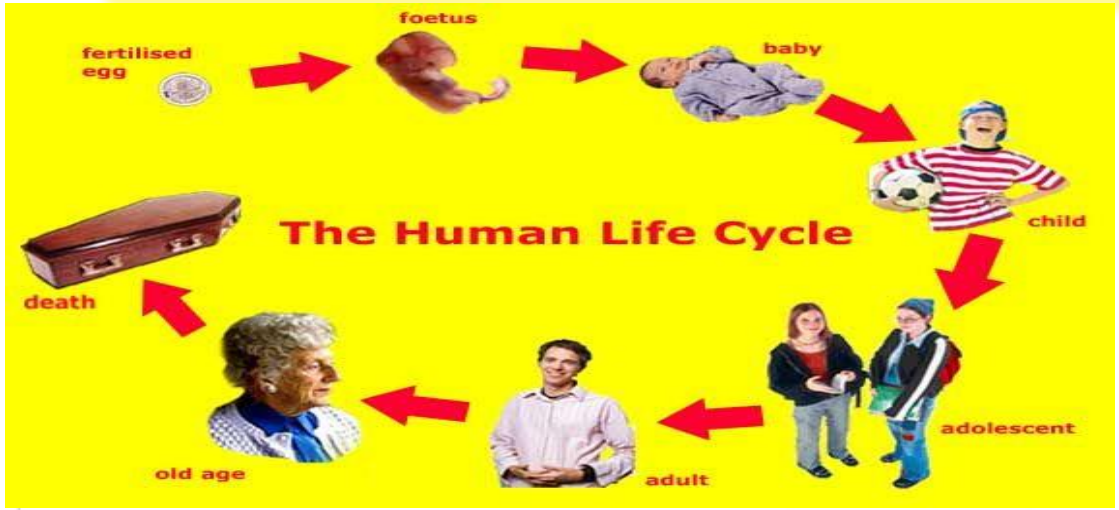
Dulwich Hamlet Junior School

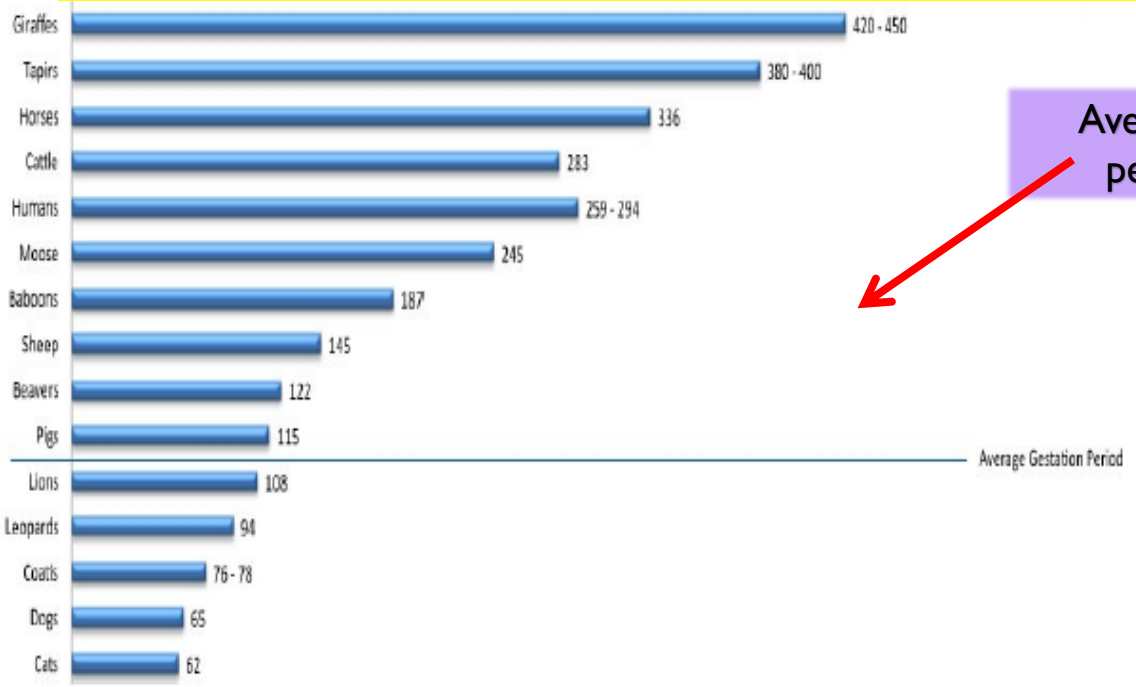
Science Knowledge Organiser Year 5

ANIMALS, INCLUDING HUMANS



The Human Life Cycle

The process of changing and developing from birth through to old age.



