

Intent:

At St James' Church of England Primary Academy, we strive to prepare all our children to successfully aspire to a wealth of opportunities with curiosity and resilience embedded in all they do. It is our intention 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. Our curriculum will enable children to become enquiry-based learners collaborating through researching, investigating and evaluating experiences. It will encourage respect for living organisms and for the physical environment. Teachers will ensure that all children are exposed to high quality teaching and learning experiences. These will hook the children's interest, enabling them to develop a sense of excitement and curiosity about the world of science. They will be encouraged to ask questions about the world around them and work scientifically to further their conceptual understanding and scientific knowledge. Children will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. Children will be immersed in key scientific vocabulary, which supports in the acquisition of scientific knowledge and understanding. All children will be provided with a broad and balanced science curriculum which reflects the equality and diversity policies and practice in school.

Implementation:

St James' curriculum links directly to scientific knowledge, skills and understanding to ensure that learning is progressive and continuous.

Our curriculum is built around the principle of greater learner involvement in their work. It requires deep thinking and encourages learners to work using a question as the starting point, considering different avenues for further research. They do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They draw simple conclusions and use scientific language to talk and write about what they have found out. Children will be able to build on prior knowledge and link ideas together, enabling them to question and become enquiry-based learners.

Impact:

The successful approach to the teaching of science at St James' 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 James' is teacher based and formed using formal strategies and informal strategies (Use of concept maps, verbal/written outcomes, reflection tasks/presentations). Formative assessment is used as the main tool for assessing the impact of Science at St James' as it allows for misconceptions and gaps to be addressed more immediately rather than building on insecure scientific foundations.

Children at St James' will:

- demonstrate a love of science work and an interest in further study and work in this field
- 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.
- achieve age related expectations in science at the end of their cohort year.