

King Ina Church of England Academy

Science Curriculum Overview Statement

Our curriculum approach to science reflects our vision statement:

Within our secure Christian environment, our vision is to develop healthy, happy, motivated learners who aspire to achieve their full potential and who look to the future with confidence.

The name of the current curriculum lead is on the school website on the curriculum page.

Intent:

At King Ina Church of England Academy, we aim to invoke a strong desire for pupils to become active in seeking information through experience; we recognise science as an exciting and fascinating way to help pupils understand and engage with the world around them. It is our intention to provide pupils with a rich, scientific vocabulary to develop strong critical and analytical thinking skills – fuelling all enquiries. We intend to provide pupils with high-quality hands-on learning experiences that not only provide challenge but develop a love of learning and self-fulfilment.

We will ensure that the skills of Working Scientifically are continually developed and extended throughout the pupils' learning so that they can use this knowledge of science when using equipment to conduct investigations and experiments, building arguments and explaining concepts confidently and, importantly, to continue a life of asking questions and developing curiosity in the world around them. Our skills are progressive through the use of our Curriculum Progression Road Map. The pupils' skills are built on carefully curated substantive and disciplinary knowledge that offers consistent exposure to concepts and creates connections with prior understanding creating enhanced sticky learning.

Implementation:

- Continued professional development is identified through discussions with teachers and teacher questionnaires and will therefore be offered to provide a panoramic view of teacher's skill sets, honing in on skills that need work and finally developing confidence and empowering teachers to become more proficient in their roles.
- Science is taught weekly in topic blocks, planned and arranged by the class teacher. Teachers enable all pupils to be catered for through adapted planning suited to their abilities.
- The acquisition of key scientific knowledge is an integral part of our science lessons.
- Using flashbacks and quizzes to identify and retrieve prior knowledge and skills from previous lessons, terms and years.
- We use 'Pzaz' as an online teaching aid for both teachers and pupils.
- High expectations and Cultural Capital is gained by:
 - ❖ Using authentic high quality resources
 - ❖ Valuing oracy and teaching high level vocabulary
 - ❖ Making links to primary futures which demonstrates how learning at school leads to an exciting and interesting future, job or career.
- Teachers use assessment for learning strategies including questioning, quizzes, listening to children's reasoning and observations throughout lessons to check learners' understanding systematically and to correct any misconceptions and provide accurate and clear feedback.
- Sticky knowledge is developed by the use of flashbacks, discussions, questioning, encouraging interests and demonstrating what pupils have learnt.

Impact:

At King Ina Church of England Academy, science is taught using a fun, engaging, high-quality successful approach providing pupils with secure foundations for understanding the world that will continue with them after their primary education is complete.

Pupils' voices are used to further develop the science curriculum through questioning of their views and attitudes to science, to assess their enjoyment of science and to motivate learners.

Pupils should be able to articulate their understanding of scientific concepts and be able to reason scientifically using rich language linked to science.

Pupils should be able to demonstrate enthusiastic mathematical skills through their work of organising, recording and interpreting results.

Subject Leaders

The subject leaders use a range of tools to evaluate the science curriculum including staff and pupils' questionnaires. They will ask:

- Is the curriculum working? What are the gaps in learning? How are we going to close these gaps? Are the children making progress? Are we exposing the children to a rich-enough range of scientific vocabulary?
- What impact is the curriculum having? If the children are not progressing, is my subject sequenced correctly? Are we identifying and building on prior knowledge and skills? Are we embedding core concepts? Is teacher subject knowledge good enough? Are we meeting the needs of SEND pupils?
- What can/cannot children do? What have they learned/not learned? How do we know?
- What is this telling me about the organisation and sequence of the science curriculum?