

## **Rockin' Scavenger Hunt**

### **Museum of Geosciences at Virginia Tech**

This scavenger hunt is designed for you to discover some things about minerals and fossils and to find some of the treasures in the Geosciences Museum!

*Your mission:* Working with your team, to find the answers to as many of the following questions as possible, without copying answers from any other teams. You may begin at *any Roman numeral location*. You do NOT have to start at question #1, but you should do the questions in a Roman numeral section in the order they are listed.

*Tip:* Follow the directions given to each stop. "Right," "left," "front" and "back" refer to those locations from the door of the museum where you came in.

## Minerals

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I. Look in the *mineral* cases in the middle of the room at your left and the mineral displays along the wall to your left.

1. Choose four that you like, write down the name of the mineral, and describe what it looks like (for example: shiny, dull, blocky, rounded, flat, bumpy, how many sides, what color, etc.)
  - a.
  - b.
  - c.
  - d.

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II. Now look at the *Virginia minerals* display on the back right wall.

1. Name 3 minerals found in Virginia, including at least one from your area.
2. Find the mineral psilomelane. Describe it.

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III. Looking around in the *mineral display* area again, toward the front of the museum, find:

a. the Virginia state rock (look under the clock) \_\_\_\_\_

b. in the gem exhibit on the front wall, one type of mineral that can be cut into a gem (look at the cut gem and the natural stone) \_\_\_\_\_

c. the chemical formula for graphite (the letter or letters right below the name on the label) \_\_\_\_\_ What is it used for?

the chemical formula for diamond (the letter or letters right below the name on the label) \_\_\_\_\_ What is it used for?

Bonus: How can diamond and graphite have the same chemical formula and be so different? Hint: Look at the pyramid of styrofoam balls. It is a molecular model of diamond.

d. a sample of gold and a sample of fool's gold (pyrite). What differences do you observe between them?

e. halite. What is its chemical formula? \_\_\_\_\_  
What is its common name? \_\_\_\_\_ What colors of halite are here?

f. 2 minerals found in the southern hemisphere (look at the labels!)

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\_\_\_\_\_

# Fossils

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IV. *Fossils of Virginia* display. Find it at the back of the museum on the left-hand wall.

1. a. Look for the map of Virginia that shows the locations of rocks of different ages in the state. Find your home area on the map. What color or colors do you see there?
  - b. Look at the nearby "geologic time" chart. Going by the colors on the map you have already observed, how old are the rocks in your area? (note that "m.y." stands for million years) What time period or periods are they from?
  - c. Look for the fossils that are labeled with cards of the same color as your area on the map. What are some fossils found in your area? How old are they?
  
2. a. From what geologic era and time period is the jawbone from the ground sloth? (look back at the "geologic time" chart)
  - b. What famous Virginian is this species of ground sloth named after? Why?
  
3. a. Where were the trilobite fossils found?
  - b. What time period did they live in? How old are they? (again, look back at the "geologic time" chart)
  
4. What are some other fossils are found in Virginia? Name at least one from each time era (fossils you haven't listed for #2, #3, or #4).
  - a. Paleozoic (western VA) --
  - b. Mesozoic (central VA) --
  - c. Cenozoic (eastern VA) --

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V. In the center of the museum is another *glass case with more fossils*. Go there.

1. Find the fossils of many small fish. Why do you think they were all buried together?
2. Find the tusk in this display. What animal does it come from and what was the animal like?
3. Look at the crinoid fossil. What is a common name given to crinoids?

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VI. Find the large slab of rock by the front door with the *dinosaur tracks* in it.

1.
  - a. How many tracks can you actually see?
  - b. Do you think the tracks were made by the same kind of dinosaur as the one on exhibit here in the museum? Why or why not?
  - c. Bonus: Look at the map above the footprints which shows where these footprints were found. Why is this one of the few places in Virginia where dinosaur fossil remains can be found?  
Hint: Look at the geologic map and the geologic time chart in the [Virginia Fossils](#) display that you looked at in question #3.
2. Memory question: Of the three main rock types which you have been studying, which rock type are fossils found in? Why?

# Volcanoes

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VII. Now look at the exhibit on the back wall of the museum titled *Volcanoes of Virginia*.

1. Name two rocks in this exhibit.
  
2. a. Of the three main rock types you have studied, which type are all of the rocks in this exhibit?  
  
b. In a general way, what do these rocks tell you about geologic history in Virginia?  
  
c. Why are there no active volcanoes in Virginia now? Hint: Look at the globe to the left which shows plate tectonics and volcanic hot spots.
  
3. If rhyolite lava is found in the Mt. Rogers area of Virginia, what do scientists believe is true about the area geologically? In other words, what once happened there?
  
4. What is migmatite? Describe it.
  
5. Which of these minerals would you expect Native Americans to have used to make arrowheads?