Rocks, Rocks, Rocks

Watch the video "Types of Rock" and list 2 characteristics of each type of rock mentioned.

Igneous

1. _____

2. _____

Sedimentary

1. _____

2. _____

Metamorphic

1. _____

2. _____

There are many different types of rocks on the earth. Rocks are naturally occurring solid materials made of one or more minerals. Most of these minerals are composed of various combinations of eight elements. These elements are oxygen, silicon, aluminum, iron, calcium, sodium, potassium and magnesium. They are the most abundant elements on the earth.

A major difference among rocks is the manner in which they were formed. There are three ways rocks can be made. Rocks that form under water from particles of broken up rocks cemented together through pressure are called sedimentary rocks. Rocks that form from melted rock either under ground or in volcanoes are called igneous rocks. Rocks that have been changed due to heat and pressure in the earth's crust are called metamorphic rocks.

Identifying rocks is not easy. The best way to identify a rock is to see it in context - where did it come from? But most of the time the rock we want to identify is out of context and we have to use a few clues to identify it.

Sedimentary rocks typically have sand or pebbles stuck together and they are the only type of rock that may have fossils.

Metamorphic rocks have shiny crystals or ribbon like layers where the minerals in them have reoriented themselves while being subjected to heat and pressure.

Igneous Rocks may have a shiny-glass like appearance or may have tiny holes from the bubbles that have escaped during cooling.

Materials: Rock Science Kit; Rocks, Rocks, Rocks Placema

1. Each row of the rock kit is the same type of rock. Let's se if we can identify what's in each row.
2. Look for a rock with a shiny-glass like appearance. This rock is obsidian and it is a igneous rock.

What number is it? _____ So, this first row is the igneous row. Try to match each of the rocks in this row with the row of igneous rocks on the Placemat. There will be one that doesn't match.

What number is it? _____ This rock is called rhyolite.

What characteristics of igneous rocks do these samples show?_____

3. Look at number 9 in the second row. What does its characteristics tell you about the rock?

_____

4. This rock is conglomerate, which is a sedimentary rock. So, the second row is sedimentary rocks. Try to match each of the rocks in this row with the row of sedimentary rocks on the Placemat. There will be one that doesn't match.

Which number is it? _____ This rock is called Calcareous Tufa. It is formed by evaporation in lakes such as Mono Lake in California.

What characteristics of sedimentary rocks do these samples show?

_____

5. The last row in the box has the metamorphic samples. Can you find the three rocks in this row that have crystals?
Number 12, which is marble, usually has great crystals.

Try to match each of the rocks in this row with the row of metamorphic rocks on the Placemat. There will be one that doesn't match.

Which number is it? _____. This rock is called schist. It was once shale.

What characteristics of metamorphic rocks do these samples show?

_____

Using what you learned from the lesson and the video complete the following questions.

Sentence Stems/Questions:

1. Sedimentary rocks are formed by _____

_____

2. Examples of sedimentary rock are _____

_____

3. Igneous rocks are formed by _____

_____

4. Examples of igneous rock are _____

_____

5. Metamorphic rocks are formed by _____

_____

6. Examples of metamorphic rock are _____

_____

7. What differences did you observe between the sedimentary rocks and the igneous rocks?

_____

_____

Name _____ period _____

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1. Sedimentary rock contains
   A. broken up houses
   B. broken up cars
   C. broken up rocks cemented together
   D. broken up people

2. Metamorphic rock can be made from
   A. houses
   B. cars
   C. any other type of rock
   D. people

3. Igneous rock has to be formed by
   A. pressure
   B. people
   D. melting
   D. freezing

Conclusion: (formed, volcanoes, heat, three, minerals, pressure)

A difference among rocks is the manner in which they were _____. There are _____ways rocks can be formed. Igneous rocks are formed in _____. Metamorphic rock is formed by _____ and pressure. Sedimentary rock is formed by _____.

Name _____ period _____

EXIT TICKET

Rocks, Rocks, Rocks

Conclusion: (formed, volcanoes, heat, three, minerals, pressure)

A difference among rocks is the manner in which they were _____. There are _____ways rocks can be formed

Igneous rocks are formed in _____.

Metamorphic rock is formed by _____ and pressure.

Sedimentary rock is formed by _____.

1. Sedimentary rock contains
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   A. houses
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3. Igneous rock has to be formed by
   A. pressure
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