

## Hands On Earth Science Activity No. 18

### Rocks Around the Park

This activity can be used to help teach the following Topics and Content Statements for the 2010 Ohio Revised Science Standards and Model Curriculum:

Grade	Content Standard	Topic	Content Statement/Subtopic
Kindergarten	Physical Geology	Properties of Everyday Objects and Materials	Objects and materials can be sorted and described by their properties.
Grade 3	Earth and Space Science	Earth's Resources	Earth's nonliving resources have specific properties.
Grade 6	Earth and Space Science	Rocks, Minerals and Soil	Minerals have specific, quantifiable properties.
Grade 6	Earth and Space Science	Rocks, Minerals and Soil	Igneous, metamorphic and sedimentary rocks have unique characteristics that can be used for identification and/or classification.
Grade 6	Earth and Space Science	Rocks, Minerals and Soil	Rocks, minerals and soils have common and practical uses.
Grades 9–12	Environmental Science	Earth's Resources	<i>Multiple connections</i>
Grades 9–12	Physical Geology	Minerals	<i>Multiple connections</i>
Grades 9–12	Physical Geology	Igneous, Metamorphic and Sedimentary Rocks	<i>Multiple connections</i>
Grades 9–12	Physical Geology	Earth's Resources	<i>Multiple connections</i>



Division Of Geological Survey  
**HANDS ON**  
 EARTH SCIENCE

No. 18

**ROCKS AROUND THE PARK**

by Chuck Salmons, ODNR Division of Geological Survey

A tour of the *Geological Walk Through Time* is just the beginning of learning about Ohio's rocks and minerals. Your challenge is to use the map below to find and identify some of the rocks around the Natural Resources Park. Use what you've learned about rocks and minerals to fill in answers to the questions that follow. Use a magnifying glass, if available, to closely examine the rocks.

**1. Beneath the Pines:** Examine the stones in the flower bed beneath the pine trees. Describe the rocks in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

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Name the kind of rock you described: \_\_\_\_\_

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The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

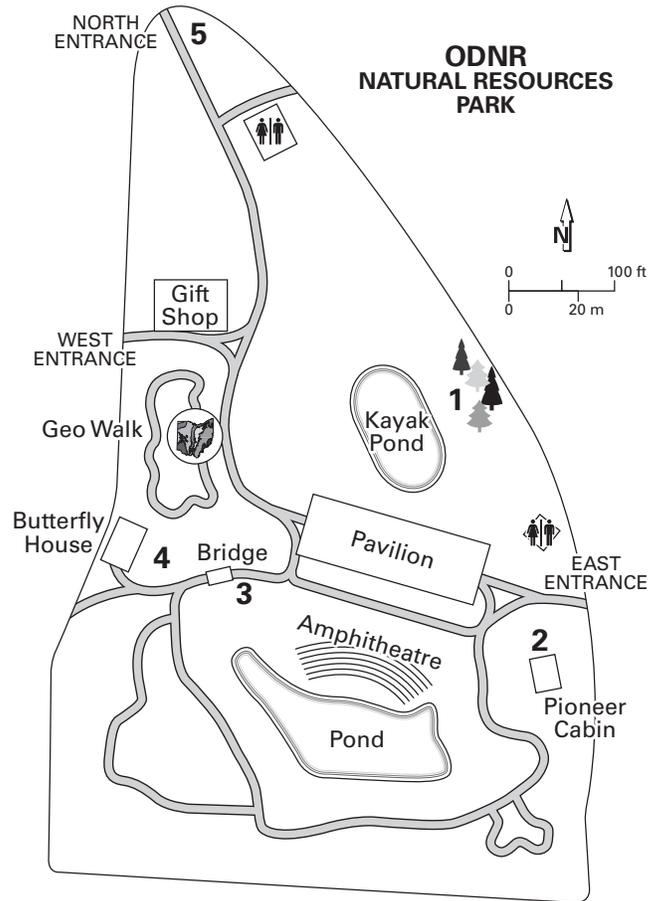
What might this type of rock be used for?

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**2. Pioneer Cabin:** Examine the stones at the base of the cabin. Describe the rock(s) in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

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Name the kind of rock you described: \_\_\_\_\_

The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

What might this type of rock be used for? \_\_\_\_\_

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**3. Covered Bridge:** Examine the large stone near the covered bridge. Describe it in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

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Name the kind of rock you described: \_\_\_\_\_

The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

What might this type of rock be used for? \_\_\_\_\_

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**4. Butterfly House:** Examine the stone near the butterfly house. Describe it in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

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Name the kind of rock you described: \_\_\_\_\_

The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

What might this type of rock be used for? \_\_\_\_\_

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**BONUS**

**5. North Entrance:** Examine the two large stones in the flower bed. Describe them in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils. What do you notice about their shape?

