



Light and Shadow

Shiny surfaces reflect light



Matt surfaces don't reflect light very well



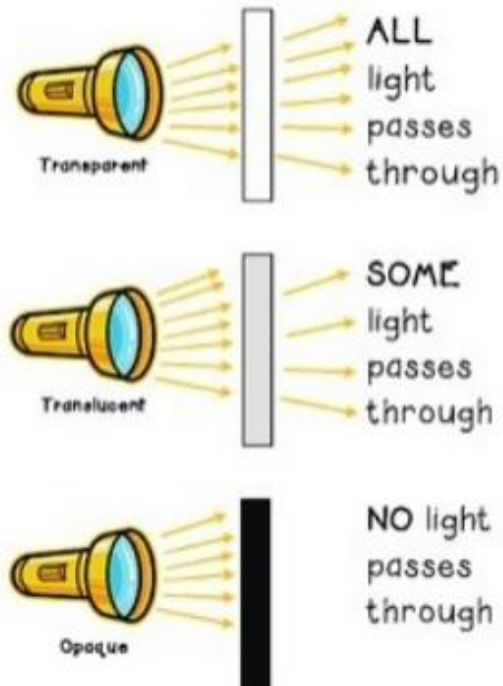
This half term we will be learning:

- That we need light in order to see.
- That light travels in straight lines.
- That some objects absorb and some reflect light.
- That shadows form when a light source is blocked.
- That the position of the sun changes the position of a shadow throughout the day,
- That we need to protect our eyes in the sun.

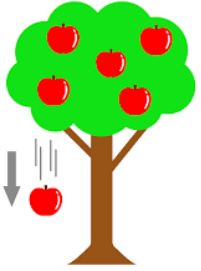
Key Vocabulary

Word	Definition
Absorb	Take in or soak up.
Dark	The absence of light.
Energy	A supply of power. The ability to do work.
Light	A type of energy. You can see an object because your eyes can see light.
Light Source	Where light comes from e.g. the sun, a light bulb.
Mirror	A shiny surface that reflects light in a regular way.
Opaque	Not clear. Blocks light so that none gets through.
Reflect	To throwback or bounce light from a surface.
Shadow	A dark shape or outline that is made when light is blocked.
Translucent	Almost see through, lets some light pass through.
Transparent	Completely see through, lets light pass through.

Translucent, Transparent & Opaque



Forces and Magnets



This half term we will be learning:

- How some things move on different surfaces.
- That some forces need contact between 2 objects but magnetic forces can act at a distance.
- How magnets attract or repel each other and attract some materials and not others.
- To compare and group everyday materials based on whether they are attracted to a magnet.
- Identify magnetic materials.
- To make predictions about whether 2 magnets will attract or repel each other.

Key Vocabulary

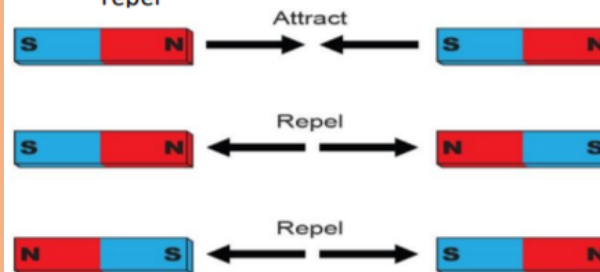
Word	Definition
Force	A push, pull, twist or turn.
Gravity	A pushing force exerted by Earth, it attracts objects towards the centre of the Earth.
Friction	The force between two moving surfaces.
Magnetism	The force of attracting or repelling caused by a magnet.
Magnet	A material or object that creates a magnetic field, it attracts or repels magnetic objects.
Poles	The 2 sides of a magnet where the magnetism is strongest.
Attract	To pull towards.
Repel	To push away.

MAGNETS - are objects or materials that produce a magnetic field and attract or repel magnetic objects.

Magnets have 2 poles: north and south.

If you put magnets towards each other:

- 1 south pole and 1 north pole will attract
- 1 south pole and another south pole will repel
- 1 north pole and another north pole will repel



Forces can make things...

