



## Teacher's Pre- and Post-Program Visit Guide

<b>Program</b>	<b>Be a "Rock" Star</b>
<b>Grade Level</b>	Grades 3-6
<b>Time</b>	50 minutes
<b>Location</b>	Museum of Natural History & Science

### Program Objectives

- Students will understand how rocks are formed and the components of the Earth.
- Students will gain insight into rock identification.
- Students will build science inquiry skills.
- Students will identify and examine the properties of minerals used for mineral classification.

### Program Description

Take on the role of a geologist and follow the rock cycle by performing experiments to learn how rocks are formed. Discover the different properties of rocks and categorize them based on a set of criteria.

### Major Vocabulary and Concepts

igneous rocks	metamorphic rocks	sedimentary rocks
erosion	identification	plate tectonics
geologist	classification	rock cycle

### Ideas for pre-visit activities

- Have students sort a variety of rocks by visible characteristics such as color, texture, hard, soft, etc. Have each child or team record their work.
- Discuss the three major types of rocks.
- Review terms and concepts listed above in your classroom.
- Have students begin a rock collection.

### Ideas for post-visit activities

- Observe and identify the sedimentary, metamorphic, and igneous rock found on the walls and floors of Union Terminal, Cincinnati Museum Center's building.
- Have students research the rocks they collected. Students could share their discoveries with the class.
- Use any candy bar that is made in layers to demonstrate layering and how pressure works. Cut it straight and at angles compare the angles and layers to pictures; apply pressure and squash it. Eat! Make/eat Dirt Pudding or Rock Candy. Discuss how this demonstrates the properties of rocks.

### Standards

*Ohio:* Earth & Space Science, Scientific Inquiry, Scientific Ways of Knowing

*Kentucky:* Earth & Space Science, Scientific Inquiry, Applications & Connections

*Indiana: The Physical Setting, Scientific Thinking, Common Themes*

### **Related Exhibits and Features**

- Union Terminal provides some interesting studies. The front of the building, the fountain and the fountain steps are made from limestone. In some areas of the steps, if you look closely, you can see fossils due to the erosion of the limestone. The Rotunda has walls made of several kinds of marble (which is metamorphic limestone). In the peach marble you can see some well preserved fossils of *Ammonites* (Coiled Nautilus), a relative of squid and octopi. The Rotunda floor is made from ground up marble called terrazzo.
- View our OMNIMAX® film *Ring of Fire*.

### **Resources**

For Teachers:

*101 Questions & Answers About Planet Earth*, by Brian & Brenda Williams

*The Age of the Earth*, by John Thackray

For Students:

*Understanding & Collecting Rocks & Fossils*, An Usborne Book

*The Illustrated Encyclopedia of the Mineral Kingdom*, Hamlyn

*Rocks and Minerals*, by Janice Van Cleave

*The Best Book of Fossils, Rocks and Minerals*, by Chris Pellant