



Key Vocabulary

Force- a push or a pull on an object

Gravity- the force that attracts a body towards the centre of the earth.

Earth- the planet on which we live.

Air resistance- the forces that are in opposition to an object as it passes through the air

Water resistance- is a force that tries to slow things down that are moving through water.

Friction- the resistance that an object encounters when moving over another.

Mechanisms- a system of parts working together in a machine

Simple machines- basic mechanical devices for applying a force and doing work.

Levers- a projecting arm or handle that is moved to operate a mechanism

Pulleys- a wheel or drum fixed on a shaft and turned by a belt.

Gears- a toothed wheel that works with others to alter the relation between the speed of a driving mechanism

Forces

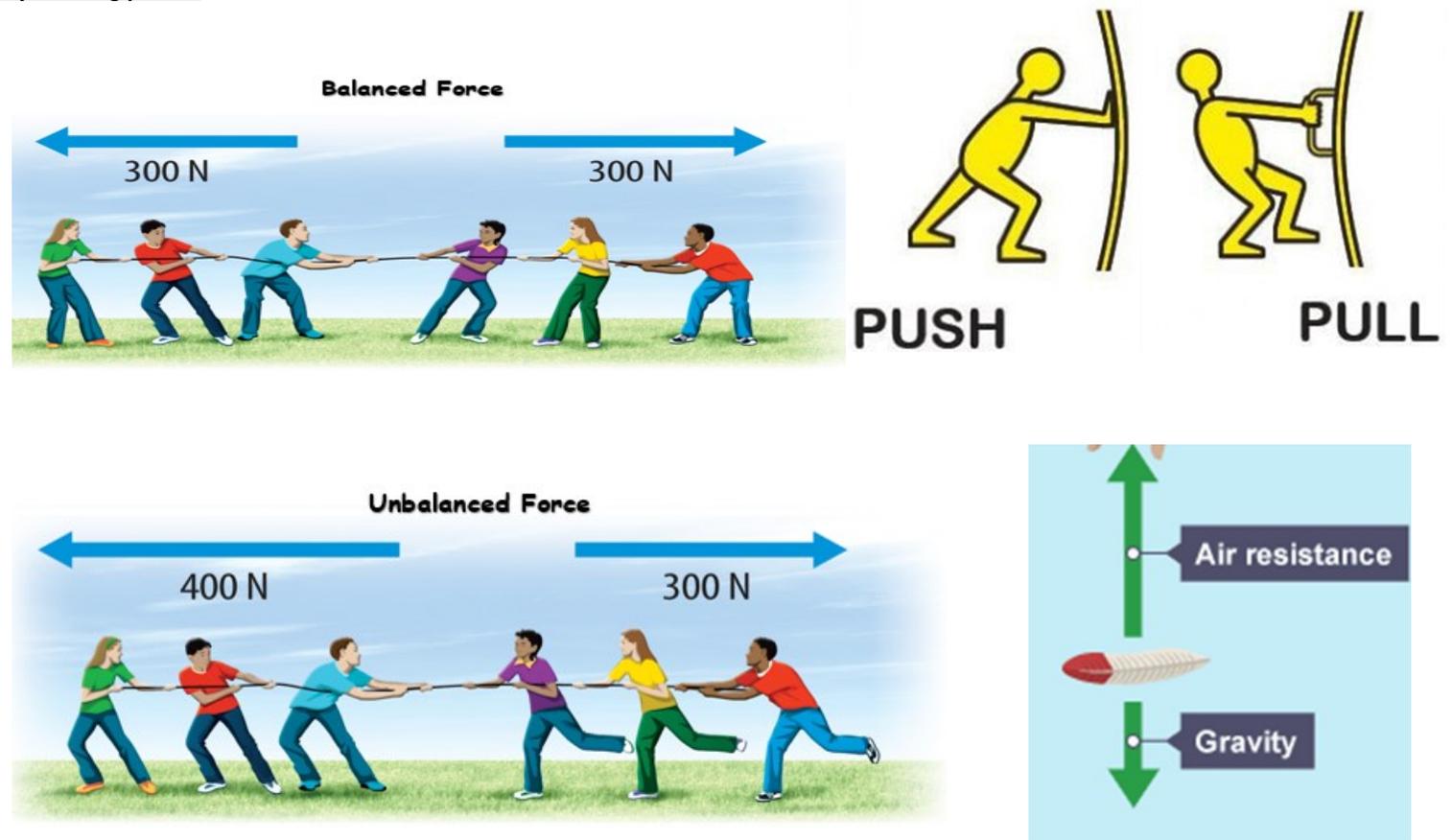
SCIENCE

What I should already know?

- How things move on different surfaces. That some forces need contact between two objects, but magnetic forces can act at a distance. How magnets attract or repel each other and attract some materials and not others. 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. Magnets as having two poles. Whether two magnets will attract or repel each other, depending on which poles are facing.

Year 3 Forces and magnets

Key learning points.





Key Vocabulary

Adolescent – The process of developing from a child into an adult (teenager)

Adult – A person who is fully grown or developed

