**Rock Cycle Crayon Lab:**

**Name: Date: Period:**

**Objective:**

By the end of class, students will be able to simulate the rock cycle and its processes using crayon shavings.

**Materials:**

* 4 different colors of crayons
* Pennies
* Desk covering
* Aluminum foil
* Hot plate
* Text book
* Cup of Ice Water
* Cup of Warm Water

**Part I:**

1. Use the penny and **weather** (shave and break up every single bit) of your crayon onto a paper towel or piece of paper. Your group will lose one point for every speck of crayon I find on the countertops or floor.
2. Describe what your piles of shavings look like.

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1. Once your group is done with all their crayons, **erode** (move) and **deposit** (place your shavings in a pile) your **sediments** (crayon shavings) into two piles on two separate sheets of aluminum foil. Have your partners repeat the same procedure, placing their sediments onto of your pile. Continue this process so you have layers of **sediment** in two piles on aluminum foil.
2. Describe and draw the crayon after this process.

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1. Carefully fold one of the piles inside the aluminum foil so that the crayon is completely covered. **Compact** and **cement** the layers by placing a textbook on top of the folded aluminum foil. Then remove the text book and unwrap the aluminum foil. Remove a piece of the crayon and set it aside.
2. Describe and draw the **sediments** after **compaction** and **cementation**:

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1. What type of rock does this represent:

**Part II:**

1. Rewrap the aluminum foil and place the text book on top of it. This time push down on the text book with as much pressure as you can. Move to the hot plates. Heat the hot plates on Level 3 for one minute. Set the foil packet down and place a textbook on it and let the foil packet cool under the textbook. After it is cool, remove the textbook, unwrap the foil and remove a piece of crayon and set it aside.
2. Describe and draw after intense **heat and pressure**:

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1. What type of rock does this represent:

**Part III:**

1. Put the remainder of the crayon shavings from step 1 onto another piece of aluminum foil. Fold the edges up so that it makes a bowl or boat to keep the shavings in the container through the **melting** process. Heat the foil on the hot plate until the shavings are melted. Make sure the hot plate is not higher than level 5. Don’t let them smoke too bad.
2. Once melted, pour 1/3 into cup of cold water, 1/3 into cup of warm water, and leave 1/3 in the foil.
3. What type of rock does this represent:
4. Describe the differences between the melted and cooled crayons:

Ice Water: Warm Water: Foil:

**Analysis Questions:**

1. When you weather the crayon, were the shavings the same size or shape as before? Why?
2. What was the weathering agent in the lab? What are three different weathering agents in nature?
3. How do rock sediments erode (move) in nature?
4. Where are rock sediments usually deposited in nature?
5. How are rock sediments put together to form sedimentary rock?
6. What was the difference between making a sedimentary rock and making a metamorphic rock?
7. How do the different temperatures represent the different types of igneous rock?
8. How are the three different igneous rock samples the same? How are they different?

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| Rock Type | Three Characteristics | Formation |
| Sedimentary  |  |  |
| Metamorphic |  |  |
| Igneous |  |  |