

Year 3 SEN Knowledge Organisers

Science

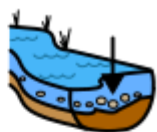
Year 3

Rocks and soils

Key vocabulary



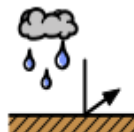
rock cycle



sedimentary



permeable



impermeable



igneous



metamorphic

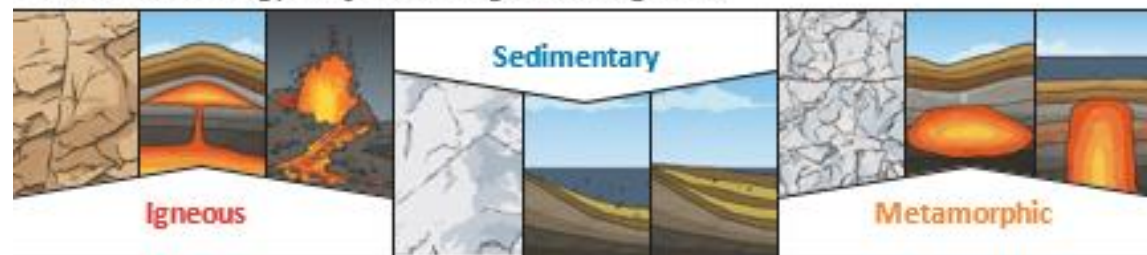
Symbol

magma



lava

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:

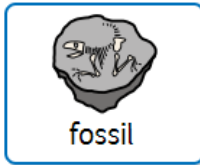
hard, soft, **permeable**, **impermeable**, durable (meaning resistant to weathering), high density, low density. Density measures how 'bulky' the rock is (how tightly packed the molecules are).

Year 3

Rocks and soils

Key vocabulary

Fossilisation



The process by which fossils are made.

palaeontology

The study of fossils.

Erosion

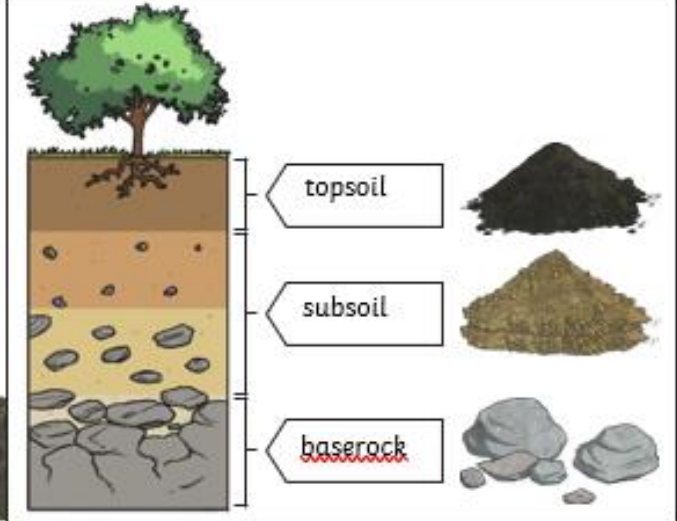


When water, wind or ice wears away land.

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.

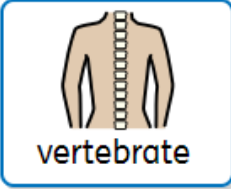



As **erosion** and weathering take place, eventually the fossil becomes exposed.

