

Make a Volcano!

Developed by: Cathy Walters

Discipline / Subject: Geography/Science

Topic: Teachers and students can make their own model of a volcano following this simple plan.

Grade Level: PK-4

Resources / References / Materials Teacher Needs:

To make the volcano:

1. Glass baby food jar
2. Aluminum foil pie tin
3. Clay
4. Tiny blocks to represent houses (optional)

To make the volcano erupt:

1. Baking soda
2. Vinegar
3. Food coloring

Lesson Summary: In this lesson the teacher may either use her pre-made volcano to demonstrate what happens when a volcano erupts or gather enough supplies for each child to make their own volcano.

Standards Addressed: (Local, State, or National)

Alaska state standards:

SG Students develop an understanding of the history and nature of science.

SD2 Students develop an understanding of the origins, ongoing processes, and forces that shape the structure, composition, and physical history of the Earth.

Learning Objectives:

The student will:

- Listen to the Step-Into-Learning book *Pompeii...Buried Alive* read by the teacher
- Discuss the current activity of the Alaskan volcano Mount Redoubt
- Discuss how scientists can now warn us when a volcano is going to erupt compared to when Mt. Vesuvius erupted
- Watch a demonstration of the volcano model.
- Make their own volcano (optional)

Method of Assessment for Learning:

Teacher assessment

Procedural Activities: To make the volcano...

1. Place the glass baby food jar in the pie tin.
2. Model the clay from the base of the jar. Make sure the clay adheres to the pie tin, giving it a wide base. Sculpt the clay to the top of the jar. Make sure the jar can't be seen and the clay is in the cone shape of a volcano.

3. Place tiny blocks at the base of the volcano (optional)

To make the volcano erupt...

- 1. Place two teaspoons of baking soda in the volcano (jar)**
- 2. Select the color of your lava and squirt the food coloring in the volcano**
- 3. Pour enough vinegar in the volcano for a good eruption**

Materials Students Need: (If you choose to have each student make a volcano.)

- 1. One aluminum foil pie tin per student**
- 2. One glass baby food jar per student**
- 3. Clay (approximately 1/4 -1/2 pound per student)**

Technology Utilized to Enhance Learning: <http://www.avo.alaska.edu/>

Other Information:

This can lead to a much deeper study of volcanoes and their origins for older students, i.e. Pacific Ring of Fire and Teutonic plates.

Modifications for Special Learners/ Enrichment Opportunities

- Students may go to the Alaska Volcanic Observatory web site (listed above) to report on Mount Redoubt and the other volcanoes in the Aleutian chain. Students can also look up the Ground-based Volcano Alert Levels on this site and monitor changes in volcanic activity.**
- Also for enrichment have students find out what causes the baking soda and vinegar reaction.**