***Rocks and Minerals Webquest***



**Directions:** Answer the following questions using the websites provided for each question (thetitles are hotlinks).

 [**Rock Cycl**](http://www.cotf.edu/ete/modules/msese/earthsysflr/rock.html)**e**

1. What are the three main types of rocks?

Igneous Metamorphic Sedimentary

1. How does a sedimentary rock turn into a metamorphic rock?

Heat and pressure

1. How does an igneous rock turn into a metamorphic rock?

Heat and pressure

1. How do metamorphic rocks change into sedimentary rocks?

Weather and erosion

1. How do igneous rocks change into sedimentary rocks?

Weather and erosion

1. What is the beginning of the rock cycle? The end?

Neither there is no beginning nor there is an end

 [**View this Rock Cycle animatio**](http://www.classzone.com/books/earth_science/terc/content/investigations/es0602/es0602page01.cfm)**n**

1. Quick cooling forms many small what?

Air pockets

1. When you look at the desert monuments, what eroded away?

Sedimentary rocks

1. The microscopic view of sandstone contains what two components?

Cement and grains of sand

1. What two things are needed to turn igneous rock into metamorphic rock?

Heat and pressure

 [**Rock**](http://www.learner.org/interactives/rockcycle/)**s**

1. List ***and*** define the 6 key characteristics that can help you identify rocks within the three main classes. a.

b. Fossils

c. Gas bubbles

d. Glassy surface

e. Ribbon like surface

f. Sand or pebbles

 [**Rock Identification Ke**](http://www.minsocam.org/msa/collectors_corner/id/rock_key.htm)**y**

1. For igneous rock, when magma cools slowly the crystals…

Are large enough to see

1. For igneous rock, when magma cools quickly, the crystals…

Are very small and not easily seen

1. Of the types of igneous rock formed underground, which one is most familiar?

Granite

1. When looking at sedimentary particle size, which material type has the largest particles and which has the smallest particles?

Sand has the largest and clay has the smallest

1. Which metamorphic rock forms under the highest temperature and highest pressure?

Gneiss

**[Mystery Rock](http://www.windows.ucar.edu/tour/link%3D/earth/geology/sed_intro.html)s**

1. How much of earth’s surface is made of sedimentary rock?

3/4

1. Give 4 examples of sediment that might eventually become sedimentary rock.

1.)

2.)

3.)

4.)

1. What caused the appearance in the sedimentary rock in picture B?

Ripples in the beach sand over 200 million years ago in the Triassic period

 [**Mohs Scal**](http://www.allaboutgemstones.com/mohs_hardness_scale.html)**e**

1. What is Mohs Scale used for?

To test hardness

1. What mineral is a 10 on Mohs Scale?

The hardest possible mineral

1. Give an example of a mineral with a hardness of 7 (according to Mohs Scale). Tell me about that mineral.

Quartz

1. If a mineral can scratch a penny, what number is it on Mohs Scale?

Gypsum

 [**Strea**](http://academic.brooklyn.cuny.edu/geology/grocha/mineral/streak.html)**k**

1. Sometimes the color and the streak of a mineral are very different. Which of the examples shows a difference between color and streak?

Smokey Quarts is gray but doesn’t leave a streak

1. Show your work for calculating the density of block 1 and 2.
2. Submit your answers to verify your correctness. If you are incorrect, correct your answers and resubmit.

 [**Sample**](http://www.youtube.com/watch?v=egEGaBXG3Kg)**s**

**Mount Nyiragongo** is an active volcano in central Africa. Not much is known about how long the volcano hasbeen erupting, but since 1882, it has erupted at least 34 times (once every 4 years), including many periods where activity was continuous for years at a time, often in the form of a churning lava lake in the crater.

27. Watch the video. Would you get this sample? Why or why not?

No way to dangerous! The lava is the fastest moving lava in the world, even when the lake is calm there’s really nothing to protect you from the dangerous lava, the risk is was to high, so no I would not get a sample, my life is more important than that sample.

|  |  |  |  |
| --- | --- | --- | --- |
| * **Types of Igneous**
* **Rocks**
 | * **Formation**
 | * **Factors**
 | * **Composition**
 |
| * Extrusive
 | * Cools quickly from lava on Earth’s surface
 | * Exposure to air and moisture
 | * Calcium core surrounded by crystals
 |
| * Intrusive
 | * Cools slowly from magma below Earth’s surface
 | * Gradual temperature change; no environmental impact
 | * High silica content, salt-rich
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