

Year 1

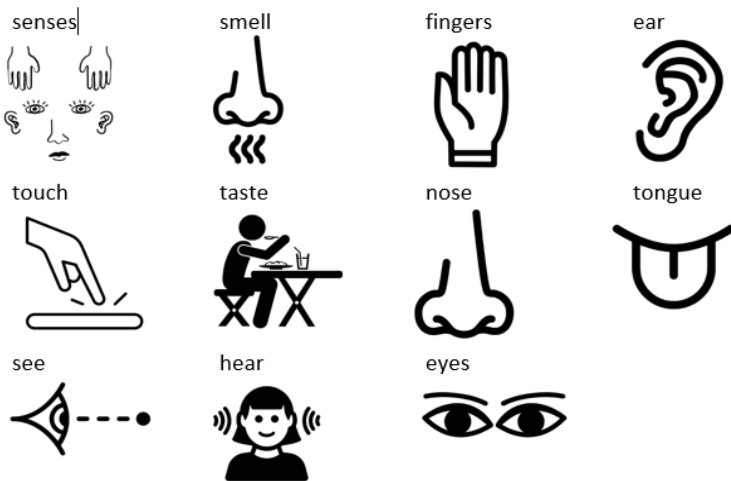
Animals including Humans

Children know how to identify and name a variety of common animals including fish, amphibians, reptiles, mammals and birds.

Children know how to identify and name a variety of common animals that are carnivores, herbivores and omnivores.

Children know how to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).

Children know how to identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.



Everyday Materials

Children know how to distinguish between an object and the material from which it is made.

Children know how to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Children know how to describe the simple physical properties of a variety of everyday materials.

Children know how to compare and group together a variety of everyday materials on the basis of their simple physical properties.



Seasonal Change

Children know how to observe and describe changes across the four seasons.

Children know how to observe and describe weather associated with the seasons and how day length varies.

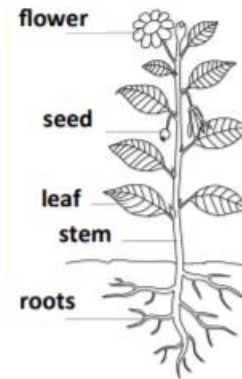
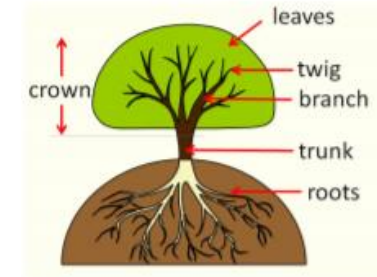


	Sunny
	Sunshine with cloud
	Cloudy
	Raining
	Thunder
	Windy
	Snow

Plants

Children know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.

Children know how to identify and describe the basic structure of a variety of common flowering plants, including trees.



deciduous

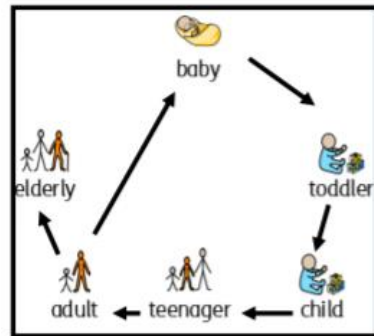
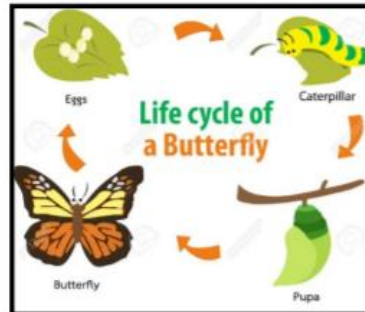
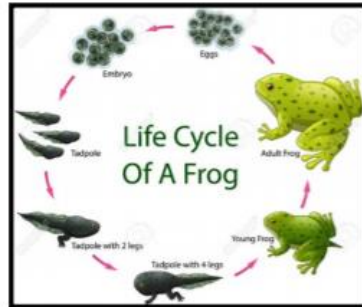


evergreen

Year 2

Animals including humans

Children know how to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Children know how to describe the basic needs of animals, including humans, for survival (water, food and air). Children notice that animals including humans have offspring which grow into adults.



