Mendlesham Primary School

Science

Intent

At Mendlesham Primary School, we are committed to ensuring that all pupils, including those with SEND, disadvantaged pupils and pupils within Mulberry SEU, access an ambitious science curriculum that enables them to be successful scientists. We want children to develop curiosity about the world around them, ask thoughtful questions and understand how scientific knowledge helps us make sense of our universe.

Science encourages children to explore, investigate and challenge their thinking. Through studying biology, chemistry and physics, pupils develop an understanding of the natural and physical world whilst learning how science impacts everyday life and shapes the future.

Through our science curriculum, pupils develop scientific knowledge and conceptual understanding across biology, chemistry and physics. They learn how scientists investigate, question, observe, test and evaluate evidence in order to deepen their understanding of the world around them. Pupils develop the knowledge, skills and confidence needed to understand the role science plays in everyday life and its importance for the future.

We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Throughout the programmes of study, children acquire and develop key substantive and disciplinary knowledge alongside the skills needed to work scientifically.

We ensure that Working Scientifically skills are built upon progressively throughout pupils' time at school so that they can confidently use equipment, conduct investigations, analyse results, build arguments, evaluate evidence and explain scientific concepts.

We believe that all pupils should experience success in science. Learning is adapted where appropriate to meet pupils' starting points and identified needs whilst maintaining high expectations for all. Pupils are supported to access practical investigations, scientific discussion and ambitious scientific concepts through carefully considered scaffolds, representations and resources.

At Mendlesham, we recognise that some pupils may require additional support to access scientific learning. In Mulberry and through our wider inclusive practice, pupils are supported to develop curiosity, communication, independence and confidence as scientists. Practical experiences, discussion, exploration and carefully sequenced learning help all pupils to make meaningful progress from their individual starting points whilst developing an understanding of the world around them.

This will align much more closely with the style of your updated Maths, Geography and PSHE documents while keeping Mulberry visible without making the entire document about SEND.

Implementation

Teachers create a positive attitude towards science learning and reinforce the expectation that all children are capable of achieving high standards.

Our whole-school approach to science includes:

- Science is taught through planned weekly lessons that follow a carefully sequenced curriculum to ensure progression across the primary phase.
- We use the White Rose Science scheme as a curriculum spine, ensuring progression of knowledge and skills whilst allowing teachers to adapt learning to meet the needs of their pupils.
- The Science Leader maintains curriculum coverage across mixed-age classes, ensuring progression and avoiding unnecessary repetition.
- Learning is carefully sequenced so that pupils build on prior knowledge and make meaningful connections between concepts.
- Children are encouraged to ask questions, investigate ideas and develop their own scientific enquiries.
- Practical investigations and problem-solving opportunities enable children to discover answers through first-hand experiences.
- Teachers use precise questioning and regular assessment, including Sticky Knowledge Quizzes, to identify misconceptions and inform future teaching.
- Children develop increasing confidence in selecting equipment, carrying out enquiries, collecting evidence and drawing conclusions.
- Working Scientifically skills are embedded throughout the curriculum to ensure pupils develop as increasingly confident scientists.
- Scientific vocabulary is explicitly taught, modelled and revisited throughout each unit.
- Pupils are regularly encouraged to discuss ideas, explain observations, justify conclusions and communicate their understanding using precise scientific language.
- Through scientific discussion and enquiry, pupils develop the confidence to articulate their thinking clearly and accurately.
- Teachers provide opportunities to develop scientific understanding through outdoor learning, local environmental studies and visits from experts.
- Children access a range of enrichment opportunities including STEM activities, Science Week, visits and workshops, which enhance and broaden their understanding of science.
- Wherever possible, children make links between science learning and the world around them, helping them understand the relevance of scientific knowledge in everyday life.

Impact

By the time pupils leave here, they will:

- Develop secure scientific knowledge across biology, chemistry and physics.

- Understand how scientific enquiry helps us answer questions about the world around us.
- Use scientific vocabulary accurately and confidently.
- Plan, carry out and evaluate investigations using a range of Working Scientifically skills.
- Draw conclusions from evidence and justify their thinking.
- Demonstrate curiosity, resilience and independence when investigating scientific questions.
- Understand how science contributes to everyday life and the wider world.
- Appreciate the importance of science in understanding, protecting and improving our environment.
- Apply scientific knowledge to new situations and make connections between different areas of learning.

Through trips, STEM events, links to the local environment and visits from experts, children encounter meaningful real-life experiences that help them apply and deepen their scientific understanding.

Pupil voice demonstrates that children enjoy science, can talk confidently about their learning and understand the importance of science in understanding and improving the world around them. Children develop an awe and wonder of the natural world and an understanding of their place within it.

The impact of our curriculum is evaluated through assessment information, pupil voice, work scrutiny, learning walks, monitoring activities and ongoing review by leaders. Through these processes we ensure pupils develop the knowledge, skills and confidence needed to be successful scientists and to access the next stage of their education.