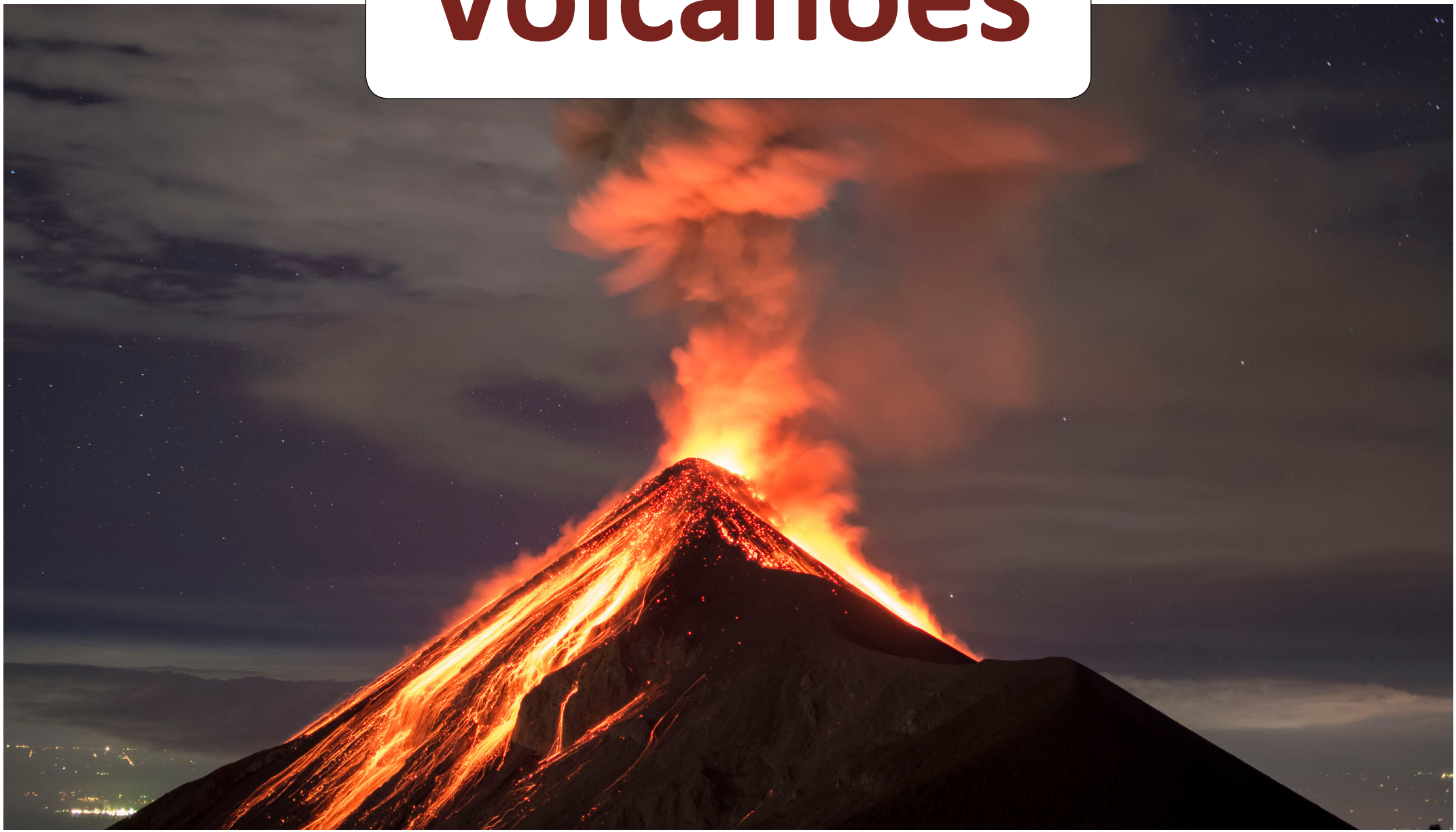
Volcanoes



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What is a volcano?