Use of Everyday Materials

Children know how to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Children know how to describe how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.



Plants

Children know how to observe and describe how seeds and bulbs grow into mature plants.

Children know how to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.



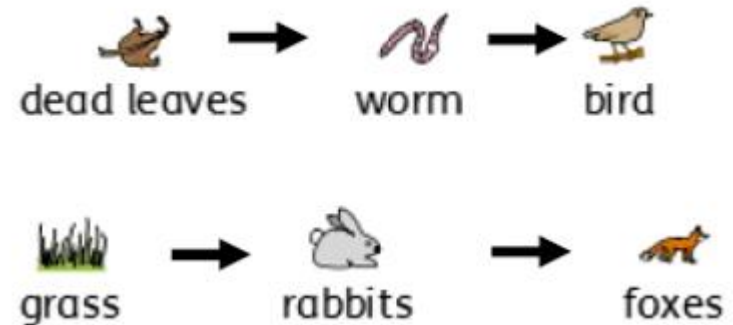
Living things and their habitats

Children know how to explore and compare the differences between things that are living, dead, and things that have never been alive.

Children know how to identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.

Children know how to identify and name a variety of plants and animals in their habitats, including micro-habitats.

Children know how to describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.



Year 3

Animals including Humans

Children know how to identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.

Children know how to identify that humans and some other animals have skeletons and muscles for support, protection and movement.



Light

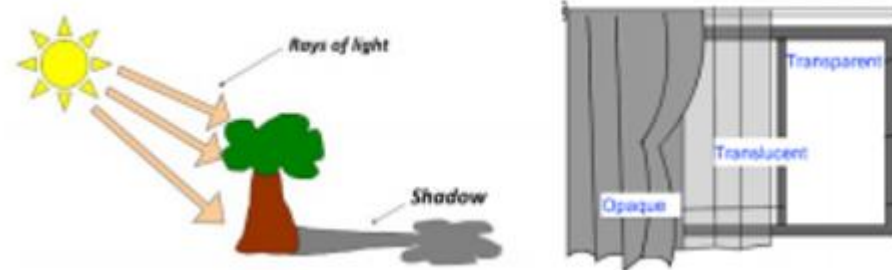
Children know how to recognise that he/she needs light in order to see things and that dark is the absence of light.

Children know how to notice that light is reflected from surfaces.

Children know how to recognise that light from the sun can be dangerous and that there are ways to protect eyes.

Children know how to find patterns in the way that the size of shadows change.

Children recognise that shadows are formed when the light from a light source is blocked by an opaque object.



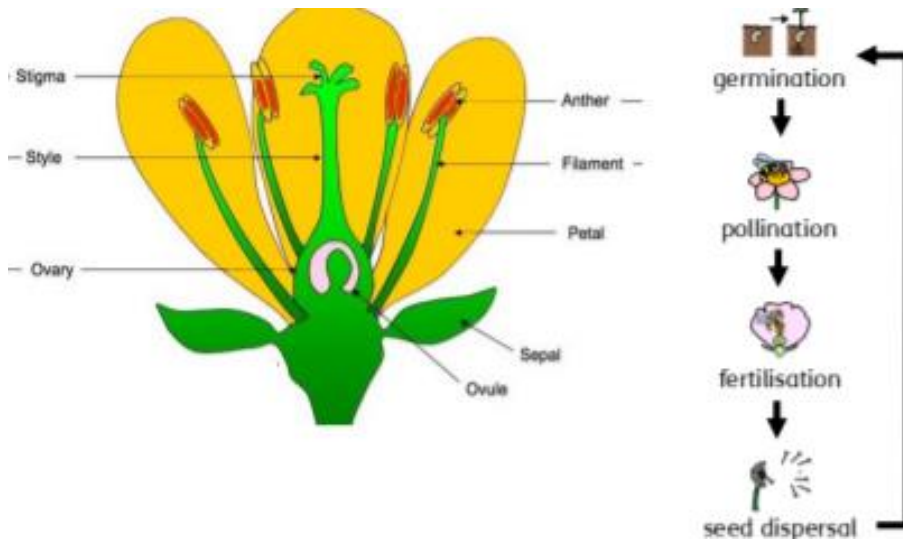
Plants

Children know how to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.

