

Science

'A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science.' Department of Education, National Curriculum

Intent

At Two Moors we provide a broad and balanced science education which will enable each child, regardless of ability or background to reach their full potential. The curriculum fosters natural curiosity in the children and will prepare them for the next phase of their education. The science curriculum is progressive throughout the school and is carefully constructed to ensure that knowledge and skills are taught over the six years ensuring sequential coverage of the National Curriculum. Science is taught as a discreet subject and where possible linked to the overall topic.

The children will:

- Develop and extend their curiosity, scientific knowledge and understanding about the world around them.
- Ask and answer scientific questions.
- Develop a scientific approach to problem solving; Working scientifically skills are planned in and developed across a year group and through the school.
- Use practical experiment and explorations to develop the skills of investigation, including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Understand and use scientific vocabulary.
- 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 real interest in science and its application in past, present and future technologies.
- Actively make links between science and other subjects.

At Two Moors we highlight science by inviting visitors into the school to help give the pupils a range of different experiences and by having science week. Science is explored beyond the classroom using our extensive school grounds including forest school and going on trips.

Within our Early Years Curriculum there is a very strong focus on the language-rich environment and understanding our children's own experiences. This includes beginning to use scientific language, exploring 'everyday science' experiences, developing a sense of enquiry and explaining this in terms of foundational scientific knowledge. Pupils are given opportunity to ask and answer questions through practical exploration. Children are encouraged to look for similarities, differences and changes in the world around them and in contrasting environments.

Implementation

Teachers build on prior learning, introducing new components in each lesson, assessing understanding and building the spiral of knowledge and skills in science. In each science unit specialist vocabulary for topics is taught, reinforced, displayed and built up and KS2 children use knowledge organisers to support their learning. Children begin topics with exploration and idea gathering – What do we already know? What do we want to find out? -and use some of the children's questions to inform planning and activities. Children then work independently and collaboratively, using a wide range of resources, through investigative and enquiry-based learning opportunities to help all

children gain a coherent knowledge of the concepts and skills in science. Children record their work in their science books.

Impact

Children are supported and challenged to help them meet age-related expectations each year. We monitor the impact of our science teaching through:

- Using pupil voice to discuss individual learning.
- Monitoring pupils' progress books, science books and class science diaries (Y1-4) for quality of work, progression of skills and depth of knowledge and understanding.
- Moderating assessments for attainment and progress across year groups and across the key stages.
- Visits to science lessons
- Monitoring the knowledge and understanding the children retain over time and the number of children who are successfully meeting the end of year milestones.
- Monitoring the number of children who are successfully meeting the end of year expectations.