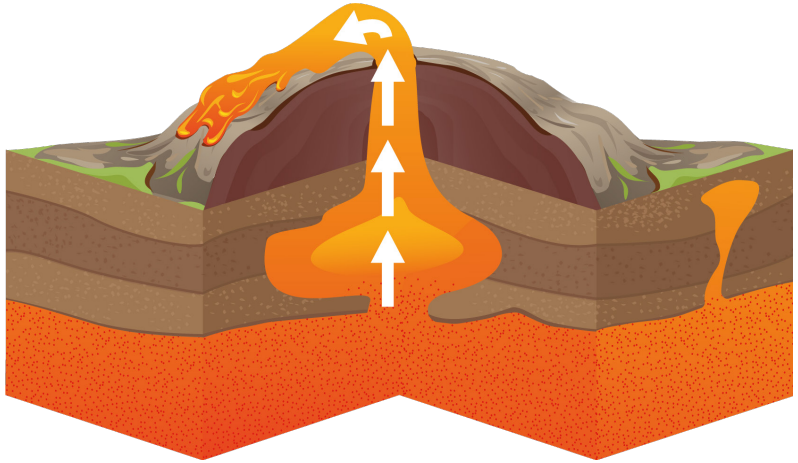
A **volcano** is a mountain or hill with an opening in the Earth's crust that allows magma, gas and ash to reach the surface.

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Types of volcanic eruption

There are two types of volcanic eruption.