Children know how to explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.

Children know how to investigate the way in which water is transported within plants.

Children know how to explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

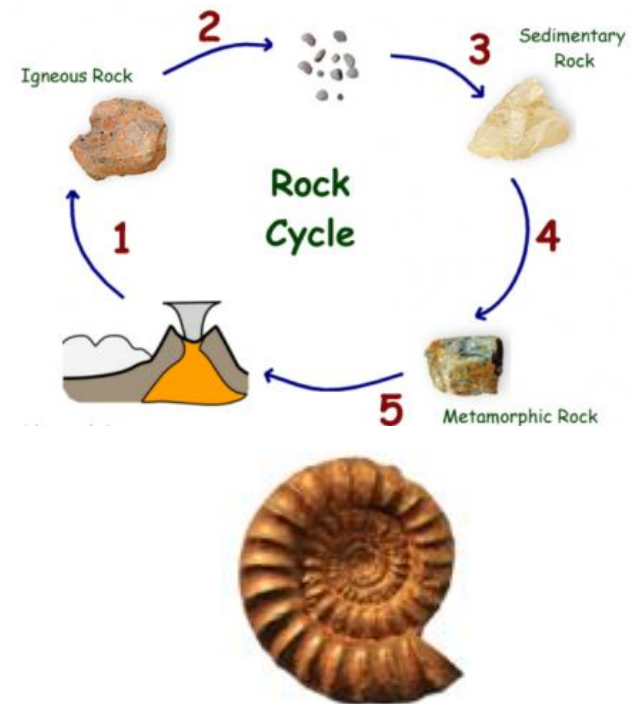


Rocks

Children know how to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Children know how to describe in simple terms how fossils are formed when things that have lived are trapped within rock.

Children know how to recognise that soils are made from rocks and organic matter.



Forces and Magnets

Children know how to compare how things move on different surfaces.

Children observe how magnets attract and repel each other and attract some materials and not others.

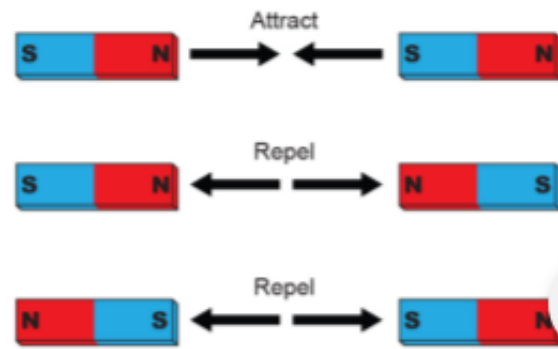
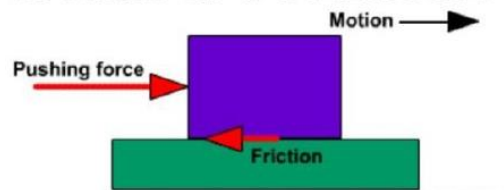
Children know that some forces need contact between two objects, but magnetic forces can act at a distance.

Children know how to compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.

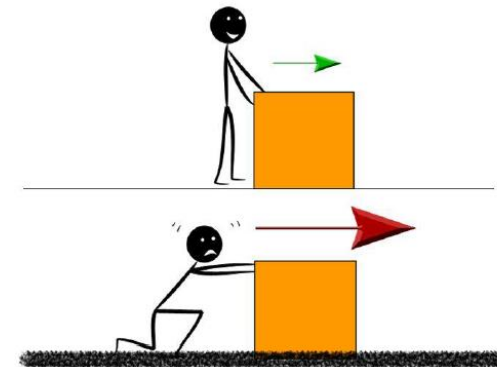
Children know how to describe magnets as having two poles.

Children know how to predict whether two magnets will attract or repel each other, depending on which poles are facing.

What is Friction?



This picture shows the same box being pushed on different surfaces.