Change shape



Change speed



Change direction



Rocks and Soils



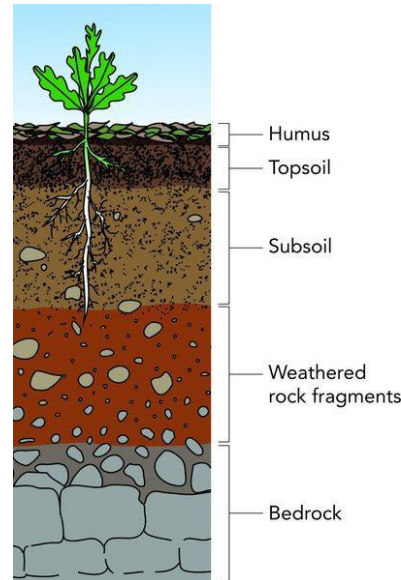
Key Vocabulary

This half term we will be learning:

- To compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
- To identify different types of rock.
- To recognise that soils are made from rocks and organic matter.
- Recognise that rocks and soils can look and feel different.
- Recognise that rocks and soils can be different in different places/ environments.

Word	Definition
Rock	Made up of grains that are packed together.
Mineral	Solid chemical substances that occur naturally.
Fossil	The remains or impressions of a prehistoric plant or animal embedded in rock.
Igneous	Lava or magma that has turned from liquid to solid (forming a rock).
Metamorphic	An igneous or sedimentary rock that has been changed by extreme heat or pressure.
Sedimentary	A rock formed from the build up sediment at the bottom of rivers or oceans.
Sediment	Dead animals, plants or pieces of rock that settles to the bottom of a liquid.
Magma	Liquid rock inside a volcano.
Lava	Liquid rock which flows out of a volcano (ranges from 700-1200 degrees centigrade)

Layers of Soil

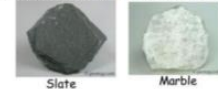


TYPES OF ROCKS

IGNEOUS ROCKS - are very hard, dark and heavy. They are formed when molten magma from a volcano cools down. They tend to have interlocking grains giving the rock a crystalline appearance. **EXAMPLES: granite, basalt, obsidian.**



METAMORPHIC ROCKS - are rocks which have been changed over time by pressure or heat. Fossils can be found in metamorphic rocks if plants and animals have been trapped in the rocks. They are hard but can be damaged by acids. **EXAMPLES: slate, marble**



SEDIMENTARY ROCKS - are formed by sediment (which includes minerals, small pieces of plants and other organic matter) that is deposited over time. The sediment is compressed over a long period of time before it become solid layers of rock. **EXAMPLES: sandstone, limestone, flint, chalk**



Fossils

This half term we will be learning:

- How the findings of palaeontologists can teach us about the past.
- That fossils are remains or impressions of plants or animals embedded in rock.
- How fossils are formed over time.
- That Mary Anning is a significant figure as a fossil hunter and what her findings have taught us.

Key Vocabulary

Word	Definition
Fossil	The remains or impressions of a prehistoric plant or animal embedded in rock.
Fossilised	The process of becoming a fossil.
Palaentologist	A person who studies fossils to find out about animals and plants from the past.
Pressure	A continual force placed on an object.
Jurassic	The period of the Mesozoic era between the Triassic and the Cretaceous or the corresponding system of rocks marked by the presence of dinosaurs and the first appearance of birds
Sediment	The matter that settles to the bottom of a liquid.
Erosion	The process of eroding (breaking down) by wind or water.



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.



Mary Anning (1799-1847)

Mary Anning was an English fossil collector, dealer and palaeontologist who became known around the world for important finds she made in Jurassic marine fossil beds along the English channel at Lyme Regis in the county of Devon in Southwest England.



