

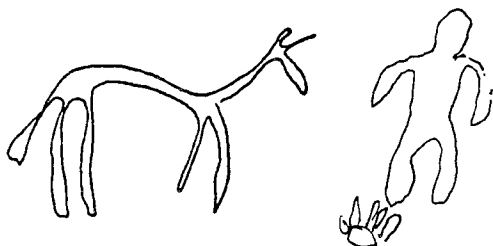
ROCK ART ONE : AN INTRODUCTION

SUBJECTS:	Science, social studies, language arts, art
SKILLS:	Knowledge, comprehension, analysis, evaluation
STRATEGIES:	Brainstorming, discussion, visualization, drawing, writing, observation
DURATION:	45 to 60 minutes
CLASS SIZE:	Any

Objectives:

In their study of rock art students will use art materials, colored photographs, and rock art examples to:

1. Differentiate between symbol, petroglyph, pictograph, and rock art.
2. Interpret rock art to illustrate its importance in the cultural heritage of a people and as a tool for learning about the past.
3. Evaluate the importance of protecting rock art for study.



Materials:

Transparency or copy for each student of "Clear Creek Canyon Rock Art Panel," and clay or plaster of paris slabs (prepared ahead of time), paper, paint or marker, paper clip. "Interpretation of Clear Creek Canyon Rock Art Panel" masters.

Vocabulary:

petroglyph: a design chiseled or chipped out of a rock surface.

pictograph: a design painted on a rock surface.

rock art: a general term for the pecking, incising, or painting of designs onto rock surfaces.

rock art panel: a group of pictograph and/or petroglyph figures.

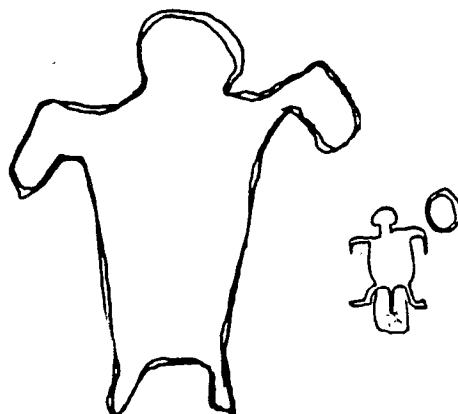
symbol: a thing which represents something else.

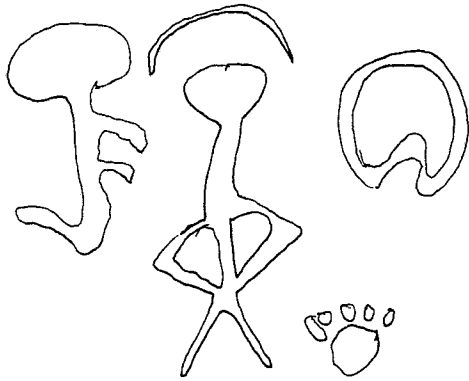
Background:

Indian people throughout North America created rock art in prehistoric times. Its meaning is mysterious and at times controversial. Some people think that rock art is a type of storytelling. Others believe it depicts religious or spiritual beliefs, while still others regard it as solely an artistic expression.

North American rock art is not a true writing system which can be "read" like Egyptian hieroglyphics or a phonetic alphabet, although some rock art specialists attempt to decode rock art symbols. Archaeologists analyze rock art figures and patterns, and frequently find that different cultural groups made different styles of rock art. Other rock art researchers analyze stories and information from Indian people to draw conclusions about rock art.

Some Indian tribes have oral traditions about rock art and its meaning. Many Indian people believe that the spirit of the makers resides in what they have created; therefore, rock art is living, and it has a spirit. Whatever our responses to, or interpretations of rock art may be, it stimulates our thoughts and imaginations and expands our awareness of cultural expressions. Rock art can mean something different to each person who ponders it.





Setting the Stage:

1. Brainstorm examples of symbols meaningful to us today.

2. Give each student a piece of paper, a marker or paint, clay or plaster of paris slab and a paper clip. Ask them to flatten the clay into a slab and imagine that it or the plaster of paris slab and the paper are rock walls. Ask them to imagine they are living 1,000 years ago. Have them carve a symbol of their culture into the clay or plaster of paris (rock) with the paper clip. Have them paint or draw this same symbol on the paper.