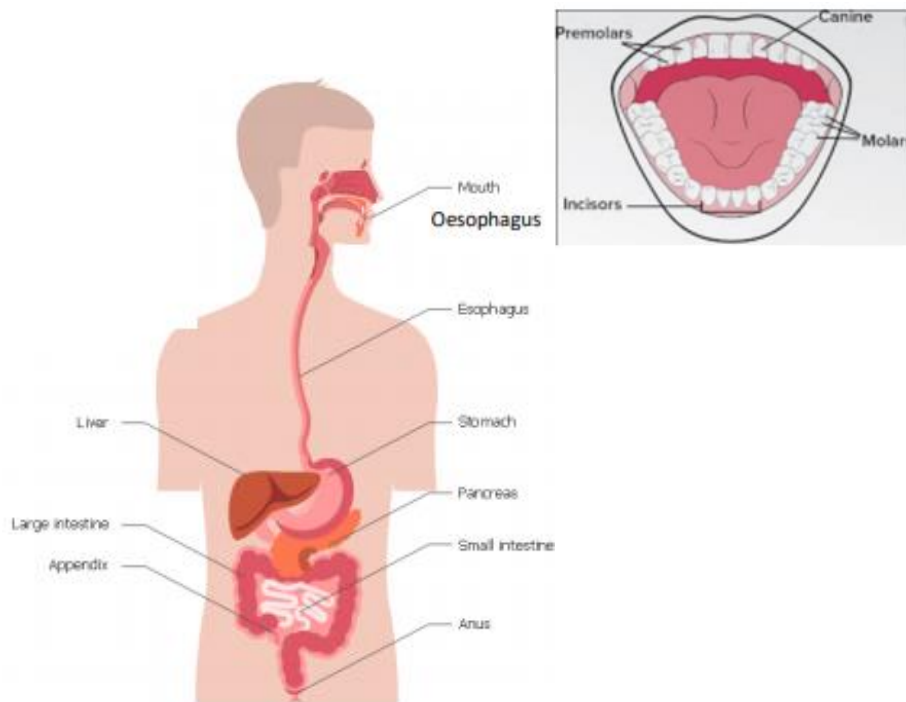
Year 4

Animals including humans

Children know how to describe the simple functions of the basic parts of the digestive system in humans.

Children know how to identify the different types of teeth in humans and their simple functions.

Children know how to construct and interpret a variety of food chains, identifying producers, predators and prey.



Electricity

Children know how to identify common appliances that run on electricity.

Children know how to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.

Children Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.

Children know how to recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.

Children know how to recognise some common conductors and insulators, and associate metals with being good conductors.

Living things and their habitats

Children know how to recognise that living things can be grouped in a variety of ways.

Children know how to explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.

Children know how to recognise that environments can change and that this can sometimes pose dangers and have an impact on living things.



Sound

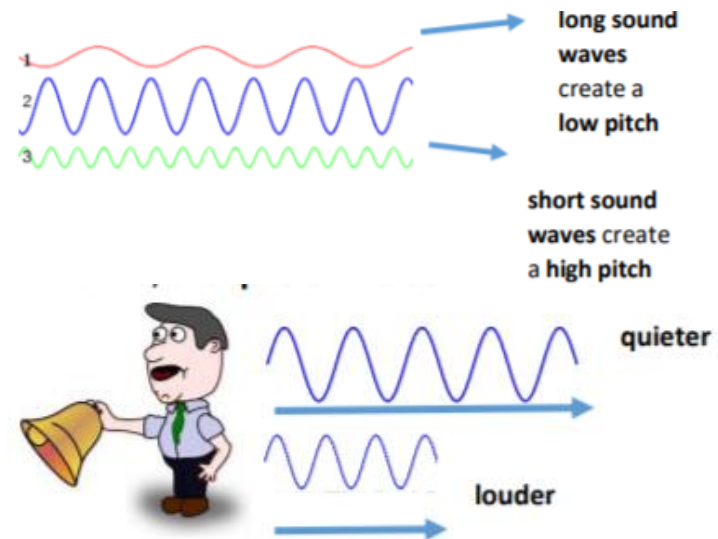
Children know how to identify how sounds are made, associating some of them with something vibrating.

Children know how to recognise that vibrations from sounds travel through a medium to the ear.

Children know how to find patterns between the pitch of a sound and features of the object that produced it.

