

The Magdalen Church of England / Methodist Primary School, Wainfleet

Science Rationale

*'The scientist is not a person who gives the right answers,
he's the one who asks the right questions.'*

Claude Levi-Struass

Retention of powerful knowledge and vocabulary

Our science curriculum allows children to develop scientific knowledge and conceptual understanding and develop understanding of the nature, processes and methods of science through different types of scientific enquiries to help them answer scientific questions about the world around them. Children are equipped with scientific knowledge and vocabulary to understand the uses and implications of science, today and for the future.

Application of powerful knowledge and vocabulary

We have designed a science curriculum that allows children to become confident and fluent with powerful knowledge and vocabulary. Children are taught specific language during each lesson, which is linked to the topic and conceptual learning is built on year on year. Children are encouraged to use terminology accurately and precisely. It is important that children develop secure understanding of each block of knowledge and concepts in order to progress with their learning. The quality and variety of language that pupils hear and speak are key factors in developing their scientific vocabulary and articulating scientific concepts clearly and precisely. Teacher ensure that pupils build secure foundations.

Inspiration

We ensure that all children gain a wealth of experiences beyond the classroom and pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. We encourage children to understand how science can be used to explain what is occurring, predict how things will behave and analyse causes. We want our science curriculum to inspire children to want to learn more, to provoke children's intellectual curiosity and to create experiences of awe and wonder.

Success for Everyone

We believe that excellence in science teaching and learning should be accessible and age-appropriate to all learners. The planning of science to meet individual needs supports the teaching, participation

and engagement of all learners and reasonable adjustments are made for children to access the curriculum. Through appropriate ongoing assessment and effective teaching, potential barriers to learning are identified and strategies are implemented to meet the specific needs of all learners. Multisensory learning opportunities are integrated into all aspects of learning and appropriate resources are support all learners. Adjustments are also made for those who are more able in science. The design of our curriculum takes our pupils on a journey from where they are, scaffolding their understanding to fulfil their knowledge needs.

By having a clear map of learning for each unit, with knowledge, skills, calculation, definitions and high-quality information, the pupils will have all they need to be successful learners.

The Impact of our curriculum:

- Children can confidently recall key knowledge from current and previous areas of learning.
- Children can confidently apply knowledge to their learning.
- Children are confident using and applying high-level vocabulary.
- Children are independent learners.
- Children are articulate and confident to talk about a wide range of science topics.
- Children demonstrate many high-level skills, such as analysis, reflection and empathy through written and spoken tasks.
- Children enjoy learning and are excited and inspired to learn new things.
- Knowledge is retained in children's long-term memories.
- Children have excellent attitudes to learning.
- Children demonstrate the '5ps' in all areas of learning – pace, productivity, perseverance, presentation and progress.
- Children show self-awareness when forming their own ideas and beliefs.
- Children show respect for all and value difference and diversity.
- Children are open-minded to learn and gain new ideas.
- Children demonstrate appreciation and wonder of the world they live in.