

Modeling Volcanoes

Summary

Students will design models of volcanoes and compare their model volcano and eruption to actual volcanoes and actual eruptions.

Time Frame

1 class periods of 70 minutes each

Group Size

Pairs

Materials

Possible Materials

:

- textbooks
- pie tins (for building model in and collecting eruption)
- 50 mL Erlenmeyer flasks (for volcano tubes)
- small rocks/gravel, sand, clay, sugar, and/or dirt for earth materials
- monopoly houses
- small figurines

Required Materials:

- vinegar
- baking soda
- water
- spatulas
- graduated cylinders
- safety goggles
- [student worksheet](#)
(attached)

Student Prior Knowledge

Students should have some prior knowledge of what causes volcanoes to erupt, what types of energy are involved in volcanic eruptions, and what effects they have on the surrounding land.

Instructional Procedures

You may introduce the topic and give students time to make a written drawing and/or description of their model and bring their own supplies or you can provide a variety of supplies for students to pick from to make their models.

Explain the requirements for the model.

Instruct students on how to mix the eruption material (baking soda, water, and vinegar). You may give them a specific amount to use or let them experiment with what amount of each to use. I like to color the vinegar red or purple.

Go over safety precautions with students i.e.: wear goggles, do not lean over volcanoes

Give students time to build their models and complete a couple of eruptions.

Have students complete the analysis questions on their lab sheets.

Discuss differences between models and the real thing.

Have students clean up.

Assessment Plan

Scoring Rubric

:

1. Students build model.....4
2. Students participate in class discussion4

Answers to Analysis and Conclusion Questions:

Answers are found in the introduction material found in the student worksheet.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)