



Science at Milford Infants' School

Intent

Science at Milford Infants' School and Pre-School aims to give all children the foundations needed to successfully understand the world around them. As scientists, Milford children are **curious** and **enthusiastic**, engaged in their learning through memorable and **collaborative** experiences. They are encouraged to have a go, ask questions, explore their ideas and suggest answers to explain what they have discovered.

Building on children's prior knowledge is important to ensure they are able to make **connections** in their learning and build new knowledge and skills. Our progressive curriculum starts from the Early Years and builds on this learning through Key Stage One. Topics will be taught and explored more than once, giving depth to their learning and ensuring that knowledge is retained for future learning experiences.

Teaching in the Early Years follows the Educational Programme and ideas from Development Matters relevant to our children's needs. Teachers follow and plan for children's interests throughout the year ensuring high quality opportunities are provided so that children can demonstrate the skills of the Early Learning Goal (ELG) detailed below by the end of the year.

Pre-School and Reception – EYFS	Year 1 and Year 2 - National Curriculum
Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.	A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Implementation:

The curriculum for science is taught throughout the whole school with a new topic each term.

The EYFS science is taught within 'Understanding the World' topic using a group discussion or activity. This happens daily although science isn't taught explicitly sometimes it is taught within a topic for example, the life cycle of a caterpillar.

In Key Stage One science is taught every week for two hours. However, during the Autumn term, it is taught as a Science Week because the other topics during that term are weekly. It is taught weekly to embed previous learning and at the end of every topic a quiz is taken to gather a better understanding of what the children have learnt.

During science the children are exposed to a range of pictures, videos and real-life objects. Sometimes children are able to move outside the children and explore the world around them for example, using forest school to observe seasonal changes. Children explore science in groups and individuals discussing ideas with each other and with adults. As a school we are developing our equipment allowing the children to use microscopes to observe closely.

At Key Stage One Science is implemented using the scheme of work by White Rose. The school follow each unit and provide the children with our own resources and some provided by twinkl. At the start of each lesson children revisit our working scientifically to gather a better understanding of how they will be learning through out the lesson.

Questioning is used throughout the lessons. At the start of the lesson a recap is used to inform the previous learning (either from the previous year group or lessons before), consolidate the learning throughout the lessons and an enquiry question at the end of the lesson helps to give the children a chance to think more deeply about an area of science.

The children are given opportunities throughout the year to investigate and experiment e.g. what does a plant need to grow? This requires children to think carefully about their previous knowledge and begin to understand the concept of carrying out an investigation. They have the opportunities to ask questions, use equipment, research their answers and make predictions. From this, children are able to record their data in order to help them answer a question from the teacher or their own questions previously asked.

Impact

At the beginning of our science lessons the children are given clear learning intentions and success criteria which allows the teachers to carry out formative assessments throughout the lessons. During this time the children are reminded of previous scientific vocabulary and introduced to new vocabulary and as the lesson progresses the teachers are giving opportunities for children to communicate using these words with each other and the teachers. Another way to gather their understanding is to ask key questions so throughout the lesson the teacher will ask specific questions for the children to answer. From this, the pupil voice is a very important tool we use to assess the children's learning. This is used frequently in the EYFS as science is an exploratory subject as written evidence is not mandatory. To support the children's enjoyment of science and to confidently and meaningfully question and explore the world we use pupil voice for most of our assessments. We want them to be curious and investigate using equipment and link their learning to other parts of the curriculum. This sometimes involves school trips e.g. Year 2 visit the zoo which is a Literacy based but through their topics in science, key vocabulary, classifying and identifying can be revisited. However, at the end of each unit children carry out an end of unit test provided by White Rose. Adults read the test to the children and model how to answer. The children fill out the test using adult support if needed. To be confident that the children throughout all of the years are receiving the correct and update scientific knowledge, learning walks and carried as well as work scrutiny (pupil voice for EYFS).