Average gestation period by days

Key Vocabulary

Adolescent	The process of developing from a child into an adult (teenager)
Adult	A person who is fully grown or developed
Child	A young human being below the age of puberty
Foetus	An unborn or unhatched offspring of a mammal
Gestation	The process or period of developing inside the womb between conception and birth
Reproduction	Creating offspring by a sexual or asexual process
Life Expectancy	The average period that you may expect to live

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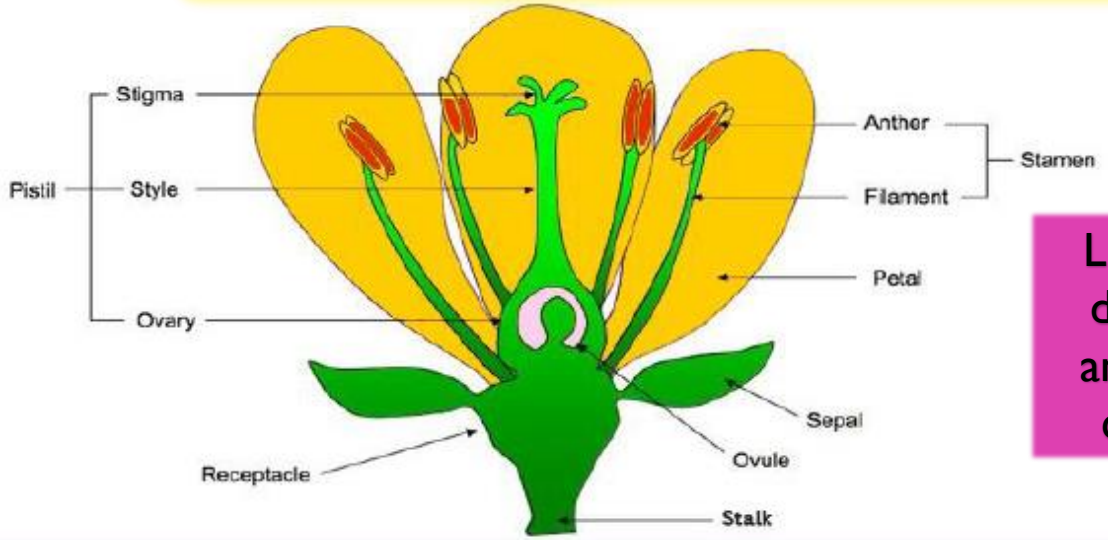
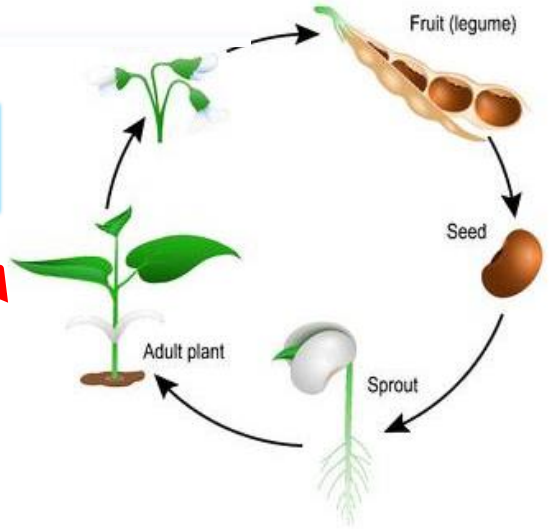
LIVING THINGS AND THEIR HABITATS

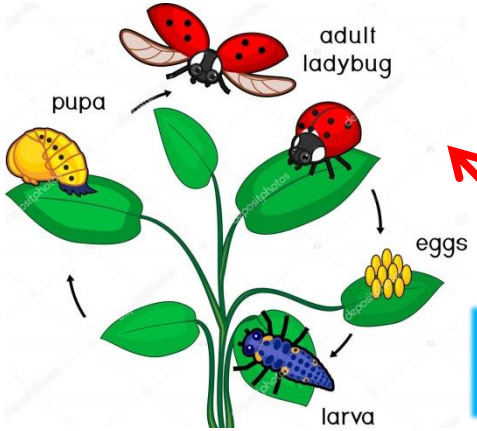
Parts of a flower



Life processes for different types of animals and plants can be different.