Children know how to find patterns between the volume of a sound and the strength of the vibrations that produced it.

Children know how to recognise that sounds get fainter as the distance from the sound source increases.

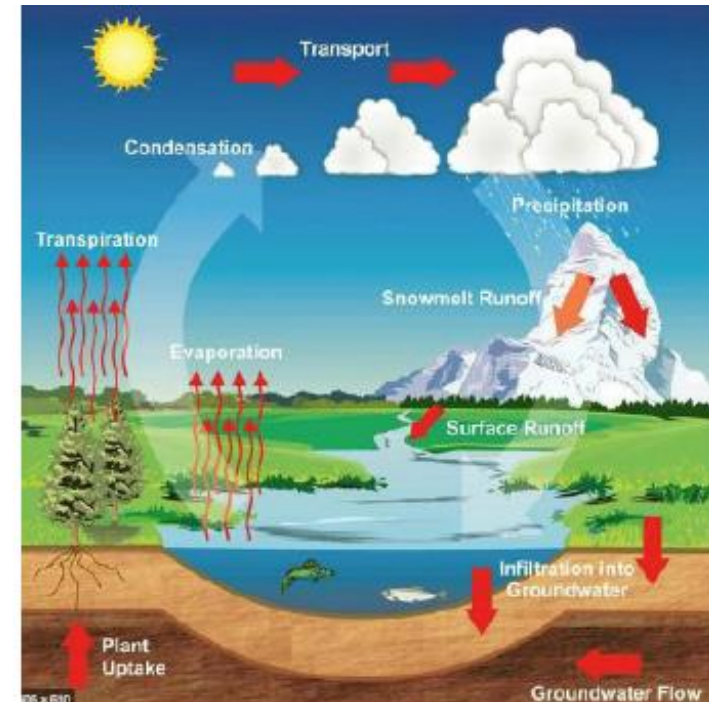
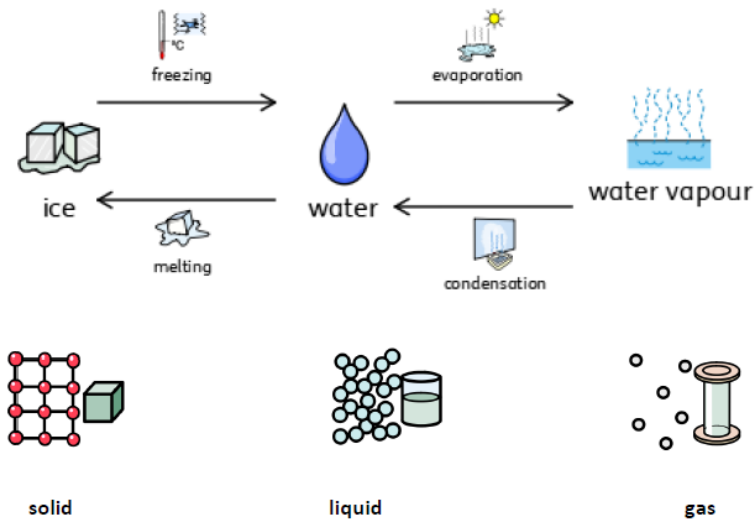


States of Matter

Children know how to compare and group materials together, according to whether they are solids, liquids or gases.

Children know how to observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius ($^{\circ}\text{C}$).

Children know how to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

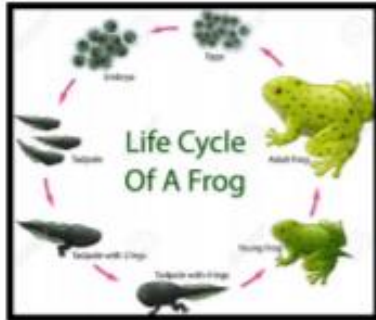
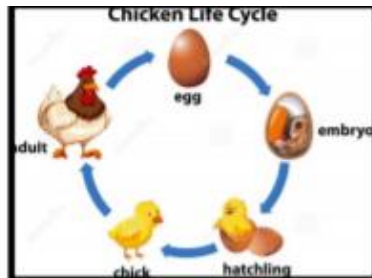
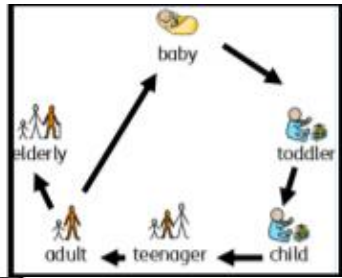


Year 5

Living things and their habitats

Children know how to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.

