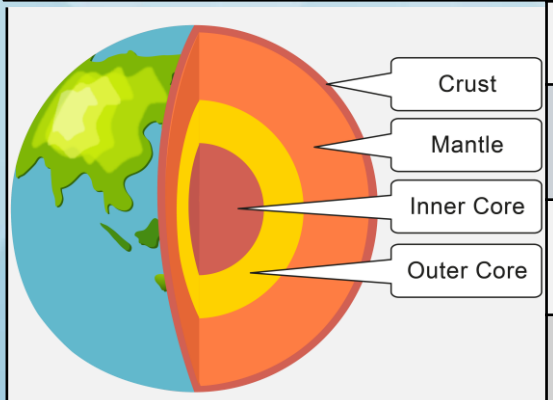
How do plate tectonics shape our planet?

Key Vocabulary

Continent	A large land mass made up of many countries.
Country	A nation with its own government, occupying a particular territory (area of the world)
Tectonic Plates	The Earth's outer layer (crust) is divided into large moving pieces called tectonic plates.
Equator	The imaginary line that runs around the middle of the Earth and is the division between the 2 hemispheres.
Hemispheres	Half of a sphere (3D circle). Used to divide the Earth into the Northern and Southern halves.
Earthquake	A sudden and violent shaking of the ground caused by movements of the Earth's tectonic plates.
Volcano	A volcano is an opening in the Earth's crust. When a volcano erupts, hot gases and molten rock find their way to the earth's surface
Magma	Molten rock that is found beneath the Earth's surface.
Lava	Molten rock that is found on the surface of the Earth.

The Structure of the Earth



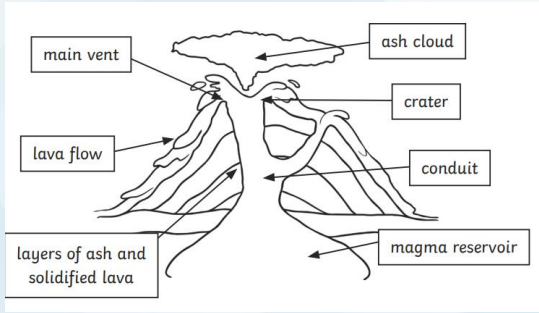
The Crust: This is the outermost layer of the Earth and is broken into large tectonic plates

The Mantle: Split into the lower and upper mantle, this layer is almost 3,000km and varies in temperature.

Inner Core – This is a huge metal ball made mainly from iron, with a temperature of around 5000°C to 6000°C.

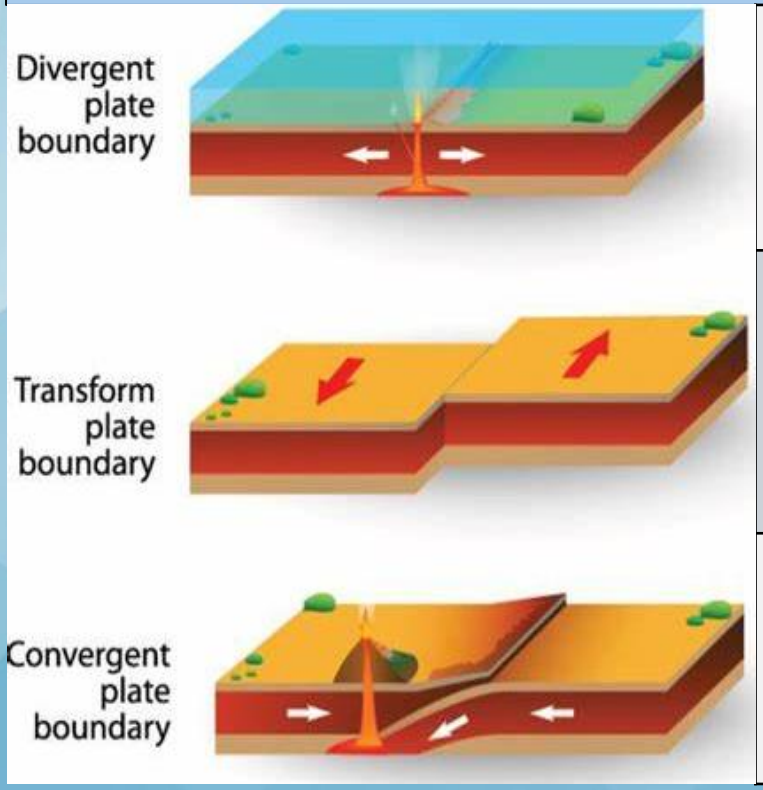
The outer core is a liquid layer of iron and nickel which flows around the centre of the Earth, creating its magnetic field.

Volcanoes



1. Deep within the core of the Earth, it is so hot that some rocks melt and become a thick and sticky substance called **magma**.
2. This substance gets hotter and hotter and **pressure** builds deep in the magma reservoir of the volcano.
3. Eventually, magma will push up towards the surface of the Earth through the volcano's conduit and escape through **vents** in the Earth.
4. When magma erupts from the volcano, it is called **lava**. During an eruption, **volcanic ash** and other rock particles also escape violently into the air and can cause major damage to the volcano's surrounding environment.
5. Volcanic ash that erupts from the volcano will fall back down onto the Earth like powdery snow. If this ash is thick enough, it can cover and suffocate surrounding plants and animals and also **contaminate** streams and rivers.
6. How explosive a volcano is depends on how runny or sticky its magma is. The stickier the magma, the more **violent** and explosive the eruption.

Tectonic Plate Boundaries



Divergent Plates: Tectonic plates slowly move away from each other in opposite directions. Where this happens, magma will rise to fill the gaps and new land is created. A famous example is the mid-Atlantic ridge.

Transform Plates: Tectonic plates slide past each other in opposite directions, or in the same direction, but at different speeds. When plates get stuck and then suddenly release, an earthquake occurs.
A well known example of this is the San Andreas Fault in America.

Convergent Plates: Plates move towards each other and collide. One plate may be forced underneath the other (subduction). This can form mountains and volcanos.
The Andes in South America is an example of where this is happening.