***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, Sedimentary, and Metamorphic.

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

Sedimentary rock turns into metamorphic rock through heat and pressure.

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

Igneous rock turns into metamorphic rock through heat and pressure.

1. How do metamorphic rocks change into sedimentary rocks?

Metamorphic rock turns into sedimentary rock through weathering, erosion, and compaction and cementation.

1. How do igneous rocks change into sedimentary rocks?

Igneous rocks change into sedimentary rocks through weathering, erosion, and compaction and cementation.

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

The beginning of the rock cycle is from the heat and pressure from inside the earth, and there is no end to its cycle.

 [**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?

Cooling quickly forms many small crystals.

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

Sandstone eroded away from the desert monuments.

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

Sand grain and cement.

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. Crystals: Small, flat surfaces that are shiny or sparkly, like tiny mirrors.

b. Fossils: Imprints of leaves, shells, insects, or other items in the rock.

c. Gas Bubbles: Holes in the rock

d. Glassy Surface: A shiny and smooth surface, colored liked glass.

e. Ribbonlike layers: Straight or wavy stripes of different colors in rock.

f. Sand or Pebbles: Individual stone, pebbles, or sand grains visible in the rock.

 [**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 you would need a magnifier to see them.

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

Granite is the most familiar.

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

Sand has the largest particles and clay has the smallest.

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

Gneiss is formed under the highest temperature and pressure.

[**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?

About three fourths of earth’s surface is made of sedimentary rock.

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

Four examples of possible sedimentary rock are dust, mud, plankton, and pebbles.

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

Ripples in beach sand that eventually became sedimentary rock caused the appearance.

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

1. What is Mohs Scale used for?

This Mohs Scale tests the resistance of a [mineral](http://geology.com/minerals/what-is-a-mineral.shtml) to being scratched by ten reference minerals.

1. What mineral is a 10 on Mohs Scale?

A diamond is a ten on the Mohs Scale.

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

Quartz is a mineral with a hardness of seven. Is one part silicon and two parts oxygen, it is the most abundant mineral on the earth’s surface and is very resistant to chemical and mechanical weathering.

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

Less than three on the Mohs.

 [**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?

Specular Hematite shows a difference between color and streak.

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

The weight of the block is 155.8 grams and the difference in the graduated cylinder level before and after placing the rock inside was 20 ml. Now I divided 155.8 by 20, so 155.8/20 and got 7.79 g/cc for the density.

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.

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

This video is blocked.