

UKS2 Cycle B
Working Scientifically

Scientific enquiry	Practical investigation	Communicating	Interpreting evidence
<p>Explores ideas and raises different kinds of relevant questions.</p> <p>Recognises which secondary sources are most useful to research their ideas and begins to recognise that there are differences between facts and opinions.</p> <p>Explores ideas and raises different kinds of relevant questions arising from correct scientific principles.</p> <p>Recognises which secondary sources will be most useful to research their ideas and begins separate opinions from fact.</p>	<p>With increasing confidence selects and plans the most appropriate type of scientific enquiry for answering a scientific question.</p> <p>Recognises when and how to set up comparative and fair tests and is beginning to explain which variables need to be controlled and why.</p> <p>Makes their own decisions about what observations to make, what measurements to use and how long to make them for.</p> <p>Chooses appropriate equipment to make measurements.</p> <p>Selects and plans accurately the most appropriate type of scientific enquiry for answering a scientific question.</p> <p>Recognises when and how to set up comparative and fair tests and explains which variables need to be controlled and why.</p> <p>Makes independent, well founded decisions about what observations to make, what measurements to use and how long to make them for.</p> <p>Chooses the most appropriate equipment to make measurements and explains how to use it accurately.</p>	<p>Decides how to record data from a choice of familiar approaches.</p> <p>Uses relevant scientific language and illustrations to discuss and communicate their ideas. Is sometimes able to justify their scientific ideas.</p> <p>Talks about how scientific ideas have developed over time.</p> <p>Uses and develops keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment.</p> <p>Records data and results using scientific diagrams and labels, classification keys, tables and bar and line graphs.</p> <p>Uses simple models to describe scientific ideas.</p> <p>Reports and presents findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations.</p> <p>Decides how to record data from a choice of familiar approaches.</p> <p>Uses relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.</p> <p>Talks about how scientific ideas have developed over time.</p> <p>Uses and develops keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment.</p> <p>Records data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.</p> <p>Uses simple models to describe scientific ideas.</p> <p>With increasing accuracy reports and presents findings from conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations.</p>	<p>Looks for different causal relationships in their data and begins to identify evidence that refutes or supports their ideas.</p> <p>Uses their results to identify when further tests and observations might be needed.</p> <p>Looks for different causal relationships in their data and identifies evidence that refutes or supports their ideas.</p> <p>Uses test results to make predictions to set up further comparative and fair tests.</p>

UKS2 Cycle B
Knowledge and Understanding

Ancient Greeks (Autumn 1 & 2)	Amazing Amazon (Spring 1 & 2)	World War Two (Summer 1 & 2)
Earth and Space	Living things and their habitats	Animals, including humans
<p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p> <p>Describe the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>Uses the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.</p>	<p>Describes the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describes the life process of reproduction in some plants and animals.</p> <p><i>Could work scientifically by: observing and comparing the life cycles of plants and animals in their local environment with other plants and animals around the world (in the rainforests, oceans, deserts and in prehistoric times), asking pertinent questions, and suggesting reasons for similarities and differences.</i></p>	<p>Describes the changes as humans develop to old age.</p> <p>Draws a timeline to indicate stages in the growth and development of humans.</p> <p>Learns about the changes experienced in puberty.</p> <p><i>Could work scientifically by researching the gestation periods of other animals and comparing them with humans.</i></p> <p><i>Could work scientifically by finding out and recording the length and mass of a baby as it grows.</i></p> <p>Identifies and names the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood.</p> <p>Recognises the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p>
Light	Forces	<p>Describes the ways in which nutrients and water are transported within animals, including humans.</p> <p><i>Could work scientifically by: investigating how heartbeat varies with exercise.</i></p>
<p>Recognises that light appears to travel in straight lines.</p> <p>Uses the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</p> <p>Explains 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>Uses the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p> <p><i>Could work scientifically by: designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works.</i></p>	<p>I can identify the effects of air resistance, water resistance and friction</p> <p>I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p>	