

# Volcanoes

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# What is a volcano?



A volcano is a mountain that opens downwards to a pool of molten rock below the surface of the earth. When pressure builds up, eruptions occur. In an eruption, gases and rocks shoot up through the opening and spill over or fill the air with lava fragments.

Volcanoes form when one tectonic plate moves under another

# Types of Volcanoes



<- Cinder  
Cone

**Cinder Cone**: simplest of volcanoes, built from particles and blobs of congealed lava, bowl shaped crater at the summit and rarely rise more than a thousand feet or so above their surroundings, there are numerous cinder cones in western North America

**Lava type**: less viscous, quite fluid lava

**Composite Volcanoes (Stratovolcanoes)**: steep-sided, symmetrical cones of large dimension built alternating layers of lava flows, volcanic ash, cinders, contains a central vent or a clustered group of vents, lava flows through breaks in the crater wall or issue from fissures on the flanks of the cone

**Lava type**: highly viscous lava that hardens before it can spread far



<- Composite Volcano

## Types of Volcanoes pt. 2



**Shield Volcanoes**: the third type of volcano, built almost entirely of fluid lava flows, flow after flow pours out in all directions from a central summit vent, or group of vents, building a broad/gently sloping cone of flat, domical shape, with a profile much like that of a warrior's shield, built up slowly by the accretion of thousands of highly fluid lava flows called basalt lava that spread widely over great distances

**Lava type**: less viscous, quite fluid lava

# Type of Volcanoes pt. 3

**Lava Domes**: volcanic or lava domes are formed by relatively small, consequently, on extrusion, the lava piles over and around its vent, a dome grows largely by expansion, as it grows , its outer surface cools and hardens then shatters, spilling loose fragments down its sides, some domes form craggy knobs or spines over the volcanic vent

**Lava type**: Highly viscous, less fluid lava



# What happens when a volcano erupts?

After a volcano erupts, white/grey ash falls from the sky. So much of it fills the air, that it covers the sky and can cover the sun. It causes the sky to become dark, once ash falls from the sky which can be harmful to nature and humans.



# Types of Volcanic Eruptions



- **Hawaiian Eruption**: fluid lava is thrown into the air in jets from a vent or line of vents at the summit or on the flank of a volcano
- **Strombolian Eruption**: distinct bursts of fluid lava from the mouth of a magma-filled summit conduit
- **Vulcanian Eruption**: short, violent, relatively small explosion of viscous magma
- **Plinian Eruption**: largest and most violent, caused by the fragmentation of gassy magma
- **Lava Domes**: form when very viscous, rubbly lava is squeezed out of a vent without exploding
- **Surtseyan Eruption**: kind of hydromagmatic eruption, where magma or lava interacts explosively with water

# How many active volcanoes are there?

- There are about 1,350 active volcanoes worldwide
- Only about 500 have erupted in historical time.





# Most Powerful volcano

The most powerful volcano known is the Yellowstone volcano. Located in Wyoming

Erupted about 640,000 years ago.



## Living near a volcano



Living near a volcano can be dangerous, volcanoes can kill and wipe out many civilizations

An example of this was Mount Ilopango, El Salvador, that volcano wiped out entire cities and altered the Mayan Civilizations.

What is left from the volcano is now known as modern day lake Ilopango.

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