



Science Curriculum

The National Curriculum

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Intent

At Emscote, we aim to:

- Provide foundations for the children to begin to understand the world around them.
- Ensure children have a secure understanding of a topic before moving on to ensure genuine progression.
- Ensure children use technical scientific vocabulary precisely and accurately to explain concepts and justify their reasoning when rationalising a concept.
- Teach all pupils essential aspects of the knowledge, methods, processes and uses of science.
- Encourage pupils to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.
- Ensure pupils are aware of current scientific advances and news to allow them to see the importance of science in our modern world.
- Ensure children connect and link their learning to other areas of the curriculum.
- Develop a sense of excitement and curiosity about natural phenomena.
- Enrich children's learning experiences and increase their science capital.

Implementation

- Science is taught in Early Years through the 'Understanding the World' strand of the Early Years statutory framework. They are given opportunity to explore scientific concepts through structured play activities.
- Science is taught weekly 1.5 hours in KS1, although this is normally taught in blocks.
- Objectives are planned to ensure a progression of skills across the school using the National Curriculum for guidance.
- Working scientifically is embedded within a topic to support the children's understanding of conceptual knowledge.

- A range of scientific enquiries are planned into the curriculum including: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources.
- One element of working scientifically is usually an objective to ensure the written element of an enquiry isn't as onerous.
- Staff are supported with CPD from subject leader.
- Teachers use children's interests to help plan lessons children will find engaging as they have a genuine interest in it.
- Enquiries are often open ended and child-led to ensure they are enthused and take ownership of their learning.
- Children are taught correct scientific vocabulary.
- Children are supported when orally explaining scientific knowledge in order to ensure they are articulating scientific ideas using appropriate vocabulary and in order for teachers to address misconceptions.
- Where appropriate, science is linked to other subjects. For example, when presenting data, there may be a link to maths.
- Planetarium workshops help to enrich the children's science capital.
- Science week enthuses the children and allows them to experience a wide range of activities.
- Children are assessed continuously throughout a topic by teacher assessment. At the end of a topic to gauge their understanding, children take a short assessment. This is inputted into a O track.

Impact

When children leave Emscote, they will:

- Understand the importance of science in our society.
- Be continually excited and curious about the world around them.
- Use their experiences to explore ideas and raise questions.
- Have a secure understanding of the key scientific concepts outlined in the National Curriculum.
- Be equipped with the skills to select, plan and carry out an enquiry.
- Have an improved science capital.
- Be ready to continue to learn about science at KS2.