effusive

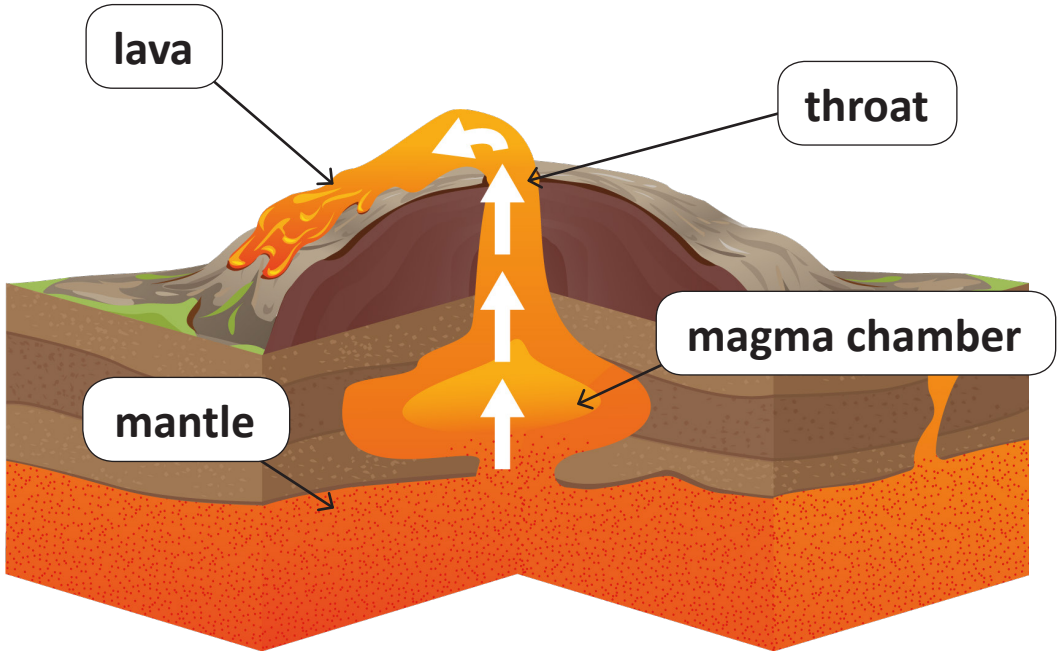


explosive

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Effusive eruption

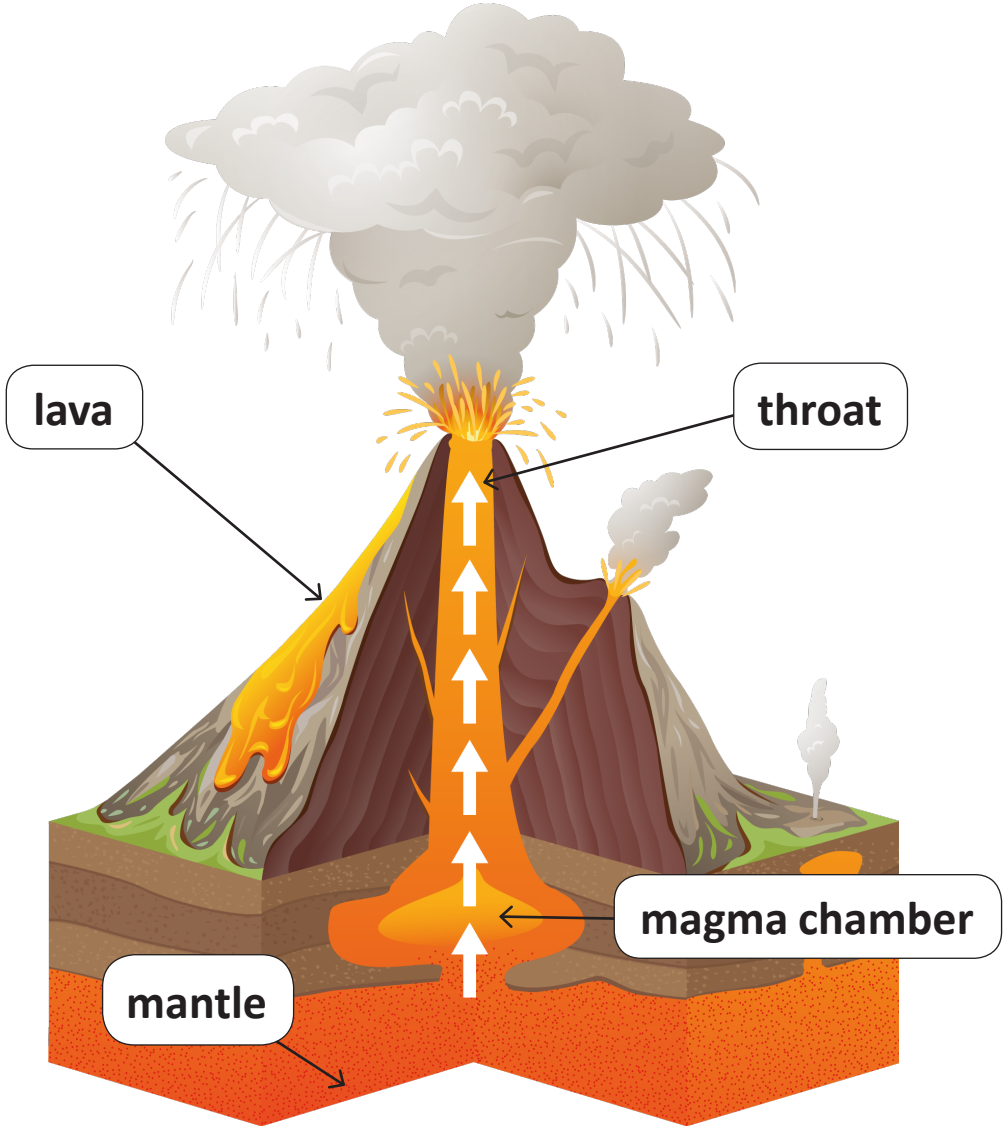


An **effusive eruption** occurs when the magma is runny and the gases inside the volcano can escape easily. When the magma reaches the Earth's surface, it flows as lava gently down the sides of the volcano and hardens, making a dome shape.

