



Science

Intent:

The 2014 National Curriculum for Science aims to ensure that all children:

- 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 scientific enquiries that help them to answer scientific questions about the world around them
- Are equipped with the scientific skills required to understand the uses and implications of science, today and for the future

We understand that it is important for lessons to have a skills-based focus and that knowledge can be taught through this.

At Mendlesham Primary School, we encourage children to be inquisitive throughout their time at the school, and beyond. Our curriculum fosters a healthy curiosity in children about our universe and promotes respect for the living and non-living.

We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills. We ensure that the 'Working Scientifically' skills are built on and developed throughout children's time at the school so that they can apply their knowledge of science when: using equipment, conducting experiments, building arguments and explaining concepts confidently, and continue to ask questions and be curious about their surroundings.

Implementation:

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards. Our whole school approach to the teaching and learning of science involves the following;

1. Science will be taught in planned, weekly sessions that follow a logical sequence that breaks learning down into manageable chunks to ensure an emphasis on this core subject and progression across the year and the primary phase. Curriculum organisers and medium-term planning is provided by the White Rose to ensure quality of teaching and learning.
2. Through our planning, we involve problem-solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning includes engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge.
3. In Science, pupils develop oracy and scientific vocabulary through explicit teaching of key terminology and carefully sequenced lessons. From EYFS to Year 6, they articulate ideas, predict, explain, justify, and evaluate. Teachers foster confident communicators, ensuring pupils engage in respectful dialogue, deepen understanding, and transfer skills beyond the classroom.
4. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly (Sticky Knowledge Quizzes twice per unit) to identify those children with gaps in learning, so that all children keep up.
5. We build upon the learning and skills development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
6. 'Working scientifically' skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in keeping with the science units.
7. Teachers demonstrate how to use scientific equipment, and the various 'working scientifically' skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts, where possible.
8. Children are offered a range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.
9. Regular events, such as Science Week or project days, such as Nature Day, allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and skills. These events often involve families and the wider community.

Impact:

The approach to teaching science at Mendlesham Primary ensures that:

- A high-quality curriculum is delivered which ensures mastery and progression (taking into account the mixed age groups of classes), and provides children with the foundations for understanding the world, beyond primary education.
- Children acquire both substantive and disciplinary knowledge, which ensures that children learn the 'Science' and the evidence for it and a curiosity for science learning is instilled within them.
- Through trips, enrichment weeks (STEM), links to the local environment and visitors, children encounter real-life experiences in which they can apply and make sense of their learning, as well as developing an awe and wonder of the world around them and their local community.
- The impact of our approach to science is measured through book looks, learning walks, data analysis (including triangulation visits from Board Members), pupil perception (pupil voice) and staff perception.

Full details of our curriculum can be found on our [website](#). Progression of knowledge and skills documents are available from the school.