



**Mexborough St John the Baptist
Church of England Primary**

Science Policy

*"Equipped with his five senses, man explores the universe
around him and calls the adventure science."*

Edwin Powell Hubble

Intent:

At Mexborough St John, we aim to provide a high quality science education through practical, engaging and explorative lessons that provide the foundations for understanding the world and how science has changed our lives and is vital to the world's future prosperity. We aim to fuel children's interest, promote purposeful questioning and support independent exploration in the world around them.

By the time pupils leave Mexborough St John, we aim to ensure they understand the basic workings of the world around them and inspire them to question the possibilities of the future.

Implementation:

This policy promotes best practice and establishes consistency in Teaching and Learning across the whole school. It aims to ensure that all pupils are provided with high quality learning experiences to develop pupil's life-long love of learning.

At Mexborough St Johns teachers plan stimulating lessons that will challenge pupil's ideas about science and the world around them, ensuring they are always trying to make tangible links with other areas of their learning. There is a clear progression in each unit and this can clearly be seen throughout the school in each year group so that children are extending their knowledge from learning in previous year groups. Teachers plan for problem solving and real life opportunities that enable children to find out for themselves. Children are encouraged to ask their own questions and are given opportunities to use their scientific skills and research to discover the answers. Planning involves teachers creating practical, engaging lessons with opportunities for precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning.

Early Years Foundation Stage (EYFS):

Pupils develop basic understanding in foundation stage where they start to understand the world around them. Through first-hand experience, exploration and teacher-led questioning, children start to understand the basic concept of their world.

Key Stage 1 and 2:

In KS1, pupils begin to apply their science understanding taught at foundation stage to the wider world and begin to ask questions about the world around them. At this stage, simple scientific enquiries are carried out; starting with questioning, testing and making observations.

Key vocabulary is introduced at this stage that they will use and develop further as they progress through school.

As pupils move in to KS2, they begin to apply knowledge further and make greater links and connections between the world around them and how science impacts on this. Questioning becomes more focussed and enquiries go further by delving in to the 'how and 'why' of ideas and events.

Scientific vocabulary becomes more of a focus for children to explain and reason within scientific enquiry and scientific knowledge. Scientific enquiry is now introduced more formally with a progression of skills through the 2 key stages so that children are able to build on prior knowledge and create 'sticky' learning. Now children explore different ways of recording and presenting data, as well as making detailed and reasoned predictions that support their understanding; making links between scientific understanding/knowledge and enquiry.

Impact:

Pupils' learning over time, reflects the intended curriculum. The concepts and big ideas provide the schema through which meaning is made and helps to ensure long term knowledge growth. This in turn ensures pupils know more and can do more.

Research shows that repetition of course content leads to sticky learning; the transfer of knowledge from the short term to long term memory. At Mexborough St John's, we achieve this through regular retrieval practise. Children can speak with confidence about what they have learnt and how they can apply this to other parts of their learning.

The impact of our curriculum will be seen not only in measurable attainment and progress but that St John the Baptist Primary School creates polite, well-mannered caring members of our school community who understand and respect everybody's differences and needs.

Assessment:

Assessment is ongoing through science units of work and includes a range of techniques to be more supportive of learning. Assessment is carried out through assessment questions included on knowledge organisers, that children carry out at the start and end of each science unit, teacher questioning that probes understanding, marking and feedback and retrieval practice.

Teachers use verbal feedback within lessons to support and develop understanding, as well as to correct misconceptions. This is then used to fill in science assessment grids at the end of each lesson. These assessment grids calculate an average score that teachers use at the end of the year when recording summative assessment. The average score is worked out on a scale of 1-3; 1 = Working Towards ARE, 2 = Working At ARE and 3 = Working Above ARE.