The life cycle of a **plant**





The life cycle of an **amphibian**

The life cycle of an **insect**

Key Vocabulary

Asexual reproduction	Offspring get genes from one parents so are clones of their parents
Sexual Reproduction	Offspring get genes from both parents, inheriting a mix of features from both
Amphibian	An animal that is born with gills then develops lungs, lays eggs in water, damp skin, body temperature changes
Life Cycle	The series of changes in the life of an organism
Vertebrate	An animal with backbone
Invertebrate	An animal without a backbone
Insect	A small animal that has six legs and generally one or two pairs of wings
Mammal	A warm-blooded vertebrate animals that has hair or fur, and gives birth to live young.

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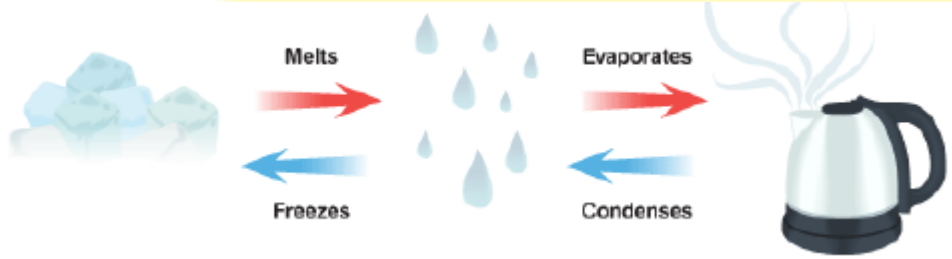
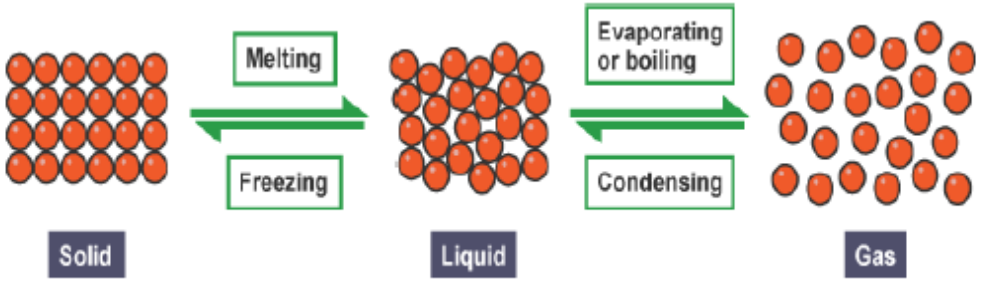
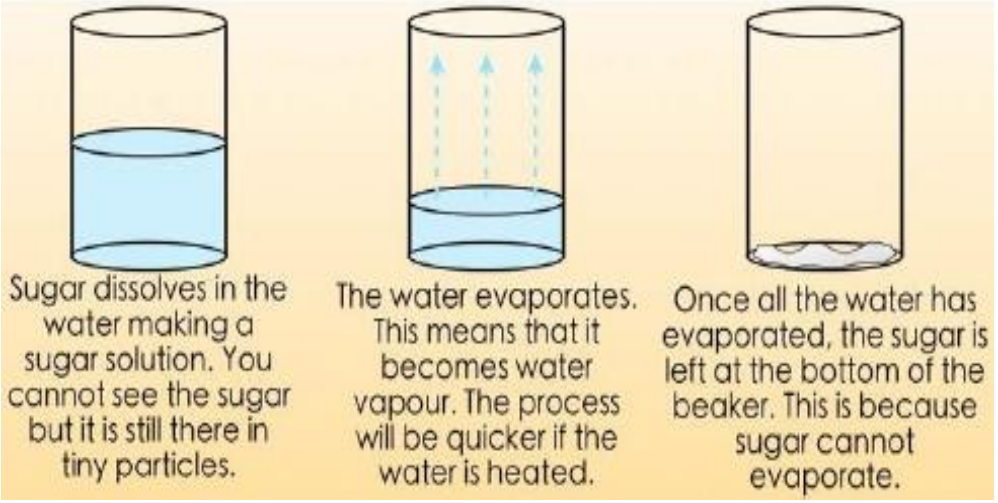
PROPERTIES AND CHANGES OF MATERIALS







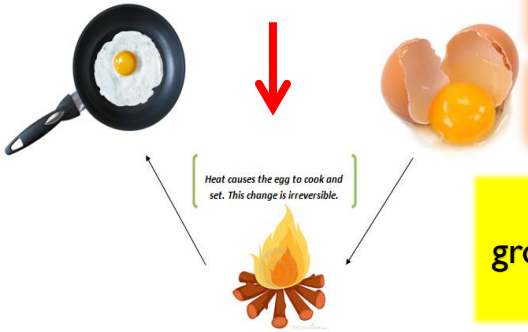
Reversible Changes

Dissolving, mixing and changes of state are **reversible** changes.

