

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# NAME THAT ROCK CATEGORY

As you know, we can name three categories of rock...and I do not mean Goth, Punk, and Heavy Metal! Igneous, Sedimentary, and Metamorphic rocks are all formed in different ways and, as a result, have different characteristics.

Below are three different explanations of a rock category. Individually read the description and state what category you think is being described. Then provide a detailed explanation as to why you think it is that category. Use the characteristics in the explanation along with the information you know about how the different rocks are formed to justify your opinion. You may reference your previous work.

Once you have completed all three explanations find a partner, who is also done, to sit with and discuss your thoughts. If they are the same, see if you have different details. If your thoughts are different, see if you can rationally figure out who is correct.

Category #1: Sedimentary

These rocks often have flat layers. They are composed of pieces that are roughly the same size, with pores between these pieces that are commonly filled with smaller grains. This type of rock sometimes contains fossils.

Flat Layers - Sedimentary rocks are formed from small pieces of rock that rest at the bottom of water  
these small pieces build up in layers.

Same Size - The same size pieces of rock would tend to settle in the same area.

Pores - The pieces of rock are not perfectly fitted together, so they leave small holes.

Filled With Smaller Grains - When the pores are formed, other pieces of rock can get stuck inside.

Fossils - As marine animals die, they sink to the bottom and can get stuck between the pieces of rock.

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Category #2: Metamorphic

These rocks may have alternating bands of light and dark minerals, or may be composed predominantly of only one mineral. This type of rock rarely contains fossils.

Alternating Bands - Metamorphic rocks are formed by squeezing other rocks, together over a long time  
these bands represent different parts of the rocks that have been squished together

Mostly One Mineral - As minerals get squeezed over time, pieces of other minerals can be joined with  
them, when a second mineral is added, the substance is now a rock.

No Fossil - Because these rocks form over a very long time, and fossils that would have been there are  
filled with more rock as the rock is squeezed together.

Category #3: Igneous

These rocks generally have no layers. They have variable textures and do not contain fossils.

No Layers - Igneous rocks are formed when magma cools, which happens too quickly to form layers.

Texture - Some magma pools then cools, some is moving when it cools and some is flying through the  
air as it cools. These different situations cause many different textures in the rocks.

No Fossils - The formation of igneous rocks is too quick to form a fossil.

