



Intent

Science teaching at Phoenix St Peter Academy aims to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them to think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and application of science, today and for the future.

At Phoenix we want our children to be naturally curious about the world around them. We want to embrace their sense of wonder about natural phenomena and to guide them into becoming enquiry-based learners. The science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live. We want our children to develop an understanding of the uses and implications of science, how it has changed and shaped our lives and how vital it is to the world's future prosperity.

Scientific enquiry skills are in each topic the children study and these topics are revisited and developed throughout their time at school. Topics, such as Plants, are taught in Key Stage One and studied again in further detail throughout Key Stage Two. Thus, allowing the children to grow in their understanding, building upon their prior knowledge and increasing their enthusiasm for the topics whilst embedding this procedural knowledge into the long-term memory.

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.

Implementation

At Phoenix St Peter Academy, scientific knowledge and enquiry skills are embedded in each project the children study and knowledge and skills are revisited and developed throughout their time at school. Topics, such as Plants, are taught in Key Stage One and studied again in further detail throughout Key Stage Two. This model allows children to build upon their prior knowledge and increases their enthusiasm for the topics whilst embedding this procedural knowledge into the long-term memory.

To facilitate this learning process, teachers plan the following:

- A sequence of learning which builds on prior knowledge, skills and understanding.
- Opportunities to explore, revisit, understand and use technical vocabulary related to science.
- A well thought out sequence of lessons for each subject that results in progression and depth.
- Trips and visiting experts who will enhance the learning experience.
- A means to display and celebrate the pupils' work in their school and finally a way to share their learning with parents and the local community.

Impact

Our Science Curriculum is high quality, well thought out and is planned to ensure progression. If children are keeping up with the curriculum, they are deemed to be making good progress in line with age related expectations.

In addition, we measure the impact of our curriculum through the following methods:

- A reflection on standards achieved against the planned outcomes.
- A celebration of learning for each term which demonstrates progression across the school.
- Pupil discussions about their learning - which includes discussion of their thoughts, ideas, processing, and evaluations of work.
- Termly assessment against the progression document to assess if the child is working at age related expectations for science.

At Phoenix St. Peter Primary Academy, we encourage children to ask questions and have a natural curiosity of the world around them. They are encouraged to work collaboratively, using a variety of approaches to pose and answer relevant scientific questions. Our curriculum is coherently planned and sequenced to build skills and knowledge all the way up from Early Years, to help build the foundations for success in their future learning beyond Phoenix. Our curriculum is ambitious for all children, particularly the most disadvantaged or those with learning differences (e.g. SEND/ disabilities), as we meet their needs to achieve this. Children will gain and develop their scientific knowledge of a wide range of topics within the disciplines of biology, chemistry and physics and be able to consolidate their learning by planning and conducting their own investigations. They will explore the scientific vocabulary required for the topics taught and will be able to refer to this accurately when explaining scientific processes around them. Our science curriculum provides children with opportunities to acquire the key skills of 'working scientifically', including observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing and; researching using secondary sources. In addition, children are encouraged to apply their mathematical knowledge to their understanding of science through collecting, presenting and analysing data. They will continue to build upon these lifelong skills as they transition through the stages of their education and beyond, to help make a difference as independent and confident individuals. We develop enthusiastic scientists who have the confidence and passion to independently explore and understand science in everyday life.

Science teaching at Phoenix St Peter Academy aims to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them to think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and application of Science, today and for the future.

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 up, 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 relevant scientific questions.

Knowledge of scientific processes is gained throughout a child's journey through school. Learning in Key Stage Two builds on prior learning in Key Stage One which, in turn, builds on solid foundations gained in the Early Years Foundation Stage. Our Science curriculum uses the National Curriculum to ensure that children gain the knowledge they need to become successful scientists at primary school and beyond, fostering an interest in the subjects – much needed by today's society.