

# Earth Science 11

## Unit 3 – Minerals and Rocks

### Day 4 – The Rock Cycle

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

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

Block: \_\_\_\_\_

Why do we study rocks?

- They contain clues about the environment
- They tell a story about the events on Earth

What are rocks?

- Any solid mass of mineral or mineral-like matter that occurs naturally as part of our planet

The three types?

- 1) Igneous rocks
- 2) Sedimentary rocks
- 3) Metamorphic rocks

The rock cycle: \_\_\_\_\_

Interactions among earth's water, air, land, and

living things can cause rocks to change from one

type to another. This continuous process causes

the rocks to change and make up the rock cycle.

Making Igneous Rocks: \_\_\_\_\_

Magma is molten material that forms deep beneath Earth's surface.

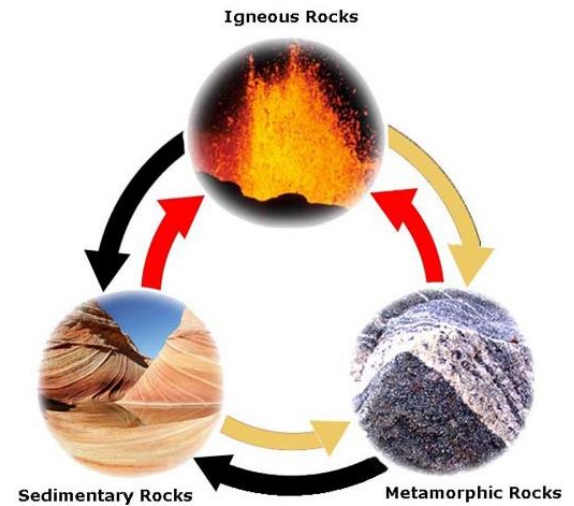
When magma cools and hardens beneath the surface or as the result of a volcanic eruption, igneous rock forms.

Then what.... Igneous Rocks on the Surface: \_\_\_\_\_

When igneous rock formed within the earth's surface is brought to the surface, weathering will occur.

What's weathering?

A process in which rocks are physically and chemically broken down by water, air, and living



**Making Sedimentary Rocks:** These weathered pieces of earth's materials are sediments.

Sediments are often moved by water, gravity, glaciers, or wind.

Eventually, sediments are compacted and cemented to form sedimentary rocks.

**Making Metamorphic Rocks:** If the sedimentary rocks become buried deep within  
Earth, they will be subjected to increase in pressure  
and/or temperature.

Under extreme pressure and temperature conditions, sedimentary rock will change i  
nto metamorphic rock

**Completing the Cycle:** If metamorphic rocks are subjected to additional pressure changes or to higher  
temperatures, they may melt to form magma.

The magma will eventually crystallize to form igneous rock once again.

BUT...

Other paths are just as likely to be taken  
as igneous rock goes through the rock cycle.  
The arrows show a few of these alternate paths.

