Evolution and Inheritance

SCIENCE

Key Vocabulary

Offspring– a person's child or children.

Sexual reproduction- the production of new living organisms by combining genetic information from two individuals of different types

Vary- differ in size, amount, degree, or nature from something else.

Characteristics- a feature or quality belonging typically to a person, place, or thing.

Suited- right or appropriate for a particular person, purpose, or situation

Adapted- make (something) suitable for a new use or purpose.

Environment- the surroundings or conditions in which a person, animal, or plant lives or operates

Inherited- characteristic acquired genetically from one's parents or ancestors

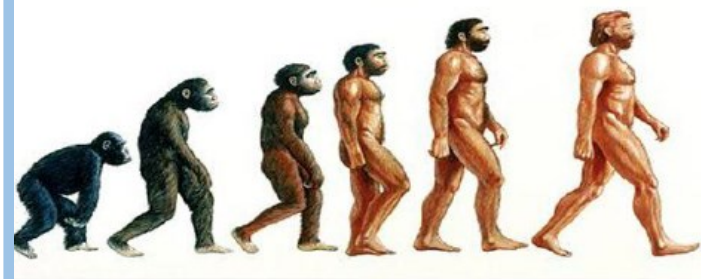
Species- a group of living organisms consisting of similar individuals.

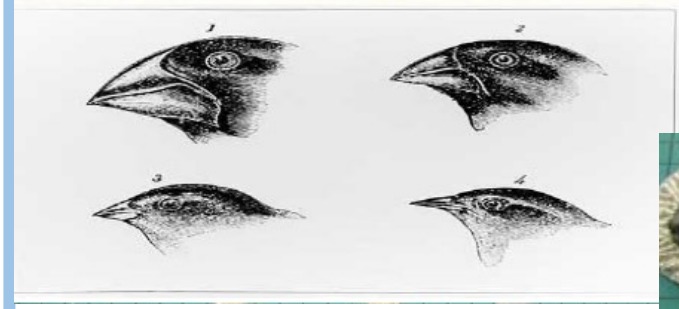
Fossils- the remains or impression of a prehistoric plant or animal embedded in rock.

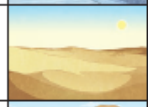
What I should already know?

- 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 (year 2).
- How fossils are formed- when things that have lived are trapped within rock (year 3).
- That environments can change and that this can sometimes pose dangers to living things (year 4).

Key learning points.





Living Things		Habitat		Adaptive Traits
polar bear		arctic		Its white fur enables it to camouflage in the snow.
camel		desert		It has wide feet to make it easier to walk in the sand.
cactus		desert		It stores water in its stem.
toucan		rainforest		Its narrow tongue allows it to eat small fruit and insects.

Animals Including Humans SCIENCE

Key Vocabulary

Heart- a hollow muscular organ that pumps the blood through the circulatory system.

Pulse rate- a rhythmical throbbing of the arteries as blood is propelled through them.

Pump- an instance of moving something by or as if by a pump.

Blood- the red liquid that circulates in the arteries and veins of humans and other vertebrate animals.

Blood vessels- a tubular structure carrying blood through the tissues and organs; a vein, artery, or capillary

Transported- take or carry from one place to another

Lungs– a pair of organs situated within the ribcage

Oxygen- a colourless, odourless reactive gas

Carbon dioxide- a colourless, odourless gas

Nutrients- a substance that provides nourishment essential for the maintenance of life and for growth.

Muscles- a band or bundle of tissue in a human or animal body that has the ability to contract, producing movement in or maintaining the position of parts of the body

Cycle- a series of events that are regularly repeated in the same order.

Circulatory system- the system that circulates blood through the body

Diet- the kinds of food that a person or animal eats.

Exercise- activity requiring physical effort.

Drugs- a medicine or other substance which has a physiological effect when ingested or otherwise introduced into the body.

Lifestyle- the way in which a person lives.

