

# Sacred Images - Understanding Properties of Rocks

## Summary

Students will understand that there are three main types of rocks and that each type has its own properties, characteristics and processes of formation.

## Materials

Samples of the three main types of rocks

Diagrams of the rock cycle and the three main types of rocks

- *Sacred Images A Vision of Native American Rock Art*

## Background for Teachers

Create diagrams showing the rock cycle and the basic structure of metamorphic, sedimentary, and igneous rocks. Group the rock samples according to their different properties for the students to observe and pick at with nails to see how hard or soft each one is. This cycle exists throughout the world.

## Student Prior Knowledge

Rocks are oldest things on earth, but are not all alike. They are formed differently, and have differences that we can see and feel. Most Rock Art was created upon a specific type of rock because of its properties. See if you can determine, from the photographs of the Rock Art which type of rock most of the art was done on.

## Intended Learning Outcomes

Students will be able to classify the common rocks found in Utah. They will be able to sort rocks by appearance according to the three basic types.

## Instructional Procedures

Pass the rock samples around to all students, or group them into three learning centers, divided into the three main categories. Discuss the properties of each type of rock and allow students to test for hardness by picking at each sample with a nail.

Review the structures of each type of rock using the diagram and allow time for students to study the rock specimens.

Form the class into one large circle and have them squeeze together, imitating the particles of sedimentary rocks that are stuck together.

Divide the class into groups of four, and have them imitate the process of heat and pressure to form metamorphic rocks.

Lastly, have these small groups of students imitate the melting and then hardening of rocks to represent the way that igneous rocks are formed.

Questions for students:

Which type of rock is the hardest? Why is this so?

Which type of rock is most rock art done on? Why do you think this is so?

Why do you think that Native American Indians have a respect for the rocks and the earth?

What are the many ways that we use rocks today?

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