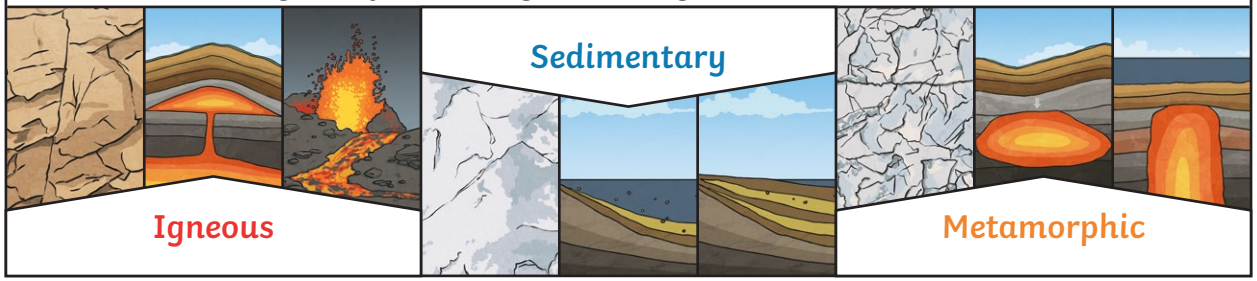
Key Vocabulary	
igneous rock	Rock that has been formed from magma or lava.
sedimentary rock	Rock that has been formed by layers of sediment being pressed down hard and sticking together. You can see the layers of sediment in the rock.
metamorphic rock	Rock that started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.
magma	Molten rock that remains underground.
lava	Molten rock that comes out of the ground is called lava.
sediment	Natural solid material that is moved and dropped off in a new place by water or wind, e.g. sand.
permeable	Allows liquids to pass through it.
impermeable	Does not allow liquids to pass through it.

Key Knowledge

There are three types of naturally occurring rock.



Natural Rocks			Human-Made Rocks
Igneous	Sedimentary	Metamorphic	
Obsidian	Chalk	Marble	Brick
Granite	Sandstone	Quartzite	Concrete
Basalt	Limestone	Slate	Coade Stone

Some words you might use to discuss the properties of a rock:

hard, soft, **permeable**, **impermeable**, durable (meaning resistant to weathering), high density, low density. Density measures how 'bulky' the rock is (how tightly packed the molecules are).

Key Vocabulary

fossilisation	The process by which fossils are made.
palaeontology	The study of fossils.
erosion	When water, wind or ice wears away land.

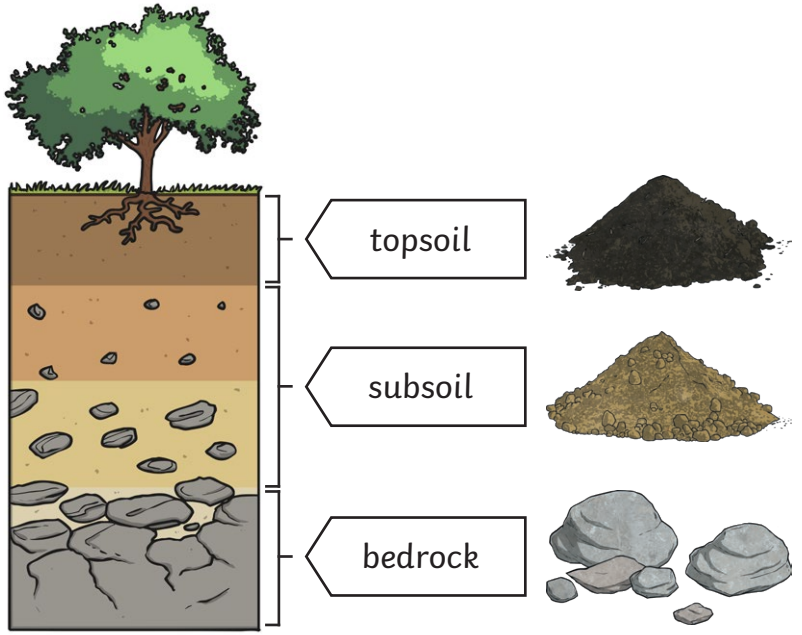
Caves are formed when water **permeates** through the bedrock and **erodes** some of the rock away. Over thousands of years these caves can become very large.

Key Knowledge

Soil

Soil is the uppermost layer of the Earth. It is a mixture of different things:

- minerals (the minerals in soil come from finely broken-down rock);
- air;
- water;
- organic matter (including living and dead plants and animals).



