Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lab Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LAB 9: WHETHER OR NOT THERE IS WEATHERING

**INTRODUCTION:** Students will understand and recognize weathering through 2 experiments.

**EXPERIMENT 1:** Parking Lot Exploration

**HYPOTHESIS:** Where might you see weathering in a parking lot?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**MATERIALS:** Pencil, your science eyes!

**PROCEDURE:**

1. Look for mechanical and weathering processes.
2. Record notes and sketches.

**OBSERVATIONS:** Record all observations on page 2 in Data Table 1.

**EXPERIMENT 2:** Rate of Weathering

**MATERIALS:**

Sugar Cubes (9)

Shaker Bottle

2 Beakers

Warm and Cold Water

Triple Beam Balance

**PROCEDURE:**

1. Mass 5 sugar cubes prior to shaking and record in the Data Table 2

2. Make a drawing of what the average sugar cube looks like prior to shaking and draw this in your data table.

2. Place the sugar cubes in the jar.

4. Now shake your sugar cubes 20 times.

5. Pour the contents of the jar onto a piece of paper separating the sugar cubes and the crumbs. (Don’t eat any of it!)

6. Mass your sugar cubes and sketch the general appearance of one of the sugar cubes.

7. Record this in data table 2.

8. Repeat this procedure 5 times.

Data Table 1: Parking Lot Exploration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type of Weathering | Effect of… | Name | Explanation | Field Sketch |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**DATA TABLE 2: The Abrasion of Sugar Cubes**

|  |  |  |
| --- | --- | --- |
| **Shaking Trial** | **Drawing of Sugar Cube** | **Mass of Sugar Cube (g)** |
| **0 Shakes** |  |  |
| **After 20 Shakes** |  |  |
| **After 40 Shakes** |  |  |
| **After 60 Shakes** |  |  |
| **After 80 Shakes** |  |  |
| **After 100 Shakes** |  |  |

**ANALYSIS:**

1. What change did you notice in the sugar cubes?

2. Were these changes due to chemical or physical weathering?

3. What reason(s) did you give for these changes?

4. How did the continued shaking change the cubes appearance?

5. Describe where this occurs in nature.

6. Draw how a relationship graph would appear for **# of shakes** and **mass of sugar cube**.