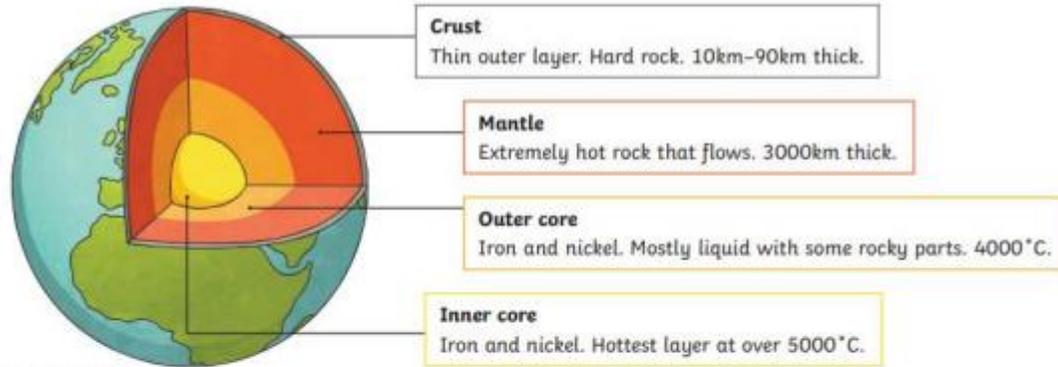


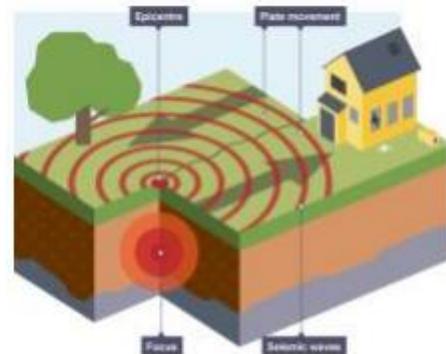
Extreme Earth

Layers of Earth



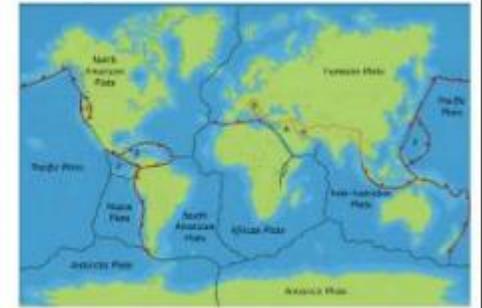
Earthquakes

- Earthquakes are caused when the earth's tectonic plates suddenly move.
- Most earthquakes occur near the tectonic plate boundaries.
- Earthquakes can cause lots of damage to roads, buildings and property.
- The power of an earthquake is measured using the Richter Scale.



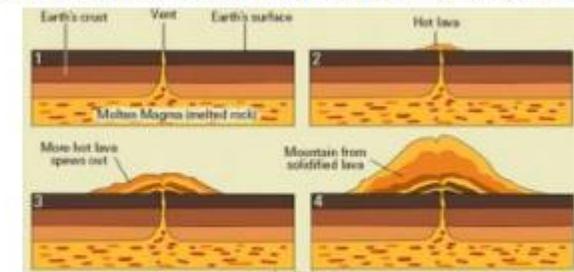
Tectonic plates

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.



Volcanoes

Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing magma to sometimes erupt through it.



- Active volcanoes have erupted in the last 10 000 years.
- Dormant volcanoes haven't erupted in the last 10000 years but may erupt again.
- Extinct volcanoes aren't expected to erupt again.

Key Vocabulary

Core - The core is at the centre of the Earth. There is a solid inner core and outer liquid core of molten metal.
Crater - The mouth of a volcano.
Crust - The surface layer covering our planet.
Earthquake - A violent movement of parts of the Earth's surface.

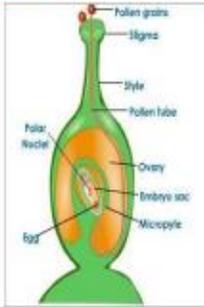
Epicentre - The point on the Earth's surface at the centre of an Earthquake.
Erupt - To suddenly burst out causing lava to explode out of the earth's surface.
Lava - Molten, hot rock flowing from a volcano.
Molten - Hot, melted rocks.
Magma - Extremely hot, liquid rock.