Asexual reproduction – Offspring get genes from one parent so are clones of their parents

Child – A young human being below the age of puberty or below the legal age of majority

Foetus/ fetus – An unborn or unhatched offspring of a mammal, in particular an unborn human more than eight weeks after conception

Gestation – The process or period of developing inside the womb between conception and birth

Life expectancy – The average period that you may expect to live

Mammal – A warm-blooded vertebrate animal, distinguishable by the possession of hair or fur, females secreting milk for young and typically giving birth to live young

Offspring – A person's child or children/ an animal's young

Puberty – The period during which adolescents reach sexual maturity and become capable of reproduction

Reproduction – The production of offspring by a sexual or asexual process

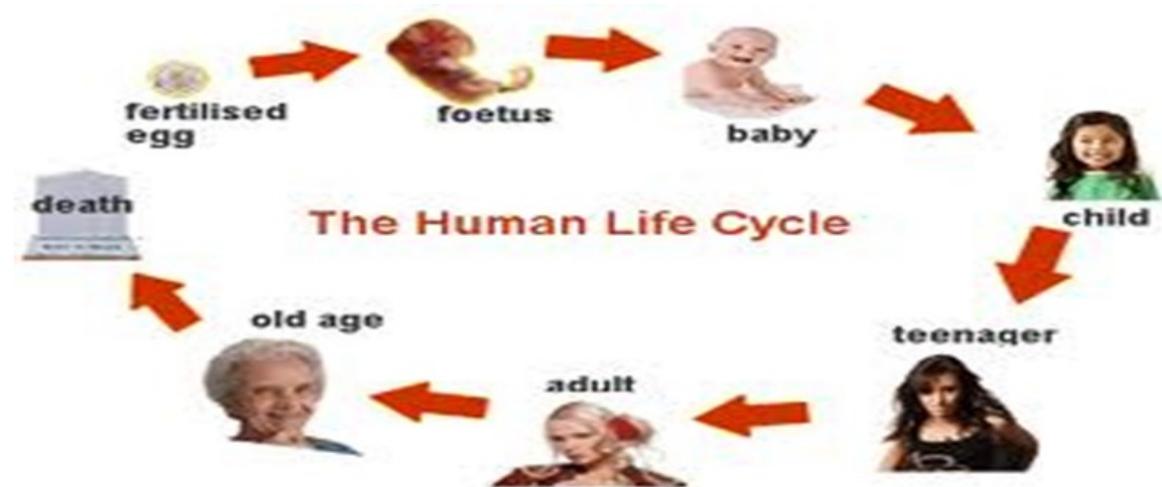
Animals Including Humans SCIENCE

What I should already know?

That animals, including humans, have offspring which grow into adults (year 2).

Key learning points.

Fetal Growth From 8 to 40 Weeks





Key Vocabulary

Life cycle– the series of changes in the life of an organism including reproduction

Reproduce- produce offspring by a sexual or asexual process

Sexual- involving the fusion of gametes

Sperm– semen

Fertilises- to develop a new individual by introducing male reproductive material to an egg, female animal or plant.

