



Hartford Junior School UKS2 LTP Science

Scientific skills - 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

	Autumn		Spring		Summer	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5 Cycle A	<p>Living things and their habitats - 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> <p>Do all animals have young in the same way?</p>	<p>Properties of materials - 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, give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>How do we choose the materials needed for special jobs?</p>	<p>changes of materials - 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 and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating, demonstrate that dissolving, mixing and changes of state are reversible changes, 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>Are all changes to materials reversible?</p>	<p>Forces - 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.</p> <p>How useful are forces? (May the forces be with you!)</p>	<p>Living things & Habitats - describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals, give reasons for classifying plants and animals based on specific characteristics.</p> <p>How and why do we classify living things? (classification connoisseurs)</p>	<p>Light - recognise that light appears to travel in straight lines, use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye, explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes, use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p> <p>How does the way light travels, help us see? (crime lab investigation)</p>

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Year 6	<p>Light - recognise that light appears to travel in straight lines, use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye, explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes, use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p> <p>How does the way light travels, help us see? (crime lab investigation)</p>	<p>Evolution and Inheritance - recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago, recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents, identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>What is evolution & how does it help survival? (The game of survival)</p>	<p>Electricity - associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit, 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, use recognised symbols when representing a simple circuit in a diagram.</p> <p>How can circuits be changed? (Electric celebrations)</p>	<p>Animals including Humans - identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood, recognise the impact of diet, exercise, drugs and lifestyle on the way their body's function, describe the ways in which nutrients and water are transported within animals, including humans.</p> <p>What does my blood do? (The art of being human)</p>	<p>Living things & Habitats - describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals, give reasons for classifying plants and animals based on specific characteristics.</p> <p>How and why do we classify living things? (classification connoisseurs)</p>	<p>Introduction to Secondary Science Units written by Ali Hodgson from CamVC concentrating on Science skills ready for secondary school. Supplemented with Science lessons delivered by the Science Teachers at St Peers School.</p>
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