Mixtures can be separated through filtering, sieving and evaporating.

Irreversible Changes

Some changes result in new materials and this change is **not** reversible, e.g. burning.



Key Vocabulary

Dissolve	When something solid mixes with a liquid and becomes part of the liquid
Evaporation	The process of turning from liquid to vapour
Reversible	Able to be reversed back to its original state
Irreversible	Cannot be reversed back to its original state
Soluble	Able to be dissolved, especially in water
Conductor	A material which allows heat or electricity through
Insulate	A material which **does not** allow heat or electricity through
Thermal	Relating to heat
Solution	A mixture of two or more substances

Materials can be grouped together based on their properties

Hardness Conductivity Solubility Transparency Magnetic

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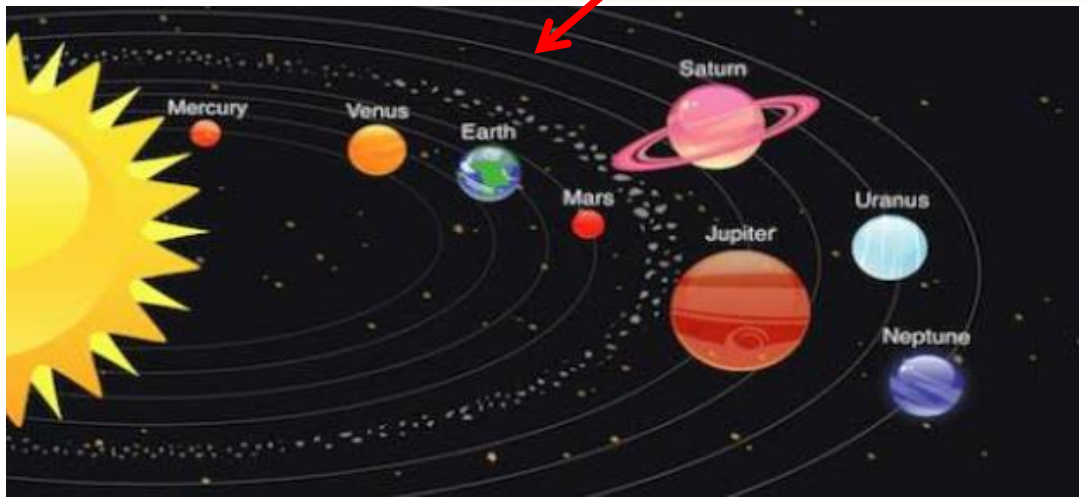
EARTH AND SPACE

The Solar System

The sun is a star at the centre of our solar system. Our solar system has 8 planets.