Egg- the female reproductive cell in animals and plants; an ovum .

Live young– young not born from an egg

Metamorphosis- the process of transformation from an immature form to an adult form in two or more stages.

Asexual- not involving the fusion of gametes

Plantlets– young or small clones produced on a leaf.

Runners- a shoot, typically leafless, which grows from the base of a plant along the surface of the ground

Bulbs- a rounded underground storage organ present in some plants .

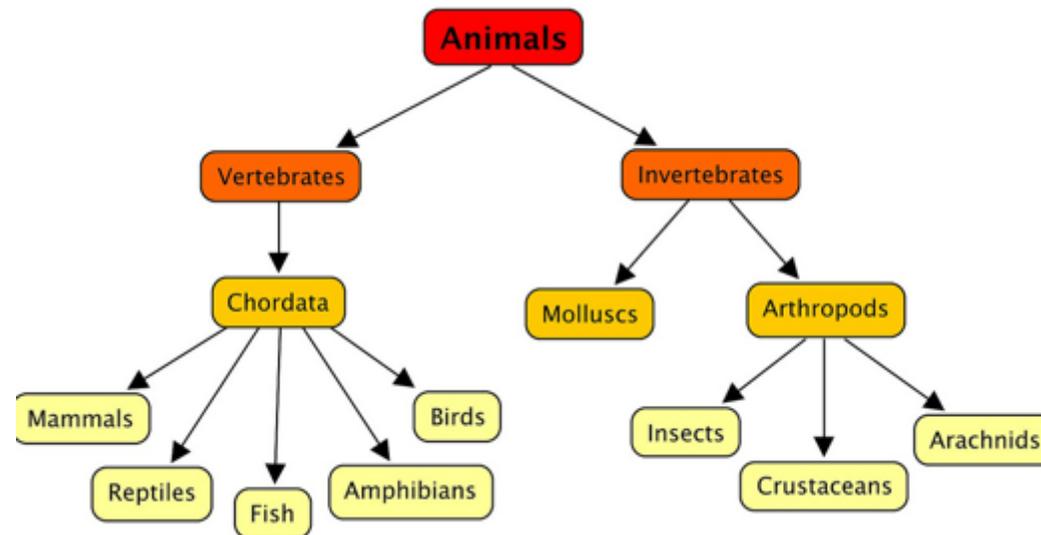
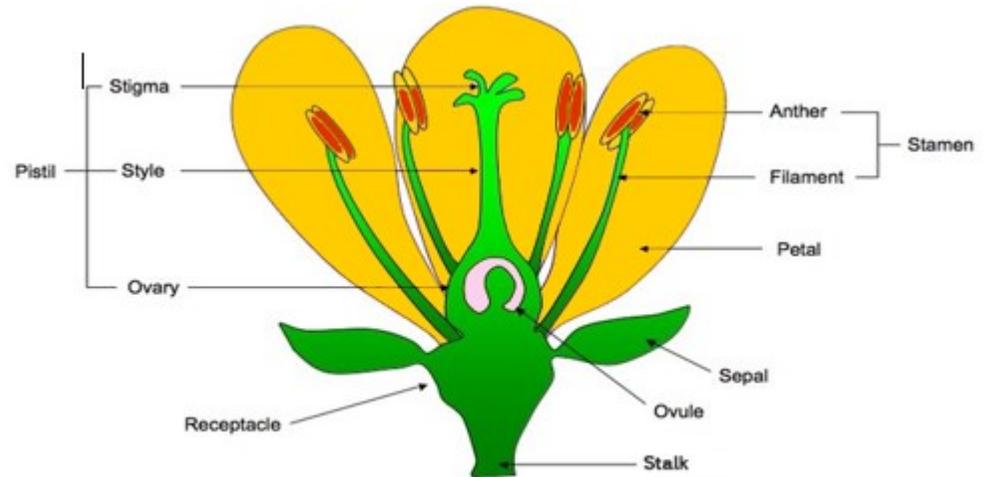
Cuttings- a piece cut off from something.

