



Boorley Park Primary

Science

Intent, Implementation and Impact

Intent

At Boorley Park Primary, we endeavour to provide a high quality science education that provides children with the foundations they need to recognise the importance of science in every aspect of daily life. We want our children to appreciate how science has changed the lives of human beings and know that it is vital to the world's future. We aim 'to develop responsible citizens who make positive contributions to local, national and global communities'.

Each unit of learning is led by an enquiry question. Children need to acquire key knowledge through scientific enquiry in order to answer the question using scientific vocabulary.

Throughout the programmes of study, the children will acquire the key knowledge, skills that have been identified within each unit and across each year group. Previous year groups' knowledge will also continue to be returned upon in order for children to retain this knowledge and so that they can build upon what they already know. Each lesson begins with retrieval practice either relating to current learning or previous years learning, i.e. types of animals being revisited each year.

At Boorley Park we recognise the importance of children being able to work scientifically. Therefore 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 and investigation, building arguments and explaining concepts confidently, being familiar with scientific terminology. So that children develop skills in teamwork and cooperation, thinking critically about problems and collaborating to find creative solutions.

Implementation

At Boorley Park, our Science curriculum is underpinned by a clearly defined programme of study that outlines specific end points for each year group. These end points are rooted in the National Curriculum and have been broken down into knowledge and skills progression documents to ensure a clear and coherent journey through scientific learning from Reception to Year 6. Each unit is designed with prior learning in mind, allowing pupils to revisit, consolidate and build upon their understanding over time.

Our Science curriculum is constructed with ambition and inclusivity at its core. It ensures full coverage of the National Curriculum, while our EYFS curriculum lays strong foundations

through the Understanding the World strand. Scientific enquiry is woven throughout, ensuring pupils develop both substantive knowledge and disciplinary (working scientifically) skills. Units are designed to be engaging, relevant, and rooted in real-world contexts to deepen understanding and provide purpose.

Science is taught weekly across all year groups, ensuring consistency and regular opportunities to build knowledge and skills. While the frequency remains the same, the content is appropriately adapted to suit the developmental stages and prior knowledge of each year group. This allows all pupils to access high-quality science teaching that is ambitious yet supportive.

To ensure content and pedagogy are strong, teachers have access to clear unit overviews, knowledge organisers, progression maps, and high-quality resources. CPD is provided through staff meetings, external training, and peer support. Where needed, teachers are offered additional planning guidance or coaching to build subject confidence and ensure high-quality delivery across all classrooms.

Assessment in Science is both formative and summative. Teachers use retrieval tasks, questioning, practical work and discussions to assess understanding within lessons, and use this to adapt teaching. Summative assessments take place at the end of each unit, based on the intended knowledge and skills outcomes. These are tracked using our internal assessment systems and used to inform planning, intervention, and reporting.

Monitoring of Science includes regular book looks, pupil voice, learning walks, and planning scrutiny. These help evaluate the quality of teaching and learning, consistency of coverage, and pupil progress. Feedback is shared with staff and used to inform ongoing improvements in teaching and curriculum development. The quality of work in Science is strong, with evidence of well-sequenced learning, appropriate use of scientific vocabulary, and a variety of enquiry-based tasks.

Cultural capital is embedded throughout the Science curriculum via opportunities to explore scientific discoveries, influential scientists from a range of backgrounds, and current global issues such as climate change, sustainability, and innovation. Inclusion and diversity are woven into lessons through the choice of scientists studied, accessibility of resources, and tasks that encourage every pupil to participate and succeed.

Diversity and inclusion are embedded throughout our approach to Science. Lessons reflect a range of cultural perspectives and scientific contributions from different societies. All pupils, regardless of background or ability, are supported to access the full curriculum through adaptive teaching, targeted support, and careful planning of practical tasks to ensure equity and engagement.

Impact

Recent internal assessment data indicates that the majority of pupils across all year groups are meeting age-related expectations in Science. Strengths identified include pupils' developing confidence in using scientific vocabulary, their ability to plan and carry out fair tests, and their enthusiasm for enquiry-based learning. Areas for development include ensuring greater consistency in the recording of scientific investigations and further embedding retrieval strategies to strengthen long-term retention of key knowledge.

Monitoring through book looks, pupil voice, and lesson visits shows clear evidence of progression in both substantive knowledge and working scientifically skills. Pupils demonstrate that they know more and remember more as they move through the school. They are increasingly able to make connections between topics, use accurate scientific terminology, and explain scientific processes with increasing complexity. For example, pupils in upper Key Stage 2 can recall earlier learning about plants and link it to more advanced concepts like reproduction and pollination.

Science is coherently sequenced, and the cumulative nature of the curriculum supports progress over time. Regular retrieval activities and practical enquiry tasks support long-term memory, and children are able to articulate what they have learned in previous topics. Pupil voice reflects that children enjoy Science, especially practical investigations and learning about real-world science and famous scientists. They speak confidently about their lessons and show genuine curiosity and enthusiasm for the subject.

Pupils with SEND are well supported through adaptive teaching, pre-teaching of vocabulary, scaffolded tasks, and visual supports. Where needed, adult support is in place to ensure pupils can engage fully with practical work and communicate their understanding. This ensures all pupils are well-prepared for transition to their next year group or key stage, with individual learning needs carefully considered in planning and assessment.

Overall, children at Boorley Park develop into confident, capable young scientists with a secure understanding of the key knowledge and skills needed for success in Science. They leave us ready for the next stage of their education, with a strong foundation and a positive attitude toward scientific learning.