Chemical Weathering Lab

**PLEASE BE SAFE**: Wear your goggles and wash your hands at the end of the lab.

During this lab, you will model chemical weathering. You will put chalk (limestone) in two separate baggies. You will put vinegar (acid) in one of the baggies and water in the other. What do you think will happen?

In the baggy with water: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In the baggy with vinegar: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Materials**:

Vinegar

Water

2 Plastic pipettes

Marker

2 baggies

Goggles

2 pieces of chalk

**Procedure:**

1. Place one piece of chalk in one baggy and label it “water”. Place a second piece of chalk in another baggy and label it “acid”.
2. Put 4 mL (4 pipets full) of vinegar in the bag labeled “acid”. Put 4 mL (4 pipets full) of water in the bag labeled “water”.
3. Make observations of each baggy every 30 seconds.

**DATA**:

|  |  |  |
| --- | --- | --- |
| **Time in seconds** | **Observations of chalk with acid** | **Observations of chalk with water** |
| 0 |  |  |
| 30 |  |  |
| 60 |  |  |
| 90 |  |  |
| 120 |  |  |
| 150 |  |  |
| 180 |  |  |

**Analysis:**

1. What happened?
2. Is this what you thought would happen?
3. Explain how limestone is weathered by carbonic acid naturally.
4. Explain how we could we create another lab to model mechanical or chemical weathering?