3. Show the students the words "pictograph" and "petroglyph." Ask them to determine which word fits which method of rock design and give reasons for their answers. Verify the correct answer and explain that both design methods are classified as rock art. Or, give them the definitions of the root words prior to determining the correct definitions:

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

Procedure:

1. Project the "Clear Creek Canyon Rock Art Panel" transparency. Explain that this rock art panel was created by the prehistoric people of Utah.

2. Use the following questions to analyze the rock art panel:

a. What words might you use to describe the symbols on this page?

b. Why do you think people created these designs?

c. If there is a message in these designs, what do you think it is?

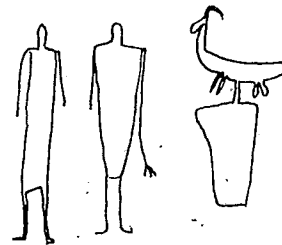
d. Specifically, what might the message be in the symbol labeled with a, b, c? Using the "Interpretation" activity sheet share the four American Indian interpretations of this symbol. (Note: The letters are not part of the original art work.)

3. In what ways might rock art be important to archaeologists' study of ancient people?

4. How might vandalism to rock art create problems for the archaeologist? for the descendants of the prehistoric rock artists? for all of us?

Closure:

In summary, why is the preservation of rock art important?



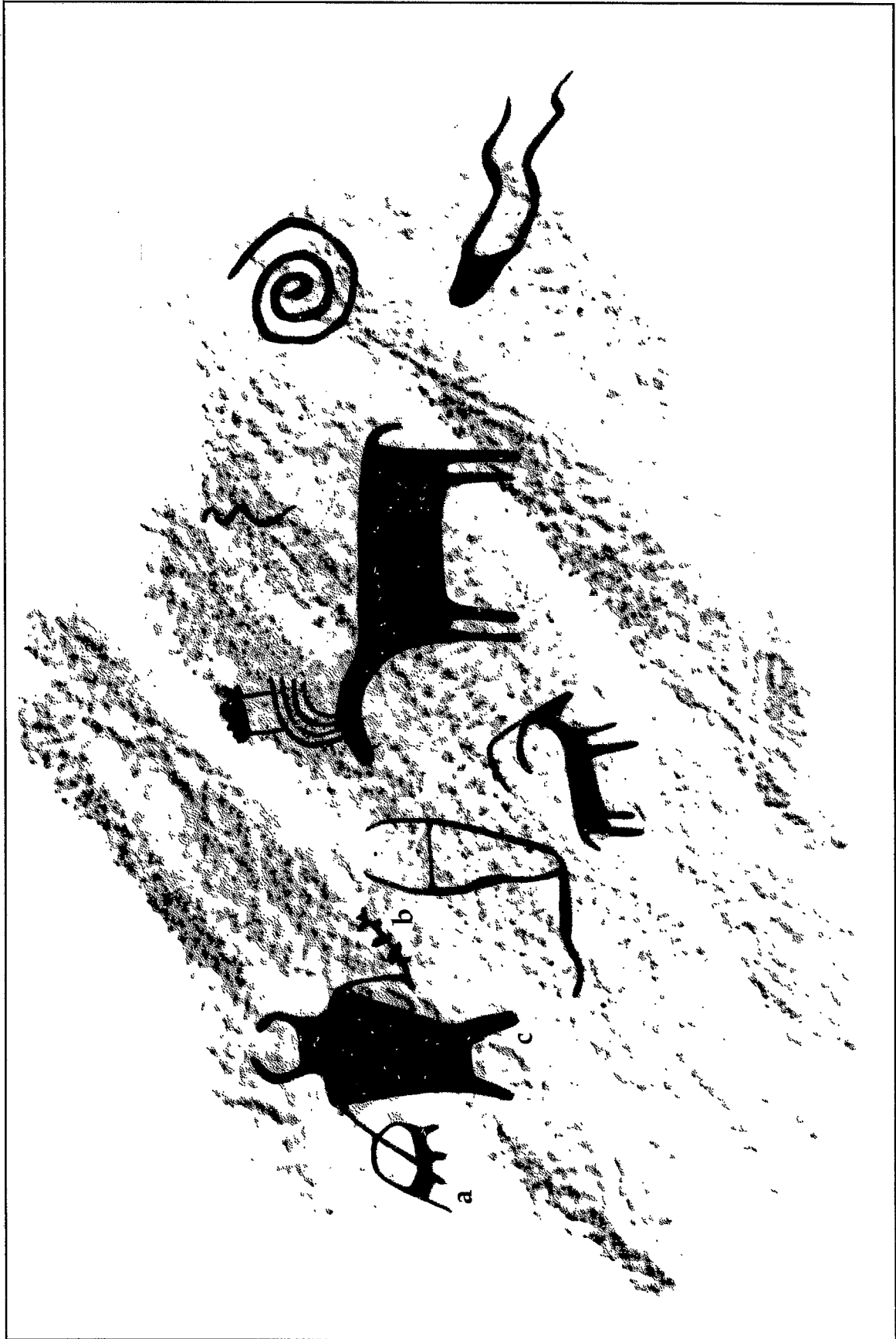
Evaluation:

