Science Intent

#LearningForLifeAnchoredInChrist

Intent

As a Church school, the teachings of the bible guide and influence every aspect of school life, including the curriculum for Science, which has been enhanced/constructed around our school vision, which is encapsulated by #LearningForLifeAnchoredInChrist. We believe that through working together with our unique school community, we can inspire happy, courageous, independent, curious, creative, life-long learners who are proud of their community, heritage and identity. In addition to this, as part of the Birmingham Diocesan Multi-Academy Trust (BDMAT), we also strive to provide an experience that reflects their vision, "life in all its fullness" (John 10:10).

The Science curriculum fosters a healthy curiosity in children about our universe & God's world and promotes respect for the living and non-living. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. It is our intent at St Clement's for pupils to be fully immersed in every aspect of Science and for them to recognise the importance of Science in daily life. We ensure the teaching and learning of Science has the importance and prominence it deserves by delivering a well-rounded, engaging curriculum.
Our curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Our vision and values, support to shape and inspire our science curriculum. Children will grow their scientific vocabulary, develop their scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics and also develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences. Children are encouraged to ask questions and be curious about their surroundings and a love of science is nurtured through a whole school ethos and a varied science curriculum.

Our children will develop spirituality within the scientific world, developing a sense of awe and wonder at the natural world, as they equip themselves with the scientific knowledge required to understand the uses and implications of science today and for the future. We want our children to leave St Clement's knowing that it is possible for them to achieve their aspirations having developed attitudes of curiosity, originality, co-operation, perseverance, open mindedness, self-criticism, responsibility and independence in thinking.

Implementation

At St.Clement's CE Academy, we make the learning of science interactive and engaging through the use of correct scientific resources and activities. It is carefully planned, following the long term plan, to ensure progression of learning in each year group, particularly for those subject areas such 'Animals including Humans' and 'Materials' which are covered in several consecutive year groups. Progression of skills when 'working scientifically' are similarly specified to ensure that all these skills are taught, practised and progressed throughout a child's primary education.

At St.Clement's , science is taught weekly. Teachers check on what children already know and recap previous learning through Do it Now tasks. This helps children to make links to prior learning. Children will be able to build on prior knowledge and link ideas together. Learning revisited is not only component 'knowledge' but also disciplinary knowledge, too- i.e. how to be a scientist.

We use Collins Snap Science to support our delivery of science and this supports non specialist teachers to deliver high quality science, including practical science. All planning and lessons ensure a focus is given to tier 2 and tier 3 vocabulary for each unit.

Impact

The successful approach to the teaching of science at St.Clement's 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 St.Clement's is teacher based using informal strategies (Use of double page spreads, verbal/written outcomes, quizzes, reflection tasks/presentations and pupil voice).

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

Children at St.Clement's will:

- Demonstrate a sense of awe and wonder at the natural world and understand how scientific developments underpin our everyday lives
- 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 love 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 though: Interviews, deep dives, assessing whether or not children can answer questions and make links to prior learning etc.