

Volcanoes

How Volcanoes Form

The Earth's crust is made up of several layers. The Earth's surface, the layer we see and live on, is called the crust. Underneath the crust is a very hot layer of rock called the mantle. High temperatures and pressure can cause parts of the mantle to melt, creating a type of liquid rock called magma.

As this magma rises to the surface, a volcanic eruption can occur. Once the magma is outside the volcano, it is no longer called magma - it is called lava. This lava spills out of the volcano and eventually hardens. This process happens over and over again, causing the volcano to grow bigger and bigger.

Types of Volcanoes

Cinder Cone Volcano



A smaller, conical volcano

Shield Volcano



A flatter, gently sloping volcano

Composite Volcano



A tall, steep volcano

Are Volcanoes Dangerous?

Volcanologists, or scientists who study volcanoes, look carefully at how often volcanoes erupt and how long they have gone without erupting, to help them decide how dangerous different volcanoes are. They classify volcanoes as being active, dormant, or extinct.

Active volcanoes are volcanoes that have erupted fairly recently and are capable of erupting again when conditions are right. **Dormant volcanoes** are volcanoes that have not erupted in a long time, but still could. **Extinct volcanoes** are volcanoes that volcanologists believe will never erupt again.

Not all active and dormant volcanoes are dangerous, however. Most volcanoes are found on the ocean floor. When these volcanoes erupt, they are not a danger to humans. Sometimes volcanoes only have minor eruptions and are not a huge threat to humans. However, some volcanoes have the potential to be extremely dangerous. These volcanoes not only produce hot lava, but they can also cause mudslides, avalanches, floods, tsunamis, and earthquakes.

One of the most well known volcanic eruptions occurred about 2,000 years ago in Italy. Mount Vesuvius, a volcano that is still active today, erupted and destroyed two entire cities. The eruption lasted for at least 2 days and the volcanic ash completely buried the cities of Pompeii and Herculaneum.



Staying Safe in Case of an Eruption

If you live near a volcano, it is important to plan ahead of time in case of an eruption. Prepare an emergency kit that has food, water, a flashlight, goggles, dust masks, and a first aid kit. Also, know all of the evacuation routes and be ready to leave the area if necessary.

During a major eruption, it is best to evacuate if possible. If you get trapped inside, then close all of the windows and doors. Put on long sleeve shirts and pants to protect your skin from falling ash. Put on a dust mask and goggles. After the eruption is over, continue to wear all of these to protect your body while the ash settles.