Instead of answering the last question as a group, require students to answer it individually in a story, poem, essay, advertisement or song.





Clear Creek Canyon Rock Art Panel





Interpretation of Figure in Clear Creek Canyon Rock Art Panel, Central Utah

Levan Martineau, hired by the Paiute tribe of Utah to interpret Clear Creek Canyon rock art.

Martineau thinks this is part of a larger story of the emergence from the underworld.

- a. The clan sign of the Badger clan. Badger was involved in and recorded the emergence story.
- b. The river reed which the people of the underworld crawled through to get to this world.
- c. A god-like figure who is part of the emergence story.

Indian Joe (Joseph J. Pickyavit), Ute Indian.

Pickyavit thinks that this figure was left by the "Pueblo Indians" whom he said once lived in Clear Creek Canyon. He feels this figure deals with making rain.

- a. Rain cloud making rain.
- b. Lightning bolt making lightning with the rain storm.
- c. Medicine man with good powers in a rain sing (ceremony to bring rain).

Wil Numkena, Hopi Indian and Director, Utah Division of Indian Affairs.

Numkena thinks this figure deals with the emergence into the fourth world.

- a. Seed sack that contains the seeds used by the chipmunk to grow a plant for the people, which they used to climb out of the underworld.
- b. The spruce or pine tree which they climbed to get out of the third or underworld.
- c. A two-horned priest of the higher order of the priesthood and keeper of the oral traditions and the stories of the fourth world.

Kenneth Smith, Navajo Indian and early worker at Fremont Indian State Park.

Smith thinks this figure was part of a fertility ceremony.

- a. This was the sack of seeds widely planted.
- b. This was a stock of corn; corn was the most important food source for the people.
- c. This was some type of god of fertility or germination who helps the crops and plants to germinate and grow.

(Provided through the courtesy of Gordon Topham, Fremont Indian State Park, Clear Creek Canyon, Utah.)



ROCK ART TWO: CREATING YOUR OWN

SUBJECTS:	Science, art
SKILL:	Synthesis
STRATEGIES:	Visualization, drawing
DURATION:	30 to 45 minutes
CLASS SIZE:	Any

Setting the Stage:

Distribute a copy of the "Rock Art Symbols" master or display on the overhead projector. Give students time to observe and talk with each other about the symbols.

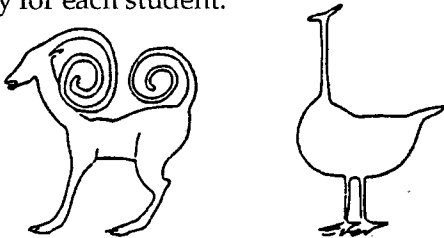
Objectives:

In their study of rock art, the students will use regional rock art symbols or their own symbols to:

1. Create a petroglyph replica.
2. Cooperatively create a "rock art panel."

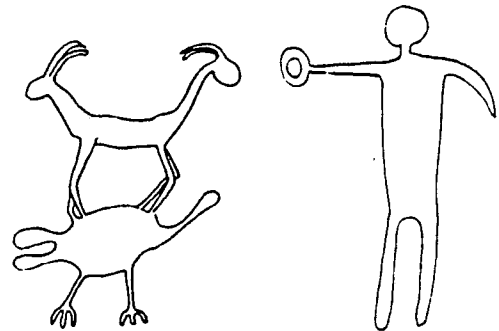
Materials:

Brown construction paper, a roll of brown butcher paper, a box of cotton swabs, one cup of chlorine bleach diluted with an equal amount of water, small paper or plastic cups, "Rock Art Symbols" master displayed on the overhead projector or a copy for each student.



Background:

Rock art "...occurs in caves, on cliff walls, or on boulders. Rock art occurs all over the world, in virtually every culture, and surviving examples are known to be as old as 30,000 years, from the time of the last Ice Age. In modern America, the most common kind of 'rock' art is that which is painted on the concrete and brick walls of the artificial canyons of our cities and on bridge abutments and rock faces along our highways. In modern American culture, as in all cultures, it expresses the values, attitudes, beliefs, and desires of the society" (Hurst and Pachak, 1989, p. 1).

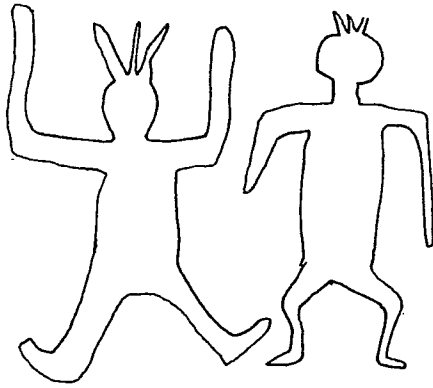


Procedure:

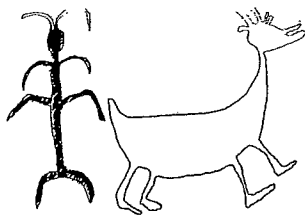
1. Explain to students that they will be using symbols to make an artwork which resembles petroglyphs. They will also contribute to a "rock art panel." They may use the symbols from the "Rock Art" master for their artwork, or they may create their own.

2. Give each student a piece of brown construction paper and a cotton swab. The art is created by dipping the cotton swab in bleach mixed with an equal amount of water and rubbing the wet cotton swab on the paper to form the desired design. Demonstrate the process, emphasizing to students that they must be very careful not to touch anything but the paper with their cotton swab. Place a jar lid with a small amount of bleach in the center of the work table or carry a small cup of bleach to each student and have them dip their cotton swab. They should only need one or two dips for the activity.

3. Lay the roll of brown butcher paper on a table or floor. Divide the class into groups no larger than 10 students. An adult aide for each group would be helpful. Alternatively, have only one group at a time do the activity.



4. After students have completed their own "petroglyph" they take turns making figures on the large piece of butcher paper. Space students a few feet apart, and have small groups work at a time. Exhibit the "rock art panel" in the classroom or hallway. The panel is used for an activity in Rock Art Three.

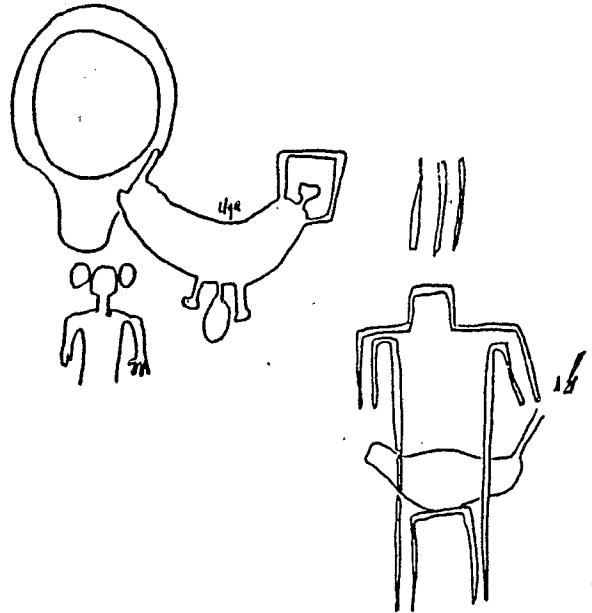


Closure:

Have students share the meanings of their rock art.

