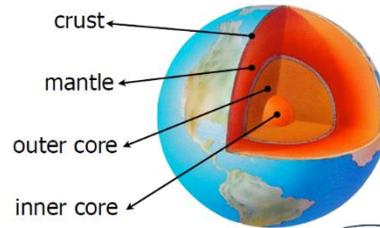


Geography Knowledge Organiser – Extreme Earth - Year 5

Tectonic plates

The Earth is made up of several different layers. The inner core is the hottest part of the Earth and is solid. The outer core is a hot liquid layer. The mantle is made up of semimolten rock. The crust is the outer layer of the Earth. It is made up of plates of rock (that are different shapes and sizes) that fit together like a jigsaw, on top of magma. These are called tectonic plates and they are constantly moving. They move a few centimetres each year. Tectonic plates move in 3 different ways:

- converge (creates mountains)
- diverge (creates volcanoes and ocean trenches)
- transform (creates earthquakes).



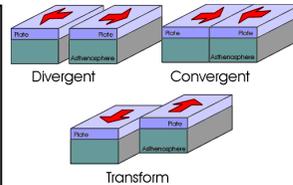
Key vocabulary:

- Weather: changes in the atmosphere that occur on a *daily basis*. E.g. rainy, sunny, windy.
- Climate: patterns of weather over a *period of time*. E.g. tropical, dry, polar, cold, mild.
- Biome: a large region of Earth that has a certain climate and certain types of living things. For example, a biome could be: tundra, forest, grassland, desert.
- Latitude: imaginary lines that extend horizontally around the Earth.
- Longitude: imaginary lines that extend vertically around the Earth.
- Tectonic plates: slabs of rock that make up the Earth's crust.
- Fault line: where two tectonic plates meet.
- Converge: tectonic plates moving towards each other.
- Diverge: tectonic plates moving away from each other.
- Transformative: tectonic plates sliding past each other.
- Magma: hot fluid within the Earth's crust that is called lava once it erupts.
- Pyroclastic flow: a combination of hot ash, gas, rock and lava, erupting out of a volcano.
- Natural disaster: a natural event such as a flood, earthquake, or hurricane that causes great damage or loss of life.

Mountains

There are 3 main types of mountains, formed in 3 different ways:

- Fold mountains are formed by two tectonic plates converging (moving together) and crumpling upwards.
- Fault block mountains are formed by tectonic plates converging, forcing a section of land upwards.
- Dome mountains are formed by a build-up of pressure of magma causing a bulge in the Earth's surface.



Earthquakes

Earthquakes occur when tectonic plates slide past each other (transform). This point is called the epicentre. However, effects can be felt for miles. These effects are measured in two ways: the Richter scale and the Mercalli scale. The damage caused by an earthquake will vary depending on the size but also on how prepared the country is and the resources they have available.

Extreme weather

Lines of latitude are imaginary lines that extend horizontally around the Earth. Two of those lines are called the Tropic of Capricorn and the Tropic of Cancer. The area between these lines of latitude is known as the tropics. Tropical storms are formed in the tropics where the water is warm enough to heat the air above. There are 3 types of tropical storms: hurricanes, cyclones and typhoons. These are the same but names differ according to where they form (hurricanes in the Atlantic Ocean, cyclones in the Indian Ocean, typhoons in the Pacific Ocean).

More examples of extreme weather are tornados, blizzards, flood, hail and lightning storms. These, as well as tropical storms, are caused by the climate. This means there are trends in where these occur.

Tsunamis

A tsunami is a giant wave formed by an earthquake that takes place under water. The force of the earthquake causes the water above to move violently. This can cause huge devastation.

Volcanoes

In some areas, where tectonic plates diverge (move apart), magma can break through the Earth's crust. Once magma erupts from the Earth's crust, it is called lava. The lava cools and turns into rock. This process keeps repeating to form layers of rock, making the volcano grow.

Often volcanoes erupt but hot ash, gas, large pieces of rock and lava are forced out. This combination is called pyroclastic flow.

Why people choose to live near a volcano:

- Fertile soil
- Mining for stones and precious metals
- Tourism
- Geothermal energy
- Jobs