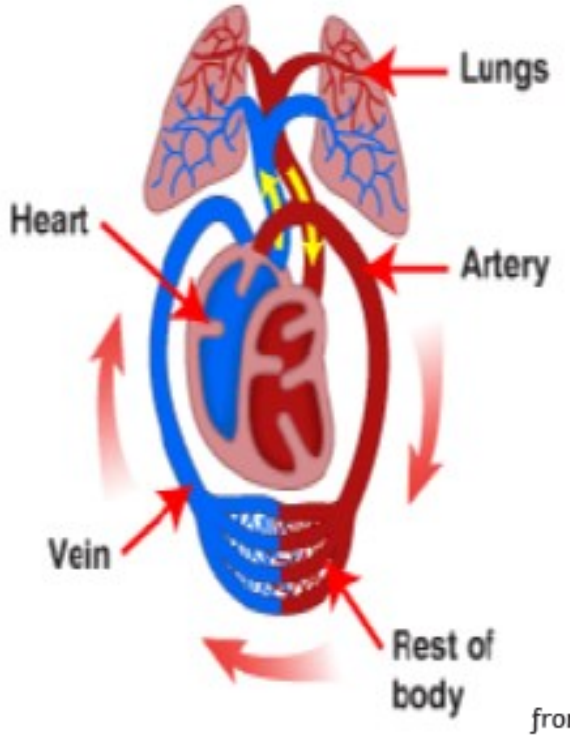
What I should already know?

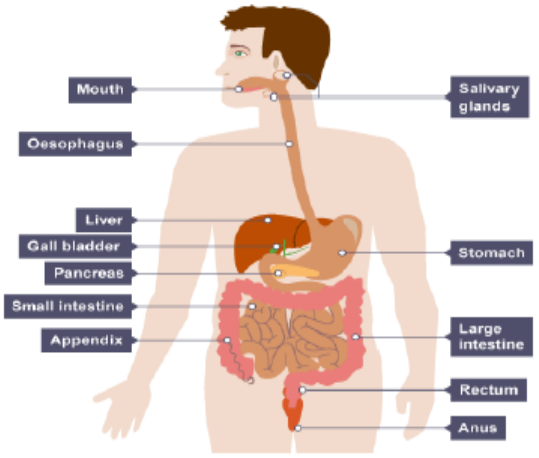
The importance for humans to exercise, eat the right amounts of different types of food, and hygiene (year 2).

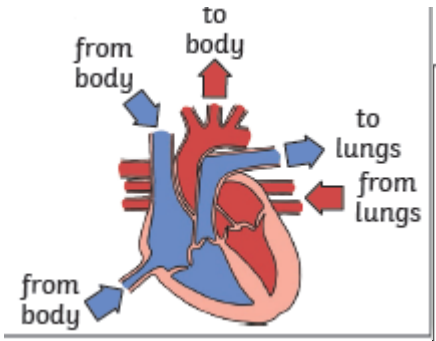
• That animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat (year 3).

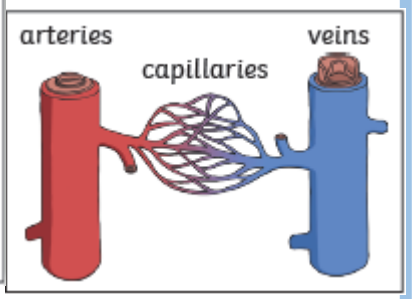
• The simple functions of the basic parts of the digestive system in humans. The different types of teeth in humans and their simple functions (year 4).

Key learning points.









Living Things and Their Habitats

SCIENCE

Key Vocabulary

Vertebrates- an animal with a backbone or spinal column.

Fish- a limbless cold-blooded vertebrate animal with gills and fins living wholly in water.

Amphibians- a cold-blooded vertebrate animal of a class that comprises the frogs, toads, newts and salamanders.

Reptiles- a vertebrate animal of a class that includes snakes, lizards, crocodiles, turtles, and tortoises. They have dry scaly skin and typically laying soft-shelled eggs on land.

Birds- a warm-blooded egg-laying vertebrate animal distinguished by the possession of feathers, wings, a beak, and typically by being able to fly.

Mammals- a warm-blooded vertebrate animal of a class that is distinguished by the possession of hair or fur, females that secrete milk for the nourishment of the young, and (typically) the birth of live young.

Invertebrates- an animal lacking a backbone.

