



## Vulcan

The word **volcano** comes from the name **Vulcan**: the **god of fire** in **Roman mythology**. He lived in a **volcano** and was a **skilled blacksmith**. He made **jewellery, armour and weapons** for the **other gods**. Ancient Romans believed that if **Vulcan** became **angry**, then the volcano would **erupt!**

## Types of Volcanoes

**Volcanoes** can be described in terms of **how active** they are:

- active** – a volcano that is *erupting* or that *erupts regularly*
- dormant** – a volcano that has *not erupted for many years*, but is expected to *erupt again* one day
- extinct** – A volcano that is *not expected to erupt* ever again

**Volcanoes** can also be described by their **shape or type...**

### Composite Volcanoes



**Steep-sided** volcanoes composed of layers of **lava** and **ash**. The lava is **thick** and **sticky**. These volcanoes can have **explosive eruptions**

### Shield Volcanoes



Named for their **shield-like shape**, these volcanoes have **runny lava** that runs down the **sloped sides**. These volcanoes **rarely explode**

### Cinder Cone Volcanoes

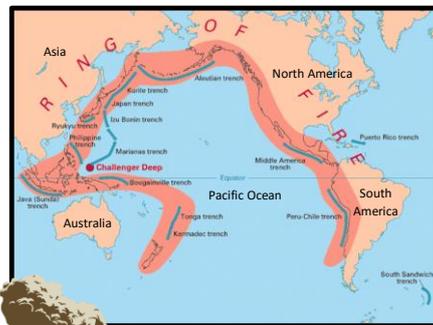
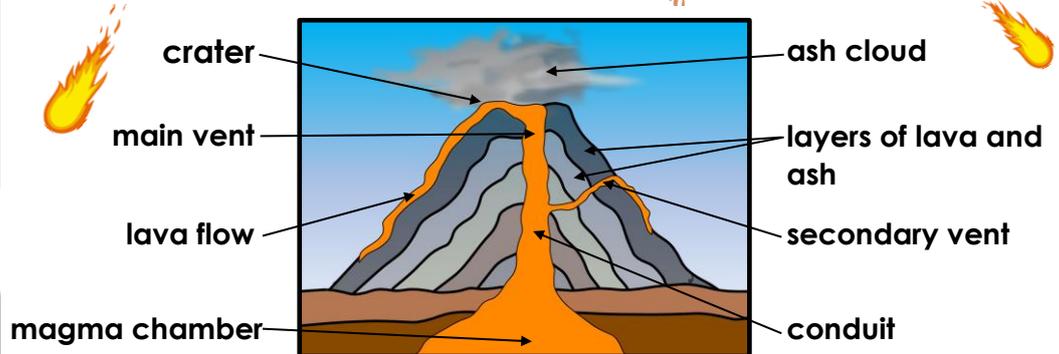
These volcanoes are formed when **lava fragments** are blown from the **vent**, **cool** in the **air** and **fall back** to the ground



# VOLCANOES

A **volcano** is a **geographical feature** that *usually* resembles a mountain. It is an **opening** in the **Earth's crust** from which **red-hot magma, ash** and **gas** can escape

## Structure of a Volcano



## Ring of Fire

**90%** of the world's volcanoes can be found in the **25,000 mile** ribbon of **land and water** known as the **Pacific Ring of Fire**. The vast majority of them are **underwater**. Volcanoes can also form where the **Earth's crust** is particularly **thin** – these are known as **hot spots**. **Hawaii** and **Iceland** are examples of **land masses** created by **hot spots**

## When Volcanoes Explode

When the **pressure** of **gas** and **magma** building up inside a **composite volcano** becomes too great, the **volcano** is likely to **explode** and the following events



Mount St. Helens, 1980

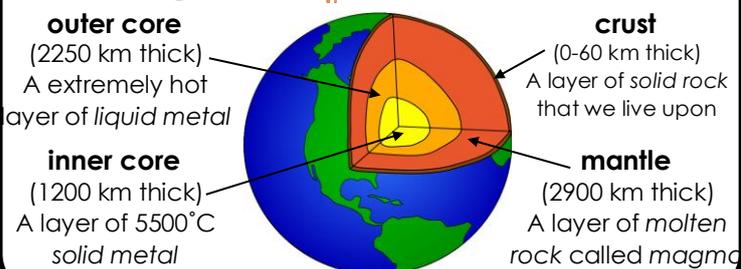
**ash cloud** – a large cloud of **smoke** and **debris** that rises into the sky and can **travel** for **hundreds of miles**, covering the surrounding area in a **blanket of ash**

**lava flows** – this is the **magma** that **escapes** from the inside of the **volcano** (lava flows do **not** always occur)

**pyroclastic flow** – this is a **mixture** of **hot gas** and **volcanic matter** that rushes down the **side** of the volcano at **speeds** of up to **700 km/h**. It is the **deadliest** feature of the eruption

**lahars** – these occur when **volcanic matter** *mixes* with **snow, ice** or **water** and **flows down** from a volcano. **Lahars** can **flood** the local area **destroying buildings** and **bridges**

## Layers of the Earth



**350 million** people live in the **danger zone** of an **active volcano!**



A plaster cast of one of the Pompeii victims



Mount Vesuvius

## Pompeii

Pompeii was a city in **Ancient Roman** times. However, in **79 AD**, the nearby volcano (**Mount Vesuvius**) erupted, burying the city under **20 feet** of **ash** and **debris**. It is estimated **16,000 people** died in the eruption. The city lay **undiscovered** for around **1700 years** until it was unearthed by **archaeologists**