

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Y5</b>	<b>Properties and changes of materials</b>	<b>Properties and changes of materials</b>	<b>Forces and motion</b>	<b>Forces and motion</b>	<b>Earth and Space</b>	<b>Animals including humans/ Living things and their habitats</b>
<b>Topic take Aways</b>	<p>I can compare materials based on properties including hardness, solubility, insulators, transparency, electrical conductivity, thermal conductivity and magnetism.</p> <p>I can group materials based on properties above.</p>	<p>I know reversible changes are when materials can be separated by filtering, sieving and evaporating.</p> <p>I can give an example of a reversible change.</p> <p>I can discuss an irreversible change for example burning wood.</p> <p>I can give evidenced</p>	<p>I can explain what gravity is.</p> <p>I can explain the impact gravity has on our lives.</p> <p>I know that friction is a force that acts between two surfaces or objects that are moving, or trying to move, across each other.</p> <p>I can discuss the effects if friction.</p>	<p>I know how pulleys can be used to make a small force lift a heavier load. The more wheels in a pulley, the less force is needed to lift a weight.</p> <p>I know 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</p>	<p>I can describe and explain the movement of the Earth and other planets in relation to the Sun.</p> <p>I can describe and explain the movement of the Moon in relation to the Earth.</p> <p>I can explain how night and day are caused by the rotating of the Earth.</p>	<p>I can describe the changes as humans develop to old age.</p> <p>I can describe the life cycle of a mammal, an amphibian, an insect and a bird.</p> <p>I can describe the differences between the</p>

	<p>I know a solution is made when solid particles are mixed with liquid particles</p> <p>I know a suspension is when particles do not dissolve.</p> <p>I know materials which dissolve are soluble and materials which don't are insoluble.</p>	<p>reasons why materials should be used for a specific purpose.</p> <p>I can give evidenced reasons why materials should not be used for a specific purpose</p>	<p>I can explain that air resistance is a type of friction caused by air pushing on any moving object.</p> <p>I can explain that water resistance is a type of friction caused by water pushing on any moving object.</p> <p>I can give examples of air and water resistance.(e.g. In parachuting or swimming)</p>	<p>direction to each other.</p> <p>I can explain how levers can be used to make a small force lift a heavier load. A lever always rests on a pivot</p>	<p>I can describe the Sun, Earth and Moon (including the term spherical.)</p>	<p>different lifecycles.</p> <p>I can describe the process of reproduction in plants.</p> <p>I can describe the process of reproduction in animals.</p>
<b>Working Scientifically Takeaways</b>	<b>I can select and plan the most</b>	<b>I can take measurements using a range of scientific</b>	<b>I can take measurements using a range of scientific</b>	<b>I can use test results to identify when</b>	<b>I can select and plan the most</b>	<b>I can present a report of my findings through</b>

(skills ongoing throughout)	appropriate type of scientific enquiry to use to answer scientific questions?	equipment with increasing accuracy and precision?	equipment with increasing accuracy and precision?	further tests and observations may be needed?	appropriate type of scientific enquiry to use to answer scientific questions?	writing, display and presentation?
<b>Science Investigation</b>	<p><b>Can I investigate how to separate?</b></p> <p>How to best separate mixtures, solutions and suspensions (e.g. sand &amp; water, salt &amp; water, raisins &amp; flour, paper clips &amp; sand). Can we always separate them to get them back to their original states?</p>	<p><b>What is the best material for a school lunch bag?</b></p> <p>Investigating thermal insulators of materials to keep refreshments hot or cold -</p>	<p><b>Can I investigate friction?</b></p> <p>How the friction of different surfaces will affect the speed or mobility of a toy car travelling down a ramp.</p>	<p><b>Can I investigate air resistance?</b></p> <p>How does air resistance help a parachute/ paper helicopter to work. Children make parachutes/ paper helicopters in different sizes to investigate the effects of air resistance.</p>	<p><b>Can I investigate how and why the sun appears to move across the sky throughout the day?</b></p> <p>Look at its effect on the shadows being cast.</p>	<p><b>Can I re-grow vegetables?</b></p> <p>Grow from 'tops' and growing new plants from cuttings. Cut the top off a carrot and place in a saucer of water or place the 'stub' from celery in shallow water - investigate how they sprout new foliage. To grow new plants from cuttings eg. Mint.</p>
<b>Vocabulary</b>	<p>Hardness Solubility Transparency</p>	<p>Evaporation Dissolving Mixing</p>	<p>Air resistance Water resistance</p>	<p>Gravity Levers Pulleys</p>	<p>Earth Sun Moon</p>	<p>foetus, embryo, womb,</p>

	Conductivity Magnetic	Filter		Gears	Axis Phases of the moon Star Constellation	gestation, baby, toddler, teenager, elderly, growth, development, puberty
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