**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 Rocks  Formation: 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 pressure  Characteristics:  -Can have wavy lines  -Can have crystals that may have separated into layers | 30 minutes |  |
| CONCLUSION  END | -Summarize new information from the day | -Add to K/W/L chart | 5 minutes |  |