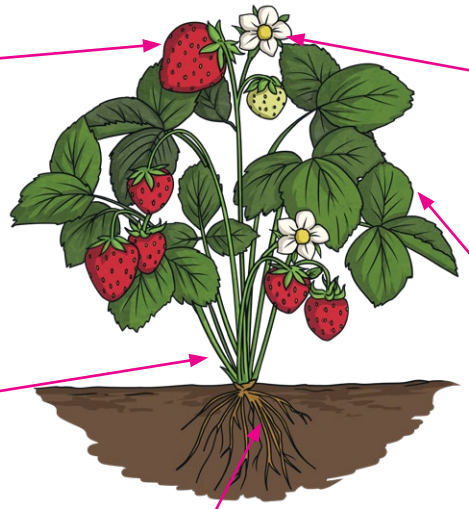
Fossilisation

An animal dies. It gets covered with **sediments** which eventually become rock.	More layers of rock cover it. Only hard parts of the creature remain, e.g. bones, shells and teeth.	Over thousands of years, **sediment** might enter the mould to make a **cast fossil**. Bones may change to mineral but will stay the same shape.	Changes in sea level take place over a long period.	As **erosion** and weathering take place, eventually the fossil becomes exposed.

Key Vocabulary

fertilisation	**Fertilisation** is the process whereby part of the pollen combines with an ovule in the **flower's** ovary, producing a **seed** that can grow into a new plant.
flower	A **flower** is the part of a plant that makes **seeds**, which grow into new plants. Most flowering plants only grow **flowers** for a short time each year.
germination	**Germination** is the process by which a **seed** starts to grow.
leaf	A **leaf** is the part of a plant that makes food for the plant by absorbing energy from sunlight.
nutrients	**Nutrients** are substances that are needed by living things to grow and survive. Most plants gather **nutrients** from the soil using their **roots**.
pistil	The **pistil** is the female part of the flower that includes the stigma, style and ovary. The stigma collects pollen. The style connects the stigma to the ovary. The ovary contains ovules, which develop into **seeds** after they have been **fertilised**.

Parts of a Plant



Fruit
encases a plant's seeds and is often eaten by animals

Flower
produces seeds that can grow into new plants

Leaf
absorbs sunlight to make the plant's food

Stem
transports water and food around the plant

Roots
support the plant, take up water, air and nutrients from the soil and can store food and water

What Does a Plant Need to Grow?

water

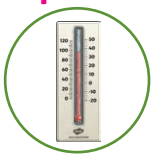
light

air

space

nutrients

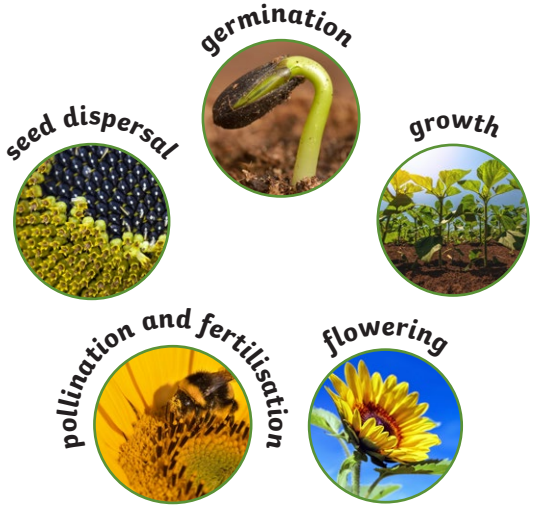
temperature



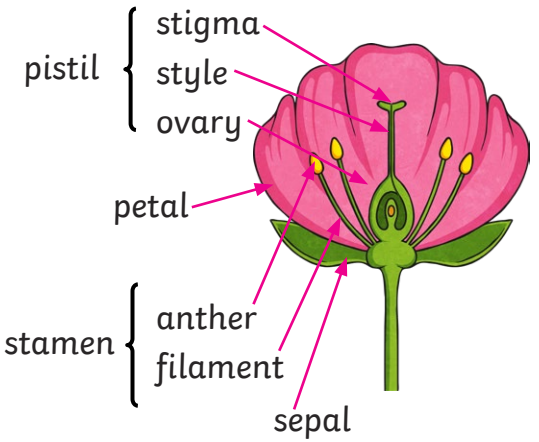
Key Vocabulary

pollination	**Pollination** is the process whereby pollen (a fine powdery substance produced by a flowering plant's anther) is moved to a flower's stigma.
pollinator	A **pollinator** is an animal that carries pollen between **flowers**. Examples include insects, birds and bats.
roots	**Roots** are the part of a plant that anchor the plant into the ground and absorb water, air and **nutrients**.
seed	A **seed** is a small, **fertilised** ovule of a plant that, when in the right conditions, can grow into a new plant.
seed dispersal	**Seed dispersal** is the method of moving **seeds** away from the parent plant so the **seeds** have the best chance of survival.
stamen	The **stamen** is the male part of the flower that includes the anther and the filament. The filament supports the anther. The anther produces pollen.
stem	A **stem** is the central part of a plant, which supports it and carries water and **nutrients** around it.

Life Cycle of a Flowering Plant



Parts of a Flower



Seed Dispersal

Plants disperse their seeds in a variety of ways.

wind

water

animal (carrying)

animal (eating

bursting