



Science Progression Map

Respect

Compassion

Perseverance

Creation

Service

Working Scientifically

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Asking and Answering Questions						
Answer 'how' and 'why' questions about their experiences and in response to stories or events.	Use everyday language/begin to use scientific words to ask or answer a scientific question.	Suggest ideas, ask simple questions and know that they can be answered/investigated in different ways including simple secondary sources, such as books and video clips.	Use ideas to pose questions, independently, about the world around them.	Suggest relevant questions and know that they could be answered in a variety of ways, including using secondary sources such as ICT. Answer questions using straight forward scientific evidence.	Raise different types of scientific questions, and hypotheses.	Pose/select the most appropriate line of enquiry to investigate scientific questions.
Making Predictions						
Talk about events that are to happen in the future.	Begin to say what might happen in an investigation.	Begin to make predictions.	Make predictions and begin to give a reason.	Make predictions and give a reason using simple scientific vocabulary.	Make predictions and give a reason using scientific vocabulary.	Make predictions and give a reason using scientific vocabulary. Base predictions on findings from previous investigations.
Making Observations						

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Begin to use 'why' questions.	Observe objects, materials and living things and describe what they see.	Observe something closely and describe changes over time.	Make decisions about what to observe during an investigation.	Make systematic and careful observations.	Plan and carry out comparative and fair tests, making systematic and careful observations.	Make their own decisions about which observations to make, using test results and observations to make predictions or set up further comparative or fair tests.
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Equipment and Measurements

Use simple, nonstandard equipment and measurements in a practical task with support.	Use simple, nonstandard equipment and measurements in a practical task.	Use simple equipment, such as hand lenses or egg timers to take measurements, make observations and carry out simple tests.	Take accurate measurements using standard units.	Take accurate measurements using standard units and a range of equipment, including thermometers and data loggers.	Take measurements using a range of scientific equipment with increasing accuracy and precision.	Choose the most appropriate equipment in order to take measurements, explaining how to use it accurately. Decide how long to take measurements for, checking results with additional readings.
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Identifying and Classifying

Sort and group objects, materials and living things, with help, according to	Sort and group objects, materials and living things, according to simple	Decide, with help, how to group materials, living things and objects, noticing changes over time	Talk about criteria for grouping, sorting and categorising, beginning to see	Identify similarities/ differences/ changes when talking about scientific	Use and develop keys to identify, classify and describe living things and materials.	Identify and explain patterns seen in the natural environment.
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simple observational features.	observational features.	and beginning to see patterns.	patterns and relationships.	processes. Use and begin to create simple keys.		
Engaging in Practical Enquiry (Investigating)						
Work with an adult to complete a simple test individually or in a group.	Follow instructions to complete a simple test individually or in a group.	Do things in the correct order when performing a simple test and begin to recognise when something is unfair.	Discuss enquiry methods and describe a fair test.	Make decisions about different enquiries, including recognising when a fair test is necessary and begin to identify variables.	Plan a range of science enquiries, including comparative and fair tests	Select and plan the most suitable line of enquiry, explaining which variables need to be controlled and why, in a variety of comparative and fair tests.
Recording and Reporting Findings						
Talk about findings.	Begin to record simple data. Talk about their findings and explain what they have found out.	Gather data, record and talk about their findings, in a range of ways, using simple scientific vocabulary.	Record their findings using scientific language and present in note form, writing frames, diagrams, tables and charts.	Choose appropriate ways to record and present information, findings and conclusions for different audiences (e.g. displays, oral or written explanations).	Record data and results of increasing complexity using scientific diagrams, labels, classification keys, tables, bar and line graphs and models.	Choose the most effective approach to record and report results, linking to mathematical knowledge.
Drawing Conclusions						
Talk about experiences.	Explain, with help, what they think they have found out.	Use simple scientific language to explain what they have found out.	Draw, with help, a simple conclusion based on evidence from an enquiry or observation.	Use recorded data to make predictions, pose new questions and suggest improvements for further enquiries.	Use a simple mode of communication to justify their conclusions on a hypothesis. Begin to	Identify validity of conclusion and required improvement to methodology. Discuss how scientific ideas

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					recognise how scientific ideas change over time.	develop over time.
Analysing Data						
Talk about similarities and differences and explain why some things occur.	Use every day or simple scientific language to ask and/or answer a question on given data.	Identify simple patterns and/or relationships using simple comparative language.	Gather, record and use data in a variety of ways to answer a simple question.	Identify, with help, changes, patterns, similarities and differences in data to help form conclusions. Use scientific evidence to support their findings.	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.	Identify and explain causal relationships in data and identify evidence that supports or refutes their findings, selecting fact from opinion.

Biology

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals Including Humans						
Make observations of different animals and mini-beasts and talk about some similarities, differences and changes that occur.	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are	Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for	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	Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions	Describe the changes as humans develop to old age.	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,

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	<p>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 label the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p>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 humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>		<p>exercise, drugs and lifestyle on the way their bodies function</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans</p>
Plants						
<p>Make observations of different and plants and explain why some things occur.</p>	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of</p>	<p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to</p>	<p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>Explore the requirements of plants for life and</p>	-	-	-

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	common flowering plants, including trees.	grow and stay healthy.	<p>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>			
Living Things and their Habitats						
<p>Explore different habitats.</p> <p>Identify and name some animals and plants and their habitats.</p>	-	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>Identify that most living things live in habitats to</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</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals</p>	<p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including</p>

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		<p>which they are suited and describe how different habitats provide for 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 microhabitats.</p> <p>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>		<p>local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>		<p>microorganisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>
Evolution and Inheritance						
	-	-	-	-	-	Recognise that living things have changed over time and that

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						<p>fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p>
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Chemistry

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Materials						
Have simple discussions about	Distinguish between an object and the	Identify and compare the suitability of a	-	-	Compare and group together everyday	-

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the suitability of some materials.	<p>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>variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>			<p>materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from</p>	
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					<p>comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>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>	
Rocks						
	-	-	Compare and group together different kinds of rocks on the basis of their appearance and	-	-	-

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			<p>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>			
States of Matter						
	-	-	-	<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</p>	-	-

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				degrees Celsius (°C)		
				Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		

Physics

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Seasonal Change						
Make simple observations within each season.	Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.	-	-	-	-	-
Light						
	-	-	Recognise that they need light in order to see things and that	-	-	Recognise that light appears to travel in straight lines

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			<p>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 their 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>			<p>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</p> <p>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</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>
Forces and Magnets						
Investigate and explore using magnets.	-	-	<p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between two objects, but</p>	-	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between	-

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			<p>magnetic forces can act at a distance</p> <p>Observe how magnets attract or repel each other and attract some materials 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>		<p>the Earth and the falling object</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	
Sound						

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	-	-	-	<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 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>	-	-
Electricity						

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	-	-	-	<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</p>	-	<p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</p> <p>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</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>
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				conductors and insulators, and associate metals with being good conductors.		
Earth and Space						
<p>Learn about the plants in the solar system through a range of books and songs.</p> <p>Discuss our place in the solar system.</p> <p>Recognise differences between night and day and have simple discussions about why this occurs.</p>	-	-	-	-	<p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system</p> <p>Describe the movement of the Moon relative to the Earth</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>	-

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