



## Key Learning Outcomes – Knowledge and Skills - SCIENCE

	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Skills	<p>I can show curiosity about events, people and objects.</p> <p>I can question things that are happening around me.</p> <p>I can engage in open-ended activity (Playing and Exploring).</p> <p>I can take risks, engage in new activities and learn by trial and error.</p> <p>I can find ways to solve problems, find new ways of doing things and test ideas.</p> <p>I can develop ideas of grouping, sequences, cause and effect.</p> <p>I know about similarities and differences in relation to places, objects, materials and living things.</p> <p>I can comment or ask questions about the place where I live, my immediate environment and natural world.</p> <p>I can closely observe what animals, people and vehicles do and use my senses to explore the world.</p>	<p>I can ask simple questions and recognise that they can be answered in different ways.</p> <p>I can observe closely, using simple equipment.</p> <p>I can perform simple tests.</p> <p>I can identify and classify.</p> <p>I can use my observations and ideas to suggest answers to questions.</p> <p>I can gather and record data to help me answer questions.</p>	<p>I can ask relevant questions and using different types of scientific enquiries to answer them.</p> <p>I can set up simple practical enquiries, comparative and fair tests.</p> <p>I can make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>I can gather, record, classify and present data in a variety of ways to help in answer questions.</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p>	<p>I can ask relevant questions and using different types of scientific enquiries to answer them.</p> <p>I can set up simple practical enquiries, comparative and fair tests.</p> <p>I can make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>I can gather, record, classify and present data in a variety of ways to help in answer questions.</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>I can use straightforward scientific evidence to answer questions or to support my findings.</p>	<p>I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can use test results to make predictions to set up further comparative and fair tests.</p> <p>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 forms such as displays and other presentations</p> <p>I can identify scientific evidence that has been used to support or refute ideas or arguments.</p>		



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Skills	<p>I can make links and notice patterns in my experiences.</p> <p>I can choose the resources I need for my activities.</p> <p>I can create simple representations of events, people and objects.</p> <p>I can make observations of plants and animals; explain why some things occur and talk about changes.</p> <p>I can answer ‘how’ and ‘why’ questions about my experiences.</p> <p>I can develop my own narratives and explanations by connecting ideas or events.</p> <p>I can build up my vocabulary to reflect the breadth of my experience.</p>		<p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>I can use straightforward scientific evidence to answer questions or to support my findings.</p>		



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Knowledge - Plants		<p>I can name a variety of plants, including deciduous and evergreen trees.</p> <p>I can describe the basic structure of plants and trees</p>	<p>I can describe how seeds and bulbs grow into mature plants.</p> <p>I can describe what plants need to grow and stay healthy.</p>	<p>I can describe the functions of different parts of flowering plants.</p> <p>I can explore the requirements of plants for life and growth.</p> <p>I can investigate the way in which water is transported within plants.</p> <p>I can explore the life cycle of flowering plants.</p>			
	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Knowledge - Animals Including Humans		<p>I can identify and name a variety of common animals.</p> <p>I can name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>I can describe and compare the structure of a variety of common animals.</p> <p>I can identify the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p>I can notice that animals, including humans, have offspring which grow into adults.</p> <p>I can describe the basic needs of animals, including humans, for survival.</p> <p>I can describe the importance for humans of exercise, diet and hygiene.</p>	<p>I can identify that animals, including humans get nutrition from what they eat.</p> <p>I can identify that humans and some other animals have skeletons and muscles.</p>	<p>I can describe the simple functions of the digestive system in humans.</p> <p>I can identify the different types of teeth in humans and their simple functions.</p> <p>I can interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>I can describe the changes as humans develop to old age.</p>	<p>I can identify the main parts of the human circulatory system.</p> <p>I can recognise the impact of diet, exercise, drugs and lifestyle.</p> <p>I can describe the ways in which nutrients and water are transported within animals, including humans.</p>



