

## Year 5 Science Coverage

'As Scientists, we question how the world around us works so we can make predictions, experiment and explain our understanding.'			
Unit:	To Infinity and Beyond	Mother Nature's Recipes	A Force to be Reckoned With
National Curriculum Science Knowledge taught as stand-alone lessons			
National Curriculum Science Knowledge Linked to topic	<p><b>Earth and Space</b> describe the movement of the Earth and other planets relative to the sun in the solar system describe the movement of the moon relative to the Earth</p> <p>describe the sun, Earth and moon as approximately spherical bodies</p> <p>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</p> <p><b>Forces</b> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p>	<p><b>Animal / Living things and their habitats</b> describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>describe the life process of reproduction in some plants and animals</p> <p>describe the changes as humans develop to old age</p>	<p><b>Materials</b> compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</p> <p>demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</p> <p>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p>

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	recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect		<p>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p>
Subject Focus	<p>In this topic, children be exploring our place in the Universe and the solar system. They will be building on knowledge of light and dark and seasons to look closely at the Earth, Sun and Moon, studying the relationship between them and how their movement is related to time.</p> <p>They will explore the concepts of gravity and explore how scientific thinking changes in light of discoveries.</p>	<p>In this topic, children will learn about the physical and biological features of rainforest habitats and the Environmental issues faced by them. They will be looking at plants and animals that live there (eg Kapoc Tree and Poison Dart Frog) and study the differing lifecycles of a variety of plant ( and testing conditions for germination) and animal groups compared to humans.</p>	<p>In this topic, children will look at the impact of natural disasters and how technology can predict, prepare and prevent damage. They will look at, test and evaluate materials for a variety of properties and purposes. They will look at changes - both reversible and irreversible and relate this to the environmental impact of different types of disaster.</p>
Fab Five/ Top Ten	<ol style="list-style-type: none"> <li>1. I will know the order of the planets in our solar system.</li> <li>2. I can describe the phases of the moon.</li> <li>3. I can explain how I know the Earth is a sphere.</li> <li>4. I can describe the effects of gravity on a falling object.</li> <li>5. I can suggest ways to slow down a falling object using air resistance.</li> </ol>	<ol style="list-style-type: none"> <li>1. I can describe the stages in the human lifecycle.</li> <li>2. I know the vocabulary associated with the lifecycle of a plant.</li> <li>3. I can explain what conditions are needed for a plant to germinate</li> <li>4. I know how some species are adapted to live in Rainforest habitats.</li> <li>5. I know an Environmental issue facing a contrasting location.</li> </ol>	<ol style="list-style-type: none"> <li>1. I can explain evaporation and condensation.</li> <li>2. I can suggest ways to separate materials.</li> <li>3. I can describe the water cycle using scientific vocabulary.</li> <li>4. I can set up a fair test.</li> <li>5. I can describe materials using their specific properties.</li> </ol>

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Topic specific Vocabulary	All previous plus  gravity friction energy grip resistance mechanism lever pulley gear  solar system planet Earth sphere spherical rotation orbit satellite	All previous from <i>plants, animals, and living things and their habitats</i> plus  puberty reproduce reproduction	All previous Plus  transparent conduct insulate dissolve solution separated sieving filtering evaporating reversible irreversible acid reaction
	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and</li> </ul>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams</li> <li>using test results to make predictions to set up further comparative and fair tests</li> <li>identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>

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	<ul style="list-style-type: none"> <li>identifying scientific evidence that has been used to support or refute ideas or arguments.</li> <li>using test results to make predictions to set up further comparative and fair tests</li> </ul>	<p>written forms such as displays and other presentations</p> <ul style="list-style-type: none"> <li>identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>	
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