

St Peter's Catholic Voluntary Academy - Progression of skills document: KS1 Science



EYFS

Year 1

Year 2

Plants

<p><u>Big Question</u></p>	<p>From 2020 Development Matters: (These are the objectives most closely linked to areas of Science):</p>	<p>How many types of plants are there?</p>	<p>What should I do to grow a healthy plant?</p>
<p><u>Programme of Study</u></p>	<p>Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail.</p>	<ul style="list-style-type: none"> • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees. 	<ul style="list-style-type: none"> • Observe and describe how seeds and bulbs grow into mature plants • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
<p><u>Enquiry Types</u></p>	<p>Use talk to work out problems and organise thinking and activities. Explain how things work and why they might happen. Use new vocabulary in different contexts.</p> <p>Know and talk about the different factors that support their overall health and wellbeing:</p>	<p>Classifying • Allow children to classify leaves, flowers, and seeds, choosing their own criteria. Observing over time • Observe a tree through the year. • Observe a trail/patch to identify how plants change through the year. Pattern seeking • Based on observations, encourage children to identify patterns e.g. after comparing the size of leaves on different plants, children may suggest "bigger plants have bigger leaves."</p>	<p>Classifying • Based on the children's own criteria: • classify seeds • classify bulbs. Observing over time • Plant seeds and bulbs and observe how they grow. Pattern seeking • Children generate questions for investigation such as: • Do big seeds germinate more quickly? • Does it matter which way round you plant a bulb or seed? • Which comes first, the root or the shoot? Comparative/Fair testing • Not relevant Researching • Look at packets to decide how to plant and care for seeds e.g. How much water do they need? Do they need shade/full sun?</p>

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	<p><i>regular physical activity</i> <i>healthy eating</i> <i>toothbrushing</i> <i>sensible amounts of 'screen time'</i> <i>having a good sleep routine</i> <i>being a safe pedestrian</i> <i>Explore the natural world around them.</i> <i>Describe what they see, hear and feel while they are outside.</i> <i>Recognise some environments that are different to the one in which they live.</i> <i>Understand the effect of changing seasons on the natural world around them.</i> <i>Make comments about what they have heard and ask questions to clarify their understanding.</i> <i>Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</i> <i>Explore the natural world around them, making observations and drawing pictures of animals and plants.</i> <i>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</i> <i>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</i></p>	<p>Comparative/Fair testing • <i>Not relevant</i> Researching • <i>Use secondary sources to name plants (including trees) based on observations of leaves, seeds, flowers, buds, and bark (Leafsnap UK on Apple App Store, SEEK INaturalist on google play and Apple App Store, textbooks, Woodland Trust resources)</i></p>	
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<u>Working Scientificall</u> y		<ul style="list-style-type: none"> • <i>I can ask simple questions and recognise that they can be answered in different ways.</i> • <i>I can observe closely.</i> • <i>I can perform simple tests.</i> • <i>I can identify and classify.</i> • <i>I can use observation to suggest answers for questions.</i> • <i>I can gather and record data to help in answering questions</i> 	<ul style="list-style-type: none"> • <i>I can ask simple questions and recognise that they can be answered in different ways.</i> • <i>I can observe closely.</i> • <i>I can perform simple tests.</i> • <i>I can identify and classify.</i> • <i>I can use observation to suggest answers for questions.</i> • <i>I can gather and record data to help in answering questions</i>
Animals Inc humans			
<u>Big Questions</u>		What are animals like?	Do living things change or stay the same?
<u>Programme of Study</u>		<ul style="list-style-type: none"> • <i>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</i> • <i>identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</i> 	<ul style="list-style-type: none"> • <i>notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</i> • <i>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</i>

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		<ul style="list-style-type: none"> - 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><u>Enquiry Types</u></p>		<p>Classifying • Classify animals they have seen/have first-hand experience of, choosing their own criteria to do so. • Classify animals based on physical structure. • Classify animals they have first-hand experience of based on what they eat (plants, other animals, both). (Complete this after the research.)</p> <p>Observing over time • Observe animals in the local environment throughout the year.</p> <p>Pattern seeking • Children generate questions for investigation such as: • Do people with longer arms have longer legs? • Can more people identify prawn cocktail crisps than cheese and onion? • Do all animals with have?</p> <p>Comparative/Fair testing • Can I taste the difference between different flavoured crisps/skittles/smarties?</p> <p>Researching • Use secondary sources to name animals seen in the local environment that they may not currently be able to name (e.g. birds: magpie, blackbird). • Research what animals they have first-hand experience of eat</p>	<p>Classifying • Based on the children's own criteria: • classify food items • classify animals.</p> <p>Observing over time • Observe a life cycle (e.g. caterpillars, chicks, farm animals). • Observe how their body changes during/after exercise.</p> <p>Pattern seeking • Not relevant</p> <p>Comparative/Fair testing • Not relevant</p> <p>Researching • Research adult animals and their young e.g. googling pictures and names of animal babies – swan and cygnet.</p>

