



Science 'Be Your Best'

“Science consists of observing the world by watching, listening, observing, and recording. Science is curiosity in thoughtful action about the world and how it behaves.”

NASA

Intent

At Bradfield Primary School we encourage children to be inquisitive and confident learners. The science curriculum actively encourages children to be curious, caring and respectful to the world in which we live. We believe that 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 builds to an identified end point in accordance to the National Curriculum expectations.

The curriculum has been designed to ensure that children acquire key scientific knowledge through practical experiences, using equipment, conducting experiments, building arguments and explaining concepts confidently. The curriculum encourages children to ask questions and to be curious about their surroundings. A love and interest in science is nurtured through a whole school ethos and through the use of a varied and interesting curriculum.

Implementation

Our curriculum has been designed as a spiral curriculum with the following key principles in mind:

Cyclical: Pupils return to the key knowledge and skills repeatedly during their time in primary school.

Increasing depth: Each time a skill is revisited it is covered with greater complexity and in varying contexts. Progression includes - studying a specific scientific concept in more detail; studying further examples of a specific concept to broaden contextual knowledge; studying a broader range of equipment and methods to test an hypothesis; explaining concepts using models or ideas that can't be seen; making and explaining links across areas in science; engaging with increasingly complex ideas and ethical dilemmas.

Prior knowledge: Prior knowledge is utilised so pupils can build upon previous foundations, rather than starting again. The curriculum incorporates the statutory requirements of the National Curriculum and other experiences which meet the learning and developmental needs of the children in our school.

What science looks like at Bradfield Primary School

- Science projects are sequenced to provide a coherent subject scheme that progressively develops children's scientific knowledge, conceptual understanding, the nature, processes and methods of science, as well as the uses and implications of science today and for the future.

- Projects are placed alongside other subject areas to ensure that there are opportunities for making meaningful connections and links.
- Key skills are revisited with increasing complexity in a spiral curriculum model therefore allowing children to revise and retrieve previously taught skills and knowledge and build on their previous learning.
- Our progression documents detail the skills and knowledge that are taught within each year group and how these develop to ensure that attainment targets are securely met by the end of each key stage.
- Summative assessments take place throughout the year. Teachers use this information to inform future teaching and learning; ensuring children are supported and challenged appropriately and that any gaps in knowledge are addressed.
- Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging the recall of key facts and vocabulary.
- Each half term the science subject leader monitors the provision provided within the school. This includes, but is not limited to, lesson dips, work scrutinies, Talk About Learning sessions (TAL) with a selection of children from various year groups and ability levels.
- Termly Standards Meetings with Governors and staff ensure that areas of strength and priorities for development within science are shared.

Impact

Our curriculum leads to children being creative and curious learners who are willing to solve problems and take responsible risks. As scientists, children develop the skills and attributes that will allow for life-long learning. This is evidenced in a range of ways including, pupil voice, innovative activities and workbooks. We ensure that children who are achieving well, as well as those who need additional support, are identified with additional provision and that timely strategies are discussed and put into place. We aim that all children will make at least expected progress, relative to their starting point and their progression of skills.