**Lesson Plan 3: Igneous, Sedimentary, and Metamorphic Rocks**

**Materials:**

**Goals:**

**Assessment Opportunities**: Adding to ‘Want to know’ and ‘Learned Column’ in K/W/L chart,

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| **ACTIVITY** | **FOCUS (Key teaching points monitoring assessment criteria)** | **STRATEGY** | **TIME** | **STANDARDS** |
| BEGIN | -Review differences in rocks to transition into how the three different rock types form. -Introduce the three different types of rocks | -Revisit rock characteristics chart from Lesson 1. Rocks are different because of:1. Ingredients (minerals)2. Method of rock formation-There are three different types of rocks:1. Igneous rocks
2. Sedimentary rocks
3. Metamorphic rocks

These three different types of rocks form in three different ways. | 5 minutes |  |
| MIDDLE(MAIN PART) | -Explain the different methods of rock formation and how these make the three different types of rocks -Introduce Igneous Rocks-Introduce Sedimentary Rocks-Introduce Metamorphic Rocks | -Read *Let’s Go Rock Collecting* by Roma Gans (1997)-Discuss each rock type. (After the discussion is completed, you may want to make a chart of rock type, formation, and characteristics to display in the room with or without your students)A.) Igneous RocksFormation: Requires heat that melts (Remember igneous means made by heat!) \* Hot magma in the earth can cool slowly to form rocks like granite (large crystals) \*Hot magma can explode out of the ground in volcanos and make rocks like basalt and rhyolite (small crystals)Characterisitics-has crystals: large and small- Some crystals so small you can’t see B.)Sedimentary Rocks Formation: Requires Sediments that compact over time \*Can form from sediments the size of sand, mud, pebbles that settle in oceans, lakes, or rivers (sandstone, mudstone, boulders) \*Can form from shell material and calcite on the ocean floor (limestone)Characteristics:-Has grains that can range from mud to pebble size-Can feel smooth or rough depending on the grain size-May have fossils C.) Metamorphic Rocks: Formation: Requires heat that does not melt and pressure \*Forms from igneous or sedimentary rocks that have been exposed to heat and pressureCharacteristics:-Can have wavy lines -Can have crystals that may have separated into layers | 30 minutes |  |
| CONCLUSIONEND |  -Summarize new information from the day | -Add to K/W/L chart | 5 minutes |  |