



Intent, Implementation and Impact statement for Science

Intent

At St Hugh's we value the importance of Science as the foundation required for understanding the world around us. Our overall aim is that the children will have a passion for Science and a real sense of excitement for exploration. We hope to inspire the next generation to exceed and excel in Science.

Through high quality teaching of the Science Curriculum, it is our intention that all pupils will:

- develop enquiring minds through practical investigation and opportunities to work scientifically,
- be able to think critically and problem solve with confidence,
- understand and be able to retain and recall scientific knowledge and vocabulary,
- make connections between their learning in science and the wider curriculum.
- understand the impact of Science in our lives in the past, present and future.
- develop a deeper understanding and respect for God's creation and a greater appreciation of diversity.

We follow the National Curriculum Programmes of study which are split into the disciplines of Biology, Chemistry and Physics. As the children progress through the school, the children expand and build on their scientific knowledge and vocabulary.

Scientific enquiry skills are taught through all topics with a progression of these skills developed through the year groups.

Implementation

Science is taught weekly throughout the year in topics organised by each class teacher. Where appropriate, links are made to other subjects and linked to the overall class topic theme. Topics are revisited and developed throughout their time at school to allow children to build upon their prior knowledge, whilst also embedding their procedural knowledge into the long-term memory.

In Key Stage 2 the topics are organised on a 2 year cycle to ensure that children in mixed-age group classes cover all the curriculum.

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 and learning of science involves the following:

- All children are catered for through adapted planning suited to the abilities of the children. Tasks are selected and designed to provide appropriate challenge to all learners.

- Teachers create engaging lessons, using a variety of high quality resources to aid understanding of conceptual knowledge.
- Existing knowledge is checked at the beginning of each topic to identify misconceptions. In Key Stages 1 and 2, children use Knowledge organisers which help the children to learn and retain the key knowledge and vocabulary for the topic.
- At the beginning of each lesson, teachers plan opportunities for pupils to recall prior learning. This enables pupils to consolidate their previous learning, while also preparing them for future learning. This is particularly important for our EAL and SEND children, who may need more opportunities to retain and embed scientific vocabulary and concepts.
- Working scientifically skills are embedded into lessons to ensure that skills are regularly practised and developed. Children are given access to a range of scientific equipment and taught how to use it correctly.
- Children are encouraged to ask their own questions and are given opportunities to use their scientific skills and research to discover the answers.
- Teachers encourage children to use a developing scientific vocabulary as they progress through each year group, both written and verbal, to explain their ideas and make sense of their observations and findings.
- Teachers use precise questioning in class to test conceptual knowledge and skills, and use ongoing assessment to identify those children with gaps in learning, so that support can be provided to ensure that all children make progress.
- Opportunities to enhance learning and develop the children's Science Capital are planned for including, workshops, visits, competitions and use of outdoor learning.
- Children are taught about scientists in the past and present and how their discoveries have changed our lives. They are also taught about the role of Science in the world around us to make them aware of job opportunities they may aspire to in the future.

Impact

Our Science Curriculum is of high quality, it is well planned and demonstrates progression. Children enjoy Science lessons and they show high levels of motivation and confidence in lessons. When they leave our school at Year 6 they are well prepared for the next stage of their education and have the foundation skills to achieve well in Science in the future.

The impact of teaching is regularly monitored by the Science Subject Leader including lesson observations, looking at work, assessment data and discussions with pupils to assess their enjoyment of Science.