

Science in the Early Years at Millfields First School

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to show how the skills taught across EYFS feed into national curriculum subjects.

The following information demonstrates which statements from the 2020 Development Matters are prerequisite skills for science within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for science. The most relevant statements for science are taken from the following areas of learning:

- Communication and Language
- Personal, Social and Emotional Development
- Understanding the World

Three- and Four-Year Olds	Communication and Language	<ul style="list-style-type: none"> • Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"
	Personal, Social and Emotional Development	<ul style="list-style-type: none"> • Make healthy choices about food, drink, activity and toothbrushing.
	Understanding the World	<ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary. • Begin to make sense of their own life story and family's history. • Explore how things work. • Plant seeds and care for growing plants. • Understand the key features of the life-cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice.
Reception	Communication and Language	<ul style="list-style-type: none"> • 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. • Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen • Use new vocabulary in different contexts.
	Personal, Social and Emotional Development	<ul style="list-style-type: none"> • Know and talk about the different factors that support their overall health and wellbeing: <ul style="list-style-type: none"> - regular physical activity

			<ul style="list-style-type: none"> - healthy eating - toothbrushing - sensible amounts of 'screen time' - having a good sleep routine - being a safe pedestrian
Reception continued	Understanding the World		<ul style="list-style-type: none"> • 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. • Understand the effect of changing seasons on the natural world around them.
ELG	Communication and Language	Listening, Attention and Understanding	<ul style="list-style-type: none"> • Make comments about what they have heard and ask questions to clarify their understanding.
	Personal, Social and Emotional Development	Managing self	<ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.
	Understanding the World	The Natural World	<ul style="list-style-type: none"> • 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. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

In the Early Years we dedicate a whole week to Healthy Living and making healthy choices linked to Science and Personal, Social and Emotional Development. During this week, both Pre-school and Reception children explore healthy food and the value of a balanced diet, the importance of exercise, sleep and keeping ourselves clean. The children are taught how to clean their teeth properly each day after lunch so that they understand the importance of keeping their teeth healthy. This is in addition to our everyday practise where we teach these skills under our Prime Areas of Physical Development and PSED.

The children are given the opportunity to engage in science investigations such as floating and sinking experiments, the exploration of changing materials ie: temporary change – melting butter and chocolate which returns to its original state, and permanent change ie: boiling an egg and toasting bread.

During our work on 'I wonder how things work', the children use magnets to see which materials attract and repel and electricity where they explore static electricity and learn how to create a simple electrical circuit.

The children understand the constant weather changes through our daily reference to the calendar and the changing seasons. Through weekly Forest School sessions they have first-hand experience of how the seasons change and how the environment changes through observations. At Forest School they also learn how to respect nature and the local environment, they begin to understand the need of animals that live in our woodland and to appreciate the world around them. The Life Cycles of different insects are explored for example, the ladybird and butterfly which culminates in a visit to a local Butterfly Farm so that the children get first hand experience of these and other creatures.



At the Butterfly farm the children were given the opportunity to experience first hand the life cycle of a butterfly. Our Guide demonstrated the different stages of the life cycle and then the children were free to explore the environment to see if they could find evidence of eggs, caterpillars, and butterflies.



At Forest School, the children continued to explore the life cycles of other creatures including the frog and the ladybird where they were able to explore the site to see if they could find any evidence of them, they also sequenced the life cycles and discussed their understanding.



Sequencing the life cycle of a ladybird on a washing line.

Magnetism



Using the magnets to see how opposite poles are attracted to each other whilst the same poles repel each other.



Which objects are magnetic, and which aren't? Magnet investigation. Children recorded their findings.