

Year 5 – Animals Including Humans

Key Facts



Infancy



Adolescence



Old age

Childhood

Adulthood

Prenatal

Cells develop into a foetus inside the mother's uterus.

Babies depend on help for everything. Includes toddler phase.

Rapid growth, learn new skills and become more independent.

The body changes during these years to enable reproduction. Much more independent.

Independent, peak of fitness and strength. Able to reproduce.

May have decline in independence, fitness and health. Can lose ability to reproduce.



Puberty for girls



Puberty for boys

- Grow breasts
- Larynx (voice box) grows
- Hips get wider
- Start to menstruate

- Grow taller
- Skin becomes oilier
- Grow hair under armpits, on legs and arms
- Sweat glands produce more sweat
- Grow pubic hair

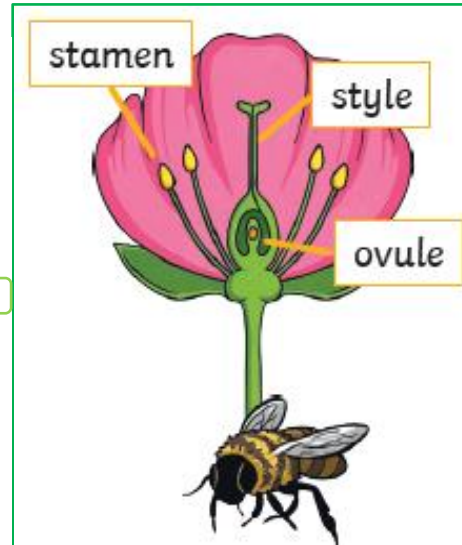
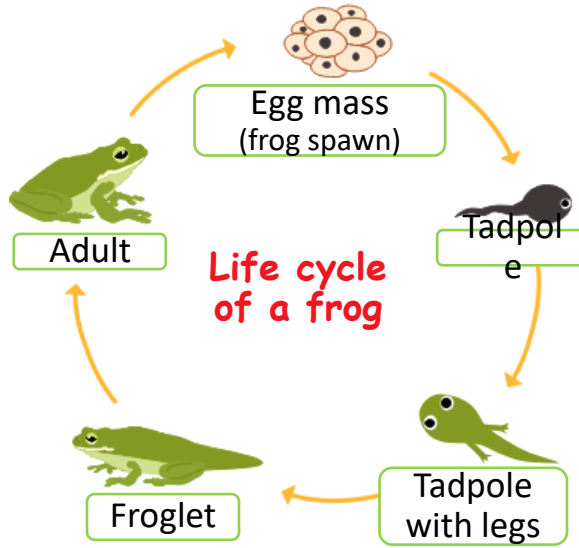
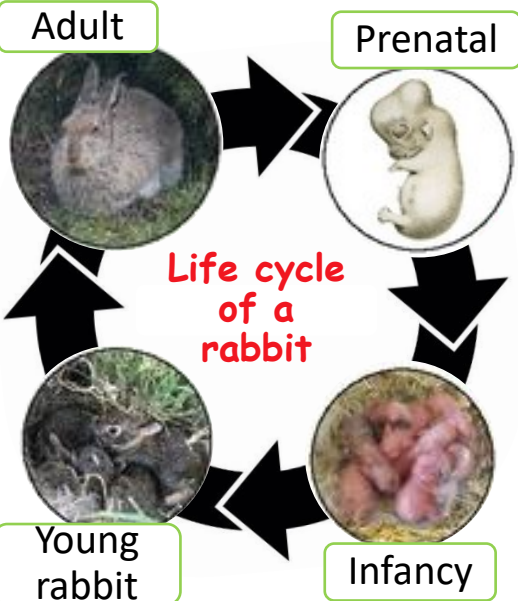
- Larynx (voice box) grows 'Adam's apple'
- Grows hair on chest
- Grow facial hair
- Scrotum, testes and penis develop
- Become more muscular

Key Vocabulary

adolescence	The social and emotional stage of development between childhood and adulthood.
adulthood	The fully grown and mature stage of development.
fertilisation	The process of male and female sex cells fusing together.
gestation	The process or time when the foetus develops and grows. A human's gestation normally lasts 40 weeks.
Life cycle	The changes a living thing goes through to become an adult and reproduce.
Life expectancy	The length of time, on average, a particular living thing is expected to live.
prenatal	The stage of development from fertilisation to the time of birth.
puberty	The physical stage of development between childhood and adulthood.
reproduce	To produce young (offspring)

