

Purston Infant School – Progression in Science

Working Scientifically

	Three and Four-Year Olds	Reception	ELG	Area	Year 1	Year 2
Working Scientifically	<ul style="list-style-type: none"> <li>Understand 'why' questions, like, 'Why do you think the caterpillar got so fat?'</li> </ul>	<ul style="list-style-type: none"> <li>Learn new vocabulary</li> <li>Ask questions to find out more and to check what has been said to them</li> <li>Articulate their ideas and thoughts in well-formed sentences</li> <li>Describe events in some detail</li> <li>Use talk to work out problems and organise thinking and activities. Explain how things work and why they might happen</li> <li>Use new vocabulary in different contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Make comments about what they have heard and ask questions to clarify their understanding.</li> </ul>	Questioning and predicting	<ul style="list-style-type: none"> <li>Ask simple questions</li> </ul>	<ul style="list-style-type: none"> <li>Suggest ideas</li> <li>Ask and answer questions using observations</li> </ul>
				Planning and carrying out investigations	<ul style="list-style-type: none"> <li>Perform simple tests to help answer questions</li> </ul>	<ul style="list-style-type: none"> <li>Carry out investigations with some support</li> </ul>
				Taking and recording observations, measurements and results	<ul style="list-style-type: none"> <li>Use simple equipment</li> <li>Observe closely</li> </ul>	<ul style="list-style-type: none"> <li>Gather and record data with some support</li> </ul>
				Explaining results and drawing conclusions	<ul style="list-style-type: none"> <li>Talk about what they have found out using simple scientific vocabulary.</li> </ul>	<ul style="list-style-type: none"> <li>Use simple scientific language to explain results</li> <li>Identify and classify objects as part of an investigation</li> </ul>

Physics						
Area		Three and Four-Year Olds	Reception	ELG	Year 1	Year 2
Physics	Everyday Materials	<ul style="list-style-type: none"> <li>• Use all their senses in hands-on exploration of natural materials</li> <li>• Explore collections of materials with similar and/or different properties</li> <li>• Talk about what they see, using a wide vocabulary</li> <li>• Explore and talk about different forces they can feel</li> <li>• Talk about the differences between materials and changes they notice.</li> </ul>			<ul style="list-style-type: none"> <li>• Distinguish between an object and the material from which it is made</li> <li>• Identify and name a variety of everyday materials including wood, plastic, glass, metal, water and rock</li> <li>• To describe the simple physical properties of a variety of everyday materials</li> <li>• Compare and group together a variety of everyday materials based on their simple properties</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and compare the suitability of a variety of everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>• Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>

Biology						
Biology	Area	Three and Four-Year Olds	Reception	ELG	Year 1	Year 2
	Seasonal Changes	<ul style="list-style-type: none"> <li>Talk about what they see, using a wide vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>Describe what they see, hear and feel while they are outside</li> <li>Understand the effect of changing seasons on the natural world around them</li> </ul>	<ul style="list-style-type: none"> <li>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</li> </ul>	<ul style="list-style-type: none"> <li>Observe changes across the four seasons</li> <li>Observe and describe weather associated with the seasons</li> <li>Observe and describe how the day length varies based on the season</li> </ul>	
Animals	<ul style="list-style-type: none"> <li>Talk about what they see, using a wide vocabulary</li> <li>Understand the key features of the life cycle of a plant and an animal</li> <li>Begin to understand the need to respect and care for the natural environment and all living things</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Explore the natural world around them, making observations and drawing pictures of animals and plants</li> </ul>	<ul style="list-style-type: none"> <li>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> <li>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li> </ul>	<ul style="list-style-type: none"> <li>Notice that animals, including humans have offspring which grow into adults</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food, air)</li> </ul>	

	<b>Humans</b>	<ul style="list-style-type: none"> <li>• Talk about what they see, using a wide vocabulary</li> <li>• Begin to make sense of their own life-story and family's history</li> </ul>	<ul style="list-style-type: none"> <li>• Know and talk about the different factors that support their overall health and wellbeing:</li> <li>• regular physical activity</li> <li>• healthy eating</li> <li>• toothbrushing</li> <li>• sensible amounts of 'screen time'</li> <li>• having a good sleep routine</li> <li>• being a safe pedestrian</li> </ul>	<ul style="list-style-type: none"> <li>• Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices</li> </ul>	<ul style="list-style-type: none"> <li>• Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</li> </ul>	<ul style="list-style-type: none"> <li>• Notice that humans have offspring which grow into adults</li> <li>• Find out about and describe the basic needs for survival (food, water, air)</li> <li>• Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li> </ul>
	<b>Plants</b>	<ul style="list-style-type: none"> <li>• Talk about what they see, using a wide vocabulary</li> <li>• Plant seeds and care for growing plants</li> <li>• Begin to understand the need to respect and care for the natural environment and all living things</li> </ul>	<ul style="list-style-type: none"> <li>• Explore the natural world around them</li> <li>• Describe what they see, hear and feel while they are outside</li> </ul>	<ul style="list-style-type: none"> <li>• Explore the natural world around them, making observations and drawing pictures of animals and plants</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> <li>• Identify and describe the basic structure of a variety of common flowering plants, including trees</li> </ul>	<ul style="list-style-type: none"> <li>• Observe and describe how seeds and bulbs grow into mature plants</li> <li>• Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>

Living things and their habitats

- Talk about what they see, using a wide vocabulary
- Begin to understand the need to respect and care for the natural environment and all living things

- Explore the natural world around them
- Describe what they see, hear and feel while they are outside
- Recognise some environments that are different to the one in which they live.
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- Explore the natural world around them, making observations and drawing pictures of animals and plants
- 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

- 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

## Chemistry

		Three and Four-Year Olds	Reception	ELG	Year 1	Year 2
Chemistry	Area					
	State of matter	<ul style="list-style-type: none"> <li>• Talk about what they see, using a wide vocabulary</li> <li>• Talk about the differences between materials and changes they notice.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>