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Explosive eruption

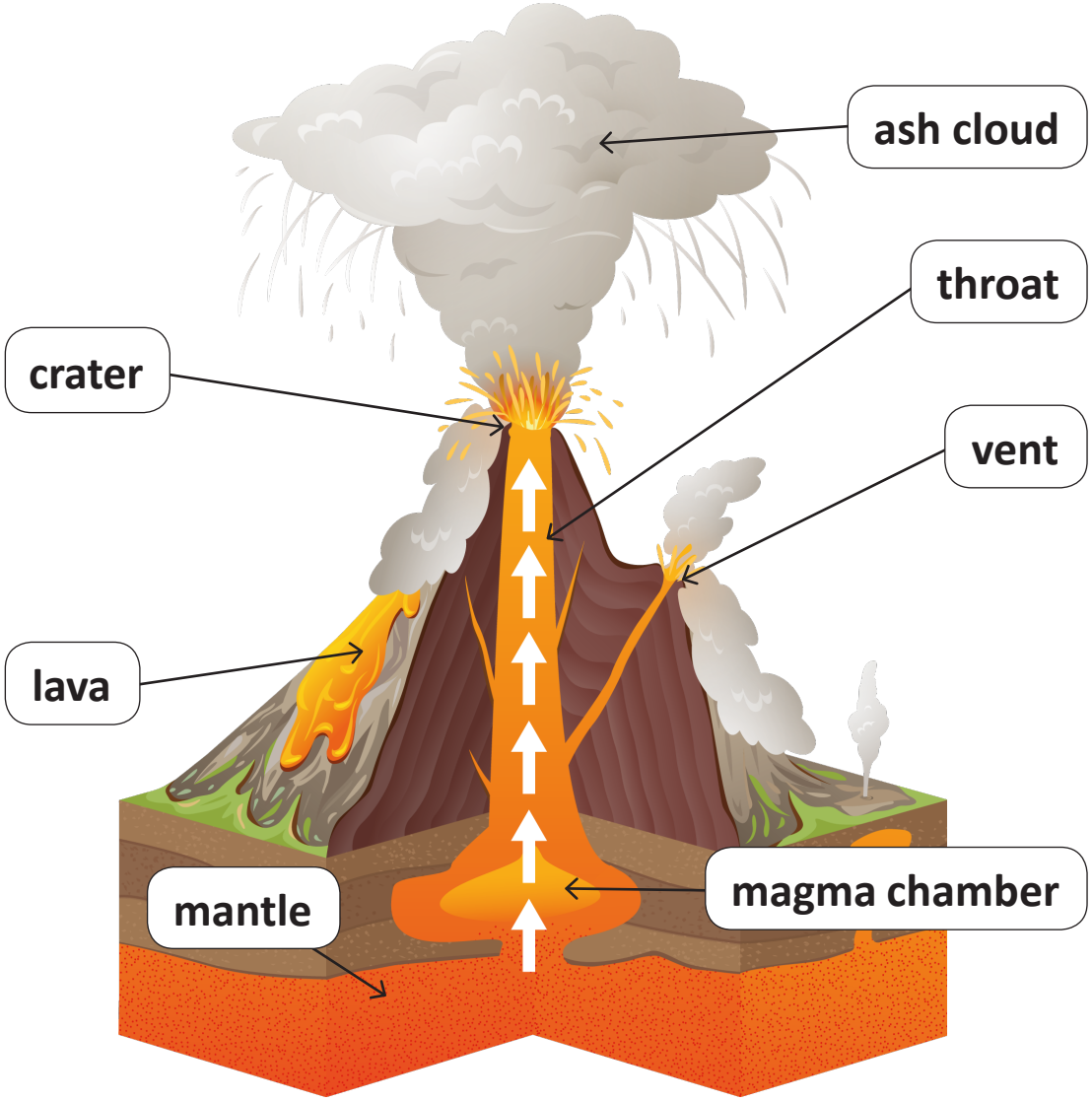


When an **explosive eruption** occurs, hot, gas-filled magma rises from the mantle and fills the magma chamber in the Earth's crust. When the pressure inside the volcano becomes too great, the magma blasts through the throat of the volcano.