Living Things and Their Habitats SCIENCE

What I should already know?

- That animals, including humans, have offspring which grow into adults (year 2, animals including humans).
- The part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal (year 3, plants).

Key learning points.





Key Vocabulary

Earth- the planet on which we live; the world

Sun- the star round which the earth orbits

Moon- the natural satellite of the earth, visible (at night) by reflected light from the sun

Spherical- shaped like a sphere

Solar system- the collection of planets and their moons in orbit round the sun, together with smaller bodies in the form of asteroids, meteoroids, and comets.

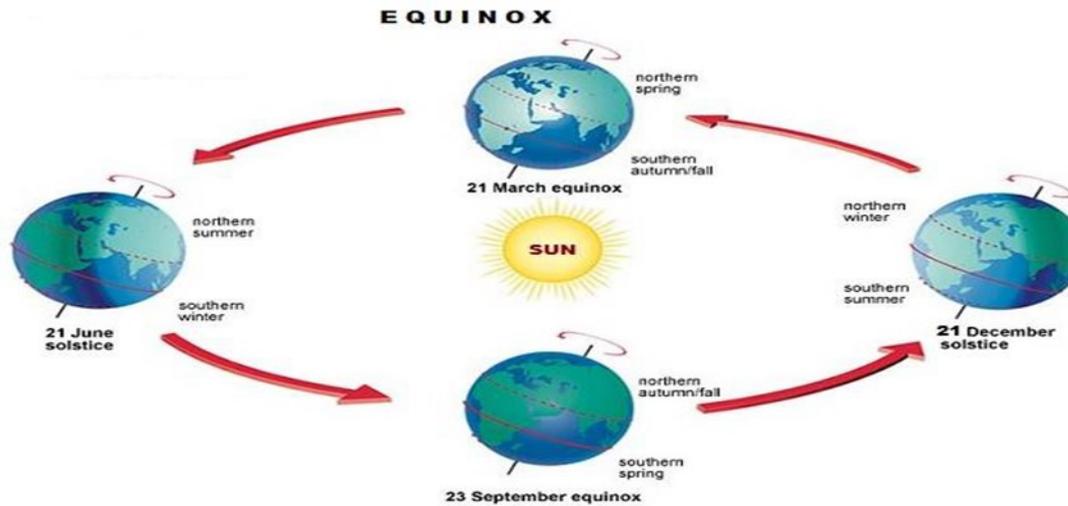
Rotates- move or cause to move in a circle round an axis or centre

Star- a fixed luminous point in the night sky

Orbit- the curved path of an object or spacecraft round a star, planet, or moon.

Planets:

Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune.



Earth and Space

What I should already know?

Changes across the four seasons.

Weather associated with the seasons and how day length varies.

Year 1 - Seasonal changes

SCIENCE



Key Vocabulary

Thermal- relating to heat

Electrical insulator- is a material that electricity does not flow freely.

Conductor: is a material which electricity, heat or sound can travel through.

Change of state- a physical change in matter

Mixture- a substance made by mixing other substances together

Dissolve- a solid becomes incorporated into a liquid to form a solution.

Solution- a liquid mixture

Soluble- a substance able to be dissolved

Insoluble- a substance incapable of being dissolved

Filter- a device removing impurities or solid particles from a liquid

Sieve- a utensil consisting of a wire or plastic mesh held in a frame

Reversible- capable of being reversed so that the previous state or situation is restored.

