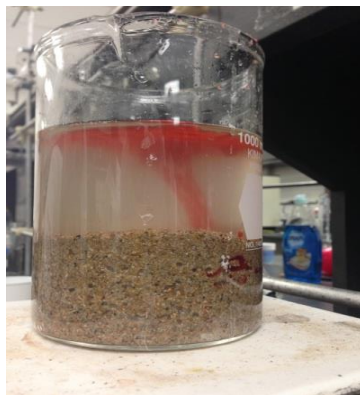




California State University of Bakersfield, Department of Chemistry

Volcano in a Cup



Standards:

ESS2.B Plate Tectonics and Large-Scale System Interactions: The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in pattern. Most earthquakes and volcanoes occur in bands that are often along the boundaries between continents and oceans. Major mountain chains form inside continents or near their edges. Maps can help locate the different land and water features areas of Earth.

4-ESS2-2 Analyze and interpret data from maps to describe patterns of earth's features.

Introduction:

Volcanoes are constantly erupting under water and go unnoticed. The volcanic byproducts create islands and new land. In this experiment you will be able to stimulate a volcanic eruption under water. Since the wax volcano erupts under water the hot volcanic byproducts are immediately cooled.

Materials:

- Burner or hot plate
- Sand
- Wax
- Water
- Heat-proof beaker
- Salt

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Safety:

- Always have an adult with you to help you during your experiment.
- Always wear eye protection and gloves when doing chemistry experiments

Procedure:

1. Place a small piece (about 1" x 1") of wax in the bottom of a glass beaker. Try to get it as close to the center of the beaker as possible.
2. Pour enough sand into the beaker to completely cover the cube of wax.
3. Slowly pour water into the beaker until the cup is nearly full. Don't fill it up all the way or you might have some spillage.
4. Place the beaker onto a burner or hot plate and turn the heat on to a medium-high temperature setting.
5. Now wait and observe the volcanic simulation.
6. Replace water with salt water and compare the reactions.

Data and Observations:

Record your data and observations here.

Questions:

1. How did the wax's reaction differ in water and the salt water?
2. What shape/ form did the wax take?
3. How long did it take for the wax to cool?
4. How long did it take for the wax to start erupting?

References:

1. "Steve Spangler Science." Volcano in a Cup. Steve Spangler, n.d. Web. 04 Aug. 2014.