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Name the kind of rock you described: \_\_\_\_\_

The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

What might this type of rock be used for? \_\_\_\_\_

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Division Of Geological Survey  
**HANDS ON**  
 EARTH SCIENCE

**No. 18**  
**ANSWER**  
**KEY**

**ROCKS AROUND THE PARK**

by Chuck Salmons, ODNR Division of Geological Survey

A tour of the *Geological Walk Through Time* is just the beginning of learning about Ohio's rocks and minerals. Your challenge is to use the map below to find and identify some of the rocks around the Natural Resources Park. Use what you've learned about rocks and minerals to fill in answers to the questions that follow. Use a magnifying glass, if available, to closely examine the rocks.

**1. Beneath the Pines:** Examine the stones in the flower bed beneath the pine trees. Describe the rocks in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

**Students should describe the gray to white color, rough texture, and the abundant fossils in the stones. Fossils include brachiopods and corals. Some students may observe small crystals (dolomite) in the stones.**

Name the kind of rock you described:

**Limestone**

The kind of rock is **sedimentary** / igneous / metamorphic (circle one).

What might this type of rock be used for?

**Building stone, construction aggregate, Portland cement concrete, making lime, and as an ingredient in foods and in toothpaste.**

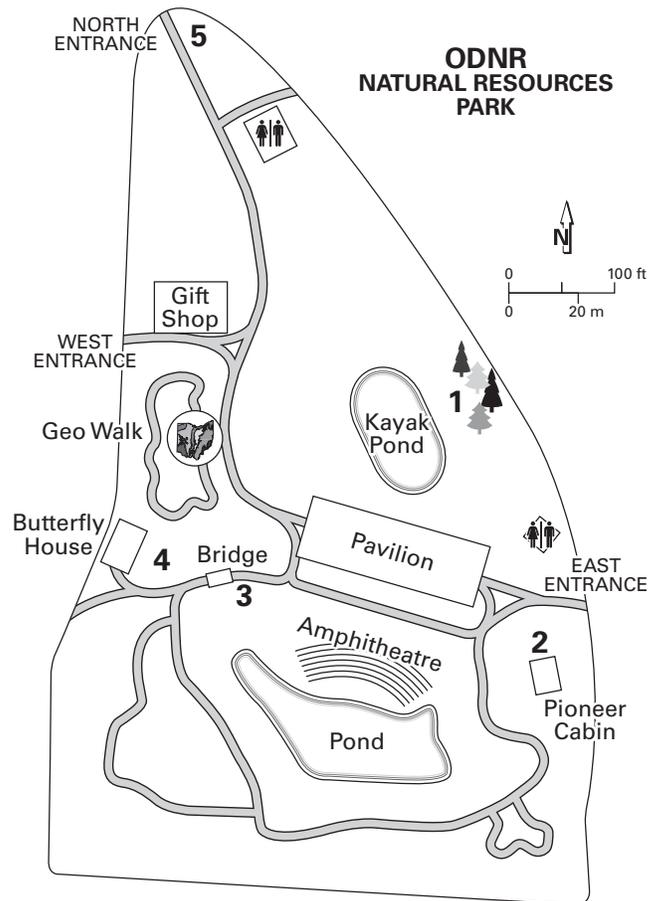
**2. Pioneer Cabin:** Examine the stones at the base of the cabin. Describe the rock(s) in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

**Students may describe the texture as slightly rough and note the buff or brown color of the stones. They should also observe the very small, fine-grained and tightly bound crystals of the stone (i.e., silica), as well as the absence of fossils.**

Name the kind of rock you described: **Sandstone**

The kind of rock is **sedimentary** / igneous / metamorphic (circle one).

What might this type of rock be used for? **Building stone, glass making, industrial sand, building and road construction, and aggregate.**



**3. Covered Bridge:** Examine the large stone near the covered bridge. Describe it in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

**Students may describe the texture as mostly smooth and note the predominant pink color as well as the black and dark-brown specks. They may also note the very small, finely-grained crystals in the stone and the absence of fossils.**

Name the kind of rock you described: **Granite**

The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

What might this type of rock be used for?

**Landscaping/decorative purposes (monuments), erosion control (rip rap).**

**4. Butterfly House:** Examine the stone near the butterfly house. Describe it in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils.

**Students may describe the texture as very rough or coarse and note the dark gray color of the stone as well as the medium-sized white quartz nodules. They should note the contrast of the small, fine-grained and tightly bound sand (silica) crystals and the larger quartz nodules. Students may also note absence of fossils.**

Name the kind of rock you described: **Conglomerate**

The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

What might this type of rock be used for?

**Building stone, glass making, industrial sand, building and road construction, and aggregate.**

### **BONUS**

**5. North Entrance:** Examine the two large stones in the flower bed. Describe them in terms of color, texture (e.g., rough, smooth), and types of minerals, crystals and/or fossils. What do you notice about their shape?

**Students may describe the texture as more smooth than rough and note the orange-brown color as well as rust stains in the stone. They should note the very round shape of the stones and may also observe horizontal ribbing that indicates the layering of sediments. Finally, they may describe the rare presence of very finely-grained crystals and the absence of fossils.**

Name the kind of rock you described: **Shale concretion**

The kind of rock is **sedimentary** / **igneous** / **metamorphic** (circle one).

What might this type of rock be used for?

**Landscaping/decorative purposes.**