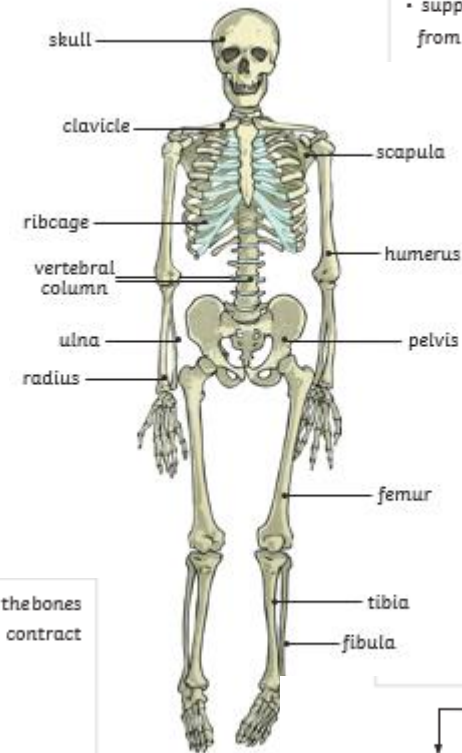


Year 3

Animals Including Humans

Key vocabulary

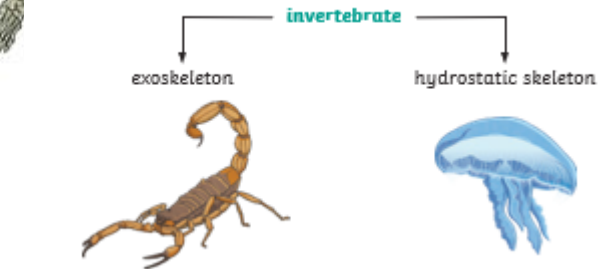
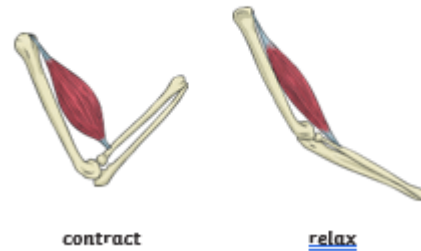
Vertebrate 	animals with backbones
Invertebrate 	Animals without backbones
Muscles 	soft tissues in the body that contract and relax to cause movement
Tendons	cords that join muscles to bones
Joints 	areas where two or more bones are fitted together



Skeletons do three important jobs:

- protect organs inside the body;
- allow movement;
- support the body and stop it from falling on the floor.

Skeletal **muscles** work in pairs to move the bones they are attached to by taking turns to contract (get shorter) and relax (get longer).



Key vocabulary



Healthy

Foods that are good for your body.



unhealthy

If you eat too much unhealthy foods you can harm your body.



energy

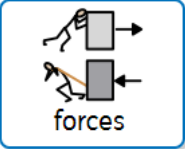
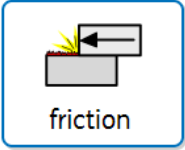

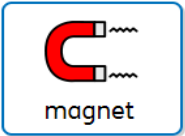
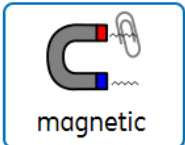
Foods give you energy.

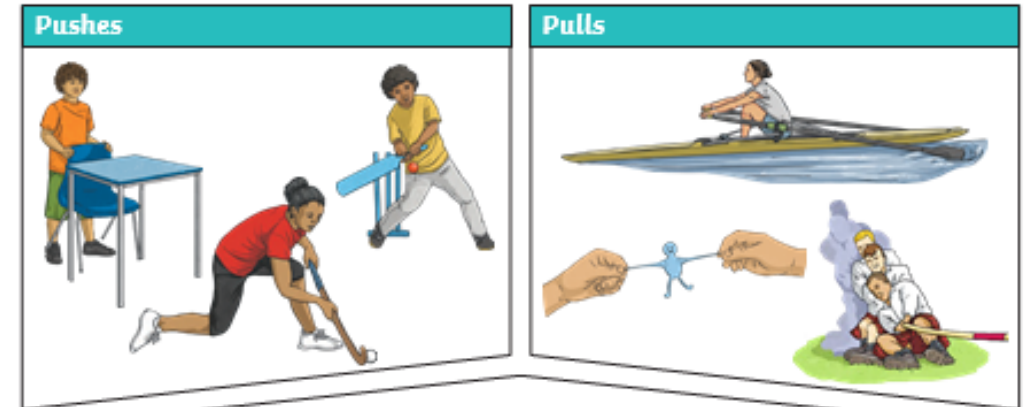
Nutrient	Found in... (examples)	What it does/they do
carbohydrates		provide energy
protein		helps growth and repair
fibre		helps you to digest the food that you have eaten
fats		provide energy
vitamins		keep you healthy
minerals		keep you healthy
water		moves nutrients around your body and helps to get rid of waste

- Living things need food to grow and to be strong and **healthy**.
- Plants can make their own food, but animals cannot.
- To stay **healthy**, humans need to exercise, eat a **healthy** diet and be hygienic.
- Animals, including humans, need food, water and air to stay alive.

Year 3

Forces and magnets

Key vocabulary		
Forces		Pushes or pulls
Friction		A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
Surface		The top layer of something.
Magnet		An object which produces a magnetic force that pulls certain objects towards it.
Magnetic		Objects which are attracted to a magnet are magnetic. Objects containing iron, nickel or cobalt metals are magnetic.



Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.

Year 3

Forces and magnets

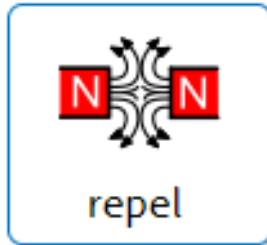
Key vocabulary

Poles



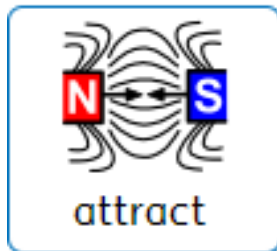
North and south poles are found at different ends of a magnet.

