

Science at Brent Knoll Church of England Primary School

Intent

At Brent Knoll Primary School, in conjunction with the aims of the National Curriculum, our Science teaching offers opportunities for children to:

- 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.
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- develop the essential scientific enquiry skills to deepen their scientific knowledge.
- use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including I.C.T., diagrams, graphs and charts.
- develop a respect for the materials and equipment they handle with regard to their own, and other children's safety.
- develop an enthusiasm and enjoyment of scientific learning and discovery.

Our Early Years Foundation children have a separate framework from September 2021. The framework aims to ensure that all pupils:

- explore the natural world around them, make 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

At Brent Knoll School we recognise the importance of Science in every aspect of daily life. We are therefore committed to ensuring that all pupils master the key concepts of science, appropriate for their age group, in order that they make genuine progress with secure understanding.

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 in science. Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned and arranged topic blocks by the class teacher. This is a strategy to enable the achievement of a greater depth of knowledge.
- As our classes consist of mixed year group. Science is taught in year groups. this is to ensure that all National Curriculum topics are covered.
- 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 involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children keep up.
- We will incorporate any curriculum recovery adjustments due to the impact of Covid 19 restrictions. We will identify the most important procedures and concepts that underpin the scientific method that may not be secure due to remote teaching and learning.
- We build upon the learning and skill development of the 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.
- 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 topics.
- 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.

Impact

The successful approach at Brent Knoll Primary results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world.

Assessment for learning has a powerful impact on children's learning and this takes place in every lesson with teachers and teaching assistants using their observations of children's learning to adapt their questioning and learning tasks during lessons. Verbal feedback given during lessons moves children's learning forward along. Feedback from teaching assistants and the teacher's own observations are used when teachers planning future lessons to ensure continued progression. Pupil voice is used to further develop the Science curriculum, through questioning of pupil's views and attitudes to Science to support the children's enjoyment of science and to motivate learners.