Insects- a small arthropod animal that has six legs and normally one or two pairs of wings

Spiders- an eight-legged predatory arachnid with an unsegmented body consisting of a fused head and thorax and a rounded abdomen.

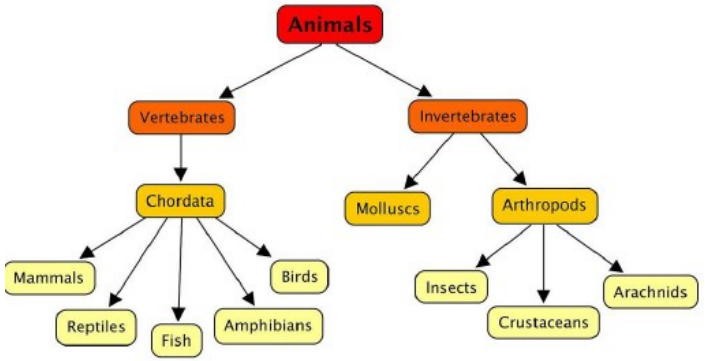
Snails- a mollusc with a single spiral shell

Worms- creeping or burrowing invertebrate animals with long, slender soft bodies and no limbs.

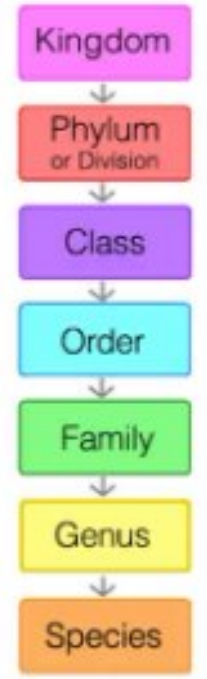
What I should already know?

- That living things can be grouped in a variety of ways. How to use classification keys to help group, identify and name a variety of living things in their local and wider environment (year 4).
- The differences in the life cycles of a mammal, an amphibian, an insect and a bird. The life process of reproduction in some plants and animals (Year 5).

Key learning points.



Domain	Bacteria	Archaea	Eukarya			
Kingdom	Bacteria	Archaea	Protista	Fungi	Plantae	Animalia
Example						
Characteristics	Bacteria are simple unicellular organisms.	Archaea are simple unicellular organisms that often live in extreme environments.	Protists are unicellular and are more complex than bacteria or archaea.	Fungi are unicellular or multicellular and absorb food.	Plants are multicellular and make their own food.	Animals are multicellular and take in their food.



The original Linnaean classification system

Light

SCIENCE

Key Vocabulary

Light- the natural agent that stimulates sight and makes things visible

Straight lines– a line that doesn't curve.

Light- the form of energy that makes it possible for the eye to see

Light source– anything that makes light

Dark- having little or no light

Absence of light– there is no light

Transparent -letting light pass through

Translucent- letting only some light through

Opaque- not letting light pass through

Shiny- reflecting or glowing with light

Matt– dull without s shine

Surface- top layer of something

Shadow- the dark image cast on some surface by a person or thing blocking the light