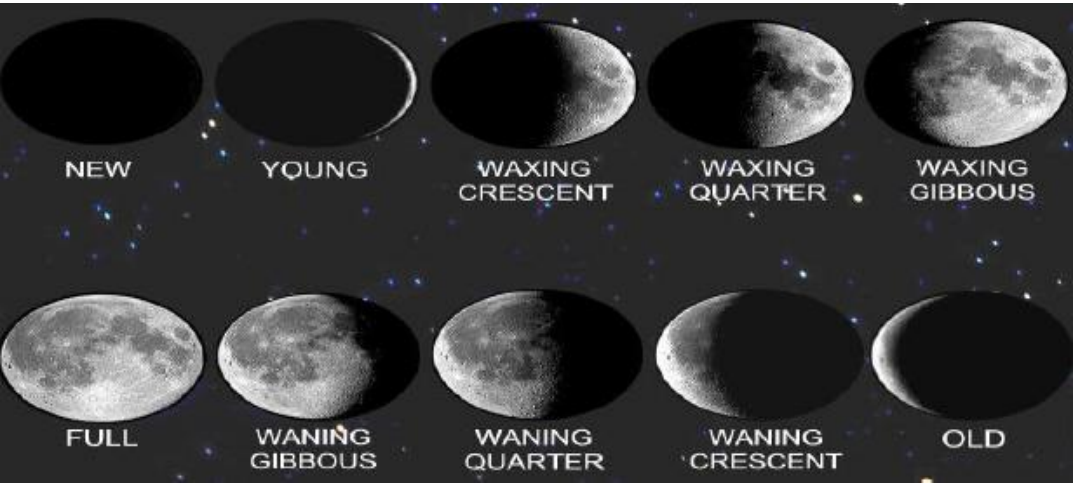


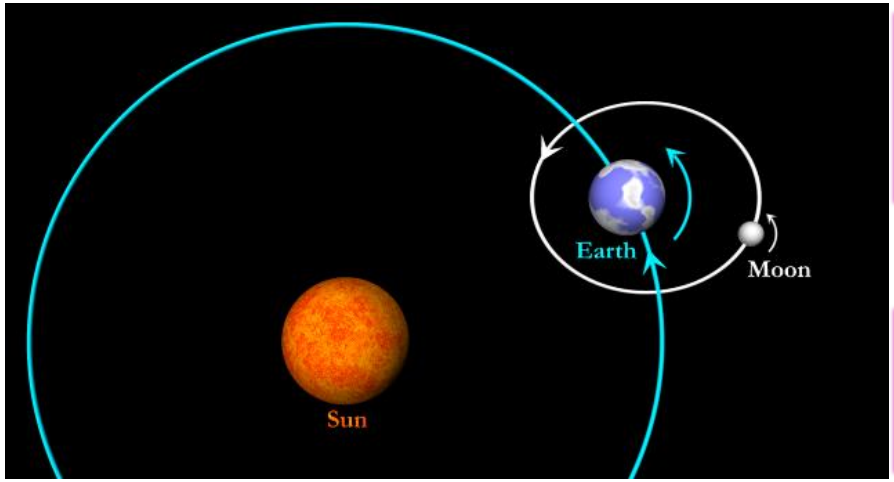
Shapes

The sun, moon and earth are spherical bodies.

Orbit Lengths

It takes **Earth** 365 days to **orbit the sun**.
It takes the **Moon** 27 days **to orbit Earth.**





The earth rotates on an axis. The earth then rotates around the sun. The moon rotates around us, rotating around the sun.

A Day

It takes the earth 24 hours to rotate on its axis, from one midnight to the next.

Key Vocabulary

Axis	A line on which a body roates
Orbit	The regularly repeated oval course of an object around a star or planet
Star	A fixed luminous point in the night sky, which is a large body like **the sun**.
Rotation	The action of rotates about an axis or centre.
Planet	A celestial body moving in orbit round a star
Celestial	Positioned in or relating to the sky or outer space.

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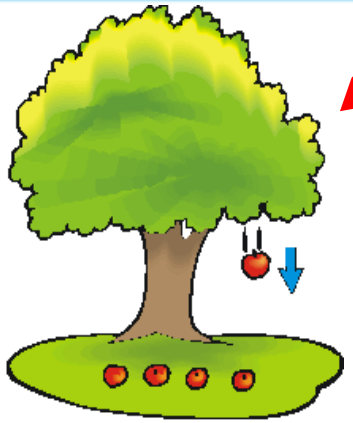
FORCES

Gravity



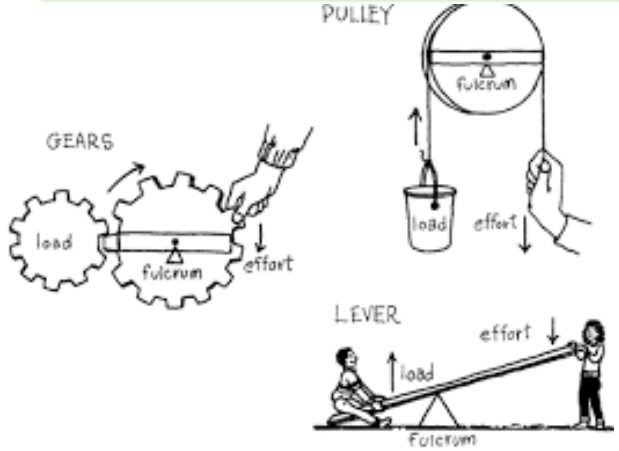
Objects fall towards the Earth because of the force of gravity acting between the falling object and the Earth.

Air Resistance

Air resistance a type of frictin. Air resistance is air pushing against a moving object. This can **slow** the speed of the travelling object.

Water Resistance

Water resistance is type of friction. When you move through **water**, you have to push **water** out of the way. As the **water** passes across your skin. it pulls against it, tending to make you slow.



Levers, pulleys and gears can make movement easier.

Friction

A force between two surfaces. This can effect the speed of the moving object.

Key Vocabulary

Mass	The weight measured by an object
Pulleys	A wheel with a grooved rim around that changes the direction of a force
Levers	A rigid bar resting on a pivot that is used to move a heavy object
Force	A push or pull upon an object because of its interaction with another object
Gears	A toothed wheel that works with others to change the speed of the mechanism and its parts.
Friction	The resistance that one surface or object encounters when moving over another