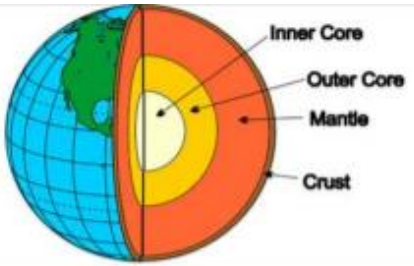
Year 6 Knowledge Organiser



	Structure of the Earth
Crust:	solid rock; 0-60 km thick; continental (granite) and oceanic (basalt); broken into tectonic plates
Mantle:	liquid/molten rock; ~2,900 km thick
Outer core:	liquid metal; iron and nickel; ~4400°C
Inner core	solid metal; iron and nickel; ~6100°C

Keywords	
Magma	Molten rock in the mantle
Lava	Magma that has reached the surface
Pressure	Physical force (pressure builds up when tectonic plates lock together and can't move)
Friction	Resistance or difficulty in moving. Tectonic plates are rough and so there is friction when they move.
Basalt	Dark-coloured volcanic rock.
Granite	Hard rock
Fold mountain	Mountains formed when tectonic plates collide and cause the plates to wrinkle
Ocean trench	A deep valley formed on the ocean floor where one tectonic plate subducts under another.
Tsunami	Large ocean wave caused by underwater earthquake.

Tectonic Plates
The Earth's surface is made up of different sections called plates.

Mountains

Mount Everest
- At 8,848 metres it is the highest mountain in the world.
- The first successful ascent was on 29th May 1953, by Edmund Hillary and Tenzing Norgay.

Types of mountains
Fold mountains, fault block mountains and dome mountains.

Earthquakes

What is an earthquake?
An earthquake is a vibration of the Earth's crust. An earthquake's strength is called its **magnitude** and is measured on **the Richter scale**. Like volcanoes, earthquakes mostly occur along **plate boundaries**.

Earthquakes are common at transform **plate boundaries**. Friction may cause two plates to stick, but when they become unstuck a violent jolt (earthquake) can occur.

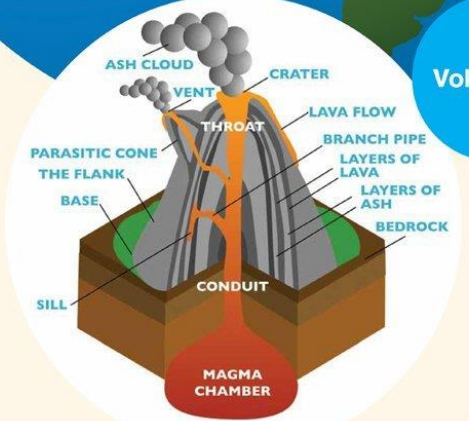
The **epicentre** is the point on the Earth's surface that is immediately above the focus.

The **focus** of an earthquake is the point deep underground where it begins.

The structure of the Earth
Inner core is primarily a solid ball of iron.
Outer core is liquid iron and nickel.
Mantle is semi-molten rock or **magma**.
Crust is solid rock.

Mountains, Volcanoes and Earthquakes

Volcanoes



What is a volcanic eruption?
Pressure is placed on the **magma** when it is deep underground. When the magma rises through a volcano's vent this pressure is released as **lava** and gas.

Shield volcanoes have runny lava; because of this they do not have an 'explosive' eruption. Lava spreads quickly across the landscape. With each eruption a new layer of rock is built on the previous one. Gradually a wide dome of rock is built up.

Composite volcanoes are formed by hardened layers of lava and ash from successive eruptions. The lava is viscous and it cools and hardens before spreading far. The eruptions tend to be violent.

Plate boundaries
Constructive plate boundaries: when two plates pull apart, magma rises and erupts as lava. This lava hardens to form new crust.

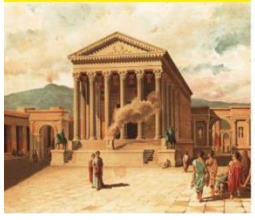
Destructive plate boundaries: when two plates collide or converge. One plate is pushed under the other. The plate underneath melts and the crust becomes magma. This magma rises to the surface to form volcanoes.

Higest Mountains in each continent
Mount Everest - Asia - 8850m
Aconcagua - South America - 6959m
Mount McKinley - North America - 6194m
Kilimanjaro - Africa - 5895m
Mount Elbrus - Europe - 5642m
Vinson Massif - Antarctica - 4897m
Carstensz Pyramid - Oceania - 4884m

Volcanic Eruption in Pompeii!

- The 79AD eruption of Mount Vesuvius was the first time the volcano had erupted for 1,800 years. The people of Pompeii didn't know what a volcano was.
- The initial 'mushroom' cloud that shot out from the volcano as a column reached over 20 miles into the air.
- It has been estimated that the pyroclastic flow (molten and ash) from Vesuvius may have moved down the mountain as fast as 450 miles per hour and as hot as 1,830mF or 999mC.
- The eruption happened the day after the religious festival of Vulcan, who was the Roman god of fire.

79 AD



TODAY