References:

Hurst, Winston B., and Joe Pachak, 1989, *Spirit Windows: Native American Rock Art of Southeastern Utah*. Edge of the Cedars Museum. Blanding, UT.





A collection of 25 black and white line drawings of various animals and human figures, arranged in a grid-like fashion. The drawings include: kangaroos, emus, lizards, and stylized human figures in various poses. There are also geometric shapes like a spiral, a square with a cross, and a circle with a star. The drawings are simple and stylized, typical of early human art.



ROCK ART THREE: PROTECTING OUR PAST

SUBJECTS:	Social studies, language arts
SKILLS:	Analysis, synthesis, evaluation
STRATEGIES:	Observation, discussion, brainstorming, decision making, problem solving, writing, drawing, invention, communication
DURATION:	One to three 45-minute periods
CLASS SIZE:	Any; work groups of 3 to 4

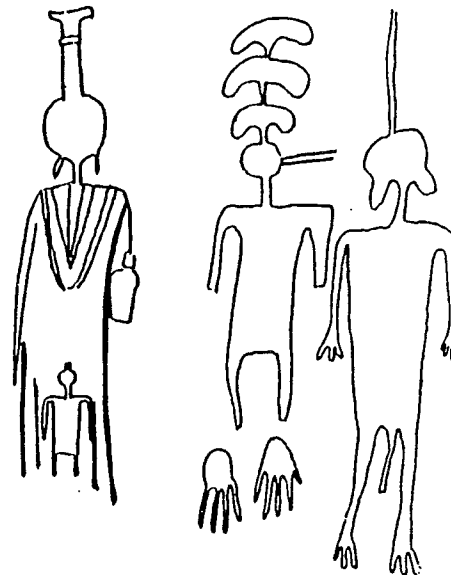
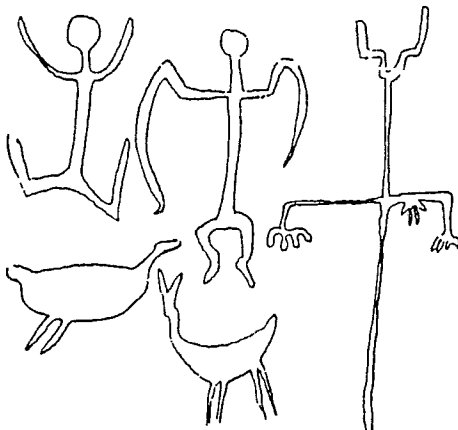
Objectives:

In their study of rock art, students will use a replica of a vandalized rock art panel to:

1. Examine their feelings about rock art vandalism.
2. Discuss ways to protect rock art and other archaeological sites, focusing on core universal values as the filter for thoughtful decision making.
3. Evaluate the Archaeological Resources Protection Act.
4. Develop an educational campaign.

Materials:

"Rock Art Panel" created in Lesson 25: "Rock Art Two: Creating Your Own"; photograph of vandalized rock art; copies of the "Federal and State Laws Protecting Archaeological Resources" and "Protecting Rock Art" masters for each student or team.



Vocabulary:

deface: spoiling or marring the surface or appearance of something.

vandalism: willfully or maliciously defacing or destroying public or private property.

Background:

Utah is fortunate to have many fine examples of rock art, and a rich archaeological heritage. Our past, however, is threatened by people who collect artifacts and dig sites as well as by those who vandalize rock art panels.

Collecting artifacts, digging sites, and defacing rock art and ruins has several harmful results. First of all, it destroys data, the evidence of people who lived here before us. Sites are very fragile, and one person with a shovel and ten minutes of time can destroy hundreds of years of prehistory. We and the generations of tomorrow are being robbed of the chance to learn about Utah's past.

