



Upper Key Stage 2 Science

	Biology		Chemistry	Physics		
Year 5	Living things and their habitats	Animals including humans	Properties and changes of materials	Earth and Space	Forces	
	<ul style="list-style-type: none"> Know and be able to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Know and describe the life process of reproduction in some plants and animals. 	<ul style="list-style-type: none"> Know and describe the changes as humans develop to old age. 	<ul style="list-style-type: none"> Know the comparison between 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. To use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Know and give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Know that dissolving, mixing and changes of state are reversible changes. To 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. 	<ul style="list-style-type: none"> Know and describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Know and describe the movement of the Moon relative to the Earth. Know and describe the Sun, Earth and Moon as approximately spherical bodies. Know and use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	<ul style="list-style-type: none"> Know and explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Know the effects of air resistance, water resistance and friction, that act between moving surfaces. Know that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	
	Biology			Chemistry	Physics	
Year 6	Living things and their habitats	Animals, including humans	Evolution and Inheritance		Light	Electricity
	<ul style="list-style-type: none"> Know how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Know reasons for classifying plants and animals based on specific characteristics. 	<ul style="list-style-type: none"> Know and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Know the impact of diet, exercise, drugs and lifestyle on the way their bodies function. To describe the ways in which nutrients and water are transported within animals, including humans. 	<ul style="list-style-type: none"> Know that living things change over time. Know that fossils provide information about living things that inhabited the Earth millions of years ago. Know that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Know how animals and plants are adapted to suit their environment. 		<ul style="list-style-type: none"> Know that light appears to travel in straight lines. To 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. 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. To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 	<ul style="list-style-type: none"> 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. Know and compare reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Know and use recognised symbols when representing a simple circuit in a diagram.

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 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



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