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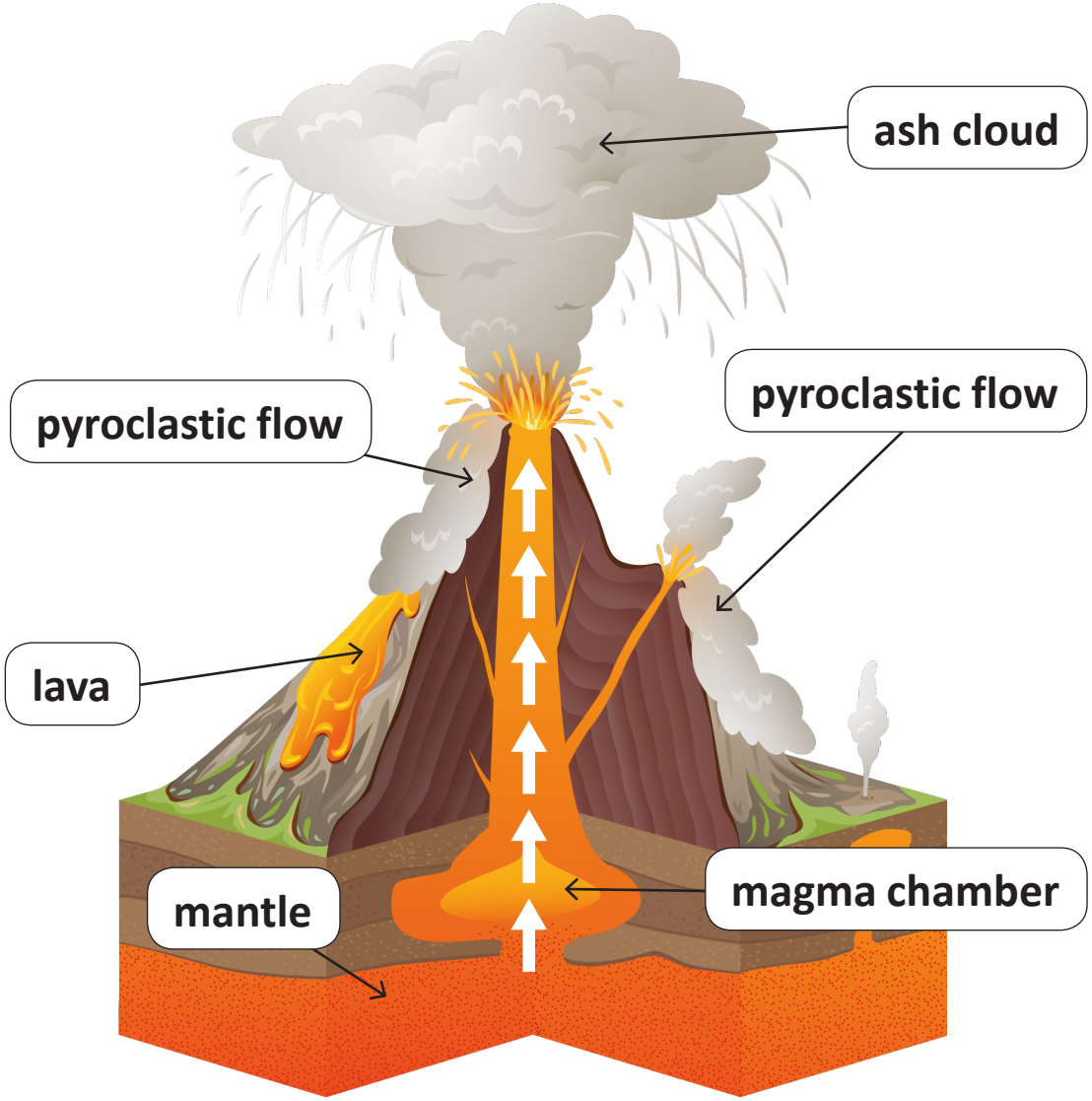
Stages of eruption



A crater is created after the eruption blows the top off the volcano. After the explosion, ash, lava, gas and hot air shoot high into the sky and an **ash cloud** forms.

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Hot air, ash and rocks rush downhill like an avalanche. This is called a **pyroclastic flow** and is extremely dangerous. Pyroclastic flow moves quickly and is so hot that it destroys anything in its path.

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Status of volcanoes

The status of volcanoes can be classified in three different ways.



active



dormant



extinct

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Active – Mount Etna, Sicily



Active volcanoes have erupted at least once in the last 10,000 years and are probably going to erupt again.

