



## Chalton Lower School - Science Progression Map



	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>QUESTIONING &amp; PLANNING</b>	<p>Ask questions to find out more and to check they understand what has been said to them.</p> <p>Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.</p> <p>Make comments about what they have heard and ask questions to clarify their understanding.</p>	<p>Ask simple questions about the world around us.</p> <p>Begin to recognise that questions can be answered in different ways.</p>	<p>Ask questions about the world around us.</p> <p>Recognise that questions can be answered in different ways.</p>	<p>Ask some relevant questions and use different types of scientific enquiries to answer them.</p> <p>Begin to explore everyday phenomena and the relationships between living things and familiar environments.</p> <p>Begin to develop their ideas about functions, relationships and interactions.</p> <p>Begin to raise their own questions about the world around them.</p> <p>Begin to make some decisions about which types of enquiry will be the best way of answering questions.</p>	<p>Ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>Explore everyday phenomena and the relationships between living things and familiar environments.</p> <p>Begin to develop their ideas about functions, relationships and interactions.</p> <p>Raise their own questions about the world around them.</p> <p>Make some decisions about which types of enquiry will be the best way of answering questions.</p>

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>OBSERVING &amp; MEASURING</b>	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p>	<p>Begin to observe closely, using simple equipment.</p> <p>Use simple observations and ideas to suggest answers to questions.</p>	<p>Observe closely, using simple equipment.</p> <p>Use observations and ideas to suggest answers to questions.</p>	<p>Begin to make systematic and careful observations and where appropriate, take accurate measurements using standard units, using a</p>	<p>Make systematic and careful observations and where appropriate, take accurate measurements using standard units, using a range of</p>

		<p>To observe simple changes over time and, with guidance, begin to notice patterns and relationships.</p> <p>To say what they are looking for and what they are measuring.</p> <p>To know how to use simple equipment safely.</p> <p>Use simple measurements and equipment with support e.g. egg timer.</p>	<p>To observe changes over time and with guidance, begin to notice patterns and relationships.</p> <p>To say what they are looking for and what they are measuring.</p> <p>To know how to use simple equipment safely.</p> <p>Use simple measurement and equipment with increasing independence e.g. hand lenses, egg timers.</p>	<p>range of equipment, including thermometers.</p> <p>Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.</p> <p>Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.</p> <p>Learn to use some new equipment appropriately.</p> <p>Begin to choose from a selection of equipment.</p> <p>Begin to see a pattern in their results.</p> <p>Begin to observe and measure accurately using standard units including time in minutes and seconds.</p>	<p>equipment.</p> <p>Look for naturally occurring patterns and relationships and decide what data to collect to identify them.</p> <p>Make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.</p> <p>Can choose from a selection of equipment.</p> <p>Can see a pattern in their results.</p> <p>Can observe and measure accurately using standard units including time in minutes and seconds.</p>
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	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>INVESTIGATING</b>	<p>Keep on trying when things are difficult.</p> <p>Solve real problems.</p> <p>Know more, so feel confident about coming up with their own ideas.</p> <p>Make more links between those ideas.</p>	<p>Perform simple tests with support</p> <p>To begin to discuss their ideas about how to find things out</p> <p>To begin to say what happened in their investigation</p>	<p>Perform simple comparative tests</p> <p>To discuss their ideas about how to find things out</p> <p>To say what happened in their investigation</p>	<p>Set up some simple practical enquiries, comparative and fair tests</p> <p>Begin to recognise when a simple fair test is necessary and help to decide how to set it up</p> <p>Begin to think of more than one variable factor</p>	<p>Set up simple practical enquiries, comparative and fair tests</p> <p>Recognise when a simple fair test is necessary and help to decide how to set it up</p> <p>Can think of more than one variable factor</p>

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>RECORDING AND REPORTING FINDINGS</b>	Express their ideas and feelings.	<p>Gather and record data with some adult support, to help in answering questions.</p> <p>Begin to record simple data.</p> <p>Begin to record and communicate their findings in a range of ways.</p> <p>Can show their results in a simple table that the teacher has provided.</p>	<p>Gather and record data to help in answering questioning.</p> <p>Record simple data.</p> <p>Record and communicate their findings in a range of ways.</p> <p>Can show their results in a table that the teacher has provided.</p>	<p>Gather, record, and begin to classify and present data in a variety of ways to help in answering questions.</p> <p>Begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>Begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Begin to use notes, simple tables and standard units and help to decide how to record and analyse their data.</p> <p>Begin to record results in tables and bar charts.</p>	<p>Gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use notes, simple tables and standard units and decide how to record and analyse their data .</p> <p>Can record results in tables and bar charts.</p>

