

## Lesson 6—What Causes Volcanoes?

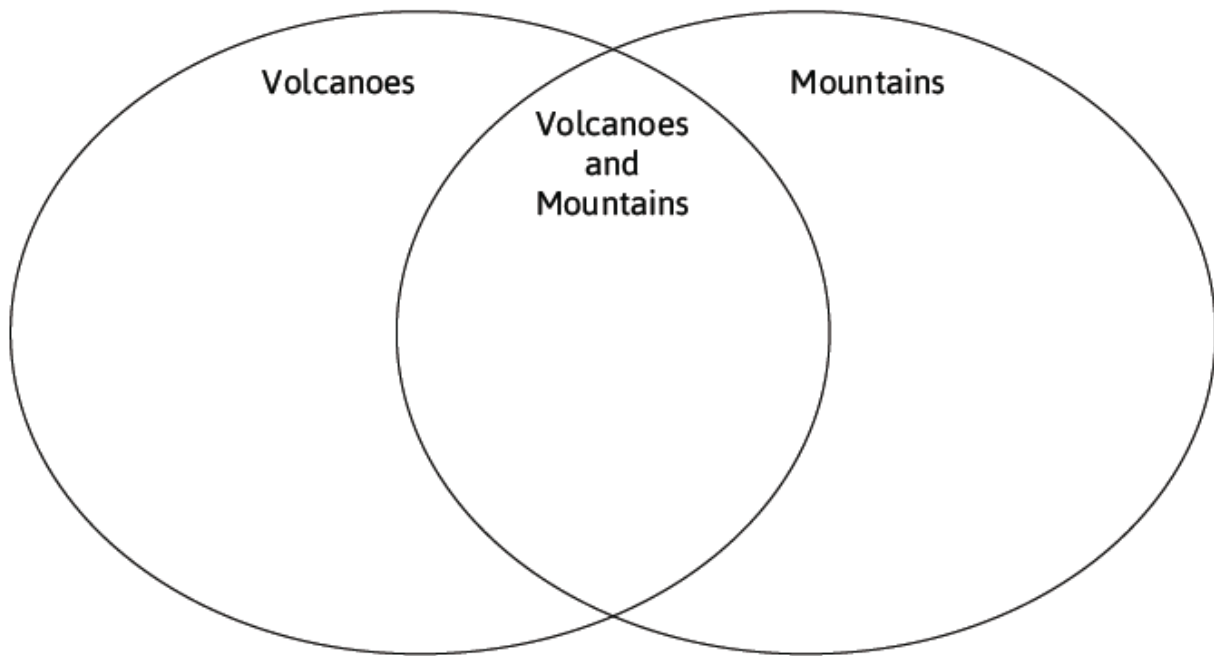
### Activity 6.1—Volcano Formation

#### What Will We Do?

We will simulate a volcanic eruption to determine how Earth is changing.

#### Brainstorming

Use the Venn Diagram to determine which characteristics are shared between volcanoes and mountains.



#### Safety

You will be working with hot material and flames. Do not touch the setup. Wear safety goggles at all times because glass can shatter when it is heated.

## Procedure

1. One member of your group should get a beaker with wax, sand, and water already set up. You will also need a ring stand and a flame source provided by your teacher.
2. Set up your materials as your teacher demonstrated. Place the beaker on the ring stand, with the heat source below the beaker.
3. Draw a simple diagram on the next page, labeling the parts of your setup and record your before observations below.
4. Ask your teacher to check your setup. Once your setup is approved, your teacher will light your flame source for you.
5. At this point, you will be observing your beaker for up to 10 minutes. Do not touch any part of the setup. It will burn you! You must wear safety goggles.
6. Record your “during” observations in the table below and draw your after diagram on the next page.
7. Once the materials in your beaker have stopped moving, your teacher will remove your heat source.  
Your materials are still hot. Do not touch the setup.
8. Answer the follow-up questions. Be sure to label your drawing.

## Observations

	Wax	Sand	Water
Before			
During			
After			

1. Describe what happens in the beaker as it is heated.
2. Draw a diagram that shows what your beaker looked like at the beginning and the end of the activity. Label your diagram so that another student could understand what it is showing.

<i>Diagram of Beaker BEFORE Activity</i>	<i>Diagram of Beaker AFTER Activity</i>

1. What does the wax represent in your model?
2. What kind of feature(s) did you create in this model?
3. Explain how the hot wax moved in the beaker.

## **Making Sense**

1. Why did the wax move this way? (Hint: Think about what happens to materials as they heat up.)
2. How is this model different from an actual volcano?
3. How does this activity help you answer the Driving Question: How Is the Earth Changing?