

Science – Year 5 - Long Term Plan

	National Curriculum Coverage	Assessment
Autumn	<p><u>Living things and their habitats</u> - describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird - describe the life process of reproduction in some plants and animals.</p>	<ul style="list-style-type: none"> • Can draw the life cycle of a range of animals identifying similarities and differences between the life cycles • Can explain the difference between sexual and asexual reproduction and give examples of how plants reproduce in both ways
	<p><u>Animals including humans</u> - describe the changes as humans develop to old age.</p>	<ul style="list-style-type: none"> • Can explain the changes that takes place in boys and girls during puberty • Can explain how a baby changes physically as it grows, and also what it is able to do
Spring	<p><u>Earth and space</u> - 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 - describe the Sun, Earth and Moon as approximately spherical bodies - use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>	<ul style="list-style-type: none"> • Can show, using diagrams, the movement of the Earth and Moon • Can explain the movement of the Earth and Moon • Can show using diagrams the rotation of the Earth and how this causes day and night • Can explain what causes day and night
	<p><u>Properties and changes of material</u> - 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 - know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution - use knowledge of solids, liquids & gases to decide how mixtures might be separated, through filtering, sieving & evaporating - give reasons, based on evidence from comparative & fair tests, for the particular uses of everyday materials, including metals, wood & plastic - demonstrate that dissolving, mixing and changes of state are reversible changes</p>	<ul style="list-style-type: none"> • Can use understanding of properties to explain everyday uses of materials, for example, how bricks, wood, glass and metals are used in buildings • Can explain what dissolving means, giving examples • Can name equipment used for filtering and sieving • Can use knowledge of liquids, gases and solids to suggest how materials can be recovered from solutions or mixtures by evaporation, filtering or sieving • Can describe some simple reversible and non-reversible changes to materials, giving examples

	- 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.	
Summer	<p>Forces</p> <ul style="list-style-type: none"> - explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object - identify the effects of air resistance, water resistance and friction, that act between moving surfaces - recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	<ul style="list-style-type: none"> • Can demonstrate the effect of gravity acting on an unsupported object • Can give examples of friction, water resistance and air resistance • Can give examples of when it is beneficial to have high or low friction, water resistance and air resistance • Can demonstrate how pulleys, levers and gears work

Assessment – working scientifically.

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations

- identifying scientific evidence that has been used to support or refute ideas or arguments