

### Diversity

At St Michael's CE Primary School, we celebrate the rich tapestry of cultures, backgrounds, and experiences that make up our school community. Diversity is woven into the very fabric of our curriculum. In Science, we explore the contributions of a diverse range of scientists from various backgrounds and time periods. This helps students appreciate the wide variety of discoveries and innovations that have shaped our understanding of the world, while also highlighting the importance of diversity in scientific achievement.

### Spirituality

At St Michael's our definition of Spirituality is to talk about something which is beyond words. We look at four key areas: self, others, transcendence (beyond), and nature. We explore spirituality across the curriculum. Ways in which we might explore spirituality in Science can be found on our planning documents on our website.

### Schemes of Work

At St Michael's, we have our own bespoke curriculum which is designed to meet the objectives set out by the National Curriculum. Our Science curriculum is grounded in Scientific Enquiry, with each key unit designed to teach and develop specific scientific skills. These skills are carefully planned and progress sequentially, enabling students to become independent and confident scientists. Each unit starts with a 'big question' that sparks curiosity and guides the learning journey. Throughout the unit, students explore this question in depth, using scientific enquiry and investigation. By the end of the unit, they are able to answer the question based on the knowledge and skills they've developed.

### National Curriculum

A high-quality science education is fundamental for understanding the world through biology, chemistry, and physics. It empowers students with essential knowledge and skills, fostering curiosity and rational thinking about natural phenomena. Pupils learn to explain, predict, and analyse scientific occurrences.

The curriculum emphasizes developing scientific knowledge through clear, sequential concepts and terminology. Students are encouraged to apply their mathematical skills in scientific contexts, including data collection and analysis. "Working scientifically" integrates various inquiry methods across disciplines, enabling students to explore scientific questions through observation, classification, and controlled investigations, ultimately enhancing their understanding and motivation in science.

### Inclusive Approach

All children will be appropriately challenged, with tasks to suit their needs. Children will experience a variety of different tasks, to ensure a good level of progression. The tasks provided will allow the children to develop their scientific skills and knowledge as they continue throughout school.

St Michael's Vision and Values



Planning

### Assessment and Data

In Science lessons, we use Assessment for Learning (AFL) to help identify each child's next steps in their learning journey. Pupils will receive regular feedback from their teachers on their work which ensures that every student is supported in making progress. Teacher's will also continuously track and document each child's progress over time.

### Milestones

The Science curriculum is planned around a series of progressive milestones. The milestones focus on the knowledge and skills that children need to learn to be successful in Science.

Progress

Teaching

### Resources

At St Michael's we use a range of resources to deliver the Science curriculum. Resources play a crucial role in supporting hands-on learning and helping students explore scientific concepts in a practical way. A wide range of materials, are used to enhance investigations and experiments. These resources allow students to observe, measure, and test their ideas.

Science

### Children's work

Children's work is completed in science books. Science books will show the learning journey through a unit, as well as show the scientific enquiry skills they have practiced and applied in Children's work is recorded in their science books, which serve as a reflection of their learning journey throughout each unit. These books not only document the key concepts and ideas explored, but also highlight the scientific enquiry skills students have practiced and applied in context.

Science is the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment.

Biology - is the Science of life and living organisms.

Chemistry - is a branch of science that studies what everything is made of and how it works.

Physics - is a branch of science that helps us understand how objects, forces and energy all interact.

Intent - At St Michael's, science promotes and implements a range of knowledge, skills and understanding of nature, processes, and methods of scientific enquiry. We challenge all pupils to question their ideas and create a safe and fair environment to encourage this.

A scientist works accurately and precisely. They are curious and ask questions to explore and test predictions and theories.

### Cross-Curricular

Where possible, we aim to make links across the curriculum to make learning more meaningful. In Science lessons, we apply mathematical skills, such as measuring, data analysis, and pattern recognition, to support scientific inquiry. Science learning is also reinforced across other subjects. For example, applying an understanding of electricity to design and build torches in DT.