Secondly, disturbing and vandalizing sites attacks the cultural heritage of Native Americans. These sites are the burial grounds, homes and sacred places of their ancestors. Archaeological sites can represent part of their spiritual and cultural legacy. To destroy or deface these places can be the equivalent to someone vandalizing your home, church, or cemetery.

Finally, people who vandalize and destroy sites steal from all of us the opportunity to appreciate and understand other cultures. It is a personally enriching experience to gain a perspective on one's life and time by understanding how and where we fit in the human history of this land.

Setting the Stage:

1. The purpose of the first part of this activity is to cause students to react to their "rock art panel" being defaced or threatened. You need to decide the best approach for your students. If the students are mature and if they will not think that school is an unsafe place, then anonymously deface the "rock art panel" by painting words over it. Say nothing to the students, but when they begin to talk about it, start the activity. Alternatively, bring the rock art panel into the classroom and, holding a can of spray paint or a marker, ask "How would you feel if I were to write my name over the rock art panel you created? Would that harm it?" Connect their feelings about their rock art being damaged to how Native Americans, archaeologists, and the public might feel when they see vandalized sites.

2. Show students the picture of the defaced rock art which is located near Price, Utah (next page). Ask them how they feel about the vandalism of these ancient and irreplaceable rock art panels, and what they think should be done about it. It is important to move students beyond the "witchhunt," that is, trying to discover and punish the person who did the damage. Ask students to

think of solutions for repairing the damage and preventing vandalism from happening in the future.

3. Distribute "Protecting Rock Art." Have the students read this page in preparation for creating an educational campaign.



Procedure:

1. Inform the students about the problem of people vandalizing archaeological sites, including rock art panels, ruins, cave sites, and historic buildings. Explain that vandalism includes a range of behavior, from picking up arrowheads to mining sites with a bulldozer.

2. Ask students to brainstorm: What are the harmful results of vandalism? They can brainstorm in the following categories: destruction of data, destruction of cultural heritage, destruction of historical appreciation; or they can be given the categories after brainstorming. (See "Background" for ideas to add to students' list.)

3. Distribute or project "Federal and State Laws Protecting Archaeological Resources." Review the ARPA and its penalties, and the state laws that protect archaeological resources.

4. Assist students in creating a pamphlet, a radio announcement, poster, advertisement, etc. that will communicate to others the importance of protecting archaeological resources. They should include a description of the ARPA, and might also include some of the ideas from "Protecting Rock Art."

Closure:

Students' products could be shared at visitor centers, libraries, a PTA meeting, a teacher convention booth or a school archaeology fair.

Evaluation:

Evaluate the students' products.

Extension:

Ask students to propose an improvement to the ARPA. As a class project, have students prepare their ideal law to protect archaeological sites.

Links:

Section Four, Lesson 28: "Artifact Ethics"

Section Four, Lesson 34: "Take Action—Save the Past"





Photograph of Vandalized Rock Art Panel



Vandalized rock art, Buckhorn Wash, Emery County, Utah. Photograph by Stephen F. Poreda.



FEDERAL AND STATE LAWS PROTECTING ARCHAEOLOGICAL RESOURCES

Federal and state laws provide for severe penalties to those who disturb and destroy sites more than 100 years old. The Archaeological Resources Protection Act (ARPA) was passed by Congress in 1979, and prohibits unauthorized digging and collecting of archaeological resources, including pottery, basketry, bottles, sites with coins or arrowheads, tools, structures, pithouses, rock art, graves and human skeletons. No person may sell or buy any archaeological resource which was illegally acquired. Penalties for those convicted of violating ARPA are:

1. **First Offense:** a person who breaks this law for the first time may be fined \$100,000 and spend one year in jail. If the cost of repairing the damage exceeds \$500, the offender may receive a fine of \$250,000 and spend two years in jail.
2. **Second Offense:** a person who breaks this law for the second time may be fined \$250,000 and spend five years in jail.
3. Vehicles and other equipment used in breaking this law may be confiscated.

ARPA provides for REWARDS to people who supply information leading to the arrest and conviction of ARPA violators.

ARPA applies to all public lands, including those administered by the U.S. Forest Service, Bureau of Land Management, the military, Fish and Wildlife Service, the National Park Service, and the Bureau of Reclamation.