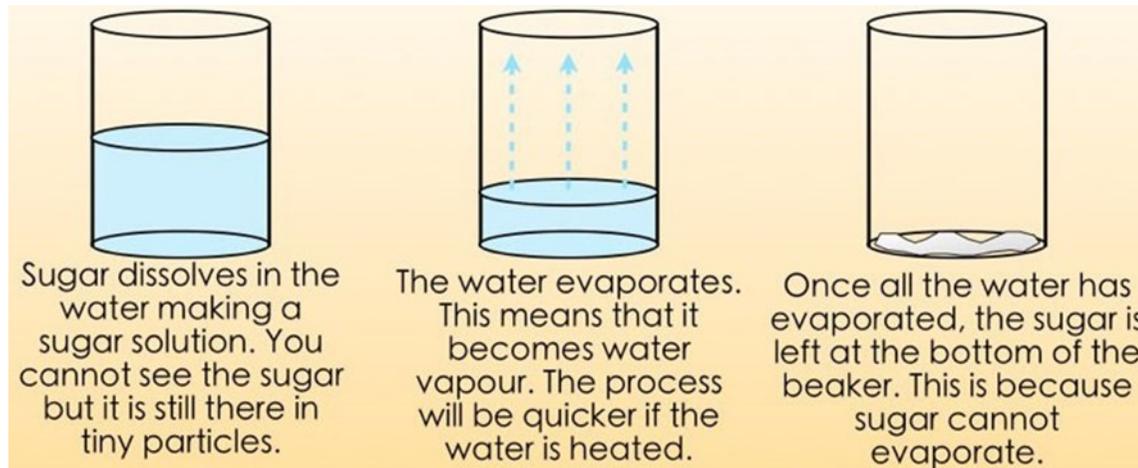
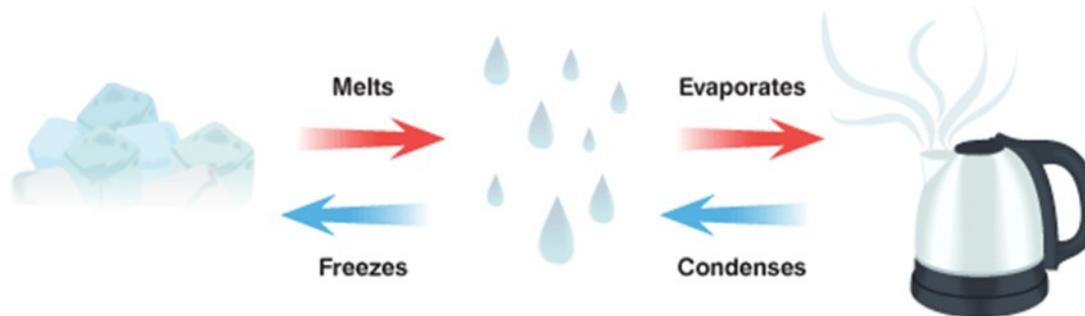
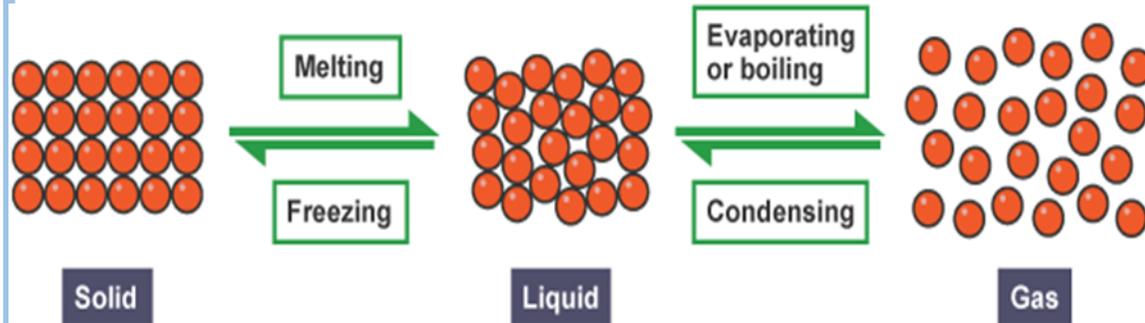
Non-reversible change- not capable of being reversed to the previous state.

Burning- on fire

Rusting- a reddish brown flaking that is formed

Properties and Changes of Materials **SCIENCE**

Key learning points.



What I should already know?

- The suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. How the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Year 2 - Uses of everyday materials)

- How to compare and group materials together, according to whether they are solids, liquids or gases. That some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius ($^{\circ}$ C). The part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (Year 4 - States of matter)