

ROCK CYCLE ROULETTE

POINT OF INQUIRY

How can two rocks that have the same minerals in them look very different?

CONCEPT

Knowledge of early geologic processes is important in understanding how mineral resources are formed.

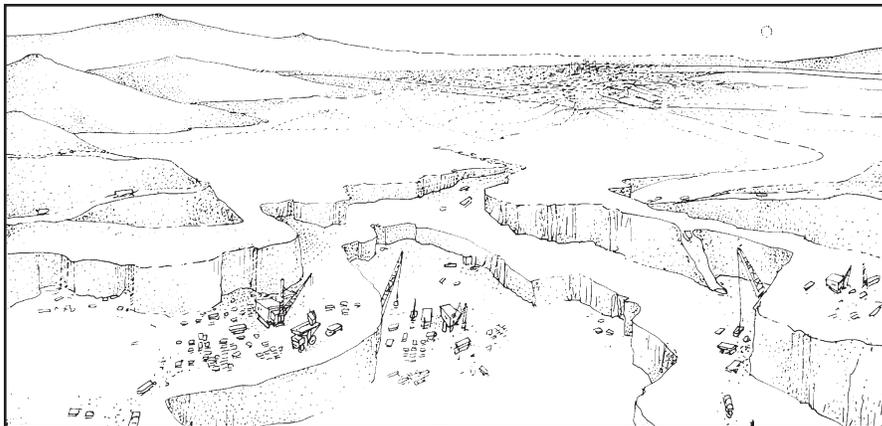
LEARNING OUTCOME
The students will role play rocks moving through the rock cycle.

CURRICULUM FOCUS:
Science, Language Arts, Math

SKILLS/PROCESSES:
record, diagram, discuss, compare, write

KEY VOCABULARY:
igneous, sedimentary, metamorphic, rock cycle

MATERIALS:
Eleven dice made from cardstock



Background

The three major types of rocks are igneous, sedimentary, and metamorphic. Igneous rocks are formed from rock that has melted, sedimentary rocks are formed from rock that has been broken into pieces and cemented together again, and metamorphic rocks are formed from rocks that have been changed by heat and pressure under the Earth's surface. Over long periods of time, one rock may be igneous, be worn down by a stream and the broken pieces turned to sand, the sand buried and cemented into a sedimentary rock, which is subjected to intense pressure turning it into a metamorphic rock. The metamorphic rock can be buried and compressed so much that it eventually melts and recrystallizes into a brand new igneous rock. This natural rock recycling is called the rock cycle.

Preparation

This activity involves the use of six sided cubes set around the room at 11 stations. The cubes (dice) can be made of construction paper or card stock. The sides of the cubes should be labeled as shown on the chart found at the end of this activity. Each die or cube corresponds to a station (11 total). You may want to place rock samples of the three major types at the appropriate stations.

Tape signs around the room in a circular pattern and move desks so that the students can easily circulate from station to station. You may want to draw or project a station map on the board.

Learning Activity

Ask the students the following questions to assess their knowledge of the subject, and to stimulate their interest in the activity:

How can one type of rock change into another type of rock?

How long does it take for rocks to change forms?