NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

THE PRESSURE IS ON - METAMORPHIC ROCKS

Read pages 160- 162 in *Inside Earth* and answer the following questions.

1. Sedimentary rocks are formed on the surface of the Earth. After they are created what three changes can they go through?

a. They can stay on the surface and break down.

b. They can be buried and subjected to heat and pressure

c. They can melt.

2. Which type of rock can become a metamorphic rock? Any rock can become metamorphosed.

3. What four physical characteristics about a rock can be changed as it is metamorphosed?

a. appearance

b. texture

c. crystal structure

d. mineral content

4. What are the two factors that cause metamorphism?

Heat and Pressure

5. How do each of those variables change the rock?

Heat -changes the size and shape of the mineral grains.

Pressure - changes the alignment of the minerals so that they are in bands.

6. How do geologists classify metamorphic rocks?

Classification is based on the alignment of the crystal grains.

7. What are the two major types of metamorphic rocks? What do they look like?

Foliated - crystals are aligned in parallel bands.

Nonfoliated - the rock is massive with no real arrangement.

Your book only listed three rocks and how they are metamorphosed. I've listed all of the ones you need to know. Do a little snooping and find the rest. Shale also goes through many other changes. Try to find them.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rock Name | Becomes | Becomes | Becomes | Becomes |
| Granite | Gneiss | X | X | X |
| Sandstone | Quartzite | X | X | X |
| Shale | Slate |  |  |  |
| Limestone | Marble | X | X | X |

So what about all of the other rocks? What do you think they call them when they are changed?

In most cases it is called "metamorphosed (name of the rock).