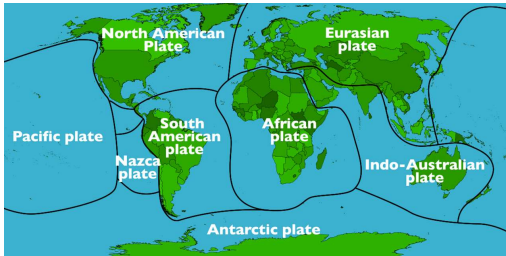


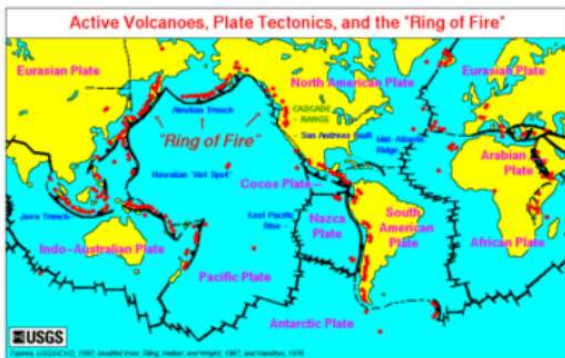


# Volcanoes & Earthquakes Knowledge Organiser

## Tectonic Plates

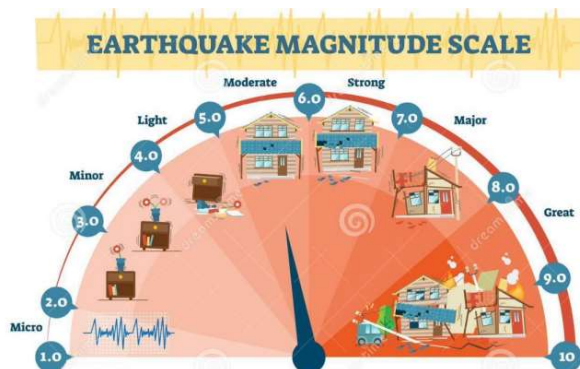


Most tectonic activity is along plate margins and the edge of continents. Some volcanoes form over hot spots in the mantle. The Ring of Fire is a region around much of the rim of the Pacific Ocean where many volcanic eruptions and earthquakes occur.



## What causes earthquakes?

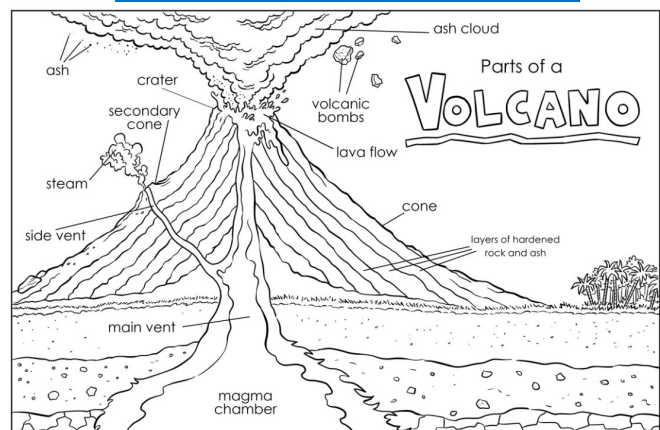
An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates (plate tectonics). Earthquakes can happen along any type of plate boundary. Earthquakes occur when tension is released from inside the crust. Plates do not always move smoothly alongside each other and sometimes get stuck. When this happens, pressure builds up. When this pressure is eventually released, an earthquake tends to occur.



## Key vocabulary

|                        |  |
|------------------------|--|
| <b>Core</b>            | The core is at the centre of the Earth. There is a solid inner core and outer liquid core of molten metal. |
| <b>Crater</b>          | The mouth of a volcano.  |
| <b>Crust</b>           | The surface layer covering our planet.   |
| <b>Earthquake</b>      | A violent movement of parts of the Earth's surface.  |
| <b>Epicentre</b>       | The point on the Earth's surface at the centre of an Earthquake.   |
| <b>Erupt</b>           | To suddenly burst out causing lava to explode out of the earth's surface.                                  |
| <b>Lava</b>            | Molten, hot rock flowing from a volcano.   |
| <b>Molten</b>          | Hot, melted rocks.   |
| <b>Magma</b>           | Extremely hot, liquid rock.  |
| <b>Mantle</b>          | Under the crust is the mantle forming about half of the Earth  |
| <b>Seismic waves</b>   | An elastic wave in the earth produced by an earthquake or other means                                      |
| <b>Tectonic plates</b> | The earth's crust is made up of large areas called tectonic plates that join together                      |
| <b>Volcano</b>         | An opening or rupture in the Earth's crust through which lava, ash and gases escape                        |
| <b>Plate boundary</b>  | where two tectonic plates meet   |
| <b>Richter scale</b>   | a scale to measure the magnitude of an earthquake  |
| <b>Fault lines</b>     | a long crack in the surface of the earth. Earthquakes usually occur along fault lines                      |

## Volcano structure



Volcanic eruptions occur when lava, rock fragments, hot vapour and gas are released through a volcano from beneath the Earth's surface. During eruptions, damage and death is caused by lava flows, mudslides and avalanches.

- Active volcanoes have erupted in the last 10 000 years.
- Dormant volcanoes haven't erupted in the last 10 000 years but may erupt again.
- Extinct volcanoes aren't expected to erupt again.