


Wheatcroft School
Progression in Science (Y4-6)

	Year 4	Year 5	Year 6
Working Scientifically	<ul style="list-style-type: none"> I can ask relevant questions and use different types of scientific enquiries to answer them. I can set up simple practical enquiries, comparative and fair tests. I can make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment. I can gather, record, classify and present data in a variety of ways to help in answering questions. I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. 	<ul style="list-style-type: none"> I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. I can use test results to make predictions to set up further comparative and fair tests. I can report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written 	<ul style="list-style-type: none"> I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. I can use test results to make predictions to set up further comparative and fair tests. I can report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written

	<ul style="list-style-type: none"> • I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. • I can identify differences, similarities or changes related to simple scientific ideas and processes. • I can use straightforward scientific evidence to answer questions or to support findings. 	<p>forms such as displays and other presentations.</p> <ul style="list-style-type: none"> • I can identify scientific evidence that has been used to support or refute ideas or argument 	<p>forms such as displays and other presentations.</p> <ul style="list-style-type: none"> • I can identify scientific evidence that has been used to support or refute ideas or argument
Animals including humans	<ul style="list-style-type: none"> • I can identify that humans and some other animals have skeletons and muscles for support, protection and movement. • I can describe the simple functions of the basic parts of the digestive system in humans. • I can construct and interpret a variety of food chains, identifying producers, predators and prey. 	<ul style="list-style-type: none"> • I can describe the changes as humans develop to old age. 	<ul style="list-style-type: none"> • I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. • I can recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. • I can describe the ways in which nutrients and water are transported within animals, including humans.
Living things and their habitats	<ul style="list-style-type: none"> • I know that living things can be grouped in a variety of ways. • I can explore and use classification keys to help group, identify and name a 	<ul style="list-style-type: none"> • I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. 	<ul style="list-style-type: none"> • I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences,

	<p>variety of living things in their local and wider environment.</p> <ul style="list-style-type: none"> I recognise that environments can change and that this can sometimes pose dangers to living things. 	<ul style="list-style-type: none"> I can describe the life process of reproduction in some plants and animals. 	<p>including microorganisms, plants and animals</p> <ul style="list-style-type: none"> I can give reasons for classifying plants and animals based on specific characteristics
Evolution and inheritance		<ul style="list-style-type: none"> I can identify how animals and plants are adapted to suit their environment in different ways. 	<ul style="list-style-type: none"> I recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. I know that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. I know that adaptation may lead to evolution.
Materials	<ul style="list-style-type: none"> I can compare and group materials together, according to whether they are solids, liquids or gases. I can observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). I can identify the part played by evaporation and condensation in the water 	<ul style="list-style-type: none"> I can 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 know that some materials will dissolve in liquid to form a solution, and can describe how to recover a substance from a solution. 	

	<p>cycle and associate the rate of evaporation with temperature</p>	<ul style="list-style-type: none"> • I can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. • I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. • I can demonstrate that dissolving, mixing and changes of state are reversible changes. • I can 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. 	
The Earth and Space		<ul style="list-style-type: none"> • I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system. • I can describe the movement of the Moon relative to the Earth. 	

		<ul style="list-style-type: none"> • I can describe the Sun, Earth and Moon as approximately spherical bodies. • I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	
Light			<ul style="list-style-type: none"> • I recognise that light appears to travel in straight lines. • I can 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. • I can 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. • I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Sound	<ul style="list-style-type: none"> • I can identify how sounds are made, associating some of them with something vibrating. • I can recognise that vibrations from sounds travel through a medium to the ear. • I can find patterns between the pitch of a sound and 		

	<p>features of the object that produced it.</p> <ul style="list-style-type: none"> • I can find patterns between the volume of a sound and the strength of the vibrations that produced it. • I can recognise that sounds get fainter as the distance from the sound source increases. 		
Forces and motion		<ul style="list-style-type: none"> • I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces. • I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect 	
Electricity	<ul style="list-style-type: none"> • I can identify common appliances that run on electricity. • I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. • I can identify whether or not a lamp will light in a simple 		<ul style="list-style-type: none"> • I can associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. • I can compare and give reasons for variations in how components function, including the brightness of bulbs, the

	<p>series circuit, based on whether or not the lamp is part of a complete loop with a battery.</p> <ul style="list-style-type: none"> • I can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • I can recognise some common conductors and insulators, and associate metals with being good conductors. 		<p>loudness of buzzers and the on/off position of switches.</p> <ul style="list-style-type: none"> • I can use recognised symbols when representing a simple circuit in a diagram.
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