



# Volcanoes

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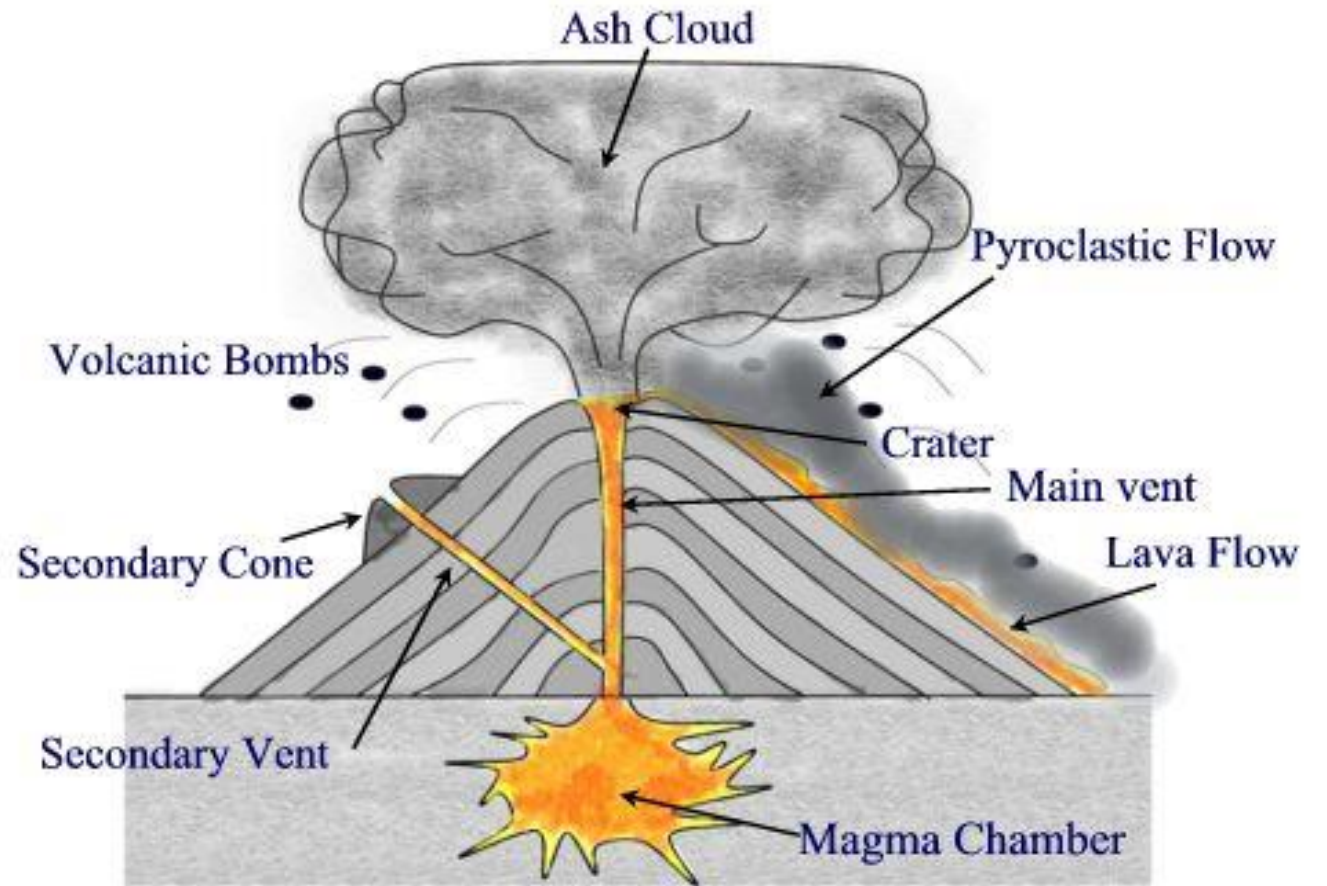
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A volcano is made up of several elements:

- Magma
- Ash Cloud
- Lava Flow
- Crater
- Volcanic Bombs
- Secondary Vent
- Pyroclastic Flow
- Secondary Cone
- Magma Chamber

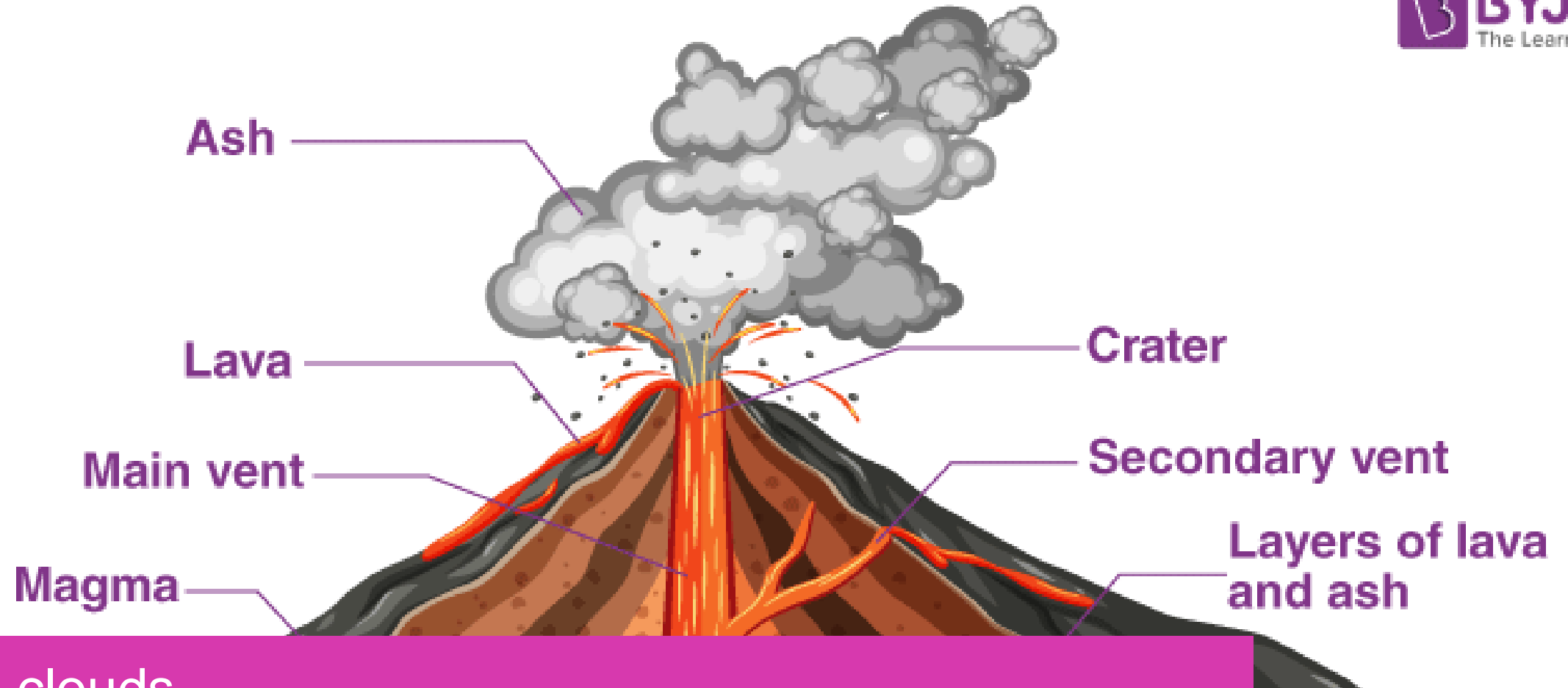


**Main Features of a Volcano**



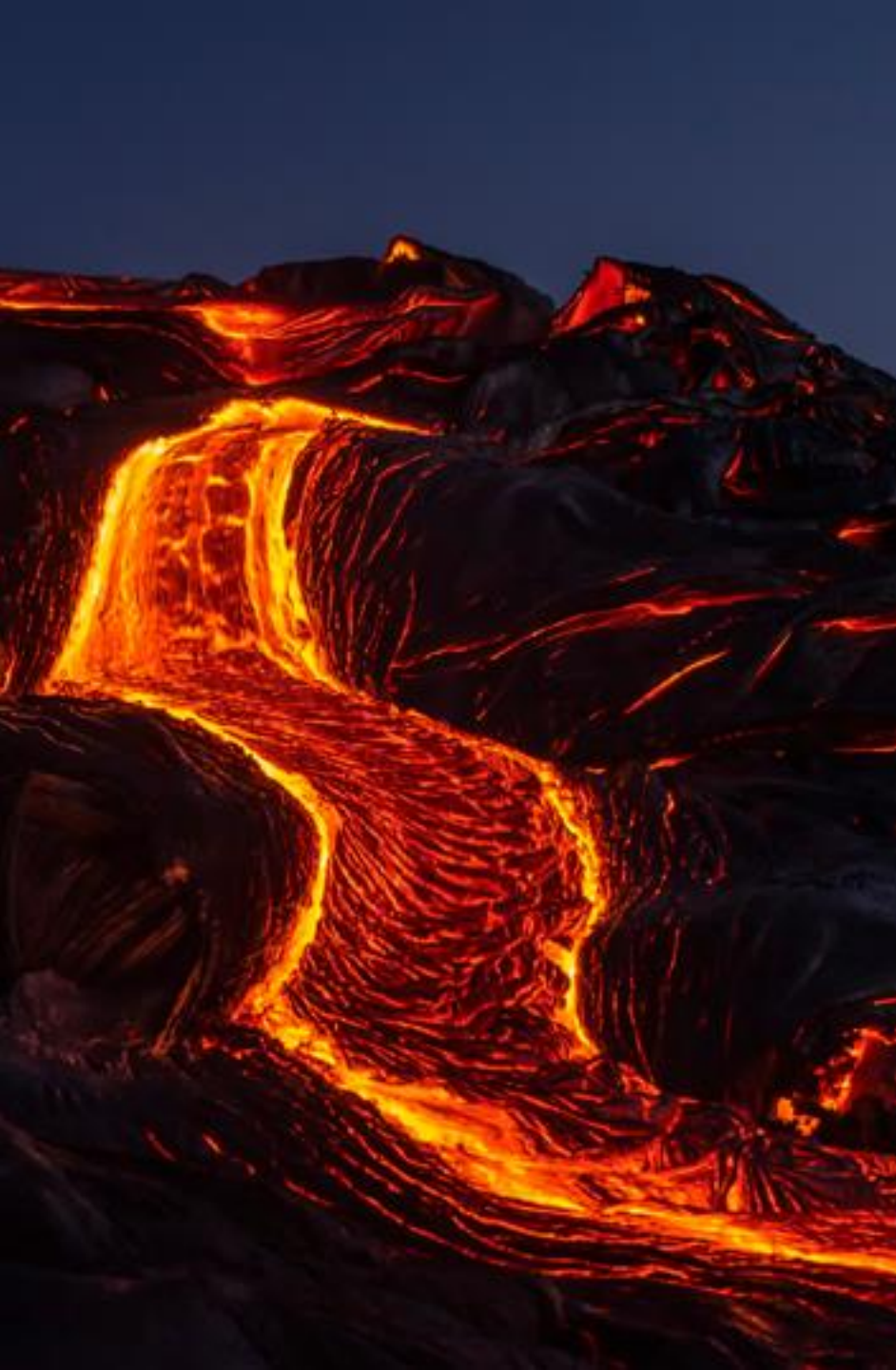
# Magma

- A magma chamber is a large pool of liquid rock beneath the surface of the Earth. The molten rock, or magma, in such a chamber is less dense than the surrounding country rock, which produces buoyant forces on the magma that tend to drive it upwards. If the magma finds a path to the surface, then the result will be a volcanic eruption; consequently, many volcanoes are situated over magma chambers.