Children know how to describe the life process of reproduction in some plants and animals.



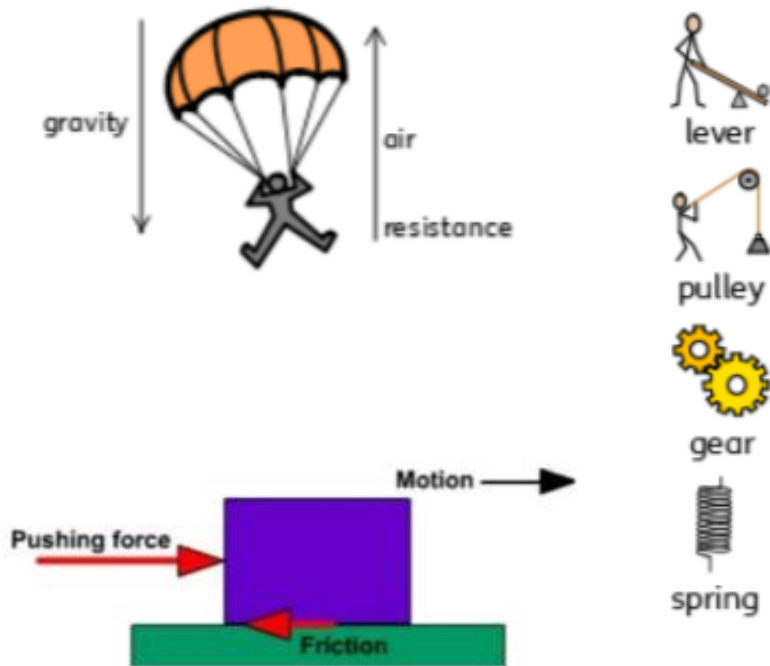
Animals including humans

Children know how to describe the changes as humans develop to old age.



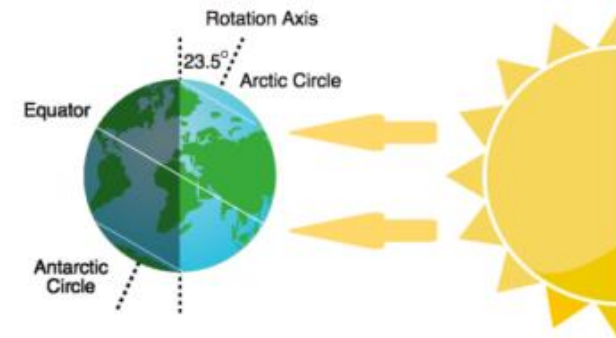
Forces and Magnets

Children know how to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
Children know how to identify the effects of air resistance, water resistance and friction that act between moving surfaces.
Children know how to recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.



Earth and Space

Children know how to describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
Children know how to describe the movement of the Moon relative to the Earth.
Children know how to describe the Sun, Earth and Moon as approximately spherical bodies.
Children know how to use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.



Properties and changes in materials

Children know how to compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.

Children know how to recognise that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.

Children know how to use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.

Children know how to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.

Children know how to demonstrate that dissolving, mixing and changes of state are reversible changes.

