

Intent

Our provision is designed to develop in all young people a lifelong curiosity and interest in the sciences. We aim to develop pupil's natural excitement and inspire them to pursue scientific enquiry now and in further life. When planning for the science curriculum, we intend for pupils to have the opportunity, wherever possible, to learn through varied systematic investigations, leading to them being equipped for life to ask and answer scientific questions about the world around them. As pupils progress through the year groups, they build on their skills in working scientifically, as well as on their scientific knowledge, as they develop greater independence in planning and carrying out fair and comparative tests to answer a range of scientific questions. Pupils should work scientifically by investigating, explaining and analysing phenomena, making predictions, questioning the world around them and solving problems.

Our scheme of work (mixed age, based on a two-year cycle) ensures that children have a varied, progressive and well-mapped-out science curriculum that provides the opportunity for progression across the full breadth of the science national curriculum for KS1 and KS2. Science is vital to our future prosperity and it is important that our children are engaged with all aspects of science. All pupils will be provided with the foundations to understand the specific disciplines of biology, chemistry and physics and to develop an understanding of the world around them at an age-appropriate level.

SMSC

A collective responsibility for our planet is imperative. Pupils are encouraged to ask questions and develop their own line of enquiry. They consider the wonder of the natural world and the inventions that have made it better. Pupils speculate about how science can be used for a variety of reasons or motives. Pupils consider negative developments that have caused harm e.g. to environment and people. They explore the social dimension of scientific advances e.g. environmental concerns, medical advances.



Impact

We believe that the impact of our personalised, progressive Science curriculum will ensure pupils know more, remember more and explain more. Attainment and progress can be measured across the school using our tracker sheets and end of unit assessments. Children who feel confident in their knowledge and enquiry skills will be excited about science, show that they are actively curious to learn more and will see the relevance of what they learn to real-life situations. Our approach results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world. Our engagement with the local environment ensures that children learn through varied and first-hand experiences of the world around them. So much of science lends itself to outdoor learning, so we provide children with opportunities to experience this. Through various workshops, trips and interactions with experts and local charities, children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children learn the possibilities for careers in science as a result of our community links and connections with national agencies. Pupil voice is used to further develop the curriculum, through analysing pupil's views and attitudes.

Implementation

When designing our curriculum, we have sought to focus on 3 main areas:

Knowledge: What do we want our children to learn and remember? How should we sequence the learning in order to ensure progression? Develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics.

Concepts: Develop understanding of the nature, processes and methods of Science through different types of science enquiries. We have planned units to embed and cover each area of the national curriculum.

Skills: How will we teach our children to become effective participants of the world? What skills do they need to learn to understand the content? Develop the essential scientific enquiry skills to deepen their knowledge and engage in life-long science.

- **EYFS** In EYFS, Scientific enquiry is driven by pupil's own questions and adult-led provocations. Adults ensure that knowledge, skills and concepts are introduced without explicitly teaching content from other year groups. The EYFS setting provides a rich language environment for pupils. Adults identify and model scientific vocabulary appropriate for the topic and age, setting high expectations. Impactful use of outdoor learning is embedded and built upon throughout school.
- **KS1/KS2** The acquisition of key scientific knowledge is an integral part of lessons. Furthermore, the progression of skills for working scientifically are developed through the year groups and scientific enquiry skills are of key importance. Each lesson has a clear focus. Scientific knowledge and enquiry skills are developed with increasing depth and challenge as children move through the year groups. The sequence of lessons helps to embed scientific knowledge and skills, with each lesson building on previous learning. Activities are effectively differentiated so that all pupils have an appropriate level of support and challenge. Online CPD (Reach Out CPD) ensures that teachers are equipped with secure scientific subject knowledge, enabling them to deliver high-quality teaching and learning opportunities while making them aware of possible scientific misconceptions.
- **STEM** The close links between Science, Maths, Technology and Engineering are exploited at every opportunity. The development of Science Capital is paramount. A STEM project and community learning celebration are a vital part of the annual Science calendar.