

TOPIC: Volcano

Instructions: Read the notes on Volcanoes and focus on the following subtopics.

WHAT IS A VOLCANO?

A volcano is a landform (usually a mountain) where molten rock erupts through the surface of the crust.

Pyroclastic materials- are thrown out of the volcano. These include ash, cinders, gases and lava.

PARTS OF A VOLCANO

- **Ash cloud** - an ash cloud is the cloud of ash that forms in the air after some volcanic eruptions.
- **Crater or cone:** an opening at the top of a volcano
- **Main vent (conduit)** - a conduit is a passage through which magma (molten rock) flows in a volcano.
- **Crust** - the crust is Earth's outermost, rocky layer.
- **Magma chamber** - a magma chamber contains magma (molten rock) occurring from the mantle.
- **Side vent (secondary vent)** - a side vent is a vent in the side of a volcano.
- **Magma:** The hot molten rock is called magma.
- **Lava:** is magma that reaches the Earth's surface

FORMATION OF A VOLCANO

Volcanoes are formed along two types of plate boundary: **destructive (plates move together-Convergent)** and **constructive (plates move apart-Divergent)**.

1. Magma rises through cracks or weaknesses in the Earth's crust.
2. Pressure builds up inside the Earth.
3. When this pressure is released, as a result of plate movement, magma explodes to the surface causing a volcanic eruption.
4. The lava from the eruption cools to form new crust.
5. Over time, after several eruptions, the rock builds up and a volcano forms.

Volcanic Activity

Are volcanoes always active?

Volcanoes usually pass through 3 stages in their life cycle. In the beginning eruptions are frequent and the volcano is active.

Later eruptions become so infrequent that the volcano is said to be dormant (sleeping). (E.g. Mount Fuji in Japan.) This is followed by a long period of inactivity.

Volcanoes which have not erupted in historic times (1000 years) are said to be extinct. (Mount Kilimanjaro)

Where do volcanoes occur?

Volcanoes occur along lines of weakness in the earth's crust. They occur at converging and divergent plate boundaries.

Distribution of volcanoes

1. Volcanoes are found near the margins of continents lining the Pacific seaboard and the western side of North, Central and South America. More than half circle the Pacific Ocean as a "Ring of fire."
2. Some volcanoes are located in and around the Mediterranean Sea. E.g. Mt Etna in Sicily, Mt. Vesuvius in Italy and Mt Stromboli in Italy.
3. Volcanoes can also be found in the Caribbean where they form an insular arch. E.g. Mt. Pelee in Martinique, Mt. Soufriere in Dominica.
4. Other volcanoes are located near rift valley zones.