

Science

Throughout the year the children will cover a variety of aspects of the science curriculum to ensure all children:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

Autumn 1	<p>Animals including humans <i>identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</i> <i>recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</i> <i>describe the ways in which nutrients and water are transported within animals, including humans.</i></p>
Autumn 2	<p>Living things and habitats - from Y6 NC objectives <i>describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</i> <i>give reasons for classifying plants and animals based on specific characteristics.</i></p>
Spring 1	
Spring 2	<p>Earth, Sun and Moon <i>describe the movement of the Earth, and other planets, relative to the Sun in the solar system</i> <i>describe the movement of the Moon relative to the Earth</i> <i>describe the Sun, Earth and Moon as approximately spherical bodies</i> <i>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</i></p>
Summer 1	<p>Materials <i>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</i> <i>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</i> <i>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</i> <i>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals,</i></p>

	<p><i>wood and plastic</i></p> <p><i>demonstrate that dissolving, mixing and changes of state are reversible changes</i></p> <p><i>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.</i></p>
Summer 2	<p>Electricity</p> <p><i>associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</i></p> <p><i>compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches</i></p> <p><i>use recognised symbols when representing a simple circuit in a diagram.</i></p>

Investigations – on-going throughout all units

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 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.