Children know how to explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

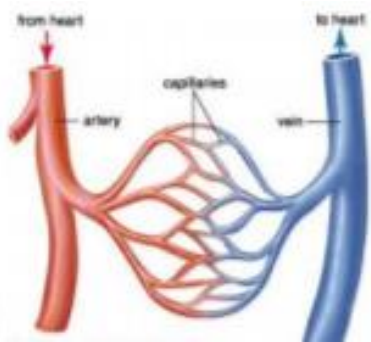


Year 6

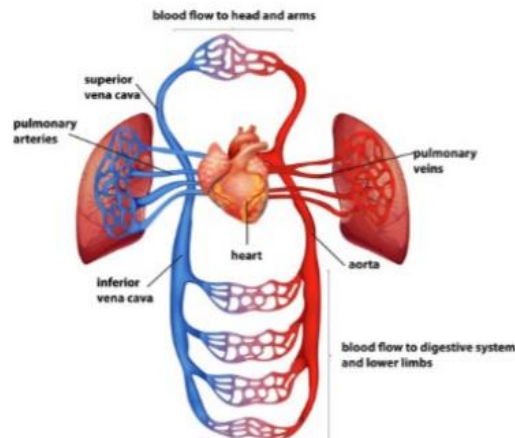
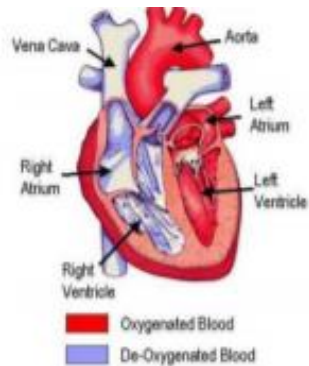
Animals including humans

Children know how to identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.

Children know how to recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.



Children know how to describe the ways in which nutrients and water are transported within animals, including humans.



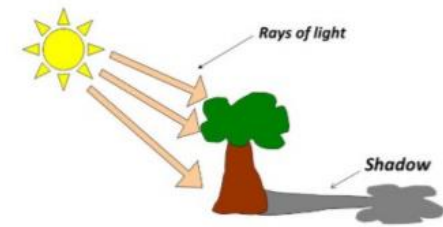
Light

Children know how to recognise that light appears to travel in straight lines.

Children know how to use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.

Children know how to explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.

Children know how to use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.



Light travels in a straight line and hits the apple.



The ray of light is reflected off the apple and travels in a straight line to the eye allowing it to see the apple.

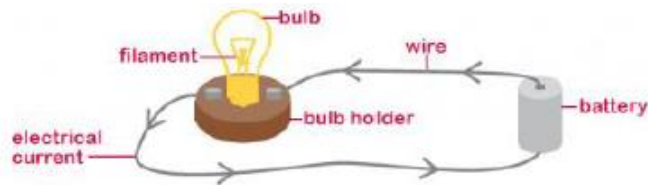
Electricity

Children know how to associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.

Children know how to compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.

Children know how to use recognised symbols when representing a simple circuit in a diagram.

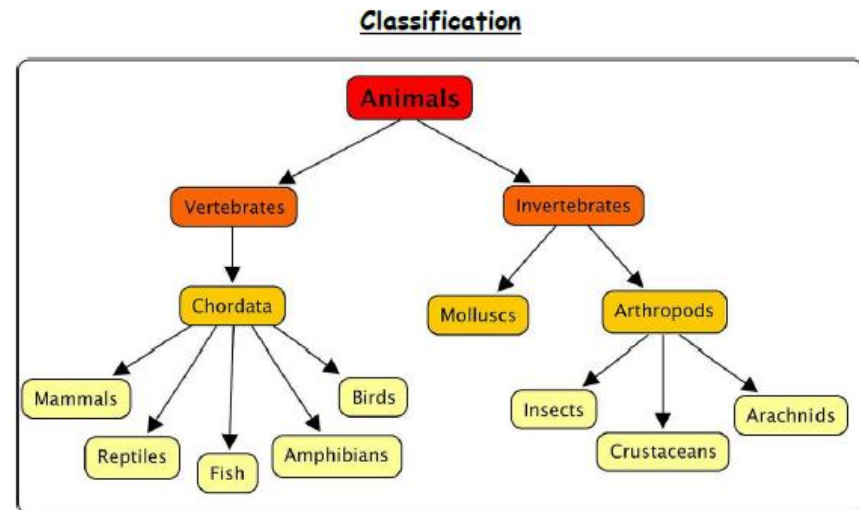
Symbol	Component
	ammeter
	battery
	bulb
	buzzer
	cell
	motor
	resistor
	switch (open)
	switch (closed)



Living things and their habitats

Children know how to describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.

Children know how to give reasons for classifying plants and animals based on specific characteristics.



Evolution and inheritance

Children know how to recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.

Children know how to recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

Children know how to identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