## Ash clouds

- Ash clouds are large clouds of gas and dust that erupt from a volcano. They can travel 10,000 miles! Ash can be extremely hot and cause fires, even far from the point of explosion. Rainfall can wash away light volcanic ash, causing mudslides. Heavier ash deposits can cause a roof to collapse under the weight. Some volcanoes create significant weather changes when they erupt due to ash particles in the air that block sunlight and reflect heat.



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# Lava

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- Lava is molten or partially molten rock (magma) that has been expelled from the interior of a terrestrial planet (such as Earth) or a moon onto its surface. Lava may be erupted at a volcano or through a fracture in the crust, on land or underwater, usually at temperatures from 800 to 1,200 °C (1,470 to 2,190 °F). The volcanic rock resulting from subsequent cooling is also often called lava.





## Crater

- A volcanic crater is an approximately circular depression in the ground caused by volcanic activity. It is typically a bowl-shaped feature containing one or more vents. During volcanic eruptions, molten magma and volcanic gases rise from an underground magma chamber, through a conduit, until they reach the crater's vent, from where the gases escape into the atmosphere and the magma is erupted as lava. A volcanic crater can be of large dimensions, and sometimes of great depth.



## volcanic bomb

- A volcanic bomb or lava bomb is a mass of partially molten rock (ash) greater than 64 mm (2.5 in) in diameter, formed when a volcano ejects thick lava fragments during an eruption. Because volcanic bombs cool after leaving the volcano, they are extrusive igneous rocks. Volcanic bombs can be launched many kilometers from a vent and often take on aerodynamic shapes in flight.





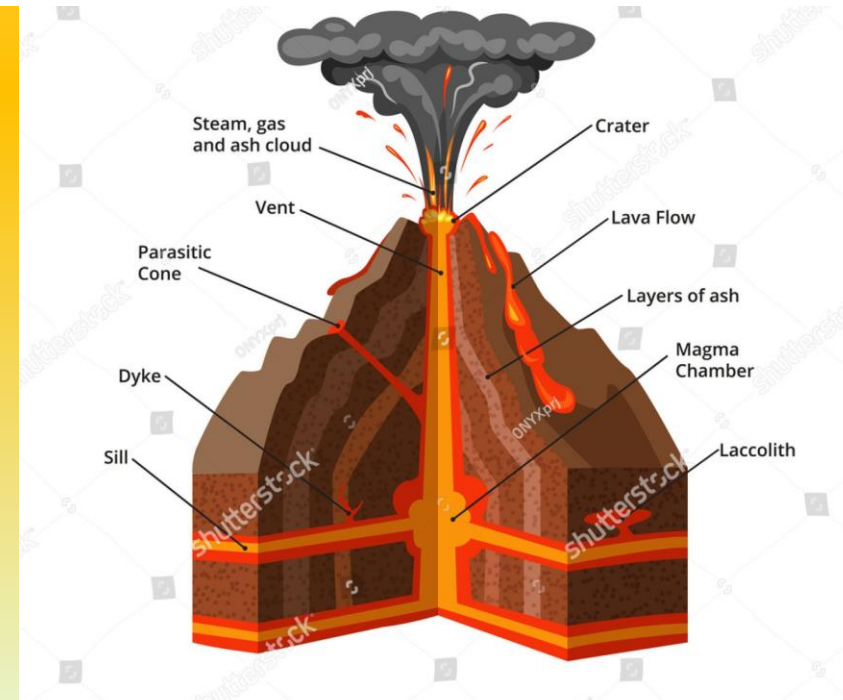
## Secondary vents

Secondary vents are smaller openings in a volcano from which magma erupts. They may cause additional craters to form on the sides of the volcano.



## Pyroclastic Flow

The word pyroclast is derived from the Greek πῦρ (pýr), meaning "fire", and κλαστός (klastós), meaning "broken in pieces". A name for pyroclastic flows which glow red in the dark is nuée ardente (French, "burning cloud"); this was notably used to describe the disastrous 1902 eruption of Mount Pelée on Martinique, a French island in the Caribbean.





