



Science at St. Michael's CE Acade-



Intent—We aim to....

Instil a love of Science in all of our children through an interesting and varied curriculum that motivates and challenges.

Provide children with the progressive investigative skills which enable them to question, observe and analyse the world around them with increasing independence.

Develop scientific knowledge, key vocabulary and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics.

Develop the natural curiosity of the child, and encourage respect for living organisms and the physical environment.

Nurture a passion within the children through developing their scientific skills and growing their knowledge, which will enable them to become confident, enthusiastic scientists in preparation for secondary school and beyond!



Implementation— How do we achieve our aims?

Scientific Enquiry

The teaching of Science will be through regular investigative work covering the five areas of enquiry: fair testing, observing over time, identifying & classifying, pattern seeking and research, with a strong emphasis on exploration and discovery.

School life

Pupil's selected to be Science Ambassadors engage children at break times with exciting practical scientific activities. They also, at times, lend their expertise to support learning in other year groups.

Half-termly homework challenges are set to help develop their curiosity and deepen their understand of the current topic.

Outside opportunities

We are a part of the Ogden Trust network. Through this children have the opportunity to engage with scientific enquiry and participate in scientific challenges within the local region.

Children have the opportunity to deepen their curiosity and passion for science through purposeful, exciting trips linked to the topics within our curriculum.

Staff subject knowledge

Science is planned by science specialists, who regularly develop their own subject knowledge through the Ogden Trust and other CPD opportunities, such as Reach Out. These are shared with the rest of the staff through regular staff meetings.



Implementation continued.....

Vocabulary

Vocabulary is at the heart of every science lesson. Each topic has their own key vocabulary which is taught explicitly and revised in every lesson. Specialists ensure that taught vocabulary is progressive across the school. Within each lesson, children are encouraged to use such vocabulary to support them in thinking and speaking scientifically.

Assessment and progression

Informal weekly assessment is delivered via the fluency task to enable the children to have rapid recall of previously taught facts.

Children are given baseline assessments at the start of new units to assess their prior knowledge and understanding of the vocabulary due to be taught. From these, science boards are used within the classroom to help provide a visual aid to develop their understanding of the vocabulary.

At the end of each unit, children are formally assessed and given the opportunity to self-assess their knowledge against the learning objectives and the strands of scientific enquiry.

Typical Lesson Structure

Vocabulary
retrieval and
Fluency

Big Question

Every lesson begins with a Big Question to explore.

Exploration of new learning.

Children explore new learning through various resources e.g. media, PowerPoint and Explorify. They have opportunities to discuss and rehearse stem sentences.

Structured review

Children review the Big Question and revisit the vocabulary board.

Application

Children apply their learnt knowledge through practical activities or written outcomes.

Curriculum content

Scientific knowledge is progressively taught through topics. Within KS1, topics are taught yearly and where possible, links are made to the wider curriculum themes. Within KS2, these topics are covered on a two-year rolling programme across phases and these are delivered by science specialists.

We ensure coverage of the curriculum by having a dedicated weekly science lesson in every year group.

Impact—How will we know we have achieved our aims?



Children display an excitement and curiosity for Science.



Children can use precise scientific vocabulary during discussion.



Children can quickly recall key scientific knowledge.



Children develop a full range of scientific enquiry skills.



High-quality CPD ensures staff are well supported



Children can make connections with science and the world around them.



Children's understanding of science helps them develop into scientists of the future with passion and curiosity.