

Science

Intent

The 2014 national curriculum for science aims to ensure that all pupils:

- 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 skills** required to understand the **uses and implications** of science, today and for the future. We understand that it is important for lessons to have a skills-based focus, and that the knowledge can be taught through this

At Huntington Community Primary School, we believe that a broad and balanced science education is the entitlement of all children. Science teaching at Huntington CP School aims to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and implications of Science, today and for the future. At Huntington Primary School, scientific enquiry skills are embedded in each topic the children study and these topics are revisited and developed throughout their time at school. This allows children to build upon their prior knowledge and increases their enthusiasm for topics whilst embedding knowledge. All children are encouraged to develop and use a range of skills including observations, planning and investigations, as well as being encouraged to question the world around them and become independent learners in exploring possible answers for their scientific based questions. Specialist vocabulary for topics is taught and built upon and effective questioning to communicate ideas is encouraged. Concepts taught are reinforced by focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer questions.

Implementation

At Huntington Community Primary School, teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all pupils are capable of achieving high standards in science. Our whole school approach to the teaching of and learning of science involves the following;

- Science will be taught in planned topic blocks by the class teacher allowing for a project-based approach enabling a greater depth of knowledge to be achieved.
- Our planning enables us to incorporate problem solving opportunities that build upon children's natural curiosity which allows children to apply their own

knowledge, and find answers out for themselves. Open-mindedness, perseverance and responsibility are encouraged and celebrated within the classroom. Children are given opportunities to use their scientific skills and research to discover the answers. Planning involves teachers creating engaging lessons, involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess pupils regularly to identify those children with gaps in learning, so that all the pupils keep up.

- We build upon the knowledge and skill development of previous years and prepare children for a life in an increasingly scientific and technological world. We provide children with an enjoyable experience of science, so that they will develop a deep and lasting interest and be motivated to study science further. **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.
- Teachers aim to build children's self-confidence to enable them to work independently and develop their social skills to work co-operatively with others.
- 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 and appreciation of our environment and their surroundings by accessing outdoor learning when possible.
- Children are offered a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in the classroom.

Impact

The successful approach at Huntington Community Primary School results in a fun, good-quality science education, that provides children with the foundations of knowledge for understanding the world. Learning outside the classroom is embedded throughout the science curriculum ensuring children learn through hands on experiences. At the end of each year, pupils will have a comprehensive understanding of the science curriculum and a positive outlook on their learning journey through Huntington Primary School. They will be able to discuss their findings using key vocabulary and references from their completed work. Children will have covered the five areas of scientific enquiry, developing their analytical and questioning skills along the way. Also, the children will have consolidated learning from other curricular areas due to the creative recording of data using a variety resources and methods. Children will be motivated learners who will feel that they are scientists capable of high achievement.