



## **ROCKS ROCK** **Junior Girl Scout Badge\*** **GEOFAIR**

### **1. BE A ROCK HOUND!**

Start a rock collection at the Cincinnati Gem and Mineral Show. Ask questions about the different kinds rock, minerals, and fossils.

### **2. GEO HUNT**

No activity at the show.

### **3. WHAT TYPE IS IT?**

Rocks fall into one of three categories. Describe the characteristics of the three types of rock.

Igneous\_\_\_\_\_

Metamorphic\_\_\_\_\_

Sedimentary\_\_\_\_\_

Which rocks in your collection are?

Sedimentary\_\_\_\_\_, \_\_\_\_\_

Metamorphic\_\_\_\_\_, \_\_\_\_\_

Igneous\_\_\_\_\_, \_\_\_\_\_

### **4. SOIL SENSE**

Make a list of the different particles that make up soil in this area.

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**\*Note: No merit badge officials will be available at the meeting.**

Where do the soil ingredients come from?

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Soil in other areas of the country may be different. What are some of these different elements?

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#### 5. "GEO" CAREERS

Talk with a geologist or a paleontologist about the different types of training or education they need to do their jobs. What other kind of careers relate to studies of the earth?

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Check out the booths of the:

University of Cincinnati – See the display on fossils

Miami University – Middletown—3 Types of Rocks, Ways to Identify,  
Definitions of Minerals and Geology

Cincinnati Mineral Society and Dry Dredgers at the Welcome Booth at the entrance

#### 6. WIPE OUT EROSION!

No activity at the Gem and Mineral Show.

#### 7. AROUND THE WORLD

Volcanic eruptions have had a tremendous impact on people who live near an active volcano.  
What causes volcanic eruptions and what happens during eruptions?

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**8. THE VIEW FROM ABOVE**

No activity at the Gem and Mineral Show

**9. FOSSIL FUN**

How are fossils made?

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Find examples of fossils that are:

Impressions \_\_\_\_\_

Molds \_\_\_\_\_

Cast \_\_\_\_\_

What is Ohio's state fossil? \_\_\_\_\_

What is Kentucky's state fossil? \_\_\_\_\_

Name other common fossils found in the area. \_\_\_\_\_

**10. WEATHERED OR NOT...**

No activity at the Gem and Mineral Show.

Girl Scout Troops should do at least one outside activity to earn the Rocks Rock Junior Girl Scout Badge.

For example: Requirement #2, girls should search for the geological clues in the community.

Requirement #8, girls look at satellite photos to locate landmarks. Requirement #10, girls look for weather clues on the land.

Date completed\_\_\_\_\_

Scout's signature\_\_\_\_\_

Leader's signature\_\_\_\_\_

**Questions based on MUM Geology Club tables; Miami University-Middletown**

- 1) List three types of jobs you could have as a geologist. \_\_\_\_\_
- 2) When trying to identify a mineral is color a good property to use?  
Why or why not? \_\_\_\_\_
- 3) How do we identify igneous rocks? \_\_\_\_\_
- 4) If magma cools below the surface of the Earth what type of rock forms? \_\_\_\_\_
- 5) How do we identify sedimentary rocks? \_\_\_\_\_
- 6) Name the two most common sedimentary rocks found in the Tri-state area. \_\_\_\_\_
- 7) Does a foliated metamorphic rock have “layers? If so how do they form? \_\_\_\_\_
- 8) When rocks weather what do they form? \_\_\_\_\_
- 9) List the following from largest to smallest grain size: Silt, clay, and sand. \_\_\_\_\_
- 10) How can you determine the amount of sand, silt and clay in the soil in your backyard?  
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**Questions about Fossils**

**Compiled by David L. Meyer, Professor of Geology, University of Cincinnati**

1 – What is a fossil? How do fossils form? Explain each of these kinds of fossils: body fossil, trace fossil, internal mold, external mold, cast. \_\_\_\_\_

2 – Why are fossils useful and significant? What is paleontology? \_\_\_\_\_

3 – Why is the Cincinnati area (Tristate) famous all over the world for its fossils and sedimentary rocks? How old are these fossils? Name some of the common fossils found in the area. \_\_\_\_\_

4 – What is the Cincinnati Arch? How did it form? Why is it important for understanding the geology of the region? \_\_\_\_\_

5 – Where can we go to find fossils in this area? \_\_\_\_\_