

The Rock Cycle Lab

The rock cycle is a never-ending process. Igneous rock forms from magma or lava. Weathering breaks igneous rock into sediments such as pebbles and sand. These small pieces are compacted and cemented under pressure into sedimentary rock. Under great heat and pressure inside the Earth's crust, igneous and sedimentary rocks are changed into metamorphic rocks. These rocks are brought to the earth's surface where they are weathered again into sediments to become sedimentary rocks.

Materials

- | | | |
|--------------------------|----------------------------|------------------------|
| hot plate | 10 butterscotch or peanut | sheet of aluminum foil |
| 10 milk chocolate chips | butter chips | heavy books |
| 10 white chocolate chips | plastic knife, paper plate | |

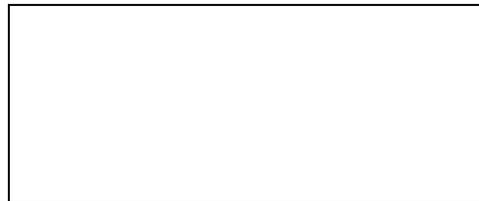
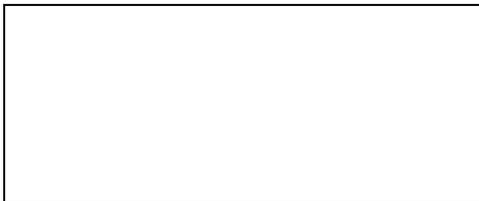
Safety Concern: *The hot plate will cause burns. Use it carefully.*

4 points for completing the lab correctly _____

Part 1 Making Weathering Rocks Procedure

- A. Pour one color of chips on the plate and cut them into little pieces and shavings with the plastic knife. (The smaller the pieces and shavings, the better)
 - B. Pour the little pieces and shavings on to the aluminum foil.
 - C. Take another color of chips and cut them up into little pieces.
 - D. Pour the little pieces and shavings on top of the other color on the foil.
 - E. Repeat with the last color.
1. Describe your observations.

2. Draw and color what you see from the top.
3. Draw and color what you see from the side.



Part 2 Making Sedimentary Rock Procedure

- A. Fold the aluminum foil over your three layers of chips.
 - B. Place two –three heavy books over the aluminum foil and leave for 3 minutes.
 - C. Take off the books and observe the chips.
4. Describe your observations in the space below.

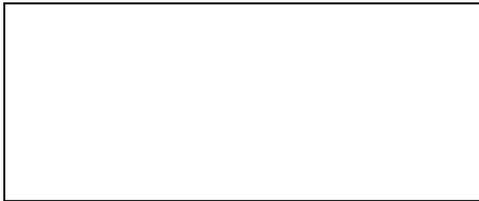
5. Draw and color what you see from the top. 6. Draw and color what you see from the side.



Part 3 Making Metamorphic Rock

- A. Fold the aluminum foil over the chips again.
 - B. Have one member of the group press very hard on the foil with their hands for 30 seconds.
 - C. Have another member of the group do the same for another 30 seconds.
 - D. Continue doing this until all members of the group have done it twice.
 - E. Unwrap the aluminum foil and observe the chips.
7. Make some observations in the space below.

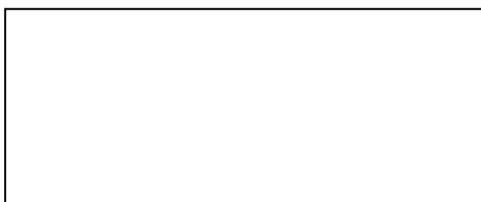
8. Draw and color what you see from the top. 9. Draw and color what you see from the side.



Part 4 Making Igneous Rock

- A. Wrap the aluminum foil over the chips again.
 - B. Take the foil package to a hot plate and lay it on the hot plate for 30-45 seconds.
 - C. Pick up the package by the sides and return it to your table.
 - D. Leave the package wrapped for at least **10 minutes**.
 - E. Gently unwrap the aluminum foil and observe.
10. Make some observations in the space below.

11. Draw and color what you see from the top. 12. Draw and color what you see from the side.



Questions

13. What did your group do to simulate weathering rocks?

14. What did your group do to make the sedimentary rocks stick together?

15. What did your group do to make the metamorphic rocks stick together?

16. What was the difference between what you did to the sedimentary rocks and what you did to the metamorphic rocks?

17. What did your group do to make the igneous rocks?

18. What was different between what you did to the metamorphic rocks and the igneous rocks?

Remembering the information you learned in this lab, fill in the following flow chart.

Use the following words: **Sedimentary Rocks, Metamorphic Rocks, Igneous Rocks**