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Dormant – Mauna Kea, Hawaii



Dormant volcanoes haven't erupted for more than 10,000 years but they may erupt again.

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Extinct – Mount Snowdon, Wales



Extinct volcanoes are not expected to erupt again and may no longer have a magma supply.

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Types of volcano

There are four main types of volcano.



shield



stratovolcano



cinder cone



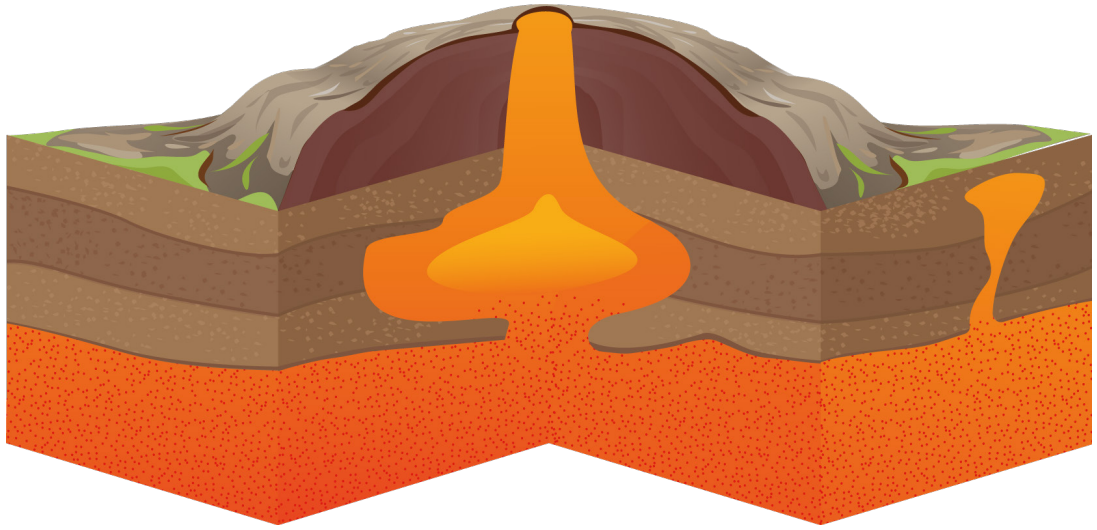
lava dome

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Shield volcanoes





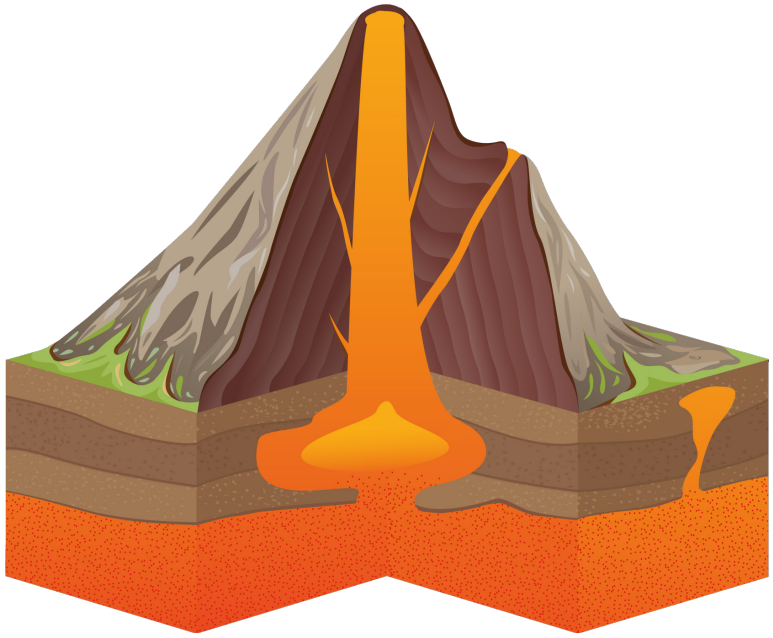
Shield volcanoes have low, gently sloping sides that are formed from layers of hardened lava. Effusive eruptions usually create this type of volcano.