Repel





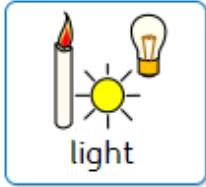
This is when a force pushes objects away.

Attract



This is when a force pulls objects together.

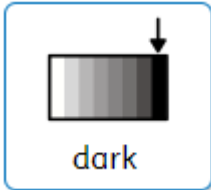
Magnetic ✓	Non-magnetic ✗
	
<p>These objects contain iron, nickel or cobalt. Not all metals are magnetic.</p>	<p>These objects do not contain iron, nickel or cobalt.</p>



A form of light energy that travels in a wave from a source.



A place where the light has been blocked.



When there is no light



Objects which let no light through.



When light hits the surface of an object and it bounces into your eyes.



Objects that you can see through clearly.



A object that makes its own light.



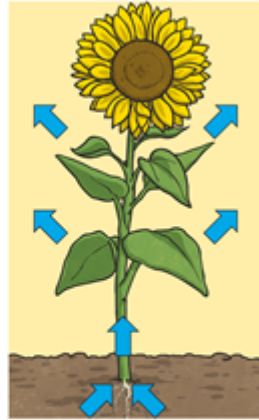
Objects that you can see a little bit through.

Year 3

Plants

How Water Moves through a Plant

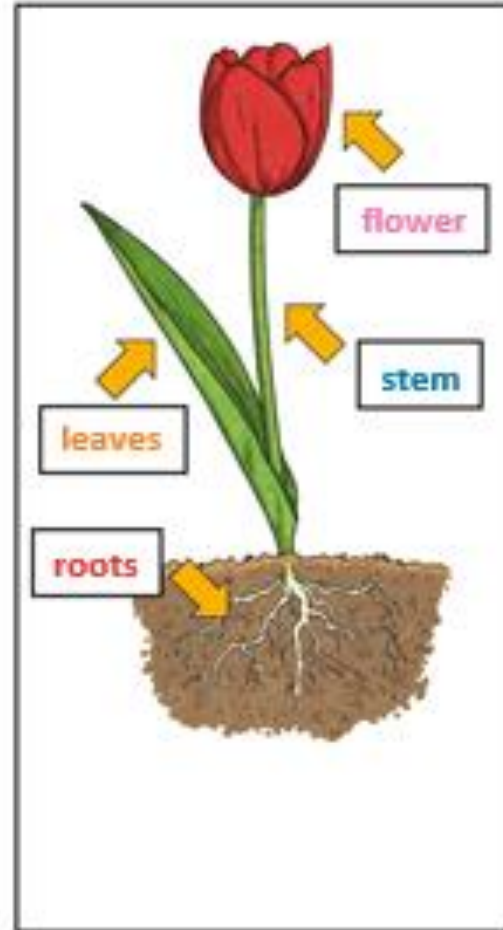
1. The **roots** absorb water from the soil.
2. The **stem** transports water to the **leaves**.
3. Water **evaporates** from the **leaves**.
4. This **evaporation** causes more water to be sucked up the **stem**.



The water is sucked up the **stem** like water being sucked up through a straw.

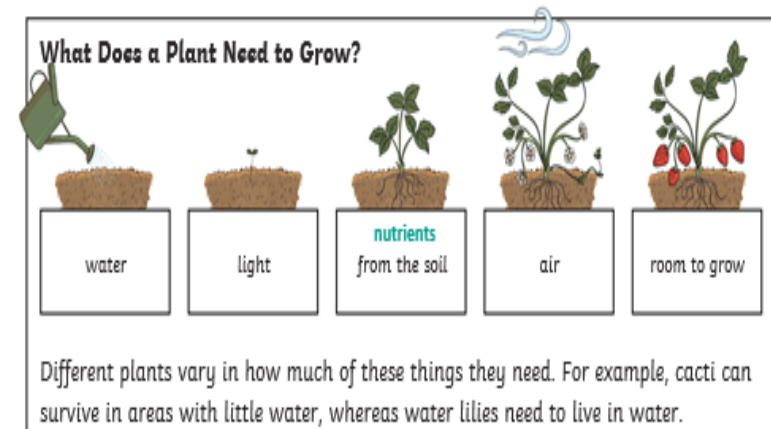
Leaves: This is where food is made for the plant.

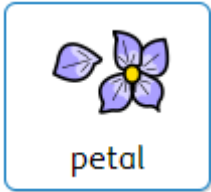
Roots: These keep the plant in the ground so they can absorb the water.



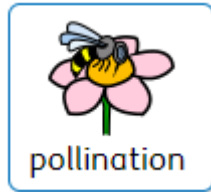
Flower: These make seeds grow into new plant.

Stem: These hold the plant upright.





Petal: The bright colours attract insects.



Pollination: When the powder passes from one flower to another.



Stamen: The male parts of the flower.

