Activity 3 Volcano Model Eruption

Instructions: Students will create a model volcano using simple household materials and simulate an eruption to understand how pressure builds up beneath the Earth's surface and forces magma to the surface.

Step 1: Gather Materials

- **Baking soda** (for the reaction)
- **Vinegar** (to create the eruption)
- **Clay or playdough** (to shape the volcano)
- **Dish soap** (to create foamy lava)
- **Food coloring** (optional, for lava effect)

Step 2: Build Your Volcano

- Use **clay or playdough** to shape a mountain with a **hollow center (crater)**.
- Label: **"Volcano Model"**.
- Suggested colors: **Brown, Gray, Red, Orange (Lava Flow)**.

Step 3: Prepare for Eruption

- Pour **baking soda** into the volcano's crater.
- Add a few drops of **dish soap** (this makes the eruption foamy).
- Label: **"Pressure Building Up Under Earth's Surface"**.

Step 4: Simulate the Eruption

- Slowly pour **vinegar** into the crater.
- Observe how the **reaction causes 'lava' to flow** down the sides.
- Label: **"Lava Flow (Baking Soda & Vinegar Reaction)"**.
- Suggested colors: **Red, Orange, Yellow for Lava Effects**.

Step 5: Discuss the Science Behind Eruptions

- Explain how real volcanoes erupt due to **built-up pressure from magma and gases**.
- Discuss different types of eruptions like:
    - **Gentle lava flows (shield volcanoes)**
    - **Explosive eruptions (stratovolcanoes)**
- Label: **"Volcanic Eruptions & Magma Pressure"**.

Final Touches:

- Add **diagrams and labels** to explain the process.
- Use **bold colors and arrows** to highlight movement and changes.
- Discuss **why some volcanoes are more explosive than others**.

Now, complete your experiment and explore the exciting world of volcanoes!