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Stratovolcanoes





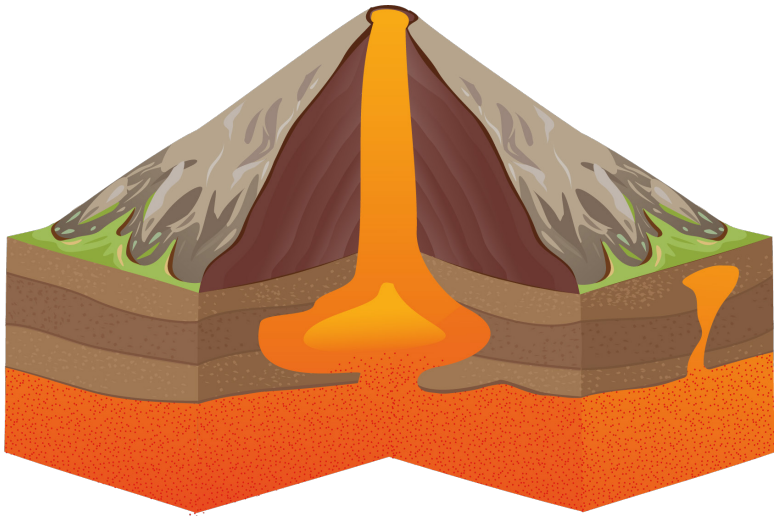
Stratovolcanoes are sometimes called composite volcanoes. They have steep sides and are formed from layers of hardened lava and ash. Explosive eruptions usually create this type of volcano.

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Cinder cone volcanoes





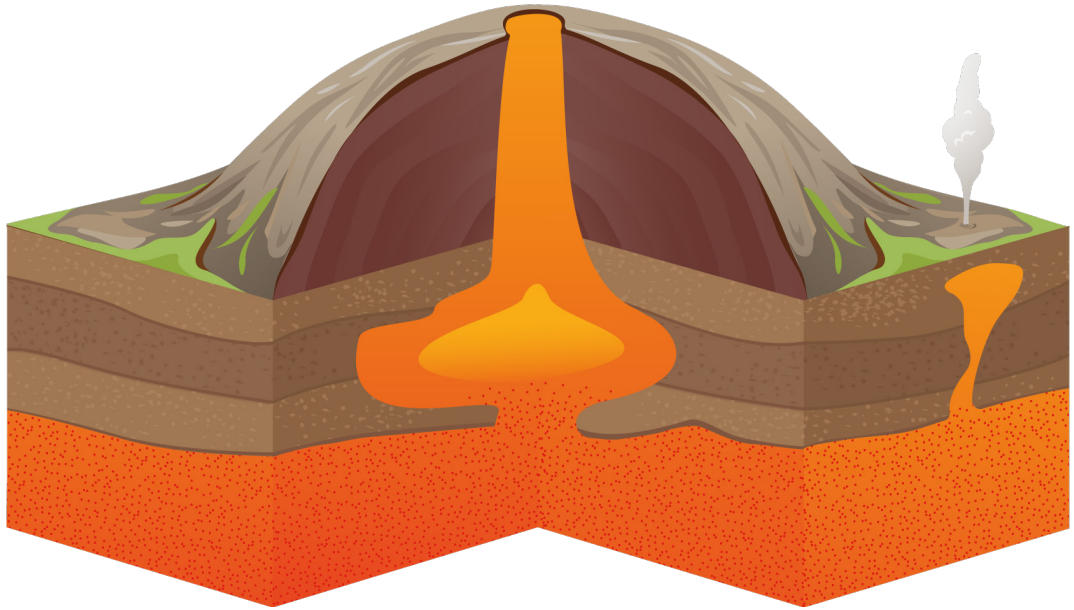
Cinder cone volcanoes are short volcanoes that are formed when an explosive eruption has occurred. Lava is blown into the air and breaks into small pieces called cinders that harden around the vent to form a cone shape.

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Lava dome volcanoes





Lava dome volcanoes are similar to shield volcanoes but the lava that flows down the sides is much thicker. The lava does not travel far before it cools and hardens, creating steep sides.

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