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Materials			
<p><u>Big Qs</u></p>		<p>What are the things I use made from?</p>	<p>How do we choose the best material? Can Materials change?</p>
<p><u>Programme of Study</u></p>		<ul style="list-style-type: none"> • <i>distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</i> • <i>describe the simple physical properties of a variety of everyday materials</i> • <i>compare and group together a variety of everyday materials on the basis of their simple physical properties.</i> 	<ul style="list-style-type: none"> • <i>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</i> • <i>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</i>

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<p><u>Enquiry Types</u></p>		<p>Classifying • Classify objects made from the same material (e.g. lots of things made from plastic). • Classify one object made from different materials (e.g. cups made of different materials). • Classify different fabrics based on texture (e.g. to make a feely-book for a child). • Classify paper/plastics/fabrics.</p> <p>Observing over time • Not relevant</p> <p>Pattern seeking • Not relevant</p> <p>Comparative/Fair testing • Test objects made of different materials to see how effective they are e.g. umbrellas/hats/coats for waterproofness, clothes/nappies for absorbency, socks for elasticity, bounciness of balls, sunglasses for protection from the sun, picnic plates for stiffness, door mats for wiping your feet, different papers for writing on/painting etc.</p> <p>Researching • Not relevant</p>	<p>Classifying • Based on the children's own criteria, classify materials e.g. samples of wood, metal, plastic, etc.</p> <p>Observing over time • Not relevant</p> <p>Pattern seeking • Not relevant</p> <p>Comparative/Fair testing • Test materials for different uses (e.g. Which material can you use to make an aeroplane? Which fabric would you use for curtains? Which materials are best for Cinderella's mop? Which fabric would you choose for Elastigirl's costume? Which paper can be used for a book, fabrics for a child's dungarees, materials for aeroplanes etc?)</p> <p>Researching • Not relevant</p>
<p><u>Working Scientifically</u></p>		<ul style="list-style-type: none"> • I can ask simple questions and recognise that they can be answered in different ways. • I can observe closely. • I can perform simple tests. • I can identify and classify. • I can use observation to suggest answers for questions. • I can gather and record data to help in answering questions 	<ul style="list-style-type: none"> • I can ask simple questions and recognise that they can be answered in different ways. • I can observe closely. • I can perform simple tests. • I can identify and classify. • I can use observation to suggest answers for questions. • I can gather and record data to help in answering questions
<p>Seasonal Changes</p>			
<p><u>Big Qs</u></p>		<p>What is it like in Spring, Summer, Autumn and Winter?</p>	

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<p><u>Programme of Study</u></p>		<ul style="list-style-type: none"> • observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies. 	
<p><u>Enquiry Types</u></p>		<p>Classifying • Not relevant Observing over time • Take weather measurements and make observations over time. • Record/Photograph what children are wearing (jumper, coat, hats, scarves, etc.) • Make observations of daylight hours e.g. send a diary and toy bear home with one child each day and ask the child to record their activities, but the bear needs to go to bed when it gets dark and the children must record the time this happens. (This gathers evidence, over time, that day length changes and so do activities.) Pattern seeking • At the end of the year, look for patterns in evidence e.g. Does it rain more in spring? Do we have more sunny days in the summer? Which was the coldest month? Comparative/Fair testing • Not relevant Researching • Not relevant</p>	
<p><u>Working Scientifically</u></p>		<ul style="list-style-type: none"> • I can ask simple questions and recognise that they can be answered in different ways. • I can observe closely. • I can perform simple tests. • I can identify and classify. • I can use observation to suggest answers for questions. 	

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Living Things and Their habitats			
<u>Big Qs</u>			Why do animals live in different places?
<u>Programme of Study</u>			<ul style="list-style-type: none"> • explore and compare the differences between things that are living, dead, and things that have never been alive • 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 • identify and name a variety of plants and animals in their habitats, including microhabitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain • identify and name different sources of food.
<u>Enquiry Types</u>			<p>Classifying • Find things that are living. • Find things that are dead. • Find things that have never been alive. • Classify things found in the environment (choosing their own criteria to do so), leading to living, dead and never been alive. • Classify minibeasts found in the environment based on physical structure. • Classify plants found in the environment</p> <p>Observing over time • Explore animals in micro-habitats throughout the year (under a rock, under a log, in a pond, in a bush, in the long grass). • Explore plants in micro-habitats throughout the year (e.g. woodland area, ponds, meadows).</p> <p>Pattern seeking • Children generate questions for investigation such as: • Are there more daisies in the meadow or on the field? • Where do you see more ivy? • Where do you see more butterflies? • Where do snails live?</p> <p>Comparative/Fair testing • Not relevant</p> <p>Researching • Use secondary sources to name plants and animals seen in the local environment that they may not currently be able to name (Leafsnap UK on Apple App Store, SEEK INaturalist on google play and Apple App Store, textbooks, Woodland Trust resources). • Research what animals they have first-hand experience of.</p>
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<i>Working Scientifically notes:</i>				
<i>Working Scientifically</i>		<p><i>These opportunities for working scientifically should be provided across years 1 and 2 so that the expectations in the programme of study can be met by the end of year 2. Pupils are not expected to cover each aspect for every area of study.</i></p> <p><i>National Curriculum: asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions</i></p> <p><i>Guidance in more detail: https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study</i></p>		
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