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>IDENTIFYING, GROUPING &amp; CLASSIFYING</b>	Sort materials. For example, at tidy-up time, children know how to put different construction materials in separate baskets.	<p>Identify and classify.</p> <p>To begin to observe and identify, compare and describe.</p> <p>To begin to use simple features to compare objects, materials and living things and, with help, decide how to sort</p>	<p>Identify, group and classify.</p> <p>Observe and identify, compare and describe.</p> <p>Use simple features to compare objects, materials and living things and, with help decide how to sort and group them.</p>	<p>Begin to identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Begin to talk about criteria for grouping, sorting and classifying and use simple keys.</p>	<p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Talk about criteria for grouping, sorting and classifying and use simple keys.</p> <p>Compare and group</p>

		and group them.		Begin to compare and group according to behaviour or properties, based on testing.	according to behaviour or properties, based on testing.
<b>RESEARCH</b>		To begin to use simple secondary sources to find answers.  To begin to find information to help them from books and computers with help.	Use simple secondary sources to find answers.  Can find information to help them from books and computers with help.	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.
<b>CONCLUSIONS</b>	Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.	Begin to talk about what they have found out and how they have found out .  To begin to say what happened in an investigation.  To begin to say what they would change about the investigation.	Talk about what they have found out and how they found it out.  To say what happened in an investigation.  To say what they would change about the investigation.	Begin to use results to draw simple conclusions, make predictions for new values, suggest improvement and raise further questions.  Begin to use straightforward scientific evidence to answer questions or to support their findings.  With help, begin to look for changes, patterns, similarities and differences in their data.  Begin to say what they found out, linking cause and effect.  Begin to answer questions from what they have found out.	Use results to draw simple conclusions, suggest improvements and raise further questions.  Use straightforward scientific evidence to answer questions or to support their findings.  With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.  Can say what they found out, linking cause and effect.  Can answer questions from what they have found out.

	<b>EYFS</b>	<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>
<b>PLANTS</b>	Explore the natural world around them.	Identify and name a variety of common wild and garden plants,	Observe and describe how seeds and bulbs grow into mature plants	Identify and describe the functions of different parts of flowering plants: roots,	

	<p>Describe what they see, hear and feel whilst outside.</p> <p>Understand the effect of changing seasons on the natural world around them.</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>including deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p>	<p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>stem/trunk, leaves and flowers</p> <p>Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</p> <p>Investigate the way in which water is transported within plants</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>	
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	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>ANIMALS INCLUDING HUMANS</b>	<p>Describe what they see, hear and feel whilst outside.</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants</p>	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>Identify, name, draw and</p>	<p>Understand that animals, including humans, have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</p>	<p>Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement</p>	<p>Describe the simple functions of the basic parts of the digestive system in humans</p> <p>Identify the different types of teeth in humans and their simple functions</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey</p>

		label the basic parts of the human body and say which part of the body is associated with each sense.			
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	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>MATERIALS</b>	Sort materials. For example, at tidy-up time, children know how to put different construction materials in separate baskets.	<p>Distinguish between an object and the material from which it is made</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>Describe the simple physical properties of a variety of everyday materials</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>Describe how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p>		<p>Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>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)</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</p>

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>LIVING THINGS AND THEIR HABITATS</b>	<p>Explore the natural world around them.</p> <p>Describe what they see, hear and feel whilst outside.</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p>		<p>Explore and compare the difference between things that are living, dead and things that have never been alive</p> <p>Identify that most living things live in habitats to which they are suited; describe how different habitats provide the basic needs of different kinds of animals and plants, and how they depend on each other</p> <p>Identify and name a variety of plants and animals in their habitats, including micro-habitats</p> <p>Describe how animals obtain food from plants and other animals, using the idea of a simple food chain; identify and name different sources of food</p>		<p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers and have an impact on living things</p>

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>FORCES</b>				<p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>Observe how magnets attract or repel each other</p>	

				<p>and attract some material and not others</p> <p>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials</p> <p>Describe magnets as having two poles</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing</p>	
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	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>LIGHT</b>				<p>Recognise that they need light in order to see things and that dark is the absence of light</p> <p>Notice that light is reflected from surfaces</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect eyes</p> <p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object</p> <p>Find patterns in the way that the size of shadows change</p>	



	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>ELECTRICITY</b>					<p>Identify common appliances that run on electricity</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors</p>

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>SOUND</b>					<p>Identify how sounds are made, associating some of them with something vibrating</p> <p>Recognise that vibrations from sounds travel through a medium to the</p>

					<p>ear</p> <p>Find patterns between the pitch of a sound and features of the object that produced it</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>Recognise that sounds get fainter as the distance from the sound source increases</p>
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	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>ROCKS</b>				<p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>Recognise that soils are made from rocks and organic matter</p>	

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
<b>SEASONAL CHANGES</b>	Understand the effect of changing seasons on the natural world around them.	<p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with</p>			

	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	seasons and how day length varies			
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