form
- b) possible human
- c) possible bird
- d) possible mammal
- e) possible reptile
- f) prehistoric modifications
- g) misc. pecking
- h) scratched / incised lines
- i) not used
- j) misc. scrapes / abrasions
- x) possible face / mask
- y) possible track

#### 13. HISTORIC (ca 1550 – 1950) SYMBOLS, FIGURES, INSCRIPTIONS

- a) initials / names / dates
- b) message
- c) unident drawing
- d) cattle brand
- e) horse
- f) human figure with historic context
- g) equestrian figure
- h) weapon
- i) vehicle / train
- j) Christian cross
- k) complex panel with life forms
- l) Pueblo ceremonial / deity figure
- m) Navajo ceremonial / deity figure
- n) Apache ceremonial / deity figure
- o) Misc. pecking

#### 14. RECENT GRAFFITI AND HUMAN DAMAGE NOT DIRECTLY IMPACTING ROCK ART

- a) initials / names / dates
- b) message
- c) drawing
- d) scratched / incised lines
- e) misc. gouges
- f) misc. abrasions
- g) bullet scar(s)
- h) spray paint
- i) paint splatters
- j) construction activities
- k) drill holes
- l) campfire remains / soot
- m) livestock tramping
- n) livestock rubbing
- o) misc. damage

#### 15. ASSOCIATED ARCHAEOLOGICAL FEATURES

- a) cupule
- b) worked natural hole
- c) grinding slick
- d) bedrock mortar
- e) rock wall
- f) worked stone
- g) sherds (describe)
### Unit 9: Petroglyph Classification

Teacher Resource Sheet 5

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**Design Element Inventory (Illustrated)**

#### ADDITIONAL

- **D. Defacement of Rock Art Design Elements or Panels**
  1. scratched / incised lines
  2. pecking / gouging
  3. bullet scar(s)
  4. spray paint
  5. brushed / spattered paint
  6. alteration of design elements
  7. attempted removal
  8. complete removal
  9. abrasion / obliteration
  10. campfire / soot damage
  11. chalking or painting
  12. latex or rubbing residue

- **N. Natural Deterioration Affecting Rock Art Panel**
  1. recent spalling
  2. repatinated spalling
  3. natural scrapes
  4. rock crack
  5. rock splitting / displacement
  6. lichen encroachment
  7. plant abrasion
  8. water erosion
  9. wind erosion
  10. mineral deposits
  11. bird / insect / rat nests
  12. forest / brush fire
  13. rock slide

- **S. Special Features**
  1. rock incorporation
  2. enhancement of rock edge
  3. prehistoric superimposition on another element
  4. historic superimposition on another element
  5. prehistoric rework
  6. historic rework / addition
  7. outstanding panel
  8. good photo / slide

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### Vocabulario Unidad 9: Clasificación de los Petrográficos

- **Elemento:** un petrográfico individual en un panel (cinco trazas de pavo igualan cinco elementos)
- **Panel:** un grupo de petrográficos en la cara de una roca.
### Unidad 9: Clasificación de los Petrográficos

**UNIDAD 9. CLASIFICACIÓN DE LOS PETROGRÁFICOS**

Categorías de los petrográficos comunes. Hoja de registro para el estudiante.

**Actividad 1**

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Unidad 9: Clasificación de los Petrográficos

Diseños de petrográficos

Hoja de actividades para el estudiante – Actividad 1

Corta los cuadros con los petrográficos y ordénalos en tu tabla.

Nombre__________________ Fecha_____________

UNIDAD 9. CLASIFICACIÓN DE LOS PETROGRÁFICOS

Frecuencias de las categorías de los petrográficos. Hoja de actividades para el estudiante.

Actividad 1

(Categorías de petrográficos: Pistas; animales; figuras humanas; círculos; serpientes; armas; imágenes del cielo; escudos; flautistas; sin identificar)

UNIDAD 9. CLASIFICACIÓN DE LOS PETROGRÁFICOS

CATEGORÍAS DE LOS PETROGRÁFICOS MÁS COMUNES EN MESA PRIETA

Hoja de información para el estudiante- Actividad 2- Cortar

En grupo, corta todos los diseños de petrográficos de la tabla. Escriba las categorías arriba de la hoja grande. Agrupa los petrográficos similares debajo del título de su categoría y después pégalos. Cuenta el número de los diseños individuales en cada categoría y escriba el número total bajo su nombre. Mientras se cuenten los elementos de cada categoría, uno del grupo se dirigirá hacia la barra de gráficos en la tabla y hará más larga la barra para esa categoría.

Pistas y huellas
Animales y pájaros
Humanos
Círculos, espirales y líneas
Serpientes
Armas
Imágenes del cielo
Escudos y personas con escudos
Flautistas
Petrográficos sin identificar