Year 3
Science
Summer 1

Plants











This half term we will be learning:

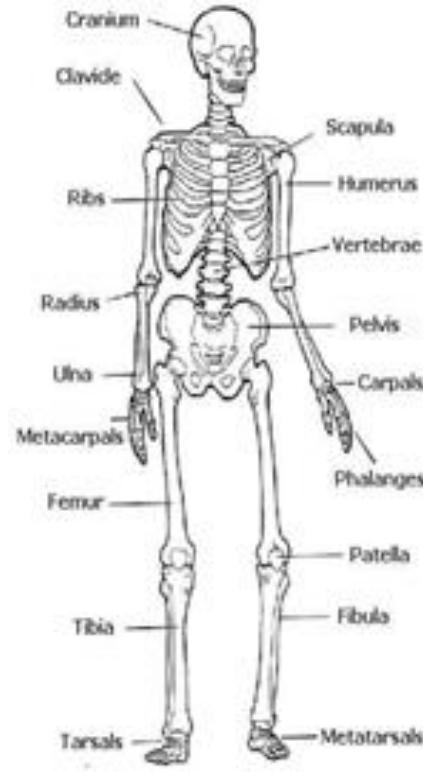
- The seven processes of all living things (Movement, Respiration, Sensitivity, Growth, Reproduction, Excretion and Nutrition) in relation to plants.
- How to observe a plant's growth over a period of time and how this might be affected by the conditions the plant is put in.
- How to identify the different parts of a plant (flower, leaf, stem and roots) and their function.
- How water is transported within a plant.
- What pollination is and the important roles bees play in this process.
- The different ways in which seeds are dispersed: wind, water, animals and explosion.

Key Vocabulary

Word	Definition
Flower	The reproductive part of a plant.
Stem	The main body of the plant.
Root	Lies under the soil to attach the plant to the ground and absorb nutrients.
Leaf	Attaches to the stem and helps to produce food.
Water transportation	How the plant takes water from the ground through the roots and then up the stem to the leaves.
Nutrients	What the plant needs so that it can stay healthy and grow.
Pollination	The moving of pollen from one plant to another for fertilisation.
Seed dispersal	The movement of seeds away from the parent plant.
Photosynthesis	How the plant makes its own food.

			
Root	Stem	Leaf	Flower
The roots anchor the plant into the ground and absorb water and nutrients. They also store some food for the plant.	The stem transports water and nutrients from the roots to the leaves. It also holds the plant up towards the sunlight.	The leaves produce food for the plant. They use sunlight, carbon dioxide and water and this is called photosynthesis.	The flower is the part of the plant that makes seeds so that new plants can grow. The petals attract bees for pollination.
			
Seeds from plants like dandelions are specially designed so that they can be carried long distances by the wind. Another example is the seed of a sycamore tree.	Coconuts are seeds from palm trees and seeds like this are specially designed so that they can float on water to new places. Another example is the seed of a waterlily plant.	Animals help with seed dispersal in different ways. When they eat seeds, they pass through them and are excreted in new places. Also some seeds are designed to stick to animals so they can be carried to new places.	Some plants can burst their seed pods when they are ready to and throw their own seeds to new locations. An example of this is a pea pod.

Animals including Humans



- This half term we will be learning:
- That animals, including humans, need the right types of nutrition.
 - For a balanced diet our bodies need carbohydrates, protein, fat, fibre, vitamins, minerals and water, in the right amount.
 - That skeletons support the body of the human or animal and protect the organs.
 - That some skeletons are outside of the body.
 - To identify and name parts of the human skeleton; including the skull, spine and ribcage.
 - About Wilhelm Conrad Roentgen (1845-1923) and his discovery of Xrays.
 - That animals have muscles attached to bones which help them to move.
 - That muscles work in pairs.
 - The importance of exercise and the impact it has on your body.

Key Vocabulary

Word	Definition
Muscles	Inside parts of your body that connects 2 bones and are used when you move.
Vertebrates	Animals with a backbone.
Invertebrates	Animals without a backbone.
Endoskeleton	Skeleton inside the body.
Exoskeleton	Skeleton outside the body.
Hydrostatic	A very flexible skeleton found inside animals such as a jellyfish.
Nutrition	Food necessary for health and growth.
Nutrients	Useful substances that help animals and plants to grow.
Joint	Parts of the skeleton that allow movement.

