

VOLCANO TYPES

Just as there are different ways that a volcano can form, there are also different types of volcanoes. Geologists (scientists that study rocks and Earth) divide volcanoes into four main types: cinder cones, composite volcanoes, shield volcanoes, and lava domes.

Cinder cones are the simplest kind of volcano. They are built around a single vent, or opening. As lava and hot gases are blown into the air, they cool and fall back down to Earth as cinders. These cinders gather around the vent and form a cone with a crater in the middle. Most cinder cones do not get taller than about 1000 feet above the rest of the landscape. Cinder cones are often found on the sides of composite volcanoes, shield volcanoes, and calderas.

Composite volcanoes, sometimes called stratovolcanoes, form some of the most beautiful and well-known mountains in the world. Among the most famous composite volcanoes are Mount Fuji in Japan, Mount Cotopaxi in Ecuador and Mount St. Helens and Mount Rainier in Washington. Like cinder cones, most composite volcanoes have a crater at the top, with a central vent or a cluster of vents. When lava erupts from the vent, it flows down the side of the volcano through breaks in the crater or through cracks in the side of the volcano. The volcano gets bigger as lava, cinder, and ash are added to the slopes. Sometimes large amounts of lava can erupt very quickly. When this happens, empty spaces in the ground below the volcano form and the volcano can no longer be supported. Without support, the volcano collapses and forms a deep bowl-shaped hole in the ground called a caldera. Crater Lake in the United States is a caldera filled with lava. The caldera is a hole in the ground that is left behind when the caldera collapses.

Shield volcanoes are different from the first two types of volcanoes, in that they are built almost entirely from lava flow. Lava flows out of the central vent or group of vents and flows downward across the ground. As the volcano grows, it begins to look like a warrior's shield, which is how this type of volcano got its name. After thousands of lava flows, the volcano can become very big. In fact, some of the largest volcanoes in the world are shield volcanoes. There are some shield volcanoes in northern California that have a base of 3-4 miles and a height of 1500 to 2000 feet. The biggest shield volcano, in fact the world's biggest active volcano, is Mauna Loa in Hawaii. The floor of the ocean is more than 15,000 feet below the base of the island, and the top of Mauna Loa is another 13,677 feet above sea level. That means that the entire volcano is over 28,000 feet!

Lava domes usually form in the crater or on the sides of large composite volcanoes. The domes form when very thick lava is ejected from a vent or crack. The lava is too thick to flow very far, and just begins to harden around the vent. Lava domes grow from the inside. The outer layer of lava cools and hardens, but as more lava is ejected from the vent, the outer layers crack and crumble down the sides of the dome. Three of the most active composite volcanoes in the Cascade Range in the United States – Mount St. Helens, Mount Shasta, and Glacier Peak – all have lava domes at their summits (the top of the volcano).