Name _____

Types of Volcanoes

By Patti Hutchison

Mount Etna, Mount Saint Helens, and Mauna Loa are breathtaking sights. Volcanoes are interesting land forms, but they are not all alike. Some are tall and cone-shaped. Others have gently sloping sides.

A volcano's shape depends on how violent the eruption is. The material that forms the volcano also has an effect on its shape. The three basic types of volcanoes are cinder-cone, shield, and composite.

Cinder-cone volcanoes form from violent eruptions. Cinders and rocks explode high into the air. They rain back down to the surface and pile loosely around the vent. They form a cone with a narrow base and steep sides. Cinder-cone volcanoes are usually not more than 500 meters high. They can form on or near larger volcanoes.

The lava that forms a cinder-cone volcano has a low viscosity. This means it is very runny. It contains a high volume of water. It also contains large amounts of gases. This makes cinder-cone volcanoes more explosive than other types.

Shield volcanoes are the largest volcanoes. They have gentle, almost straight slopes and a wide, circular base. These volcanoes form when thin, running lava flows over a large area. Each time the volcano quietly erupts, the layers of cooled lava build up.

The lava that forms shield volcanoes contains a large volume of basalt. It has a very low viscosity. Basaltic lava contains few gases, resulting in quiet, flowing eruptions. Mauna Loa, in Hawaii, is an example of a shield volcano.

The third type of volcano is called a composite volcano. A violent eruption occurs, forcing cinders and ash from the vent. This material settles around the vent, much like a cinder-cone volcano. This event is followed by a quiet eruption. The lava flows over the cinders. It eventually cools and hardens. After many of these alternating eruptions, a tall cone-shaped mountain forms.

The lava that forms composite volcanoes also has a low viscosity. It contains large amounts of silica, water, and gases. These violent volcanoes can be very dangerous. Mount Etna, in Italy, and Mount Saint Helens, in the United States, are two examples of composite volcanoes.

When a volcano erupts, new land is formed. Volcanoes differ in size, shape, and composition. Cinder-cone, shield, and composite volcanoes have formed over the earth. They are some of the most interesting parts of earth's topography.

Types of Volcanoes

Questions

1. Name the three types of volcanoes.

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2. The shape of a volcano depends on what two things?

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_____ 3. A volcano formed from a violent eruption, with a narrow base and steep sides is called a:

   A. cinder-cone volcano
   B. shield volcano
   C. composite volcano

Name _____

_____ 4. Shield volcanoes form from what type of eruptions?

A. quiet
B. violent
C. both violent and quiet

_____ 5. The largest volcanoes are:

A. composite
B. shield
C. cinder-cone

_____ 6. Mount Saint Helens is an example of which type of volcano?

A. shield
B. composite
C. cinder cone

Explain in your own words how a composite volcano is formed.

Name _____

Explain the differences between cinder-cone, shield, and composite volcanoes.

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