



## WEATHERING ROCKS



### Red Flags

If you attempt to break rocks with a hammer, make sure there is constant adult supervision and everyone is wearing protective eye covering to guard against flying chips of rock. Always hammer on an appropriate surface.

### Questions to Ask

When you are on the rock hunt, ask children where to look for them. How do they think the rocks got there? Where did they come from? When the collection is new, ask how the rocks are similar...and how they are different. You might want to make a chart that includes color, size, texture, etc.

Tips for Less Mess: This is a wonderful outside activity. If you choose to explore the rocks indoors, place old towels or newspaper on the work surface. A broom might also come in handy.

### Science Connection

The earth's surface, its crust, is made up of enormous plates of rock. The rain, wind, moving water, cold and hot temperatures, and ice cause the crust to break up into smaller pieces. Every rock you find was once part of a larger rock. Erosion is the wearing away and removal of the earth's surface. When rocks are carried by water or ice they come in contact with the stream bottom or other rocks. This "abrasion" tends to round off sharp edges and corners.

### WHY

To be a geologist and explore the nature of rocks

### WHAT YOU NEED

- 2 Clear wide-mouth plastic jars with lids
- 10 Small rocks
- A sieve
- Water

### WHAT TO DO

Take a rock collecting walk with the children. When they have found approximately 10 rocks, ask them to "get to know" them. Brainstorm ideas as to how to accomplish this. Then, ask the children to place their rocks in one of the containers. Add water until they are just covered. Securely tighten the lid. Start to shake the jar and count to 100. When the water becomes cloudy, have them carefully pour the rocks and water through the sieve, catching the water in the second jar. Examine the rocks. What has happened? What changes do you see in the water and the rocks? What do you feel inside the jar? Repeat the process. What happens this time?

### VOCABULARY

**Minerals:** Solid, inorganic, naturally occurring substances that have specific properties. Minerals are the building blocks of rocks.

**Pebbles:** Small stones worn smooth and round by the action of water or ice.

**Rocks:** Solid mixtures of minerals. There are three types of rocks – sedimentary, metamorphic and igneous.

**Weathering:** The slow breaking down of rocks on the earth's surface by rain, wind, heat, frost, and/or water

### TRY THIS

*Make your own sand by rubbing pieces of sandstone together over a piece of paper. Where else can you find sand? Try this again, but first place some glue on the paper. Rub the sandstone over the glue. How could you make a colored sand picture?*

*Ask the children how they could break a piece of sandstone. Try their suggestions. You can wrap the sandstone in an old towel or many paper towels and then use a hammer to smash the large rock. Make sure the children wear goggles for this activity.*

*You might want to play "Which rock is missing?" After the children are familiar with the rocks in the collection, have them cover their eyes, Remove one of the rocks. Can they guess which one is missing? How did they know?*



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