

# Rockin' Rocks

Grades 4– 5

*Educational Program Guide*

OAS

**5-PS1-3** | Science Practices 1, 2, 3, 4, 6, 7, 8 | Core Ideas ESS3 |

Crosscutting Concepts: Patterns, Structure and Function, Stability and Change

## Program Overview

The museum educator will lead the class in a brief discussion about geology and the differences between rocks and minerals. The class will then break into groups and visit three stations where they use observation and investigation skills to perform geological experiments. These experiments include classifying rocks and minerals, matching rocks and fossil fuels to their everyday uses, and forming and eroding their own sedimentary rock. Students will end the class with an experiment that tests the porosity of pumice, sandstone, and shale.

## Objectives

After participating in this program, students will be able to:

- Understand the difference between minerals and rocks;
- Understand the importance of natural resources and fossil fuels in our everyday lives;
- Compare and test the porosity of certain rocks, including pumice,

## Background

Geologists study the earth to predict potential major and minor changes in the earth and to understand the best uses of certain rocks and minerals. Many rocks, minerals, and fossil fuels are collected from the earth and produced into manufactured products that people use in everyday life. For example, once oil is drilled and collected it is then processed into different materials like plastic, nail polish, and ink.

## At the Museum

### *Hall of Ancient Life*

As your class visits this gallery, find the display of the cross-section of the earth at the entrance of the gallery. To the left is a case highlighting the variety of rocks and minerals found within the earth can they tell which are rocks and which are minerals?

Paleontology is the study of ancient life. Paleontologists use geology to help locate and study fossils, as fossils are often found in sedimentary rock. Do students remember how these fossils are formed?

## Vocabulary

<b>Geology</b>	the study of rocks, minerals and things that come from the earth
<b>Rock</b>	two or more minerals that have been combined using heat and pressure from the earth
<b>Mineral</b>	A solid crystal substance found in the earth
<b>Erosion</b>	is the process in which earth is worn away, often by water, wind, or ice.