***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
2. How does a sedimentary rock turn into a metamorphic rock? High heat and pressure
3. How does an igneous rock turn into a metamorphic rock? High heat and pressure
4. How do metamorphic rocks change into sedimentary rocks? Weathering to Erosion
5. How do igneous rocks change into sedimentary rocks? Weathering and Erosion, compaction and cementation
6. What is the beginning of the rock cycle? The end? It’s a cycle without a beginning or 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? crystals
2. When you look at the desert monuments, what eroded away? Sandstone surrounding the monument in Utah
3. The microscopic view of sandstone contains what two components? Contain sand grains and cement
4. 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. crystals- small flat surfaces

b. fossils-imprints of leaves, shells, or other items

c. gas bubbles- holes in rock

d. glassy surface- shiny and smooth surface

e. Ribbonlike layers- straight or wavy stripes of color

f. sand or pebbles—individual stones, pebbles, or sand

 [**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
2. For igneous rock, when magma cools quickly, the crystals… small black glass
3. Of the types of igneous rock formed underground, which one is most familiar? Granite
4. When looking at sedimentary particle size, which material type has the largest particles and which has the smallest particles? Sand is largest, clay is smallest
5. 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**
6. How much of earth’s surface is made of sedimentary rock? Three-quarters
7. Give 4 examples of sediment that might eventually become sedimentary rock. Sand on the beach, mud in a lake, pebbles in a river, dust on furniture
8. What caused the appearance in the sedimentary rock in picture B? ripples in the beach sand

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

1. What is Mohs Scale used for? Test the hardness of a material
2. What mineral is a 10 on Mohs Scale? diamond
3. Give an example of a mineral with a hardness of 7 (according to Mohs Scale). Tell me about that mineral. Quartz, has a hexagonal crystal structure and is found in the crust
4. If a mineral can scratch a penny, what number is it on Mohs Scale? 4

 [**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?
2. Show your work for calculating the density of block 1 and 2.

m/v=mass

1. 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.

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

YES. It looks interesting and adventurous. With the spotter, I feel the sampler wasn’t in too much danger.