Statutes similar to ARPA were passed in Utah in 1990, and apply to all state lands. Additionally, on private lands state law requires the express permission of the landowner before digging archaeological sites. This means that people digging on private land can be convicted if the landowner has not explicitly given permission. State law also states that it is a felony to disturb a human burial, even one accidentally unearthed at an archaeological site (archaeologists excavating with authorization are exempt.).

Some people who dig in sites are engaged in an illegal market activity, are armed with weapons, and should be considered dangerous. Never approach someone you see digging in sites or collecting artifacts. Instead, record information about them—their physical description, what they were seen doing, the license number of their vehicle—and immediately report them to a local law enforcement agency.

People recreating in the out-of-doors occasionally find archaeological sites, and wonder what they should do. Always leave artifacts where they are found, including small surface finds such as potsherds and stone flakes. Discoveries of rare or remarkable artifacts and sites should be reported to the land managing agency, or, in the case of private lands, to a local agency archaeologist or the Utah State Historic Preservation Office.



Protecting The Past: Things Not To Do

1. **Touching** rock art with your hand can harm it.
2. **Making paper rubbings or tracings** may crumble the rock art.
3. **Making latex molds** of rock art should only be done by professionals if the rock art is going to be destroyed by construction or development.
4. **Building fires nearby** can cause serious damage from smoke and high temperature.
5. **Taking it home.** Some selfish people steal rock art by using rock saws and chisels.
6. **Chalking** is harmful to the rock art, and makes it impossible to use new methods of dating the figures.
7. **Re-pecking or re-painting** a difficult-to-see image doesn't restore it, but rather destroys the original.
8. **Defacement.** Insensitive people often paint their names over rock art, or shoot bullets at it. Defacement is a sign of disrespect for other cultures.
9. **Tunnel vision.** People like rock art so much, they often forget to watch where they are walking and may trample or damage important artifacts.
10. **Removal or rearrangement of artifacts** destroys archaeological data. Artifacts should be left where they are found. While it is okay to pick up and look at most artifacts, you should not make piles of artifacts at the site or take them home.
11. **Disturbance of the ground.** Any digging at an archaeological site is not allowed. Even too many visitors walking around may damage an archaeological site. Visitors should tread as lightly as possible, especially on loose slopes and under rock overhangs. Driving off of designated roads may also damage archaeological sites.

(Adapted from Hurst and Pachak, 1989, pp. 25-26).



ROCK ART FOUR: CREATIVE EXPRESSION

SUBJECT:	Art
SKILL:	Synthesis
STRATEGIES:	Decision making, sculpting
DURATION:	Depends on chosen media
CLASS SIZE:	Any

Objective:

In their study of rock art, students will use ancient rock art as inspiration for their own artistic expression.

Materials:

Rock art reference books, clay, paper maché materials or other three dimensional media.

Background:

Observing the shapes, designs and textures of rock art transports us back in time. We wonder—who were the creators, what was their world like, why did they create images on rock, what are their meanings?

Joe Pachak, a Utah artist, seeks to come in contact with the creative spirit of the rock art artists through his own art work. He uses original rock art designs as inspiration for three-dimensional sculptures, giving the ancient designs new life through movement and action. As he works with the rock art figures he feels that he makes a connection with the creative spirit of a person from the past, getting closer to that person's ideas.

Students can experiment with this same creative technique using clay or paper maché.

Setting the Stage:

1. Have the students explore a variety of rock art images in reference books and imagine how they might transform these two-dimensional figures into three-dimensional shapes.
2. Share background information.

Procedure:

1. Have the students choose a rock art figure to create in three-dimensions.
2. Working with media such as clay or paper maché, the students will transform their rock art figure into a sculpture. Encourage them to add movement and action to their figure.

Closure:

Provide an opportunity for students to share their work, such as at an archaeology or culture fair, or in a display at a mall, in a city library, or at their school.

Evaluation:

1. Students brainstorm other ideas for transforming rock art symbols into art work.
2. Experiment with one or more of these ideas.

Extension:

Invite an artist who uses motifs from prehistoric art to talk to the class about the inspiration he or she finds in the ancient images.