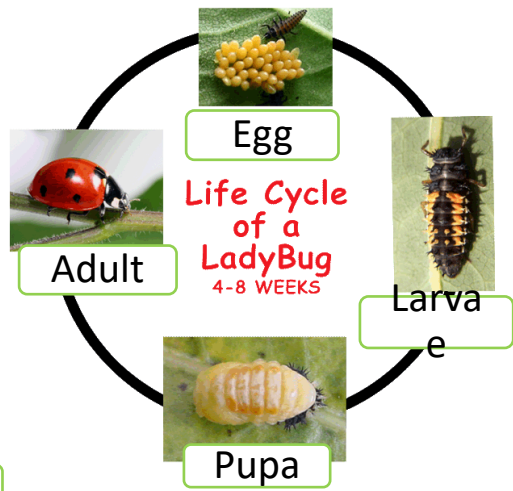
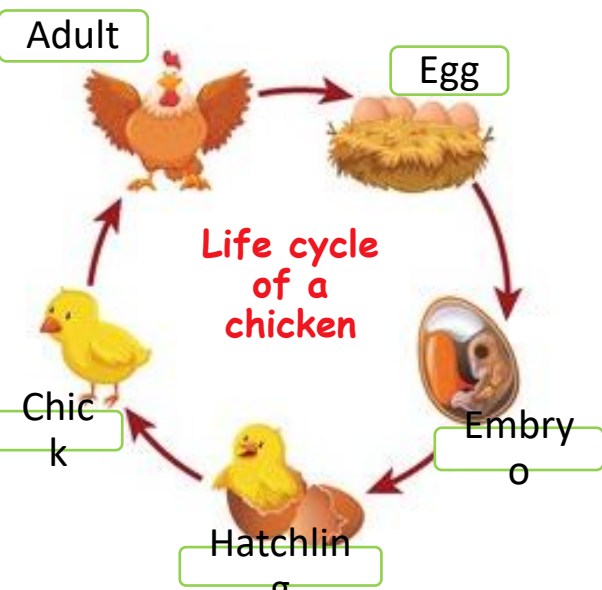
Year 5 – Living things and their habitats

Key Facts



Most plants contain both the male sex cell (pollen) and female sex cell (**ovules**). Wind and insects help transfer pollen from the **stamen** to a different plants **stigma**. The pollen travels down a tube through the **style** and fuses with an ovule, thus a seed is formed.

Key Vocabulary	
asexual reproduction	One parent is needed to create an offspring which is an exact copy of the parent.
fertilise	When male and female sex cells fuse together
Life cycle	The changes a living thing goes through to become an adult and reproduce.
metamorphosis	The process of changing physical form from an immature organism to an adult.
pollination	The process of transferring pollen from the male anther of a flower to the female stigma.
reproduce	To produce young (offspring)
sexual reproduction	A process where two parents – one male and one female – are required to produce new life.



Some plants such as strawberry, potato and spider plants use asexual reproduction to create a new identical plant.

Year 5 – Properties and changes of materials

Key Knowledge

Solids **melt** into liquids.
 Liquids **evaporate** into gases.
 Liquids **freeze** into solids.
 Gases **condense** into liquids.









A **solution** is a mixture of two or more substances.

In such a mixture, a solute is a substance dissolved in another substance, known as a solvent.



A **mixture** is when two or more substances are combined. **Mixtures** do not have a **chemical** reaction, such as dissolving or burning. Furthermore, a **mixture** can be reversed, or separated, after being combined.

Separating Mixtures

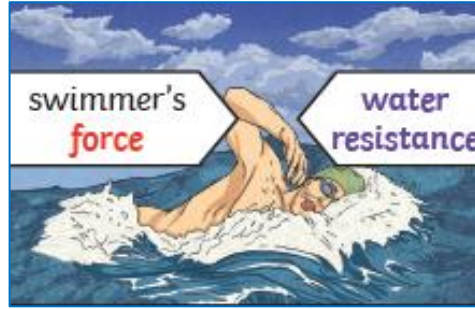
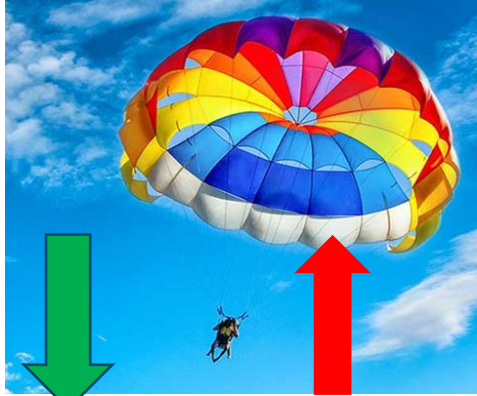
			
Pebbles and stones are removed from sand by sieving	Sieving	Magnetic Separation	Filtration using a filter paper
			
Separating two components of a mixture by sedimentation and decantation	Heating a beaker containing salt water	Obtaining salt from sea water	Evaporation and condensation

