



## Science Progression All Saints Church School

*"All things are possible if you believe." Mark 9:23*

	EYFS 30 – 50 months 40 – 60 months Early Learning Goals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Working Scientifically</b>	<p>To comment and ask questions about aspects of their familiar world, such as the place where they live or the natural world.</p> <p>To talk about some of the things they have observed, such as plants, animals, natural and found objects.</p> <p>To talk about why things happen and how things work.</p>	<ol style="list-style-type: none"> <li>1 asking simple questions and recognising that they can answered in different ways</li> <li>2 observing closely, using simple equipment</li> <li>3 performing simple tests</li> <li>4 identifying and classifying</li> <li>5 using their observations and ideas to suggest answers to questions</li> <li>6 gathering and recording data to help in answering questions</li> </ol>		<ol style="list-style-type: none"> <li>1 asking relevant questions and using different types of scientific enquiries to answer them</li> <li>2 setting up simple practical enquiries, comparative and fair tests</li> <li>3 making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, thermometers and data loggers</li> <li>4 gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>5 recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables</li> <li>6 reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> </ol>		<ol style="list-style-type: none"> <li>1 planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>2 taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>3 recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>4 using test results to make predictions to set up further comparative and fair tests</li> <li>5 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</li> </ol>	

	To look closely at similarities, differences, patterns and change.		<p>7 using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>8 identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>9 using straightforward scientific evidence to answer questions or to support their findings</p>	6 identifying scientific evidence that has been used to support or refute ideas or arguments
<b>Working scientifically vocabulary</b>	<p>Observe</p> <p>Same</p> <p>Different</p> <p>Describe</p> <p>Explain</p> <p>Understand</p>	<p>question</p> <p>answer</p> <p>observe</p> <p>observing</p> <p>equipment</p> <p>identify</p> <p>classify</p> <p>sort</p> <p>group</p> <p><b>record</b> – diagram, chart, map</p> <p>data</p> <p>compare, contrast</p> <p>describe</p>	<p><b>research</b> – relevant questions</p> <p>scientific enquiry</p> <p>comparative and fair test systematic, careful observation</p> <p>accurate measurements</p> <p><b>equipment</b> – thermometer, data logger</p> <p><b>data</b> – gather, record</p> <p>classify, present</p> <p><b>record</b> – drawings, labelled diagrams, keys, bar charts, tables</p> <p>oral and written explanations</p> <p>conclusion</p> <p>predictions</p> <p>differences, similarities, changes</p> <p>evidence</p> <p>improve</p> <p>secondary sources</p> <p>guides, keys</p> <p>construct</p> <p>interpret</p>	<p>plan</p> <p>variables</p> <p>measurements</p> <p>accuracy</p> <p>precision</p> <p>repeat readings</p> <p><b>record data</b> – scientific diagrams, labels, classification keys, tables, scatter graphs, bar graph and line graphs</p> <p>predications</p> <p>further comparative and fair test</p> <p><b>report and present</b> – conclusions, casual relationships, explanations, degree of trust, oral and written display and presentation.</p> <p><b>evidence</b> – support, refute ideas or arguments</p> <p>identify, classify and describe</p> <p>patterns</p> <p>systematic</p>

<p>Living things and their habitats</p>	<p>To show care and concern for living things and the environment.</p> <p>To develop an understanding of growth, decay and changes over time.</p> <p>To know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe.</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 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 micro-habitats</p> <p>Describe how animals obtain their food from plants and other animals, using the</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 to living things</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 micro-organisms plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics</p>
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			idea of a simple food chain, and identify and name different sources of food				
Plants	Explore the natural world around me, making observations and drawing pictures of animals and plants	<p>Identify and name a variety of common wild plants and garden plants, including deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</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 grow and stay healthy</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 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 role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>			

<p>Animals including humans</p>	<p>To eat a healthy range of foodstuffs and understand a need for variety in food.</p> <p>To show some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health including oral health.</p>	<p>Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates</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 (birds, fish, amphibians, reptiles, mammals and invertebrates, and 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>Notice 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 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>	<p>Describe the changes as humans develop to old age</p>	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Recognise the impact of diet, 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>
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Evolution and inheritance							<p>Recognise that living things have changed over time and that 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>
<b>Everyday materials</b>	To begin to be interested in and describe the texture of things	Distinguish between an object and the material	Identify and compare the suitability of a variety of everyday	Compare how things move on different surfaces	Compare and group materials together, according to	Compare and group together everyday materials on the basis of	

<p><b>Forces and Magnets</b></p> <p><b>Properties and changes of materials</b></p> <p><b>States of matter</b></p>	<p>To know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another</p>	<p>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>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>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 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</p>	<p>whether they are solids, liquids or gases</p> <p>Observe that some materials change state when they are heated or cooled, and measure 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>	<p>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 comparative and fair tests, for the particular uses</p>	
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				which poles are facing		of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and changes of state are reversible changes  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	
<b>Seasonal Changes</b>	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	Observe changes across the four seasons  Observe and describe weather associated with the seasons and how day length varies					
<b>Rocks</b>				Compare and group together different kinds of			



				<p>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>			
<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 their eyes</p>			<p>Recognise that light appears to travel in straight lines</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</p>

				<p>Recognise that shadows are formed when the light from a light source is blocked by a solid object</p> <p>Find patterns in the way that the size of shadows change</p>			<p>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>
<b>Sound</b>					<p>asking relevant questions and using different types of scientific enquiries to answer them</p> <p>2 setting up simple practical enquiries, comparative and fair tests</p> <p>3 making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment,</p>		

					<p>thermometers and data loggers</p> <p>4 gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>5 recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables</p> <p>6 reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>7 using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>8 identifying differences,</p>		
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					similarities or changes related to simple scientific ideas and processes 9 using straightforward scientific evidence to answer questions or to support their findings		
<b>Electricity</b>							Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit  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

							Use recognised symbols when representing a simple circuit in a diagram
<b>Earth and Space</b>	Exploring the concept of space, planet Earth and the solar system and our place in it.					Describe the movement of the Earth, and other planets, relative to the Sun in the solar system  Describe the movement of the Moon relative to the Earth  Describe the Sun, Earth and Moon as approximately spherical bodies  Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky	
<b>Forces</b>						Explain that unsupported objects fall towards the Earth because of the force of gravity	

						<p>acting between 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>	
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