Mantle - Under the crust is the mantle forming about half of the Earth.
Seismic waves - An elastic wave in the earth produced by an earthquake or other means.
Tectonic plates - The earth's crust is made up of large areas called tectonic plates that join together.
Volcano - An opening or rupture in the Earth's crust through which lava, ash and gases escape.

Plant Processes

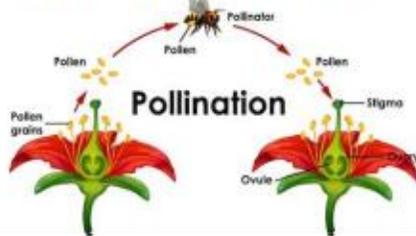
Fertilisation

The grain of pollen grows a tube from the stigma, which goes down the style until it reaches the ovary. The male part (pollen) joins with the female part (egg) to form a seed. This is called fertilisation.



Pollination

This occurs when the pollen grain lands on the stigma and the nucleus fuses with the ovule to form a seed. It can be carried out by insects, animals or the wind.



Seed Dispersal

After fertilisation plants have to spread their seeds so they can grow in a new place. There are many ways that plants do this:

- by the wind or water
- by animals eating them
- by making them stick to animal fur
- by explosion, dropping or shaking

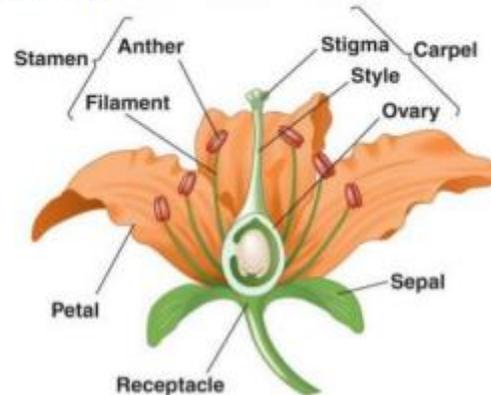


Extreme Earth

Flower Structure

The male part of the flower is called stamen. It includes the anther and filament.

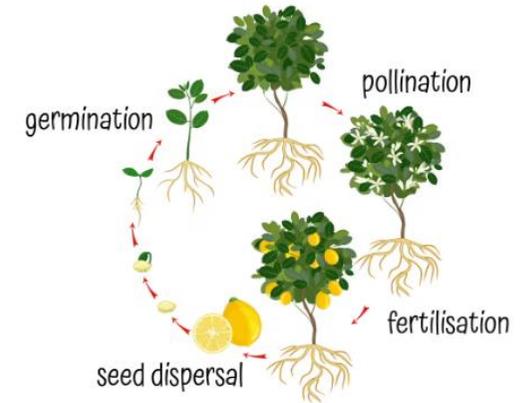
The female part of the flower is called the carpel. It includes the stigma, style and ovary.



Animal Reproduction

For most animals which live on the land, offspring are fertilised inside the mother's body. This happens in 1 of 3 ways:

- 1) The young develop inside the female and are born alive (most mammals).
- 2) Fertilised eggs are laid outside the female's body and develop in the egg getting nourishment from the yolk.
- 3) In some animals the eggs are held within the female and hatch as they are laid e.g. a fruit fly.



Key Vocabulary

amphibian	A cold-blooded vertebrate animal e.g. frogs, toads, newts.
asexual reproduction	Offspring gets genes from one parent so they are clones of their parents.
bird	A warm-blooded egg-laying vertebrate.
germination	The development of a plant from a seed or spore after a period of dormancy.
insect	A small animal that has 6 legs.
life cycle	The stages a living thing goes through in its life.
mammal	A warm-blooded vertebrate animal, has hair or fur and give birth to live young. Females secrete milk for their young.
ovule (egg)	Female sex cell, found in the ovary.
pollen	Contains the male sex cells. Produced by the stamens.
reproduction	The process by which a living organism creates a likeness to itself.
seed dispersal	The process of plants spreading their seeds so they can grow in a new place.
sexual reproduction	Offspring get genes from both parents so they inherit a mix of features from both.