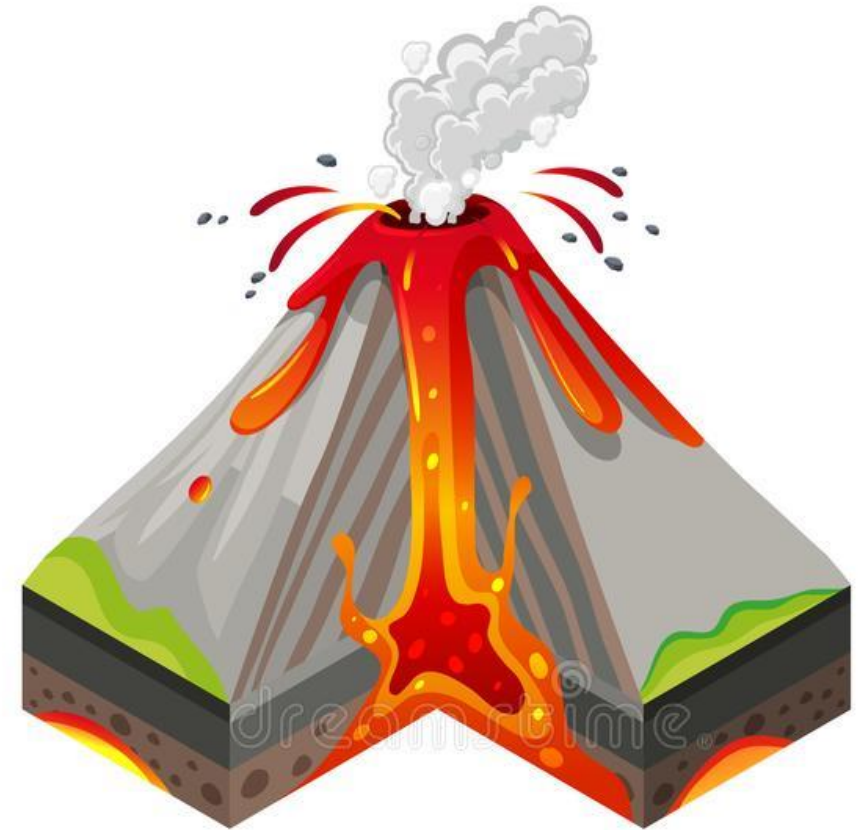


## Secondary Cone

- Volcanic cones are among the simplest volcanic landforms. They are built by ejecta from a volcanic vent, piling up around the vent in the shape of a cone with a central crater. Volcanic cones are of different types, depending upon the nature and size of the fragments ejected during the eruption. Types of volcanic cones include stratocones, spatter cones, tuff cones, and cinder cones.

# magma chamber

- A magma chamber is a large pool of liquid rock beneath the surface of the Earth. The molten rock, or magma, in such a chamber is less dense than the surrounding country rock, which produces buoyant forces on the magma that tend to drive it upwards. If the magma finds a path to the surface, then the result will be a volcanic eruption; consequently, many volcanoes are situated over magma chambers. These chambers are hard to detect deep within the Earth, and therefore most of those known are close to the surface, commonly between 1 km and 10 km down.



**Magma**



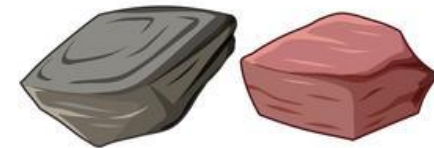
**Igneous Rock**



**Sedimentary Rock**



**Sediment**



**Metamorphic Rock**



# Volcano Erupt

When a volcano erupts, it shoots ash high into the air. The ash can create dangerous ash clouds that can drift for miles. These clouds can also contain tiny glass particles that cause serious damage to the eyes and lungs.



# VOLCANO





# Sources

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A background image of a volcanic eruption at sunset. The volcano is in the foreground, with a large plume of smoke and ash rising into the sky. The sky is a mix of dark blue and orange from the setting sun. In the top left corner, there is a solid pink horizontal bar.

# Thank you for watching!

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