

Year 5 Key Knowledge				
Forces & magnets (6 lessons) Are there different types of forces?	Materials (7 lessons) How do materials change?	Living things & their habitats (6 lessons) How do living things reproduce and why is this important in a life cycle?	Animals including humans (4 lessons) How do we change as we grow older?	Earth & Space (6 lessons) What is the Solar System?
* unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and falling objects	*know examples of solids, liquids and gasses and their properties *know states of matter change and the names of these processes	*name each of the seven life processes and how animals and plants complete each of the life processes and be able to distinguish living from non-living objects using this knowledge	*name and describe the main stages of the human life cycle*	*name the planets in the solar system based on their distance from the Sun, understanding that the Sun is a star (not a planet)
*know the effect of friction between moving surfaces	*describe the properties of materials using the scientific vocabulary	*name the five animal groups and understand that the way each of those groups reproduce may be different. Know how mammals reproduce and the gestation periods for different mammals may vary	know how the foetus grows in the womb at different stages	*know the Earth as a spherical body and understand how it was discovered that the Earth was round and not flat by the Greek philosopher Aristotle
*know the effect of air resistance	*know that some materials dissolve in a liquid to make a solution, explaining the process of dissolving using scientific vocabulary (soluble, insoluble, solution) and understand that solutions have a saturation point	*know which groups of animals lay eggs and which do not and know animals that look after their young with those that don't	*know what puberty is	*know the movement of the Earth, and other planets relative to the Sun understanding that a year is the amount of time it takes for a planet to orbit the Sun once and it is different for each planet
*know the effect of water resistance	*know that some mixed materials can be separated through various processes (evaporation, filtering, sieving or using magnets)	*know the process of pollination and fertilization, and label parts of a flower, understanding the purpose of each part. Know what seed dispersal is and some seed dispersal methods	*know how human bodies change during puberty	*know the movement of the Moon in relation to the Earth understanding that the Moon is the largest object that orbits the Earth and that we only see one side of the Moon from Earth
*recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect	*know the difference between irreversible and reversible change and give examples of each type of change	*know the differences and similarities in the life cycles of mammals, amphibians, insects and birds and the order of the stages in the life cycle of a strawberry and/or dandelion plant.	*explain what it means to be a senior and describe the changes we might face	*know why there is day and night on Earth understanding why the Moon appears to change shape describing the movement of the Moon relative to Earth, naming some of the phases of the Moon.
Key Vocabulary & Definitions				
force – a push or pull that acts upon an object that can cause it to move, change shape or change direction friction – the force that acts upon one surface when it moves against another gravity – a pull force that acts at a distance pull – to move something towards push – to move something away repel – to push away resistance – an opposing or slowing force drag – the frictional force experienced by an object moving through a fluid or air streamlined – a shape which minimises the profile presented by an object in order to minimise the resistance it encounters when moving through a liquid or gas upthrust/buoyancy – the upward force exerted on a body by a fluid that surrounds it, equal and opposite to the weight of the water displaced	soluble – a substance that will dissolve in water insoluble – a substance that will not dissolve in water saturation – the point at which no more solute can be dissolved solution – a soluble solid is dissolved in liquid to form a solution filtration – the collection of larger particles in a mixture boiling – the process by which molecules of a liquid change to vapour (much faster change than evaporation) condensing – the change of vapour into a liquid evaporation – change from a liquid to a vapour freezing – the change of a liquid to a solid melting point – the point at which a solid substance liquefies chemical change – one where the molecular	fertilisation – the point at which the sperm from the pollen meets the egg in the ovary pollination – the process by which the pollen reaches the stigma pollen – granule that delivers the male genetic material to the female seed stamen – the male part of the flower, comprising of the anther and filament pistil – the female part of the flower consisting of the stigma, style and ovary seed dispersal – the method used by a plant to spread out its seeds (usually by wind, water or animals) reproduction – the combining of genetic material from two individuals to produce new life	birth – when your life starts as a physically separate being conception/fertilisation – when the egg and sperm meet to begin the development of a foetus death – when the life cycle ends develop – to grow and become more mature or advanced egg – the female sex cell foetus – a baby that is still developing in the womb puberty – a time in the human lifecycle when the body goes through changes to become an adult sperm – the male sex cell womb – an organ in which the foetus grows and develops	orbit – the rotation that one body in space takes around another when under gravitational influence axis – an imaginary line going through a central body that most bodies in space rotate around day – length of time the Earth takes to rotate on its axis once month – the length of time the Moon takes to complete one orbit around the Earth (not exactly equal to a calendar month) planet – a non-luminous body that orbits a star solar system – the name given to the sun and all the bodies orbiting around it year – the period the Earth takes to complete one orbit of the Sun

<p>Newton (N) – the unit used to measure force</p> <p>gear – two wheels with serrated or notched rims that mesh together to transfer movement</p> <p>lever – usually a rigid bar with a pivot point close to one end, allowing movement at one end of the lever to be converted into a smaller movement at the other, which effectively magnifies the force applied</p> <p>pulley – a wheel with a grooved rim that allows the transfer of movement via a belt or band</p>	<p>structures of the combined substances are broken down and recombined to make a new substance</p> <p>physical change – where the molecular structures of the combined substance stay separate, allowing separation to occur</p> <p>reversible change – a physical change that we can undo</p> <p>irreversible change – a physical change that we cannot undo</p>			<p>gravity – the force of attraction between two masses</p>
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