



## How to Build a Volcano

### Introduction:

- A volcano is a mountain where lava (hot, liquid rock) explodes from a chamber under the ground.
- Volcanoes are formed deep in the Earth upper mantle
- When a volcano is active, materials such as lava, steam, gaseous compounds, ash and broken rock pieces comes out of it
- Thus, when there is adequate pressure, the volcano erupts.
- The magma can come out quickly or sometimes slowly. Some eruptions come out at a side instead of the top.
- Volcanoes are found on planets other than Earth
  - Olympus Mons on Mars
- Volcanologists are scientists who study volcanoes using methods from geology, chemistry, geography, mineralogy, physics and sociology
- Stages of Volcanoes
  - *Active volcano –recently erupted and there is a chance it might again soon*
  - *Dormant –hasn't erupted in a long time, but it is possible that it will erupt in the future*
  - *Extinct – These volcanoes erupted thousands of years ago and very low risk of them erupting again*
- Volcanoes erupt due to plates moving and causing friction within the Earth's crust
- Fun fact: Lava can reach 1,250°C!

### Materials:

- 2 Small Disposable Cups
- Paper Plate
- Tape
- Clay
- Vinegar
- 1 Tablespoon Warm Water
- 1 Tablespoon of Baking Soda
- Liquid Dish Washing Soap
- Red food Coloring

### Experiment:

1. Attach the disposable cup to the center of the paper plate with tape.
2. Use clay to form a mountain on the plate and around the cup. It should completely cover around the cup.
3. The hole in the cup will be the crater where the lava comes out, so be do not put any clay in it.
4. Let the clay dry if necessary.
5. Add 1 tablespoon of water into your volcano crater.
6. Add 4 drops of dish washing soap and 4 drops of red food coloring.
7. Stir in 1 tablespoon of baking soda.
8. Pour some vinegar into the other small disposable cup so the cup is about 1/3 full
9. Quickly pour the vinegar into your volcano crater
10. Take a step back and watch your volcano's eruption