Key Vocabulary

condense	When gas or vapour cools and changes into a liquid.
conductor	A material that lets heat or electricity pass through it.
Dissolve	When a solid breaks up completely into a liquid to make a solution.
evaporate	When a liquid is heated up and changes into a gas or vapour.
filtering	A process to separate a solid from a liquid.
freeze	To turn a liquid into a solid as a result of extreme cold.
Insulator	A material that doesn't let heat or electricity pass through it.
Irreversible change	A change that is not able to be undone.
Magnetic	A material that is attracted to a magnet.
melt	When a solid is heated up and becomes a liquid.
opaque	Not able to be seen through; not transparent.
Reversible change	A change that can be undone.
Soluble	Something that will dissolve in water.
Solution	A mixture formed when a solid dissolves in a liquid.
transparent	Allows light to pass through so that objects behind it can be clearly seen.
translucent	Allows light to pass through but not detailed shapes.

Year 5 – Forces

Key Facts



Air resistance and water resistance are forms of friction. Friction is sometimes helpful and sometimes unhelpful. For example, air resistance is helpful as it stops the skydiver hitting the ground at speed. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.

Gravity pulls the parachute to the ground

Air resistance pushes upwards and slows the parachute



Pulleys can be used to make a small force lift a heavier load. The more wheels in the pulley, the less force is needed to lift a weight.

Gears or Cogs can be used to change the speed, force or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.

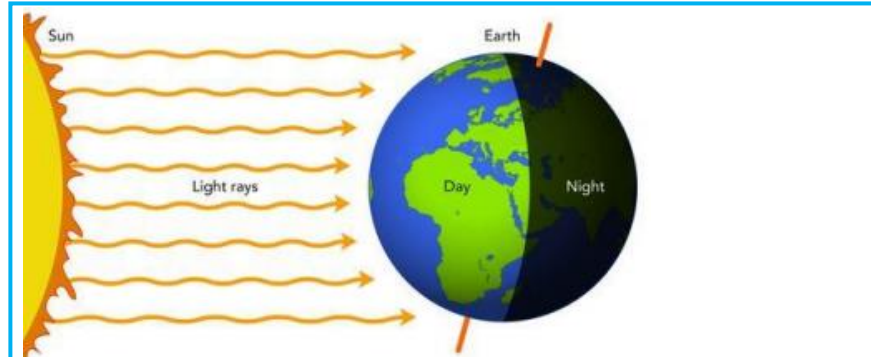
Levers can be used to make a small force lift a heavier load. A lever always rests on a pivot or fulcrum.

Key Vocabulary

Air resistance	A type of friction caused by air pushing against any moving object
buoyancy	An object is buoyant if it floats. This is because the weight of the object is equal to the upthrust.
forces	A push or pull that causes a change in speed, direction or shape.
friction	A force that acts between two surfaces or objects that are moving, or trying to move across each other.
gravity	A pulling force exerted by the earth (or anything else which has mass)
mass	A measure of how much matter is inside an object, measured in KG
mechanism	Parts which work together in a machine. Pulleys, gears and levers are examples of mechanisms.
Newton	The unit in which force is measured. (N)
streamlined	When an object is shaped to minimise the effects of air or water resistance.
upthrust	A force that pushes objects up, usually in water.
Water resistance	A type of friction caused by water pushing against any moving object.
weight	The measure of the force of gravity on an object

Year 5 – Earth and Space

Key Knowledge



Day time occurs when that side of the Earth is facing the sun.



It may look like the sun moves across the sky, it doesn't. It is the Earth rotating as it orbits the sun. It does a full spin on its axis in 24 hours and takes just over 365 days to orbit the sun.



The moon takes 27.3 days to orbit the Earth while spinning on its own axis.

Key Vocabulary

astronomer	Someone who studies or is an expert in astronomy (space science).
eclipse	Partial or whole blocking of the light from the sun or reflected from the moon and the observer due to the position of the Earth, sun and moon.
galaxy	This is a group of stars, gas and dust held together by gravity. We are part of a galaxy called the Milky Way.
geocentric model	Many years ago people believed that the planets and sun orbited the Earth.
heliocentric model	The structure of the solar system where the planets orbit around the sun.
moon	A natural satellite, which orbits some planets. Earth has one moon, mars has two.
orbit	To move in a regular repeating curved path around another object in space.
planet	Large, natural object that orbits a star. They are spherical or near spherical bodies.
satellite	An object in space that orbits a larger object. E.g. The moon is a satellite of the Earth.
solar System	Consists of the sun and everything that orbits or travels around it due to gravity.
star	A giant ball of gas held together by its own gravity.
Sun	A huge star in our solar system, which the Earth and other planets orbit.
Universe	Is everything we can touch, feel, sense, measure or detect. It includes all living things, planets, stars, galaxies, dust clouds and even time.