



**Science Year 6**

*What are the aims and intentions of this curriculum?*

Our school science curriculum is aligned to the national curriculum for science, which aims to ensure that all pupils:

- 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.

Term	Topic	Key Learning	Key Learning
Autumn 1	Evolution & inheritance	<p>Know that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>Know that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Know how animals and plants have adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Record classifications using tables, Venn diagrams, Carroll diagrams and classification keys</p> <p>Answers questions based on observations and information from secondary sources</p> <p>Discuss how new discoveries change scientific understanding</p> <p>Discuss how scientific ideas change due to the new evidence that they have gathered</p> <p>Identify casual relationships and patterns in the natural world</p> <p>Report and present findings from enquiries</p> <p>Evaluate conclusions, casual relationships and degree of trust in results</p>	<p>variety, inherited, evolution, adaption, natural selection, fossil, dinosaur, prehistoric.</p>
Autumn 2	Animals, including humans	<p>Know the main parts of the human circulatory system.</p> <p>Know the functions of the heart, blood vessels and blood.</p> <p>Know the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p> <p>Know the ways in which nutrients and water are transported within animals, including humans.</p> <p>Children decide for themselves how to gather evidence to answer a scientific question</p> <p>Choose a type of enquiry to carry out and justify their choice</p> <p>Select measuring equipment to give the most precise results</p> <p>During an enquiry, they make decisions whether they need to: take repeat readings; increase the sample size and adjust the observation period and frequency in order to get accurate data</p> <p>Decide what observations or measurements to make over time and for how long</p> <p>Identify patterns and relationships using a suitable sample</p>	<p>Vocabulary: heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs and lifestyle.</p>



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		<p>Decide how to record and present evidence e.g. using tables, tally chart, bar chart, line graph</p> <p>Identify results that do not fit the overall pattern</p> <p>Explain their findings using their subject knowledge</p> <p>Identify any limitations that reduce the trust they have in their data</p> <p>Using test results to make predictions to set up further comparative and fair tests</p>	
Spring	Light	<p>Know that light appears to travel in straight lines.</p> <p>Know that objects are seen because they give out or reflect light (which travels in straight lines) into the eye.</p> <p>Know that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</p> <p>Know that shadows have the same shape as the objects that cast them (because light travels in straight lines).</p> <p>Plan a scientific enquiry to answer a questions</p> <p>Recognise and control variables in an enquiry</p> <p>Take measurements with increasing accuracy and precision</p> <p>select measuring equipment to give the most precise results</p> <p>During an enquiry, make decisions whether they need to: take repeat readings; increase the sample size and adjust the observation period and frequency in order to get accurate data</p> <p>Record data and results of increasing complexity using line graphs and tables</p> <p>Present the same data in different ways in order to help with answering the question</p> <p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms</p> <p>Identify any limitations that reduce the trust they have in their data</p>	<p>straight lines, light rays, (Y3 vocabulary - light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous).</p>
Summer 1	Living things & their habitats	<p>Know how living things are classified (taking account of similarities and differences in observable characteristics (include plants, animals and micro-organisms)</p> <p>Record data using classification keys, tables, labelled scientific diagrams</p> <p>Identify patterns in the natural world</p> <p>Communicate their findings to an audience using relevant scientific language and illustrations</p> <p>Evaluate the credibility of secondary sources used</p>	<p>vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering.</p>
Summer 2	Electricity	<p>Know that the brightness of a lamp or the volume of a buzzer is associated with the number and voltage of cells used in the circuit.</p> <p>Know that there are variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.</p> <p>Know the symbols for components used in a series circuit.</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p>	<p>circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage.</p>



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		<p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Carry out fair tests, recognising and controlling variables</p> <p>Look for patterns and relationships using a suitable sample</p> <p>Decide how to record and present evidence</p> <p>Use scientific diagrams and writing to present findings</p> <p>answer their own and others' questions based on observations they have made and measurements they have taken</p> <p>identify causal relationships and patterns</p> <p>Identify any limitations that reduce the trust they have in their data</p> <p>make predictions they can investigate using comparative and fair tests</p>	
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