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<b>Knowledge -Materials</b>		<p><b>Everyday materials</b></p> <p>I can identify the material an object is made from.</p> <p>I can name a variety of everyday materials.</p> <p>I can describe the simple physical properties of a variety of everyday materials.</p> <p>I can compare and group together a variety of everyday materials based on their physical properties.</p>	<p><b>Everyday materials</b></p> <p>I can identify and compare the suitability of a variety of everyday materials.</p> <p>I can find out how the shapes of objects made from some materials can be changed.</p>		<p><b>States of matter</b></p> <p>I can materials that are solids, liquids and gases.</p> <p>I can observe that some materials change state when they are heated or cooled.</p> <p>I can explore evaporation and condensation in the water cycle.</p>	<p><b>Properties and changes of materials</b></p> <p>I can compare and group together everyday materials on the basis of their properties.</p> <p>I know that some materials will dissolve in liquid to form a solution.</p> <p>I can describe how to recover a substance from a solution.</p> <p>I can use knowledge of solids, liquids and gases to decide how mixtures might be separated.</p> <p>I can give reasons, based on evidence from comparative and fair tests, for the uses of everyday materials.</p> <p>I can demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible</p>	



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Knowledge - Living Things and Habitats			<p>I can explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>I can identify that most living things live in habitats to which they are suited.</p> <p>I can describe how different habitats provide the basic needs for animals and plants.</p> <p>I can identify and name a variety of plants and animals in their habitats, including micro-habitats</p> <p>I can describe how animals get their food from plants and other animals.</p> <p>I can name different sources of food.</p>		<p>I can recognise that living things can be grouped in a variety of ways.</p> <p>I can use classification keys to help group living things.</p> <p>I can recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>I can describe the differences in the life cycles.</p> <p>I can describe the life process of reproduction in some plants and animals.</p>	<p>I can describe how living things are classified into groups according to characteristics.</p> <p>I can give reasons for classifying plants and animals based on specific characteristics</p> <p><b>Evolution and inheritance;</b></p> <p>I can recognise that living things have changed over time</p> <p>I know that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>I can recognise that living things produce offspring.</p> <p>I can explore how adaption of animals and plants lead to evolution</p>



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Knowledge - Seasons		<p>Seasonal changes;</p> <p>I can observe changes across the four seasons.</p> <p>I can describe weather patterns.</p>					
Knowledge - Forces	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
				<p>I can compare how things move on different surfaces.</p> <p>I can notice that some forces need contact between two objects.</p> <p>I can observe how magnets attract or repel each other.</p> <p>I can group together a variety of materials based on whether they are attracted to a magnet.</p> <p>I can describe magnets as having two poles.</p> <p>I can predict whether two magnets will attract or repel each other.</p>		<p>I can explain the force of gravity.</p> <p>I can identify the effects of air resistance, water resistance and friction.</p> <p>I can recognise that some mechanisms, allow a smaller force to have a greater effect.</p>	



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Knowledge - Earth and Space						<p>I can describe the movement of the Earth, planets and the sun.</p> <p>I can describe the movement of the Moon.</p> <p>I can describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>I can use the idea of the Earth's rotation to explain day and night.</p>	
	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Knowledge - Light and Sound				<p><b>Light;</b></p> <p>I can recognise that I need light in order to see things.</p> <p>I can notice that light is reflected from surfaces.</p> <p>I can recognise that light from the sun can be dangerous.</p> <p>I can recognise that shadows are formed when light is blocked by an opaque object.</p> <p>I can explore the size of shadows.</p>	<p><b>Sound;</b></p> <p>I can identify how sounds are made.</p> <p>I can recognise how vibrations from sounds travel.</p> <p>I can explore patterns between in the pitch of sounds.</p> <p>I can explore the volume of sounds.</p>		<p><b>Light;</b></p> <p>I can recognise that light appears to travel in straight line,</p> <p>I can explain how we see things.</p> <p>I can explain how shadows shapes are cast.</p>



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Knowledge - Rocks				<p>I can group different kinds of rocks based on their physical properties.</p> <p>I can describe how fossils are formed.</p> <p>I can recognise that soils are made from rocks and organic matter.</p>			
	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Knowledge - Electricity					<p>I can identify common appliances that run on electricity.</p> <p>I can construct a simple electrical circuit.</p> <p>I can identify whether or not a lamp will light in a circuit.</p> <p>I can recognise that a switch opens and closes a circuit.</p> <p>I can recognise common conductors and insulator.</p>		<p>I can explore the voltage of cells used in a circuit.</p> <p>I can compare and give reasons for variations in how components function.</p> <p>I can use recognised symbols when representing a simple circuit in a diagram.</p>