Reflect- to throw back from a surface

Mirror- a smooth surface that reflects an image

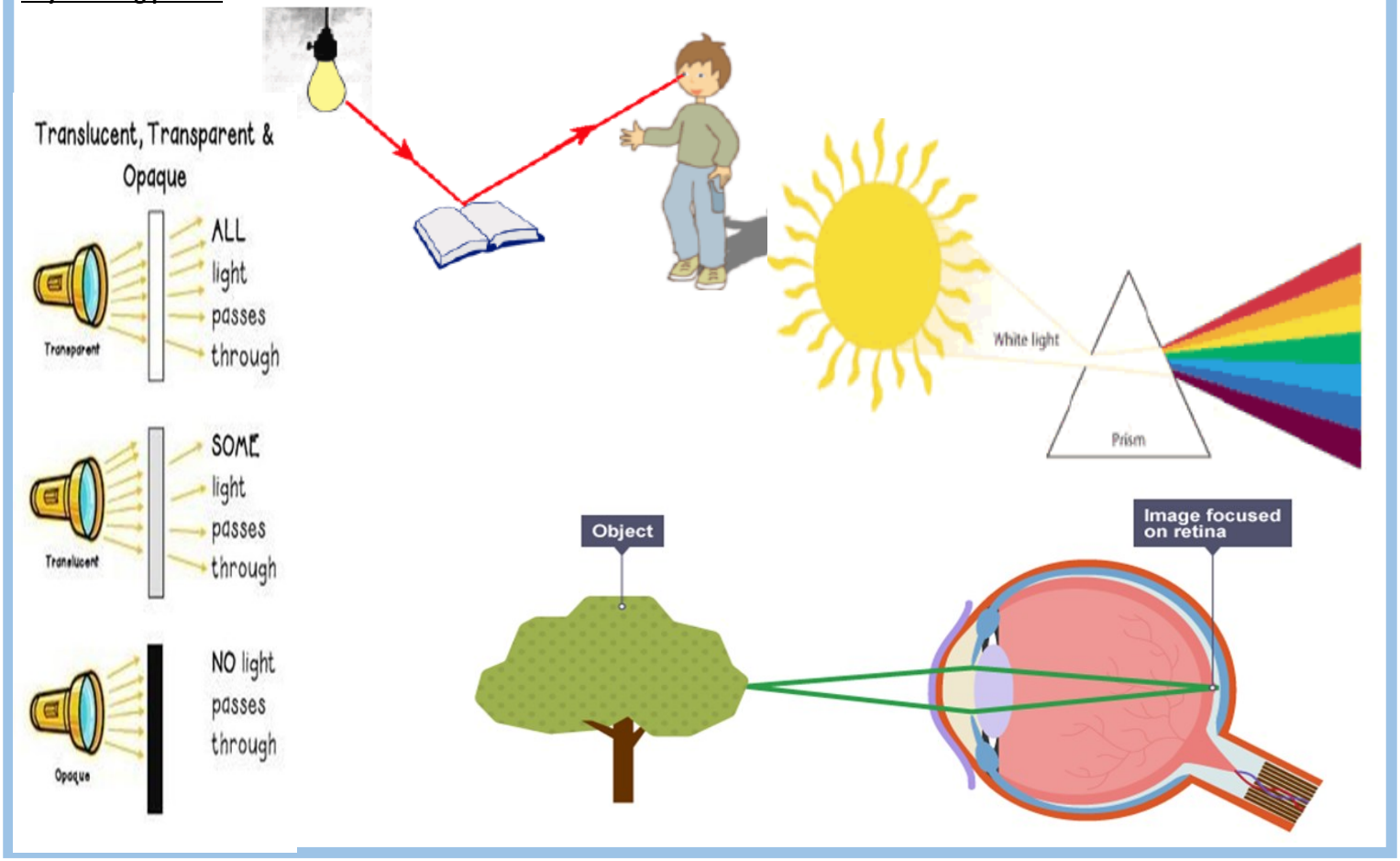
Sunlight- the light of the sun

Dangerous- likely to cause harm

What I should already know?

• That you need light in order to see things and that dark is the absence of light. That light is reflected from surfaces. That light from the sun can be dangerous and that there are ways to protect their eyes. That shadows are formed when the light from a light source is blocked by an opaque object. How to find patterns in the way that the size of shadows change (year 3).

Key learning points.



Electricity

SCIENCE

Key Vocabulary

Circuit- a route, or movement that starts and finishes at the same place

Complete circuit– a complete path which electricity can flow.

Circuit diagram– a simple diagram of a circuit using characters.

Circuit symbol- character used as to represent an object in the circuit.

Cell- a device containing electrodes.

Battery- a container consisting of one or more cells.

Bulb- a device used to convert electricity into light.

Buzzer- an electrical device that makes a buzzing noise.

Motor- giving or producing motion or action.

Switch- a device for making and breaking the connection in an electric circuit.

Voltage- a force expressed in volts.

What I should already know?

- Common appliances that run on electricity (year 4).
- How to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers (year 4).
- 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 (year 4).
- That a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit (year 4).
- Some common conductors and insulators, and associate metals with being good conductors (year 4).

Key learning points.