

Volcanoes

Name: _____ **Date:** _____

LEARNING OBJECTIVE

Students will build a model volcano and observe an eruption reaction to relate it to real volcanic activity.

MATERIALS NEEDED

- baking soda
- vinegar
- dish soap (optional, for foamier eruption)
- small bottle or cup
- clay, dirt, or paper mache to build a cone shape around the bottle
- tray to contain the mess

HANDS-ON ACTIVITY

1. Place a small bottle or cup on a tray, and build a volcano-shaped cone around it using clay, dirt, or crumpled paper, leaving the opening exposed at the top.
2. Add 2-3 tablespoons of baking soda and a squirt of dish soap into the bottle opening.
3. Pour in vinegar (about 1/4 cup) and observe the eruption, timing how long the reaction lasts and noting how far the 'lava' traveled down the sides.
4. Repeat the eruption using twice as much baking soda and vinegar, and compare the size/intensity of the second eruption to the first.

QUESTIONS

1. **What gas is produced by the baking soda and vinegar reaction that causes the 'eruption'?**

2. **How did doubling the baking soda and vinegar amounts affect the eruption? What does this suggest about real volcanoes?**

3. **In a real volcano, what causes the pressure that leads to an eruption?**

4. Name one real volcano-related hazard besides the lava flow itself.
