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| **Types of Rocks** |
| **The Rock Cycle*** A continuous process which causes rock to change \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 The 3 types of rocks are \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ rocks form from the \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_ rocks form from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ within \_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rocks form from either the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a rock or putting it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**MAGMA VS. LAVA*** \_\_\_\_\_\_\_\_\_\_ is the name of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that is \_\_\_\_\_\_\_ the earth’s \_\_\_\_\_\_\_\_\_\_\_
	+ It is found in the upper \_\_\_\_\_\_\_\_\_\_ and lower \_\_\_\_\_\_\_\_\_ layers of the earth
* \_\_\_\_\_\_\_\_\_\_\_\_ is the name of \_\_\_\_\_\_\_\_\_\_\_\_\_ that is \_\_\_\_\_\_\_\_\_\_ the earth’s \_\_\_\_\_\_\_\_\_\_\_\_

**Why are magma & lava so hot?*** + Scientists theorize that the heat is \_\_\_\_\_\_\_\_\_\_\_\_\_ from earth’s molten \_\_\_\_\_\_\_\_\_\_\_\_
	+ Also, heat generated from the decay of \_\_\_\_\_\_\_\_\_\_ elements are sources of earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How do rocks change?*** Igneous—when molten material (*magma*) from deep \_\_\_\_\_\_\_\_\_\_ Earth; or when (*lava*) molten material on Earth’s surface cools—igneous rocks are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Molten material cools—igneous rock forms
* The igneous rocks undergo \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are broken into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The sediments are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and carried away where they are deposited in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Over time the sediments continue to build up and the pressure from the overlying sediments and gravity from below causes heat to build; the rocks begin to move as hot plastic and therefore bend, stretch, the minerals in the rock may grow in size or rearrange within the rock; the rock cools and becomes a metamorphic rock specimen.
* The process continues, but does not have to proceed in this exact order.

**IGNEOUS ROCKS*** Igneous comes from the Latin word “ignis” = “\_\_\_”
* Forms from \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_
	+ Faster cooling = \_\_\_\_\_\_\_\_\_\_\_\_\_ crystals
	+ Slower cooling = \_\_\_\_\_\_\_\_\_\_\_\_ crystals
* Two types: \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_ forms \_\_\_\_\_\_\_\_\_\_ the Earth (or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ forms \_\_\_\_\_\_\_\_\_\_ the Earth
* Typically found in the \_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_ plate boundaries and in \_\_\_\_\_\_\_\_\_\_ plates

**SEDIMENTARY ROCKS*** Form from \_\_\_\_\_\_\_\_\_ material in \_\_\_\_\_\_\_\_\_\_\_\_\_ through the process of \_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_: the \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_ processes that transform sediments into sedimentary rocks
	+ Begins with \_\_\_\_\_\_\_\_\_\_\_\_
* When sediments are buried \_\_\_\_\_\_\_ deep, they will be able to start \_\_\_\_\_\_\_\_\_\_

 and \_\_\_\_\_\_\_\_\_\_ changes to cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_**“settling” or from Latin *sedimentum**** Particles of organic and inorganic material are carried from one place to the next where they are deposited and build up over time.
* Water reacts with the minerals in the sediments and “cements” the pieces together to form a new rock. Particles can be so tightly pressed together that they are “compacted” into a specific rock.
* Fossils are most often found in sedimentary rock.
* Types: \_\_\_\_\_\_\_\_ (coarse-grained, medium grained, and fine-grained), \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_
* Found \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SEDIMENTARY ROCK TYPES*** \_\_\_\_\_\_\_\_\_: grain size determines this type
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_: has gravel-sized sediments
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_: has sand-sized sediments
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_: has silt-sized sediments
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_: during chemical weathering, minerals get dissolved and carried into lakes and oceans; as water evaporates, minerals left behind become rocks
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_: form when water evaporates and leaves minerals
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_: remains of once-living things
	+ Fossils form this type of rock

**METAMORPHIC ROCKS*** “to change form”
* May change drastically from the original *parent* rock.
* Change is due to intense heat and pressure; causes rocks to fold, bend, twist.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_: change in the \_\_\_\_\_\_\_\_\_ of rock by \_\_\_\_\_\_\_\_\_ agencies, such as \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_* So, that means a metamorphic rock is one that has been heated or had pressure put on it
* Where would a rock be heated or had pressure put on it?
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		- This would be known as \_\_\_\_\_\_\_ metamorphism
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		- This would be known as \_\_\_\_\_\_\_ metamorphism

**Classification of Metamorphic Rocks**Foliated and Non-foliated* Foliated-rocks become more compacted and more dense; (Ex. Slate: minerals align in a similar direction; minerals also recrystallize and form bands (Ex. Gneiss: rocks appear to have a layered or banded appearance)
* Non-foliated—no banded texture, most only contain one mineral (Ex. Calcite), crystals combine to form larger crystals (Ex. Marble)

**Erosion and Deposition*** Agents of Erosion (wind, water, ice, and gravity)
* Loss of energy of motion, sediments are dropped (deposited) by that agent
* Sediments are deposited by size; larger sediments are generally on the bottom

**Compaction and Cementation*** Lithification—turned into stone
* Compaction—squeezing or pushing together of sediments with force
* Cementation—dissolved minerals are deposited in tiny spaces between the sediments creating a glue that binds the sediments together
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