

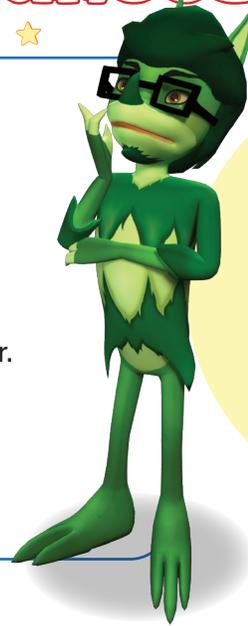
# Preparing for Volcanoes

Grades 4-6  
Reproducible Master

Hi! I'm Hugo. Volcano eruptions happen all over the world. In the United States, they mostly happen in the western states, including Hawaii and Alaska. Want to learn more? Download **Monster Guard**. It's a free app from the American Red Cross that teaches kids how to be prepared for emergencies. Choose "Volcano" on the main menu to join me on a training mission. You'll learn how to stay safe when a volcano sends ash into the air.

**Note:** You must have completed the **Monster Guard** Initiation section before you can access the Volcano training mission.

My Volcano Safety Score: \_\_\_\_\_



## Part 1

Volcanoes start out as an opening in the ground called a *vent*. Down below the vent, far below the surface of the Earth, there is a region of hot, melted rock called *magma*. When the magma pushes up through the vent, that's a volcano eruption. Magma is called *lava* once it reaches the Earth's surface and begins flowing over the ground. When it finally cools, lava turns into solid rock, which can build up over time to form a mountain. It can also collapse on itself and form a type of crater called a *caldera*.

Volcanoes have different shapes depending on how they erupt.

- A *cinder cone volcano* is made by a powerful eruption. It shoots lava high into the air. The lava cools into a kind of rock called cinder. This falls to earth and forms a tall mountain with steep, smooth sides.
- A *shield volcano* is made by a slow eruption that sends lava flowing across the ground. Over time, as the lava cools, it forms a low, flat mountain with gently sloping sides.
- A *composite volcano* is created by vents that erupt at different times. This sends lava, ash, hot gases, and chunks of rock into the air. These eruptions form tall mountains with rough, bumpy sides.

You've seen how volcanic ash can turn into a dangerous mudflow, called a lahar. Look at the diagrams. Circle the volcano you think would have the slowest-moving lahars if it erupted. Explain your choice in a class discussion.

