In this lab you will explore the different types of volcanoes and replicate two of them. The purpose of this lab is so you can visually see the differences in volcano types based upon their shapes and their volcanic activity.

1. Pre-lab: Answer the below questions. You may look at the posters to get your answers.
2. What are the three types of volcanoes?

A.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ C.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Below are boxes of information about each type of volcano. Identify which type of volcano is being described in each box and filling in the blanks.

**Volcano type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* Slow, gentle eruption
* Formed from layers of \_\_\_\_\_\_\_\_\_ lava
* Low, gently sloped sides
* Famous Volcanos – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Volcano Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* Both violent and gentle eruptions
* Formed from alternating layers of \_\_\_\_\_ and \_\_\_\_\_
* Cone-shaped mound, steep sides
* Famous Volcanos – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Draw a picture showing what a Shield volcano looks like and what a Composite volcano looks like.

**Composite Volcano**

**Shield Volcano**

Part II. Lab

Materials: 1 Film Canister with Baking Soda, 1 Film Canister with Baking Soda and Soap, 2 Pieces of Foil, Vinegar, Soap, Plate, and Paper towels

Directions:

1. Gather the materials: 2 Film Canisters and 2 Pieces of Foil
2. Form a hypothesis. In one canister you will have soap which will slow down the reaction between baking soda and vinegar. For you hypothesis, predict which volcano should have the film canister with soap in order to replicate the lava flow of that particular volcano.

Hypothesis:

If I use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ then the lava will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which is representative of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ volcano.

1. Identify your independent variable:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and your dependent variable:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Place each film canister in a separate plate. Around your film canisters, mold the foil to create 1 shield volcano and 1 composite volcano. Make sure you mold your structures to resemble the pictures you drew of each.
3. After you have made your prediction. Make sure to place the correct film canister under the correct volcano. Get vinegar from the teacher and place vinegar in your film canister until the baking soda comes out of the volcano. Describe and draw each reaction below.

Shield Volcano Reaction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Composite Volcano Reaction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Composite Volcano**

**Shield Volcano**

1. Post Lab Questions
2. Restate your hypothesis and state whether you were correct or not. Explain how what you observed supported or disproved your hypothesis.

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1. In your own words, describe the differences between shield and composite volcanos that you observed in the lab.

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