



Science at Our Lady and St Kenelm

Intent

At OLSK, it is our endeavour to provide a high quality science education that provides children with the foundations they need to recognise the importance of science in every aspect of daily life. We want our children to appreciate how science has changed the lives of human beings and know that it is vital to the world's future prosperity. Therefore, all pupils will be taught essential aspects of the knowledge, methods, processes and uses of science.

Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. Children should be taught to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. Our curriculum also encourages children to become enquiry-based learners, collaborating through researching, investigating and evaluating experiences. It will provide opportunities for the critical evaluation of evidence and rational explanation of scientific phenomena as well as opportunity to apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. Children will be immersed in key scientific vocabulary, which supports in the acquisition of scientific knowledge and understanding. The following types of scientific enquiries interweaved throughout our Science curriculum: Problem Solving, Pattern Seeking, Comparative/Fair Testing, Research, Observation over time and Identifying, Grouping and Classifying to ensure that children are gaining a full breadth of opportunities to engage in learning as scientists. All aspects of 'Working Scientifically' from the National Curriculum are interwoven throughout our Building the Kingdom curriculum, again, to ensure that children understand what it means to be a successful scientist.

All children will be provided with a broad and balanced science curriculum, which builds on prior learning and reflects the equality and diversity policies and practice in school.

Implementation

At OLSK, science is taught weekly through each half term. Science has been carefully linked with Our Building the Kingdom Curriculum, in order for children to not only develop curious about natural phenomena, but also compassion & care for God's creation. Teachers check on what children already know using 'What do I already know?' so that children are able to make links to prior learning and build on these right from development matters in Preschool, Early Learning Goals in EYFS all the way through KS2 National curriculum. Children will be able to build on prior knowledge and link ideas together. Children are also given the opportunity to revisit prior knowledge, through 'Explorify' retrieval. Learning revisited is not only component 'knowledge' but also disciplinary knowledge, too- i.e. how to be a scientist.

Impact

The successful approach to the teaching of science at OLSK will result in a fun, engaging, high quality science education that provides children with the foundations for understanding the world that they can take with them once they complete their primary education.

Assessment at OLSK is teacher based and formed using formal strategies (e.g. periodic year group assessment tasks, quizzes) and informal strategies (Use of concept maps, verbal/written outcomes, reflection tasks/presentations and pupil voice).

Formative assessment is used as the main tool for assessing the impact of Science at OLSK, as it allows for misconceptions and gaps to be addressed more immediately rather than building on insecure scientific foundations.

Children at OLSK School will:

- Demonstrate a love of science work and an interest in further study and work in this field
- Retain knowledge that is pertinent to Science with a real life context.
- Be able to question ideas and reflect on knowledge.
- Be able to articulate their understanding of scientific concepts and be able to reason scientifically using rich language linked to science.
- Demonstrate a high level of mathematical skills through their work, organising, recording and interpreting results.
- Work collaboratively and practically to investigate and experiment.

Impact of learning will be assessed through: Interviews, deep dives, assessing whether or not children can answer BIG QUESTIONS and make links to prior learning etc.