



Science Curriculum Statement

Subject Leader: Louise Preston

Intent

Our curriculum is structured around the National Curriculum and underpinned by our Christian Vision and Values. We believe that education should foster a love of learning and a deep respect for others and the world around us. We place a strong emphasis on developing the key skills of communication, collaboration, critical thinking, and creativity, and believe that these skills are best developed through connected learning experiences that we call **Curriculum Quests**.

We believe that a high- quality science education provides the foundations for understanding the world. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity. Science in our school is about developing children's ideas and ways of working which enables them to make sense of the world in which they live through investigation, as well as using and applying process skills. The staff at Upton Heath ensures that all children are exposed to high quality teaching and learning experiences, which includes exploring their outdoor environment and locality, trips and visits, and hands on STEM (Science, Technology, Engineering and Maths) activities in our STEM lab classroom. We believe that these experiences not only provide children with valuable skills and knowledge but also help them to remember the learning more effectively.

We recognise that each child is unique, and we strive to provide a broad and balanced Science curriculum that meets the needs of all our pupils, regardless of their background or ability. We work closely with parents and carers to support the learning and development of each child providing a range of support and guidance to help them achieve their full potential.

We ensure that current learning is linked to previous learning as part of a sequential curriculum, enabling children to achieve the end of year expectations in line with the National Curriculum 2014. Children are assessed on the key knowledge for each **Curriculum Quest** using online quizzes that are revisited throughout the year, further helping to ensure that learning is maintained.

At the end of each half term, classes take part in an '**Exhibition**' of their learning. This is an opportunity for children to share what they have learnt with parents, peers and the wider community, giving them a genuine purpose for work that they produce as well as providing an opportunity to revisit their learning and further embed it into their long-term memory.



Implementation

There are 3 science **Curriculum Quests** during the year, one per term, taught alongside key English literacy objectives, with each Quest lasting between two and four weeks, enabling children to become immersed in their learning and make meaningful connections between different subjects, topics, and activities. Science is taught throughout EYFS, Key Stage 1 and Key Stage 2 to ensure that all pupils receive a quality and focused Science Curriculum.

In ensuring high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school. Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage. Teachers use this to plan and deliver relevant and engaging lessons.

Science teaching at Upton Heath involves adapting and extending the curriculum to match all pupils' needs. Teachers plan using the National Curriculum, ASE Documents (examples of good practice and examples of what Working At looks like). When planning, they consider children's interests, current events, their own teaching style, the use of any support staff and the resources available. At Upton Heath, we ensure that all children are provided with rich learning experiences that aim to:

- Prepare our children for life in an increasingly scientific and technological world today and in the future.
- Help our children acquire a growing understanding of the nature, processes and methods of scientific ideas.
- Help develop and extend our children's scientific concept of their world.
- Build on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and developing the skills of investigation - including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Develop the use of scientific language, recording and techniques.
- Develop the use of computing in investigating and recording.
- Make links between science and other subjects.

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Impact

The impact and measure of this is to ensure children not only acquire the appropriate age-related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives. Outcomes in Science books, Twitter, Seesaw and Tapestry posts, evidence a broad and balanced science curriculum and demonstrates the pupils' acquisition of key knowledge.. Children are involved in reviewing their learning after each session. Through this study,



pupils learn to ask perceptive questions, think critically, consider evidence and arguments and develop their own opinions. They will also apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. Children will be able to make links to the everyday world around them. All children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.

British Values and our Christian Distinctiveness.

As a school, we value the diverse ethnic backgrounds of all pupils and families and undertake a variety of events and lessons to celebrate these. We have found this approach to be enriching for all parties, as it teaches tolerance, compassion and respect for the differences in our community and the wider world. Our teaching of the British Values of tolerance, individual liberty, mutual respect, the rule of law and democracy are underpinned by our Science curriculum themes, which have strong links to British Science where appropriate.

Throughout the Key Stages British Science is taught where it naturally fits.

UHPS is Rights Respecting School and the teaching of Science can enhance the children's understanding of the importance of living a healthy lifestyle

Assessment

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Key scientific knowledge is taught to enable and promote the development of children's scientific enquiry skills. Assessment is supported by the use of the following strategies:

- Observing children at work, individually, in pairs, small groups and in class during whole class teaching.
- Using differentiated, open-ended questions that require children to explain and unpick their understanding.
- Providing effective feedback to learning, to support learning moving forward and to provide opportunities to self-assess, consolidate and study in-depth.

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We are committed to providing a teaching and learning environment which ensures that all children are able to progress with their learning, regardless of social class, gender, culture, race, or SEND.