

William Cassidy Church of England Primary School

Science Policy

*'Life in all Fullness'
(John 10:10)*



As a school, we want to provide our learners with the very best education. To let them experience life in all its fullness and living with all their heart. Our main core value of love underpins all that we do. Our school is Christ-centred and our core Christian values of love, respect, courage, service and resilience flow through every aspect of school life. It is on this bedrock that we provide an excellent education for our whole school family. We want our entire school community to be the very best that they can be and to recognise that they are precious, loved and valued.

Introduction

At William Cassidy C of E (Aided) Primary School, we believe that a high-quality Science curriculum will provide all pupils with strong foundations for understanding the world around them. We want all children to develop a love of science and we aim to nurture children's excitement and curiosity, and give them opportunities to explore and investigate, whilst developing their understanding of the nature, processes and methods of science. We also want children to be able to talk about what they know, so we place a strong emphasis on vocabulary when introducing new scientific knowledge and concepts. We have organised our curriculum in a way which maximises progression of both scientific skills and knowledge for all pupils. We also engage with STEM professionals and businesses in our community, visit places in our local area and celebrate key STEM events to help pupils to understand the uses of science, today and for the future.

Our Vision

At William Cassidy Primary School, our vision for science is to spark children's curiosity and excitement, and encourage a love of science which will help children to understand and contribute to the ever-changing world around them. We use practical experiences whenever possible, and support children in developing key scientific skills such as investigating and exploring, and giving explanations based on the knowledge they have acquired. It is our intention that, by the end of each year group (and key stage), children will be able to confidently talk about the scientific concepts they have learned about.

We believe that science should...

- **Spark curiosity!** - Children's curiosity and enthusiasm is welcomed and encouraged
- **Be fun!** - Lessons should be engaging and fun!
- **Be practical!** - 'Hands on' lessons are planned for and taught whenever possible.
- **Be scientific!** - Children learn the scientific vocabulary and it is modelled and used confidently by staff.
- **Provide lots of opportunities to talk!** - Time to talk is planned into lessons.
- **Be relevant!** - Links to themselves and the world around them.
- **Be inspirational!** - Children learn about famous scientists, and how science is used in their local community

Curriculum and Content Overview

Key Stage One and Key Stage Two use 'Kapow' - a scheme of work which meets the requirements of the curriculum as outlined in the Science Programme of Study. The scheme aims to develop scientific knowledge and understanding by observing, studying and explaining the physical world; to develop skills for working scientifically by teaching children how to use different methods of scientific enquiry to understand the world around them; and to enable children to learn about science in action by learning how science can be used, and its impact on our day-to-day lives. Within the scheme, the content for each year group is divided into topics which are sequenced to enable progression both through the year and from year group to year group.

EYFS

Science is taught in Nursery and Reception through topic and theme work, and through continuous and enhanced provision, and adheres to the requirements set out in the Statutory Framework for the Early Years Foundation Stage (2025), specifically within the 'The Natural World' strand of the Understanding the World area of learning. Within the framework, the Educational Programme for Understanding the World states:

'Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them - from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.'

The Early Learning Goal for The Natural World is:

'Explore the natural world around them, making observations and drawing pictures of animals and plants; know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.'

Staff in our EYFS have developed a 'Understanding the World' curriculum by unpicking the skills and knowledge that the children will need to acquire in our Nursery and Reception classes and tracking progress through a bespoke progression document to give them the best possible chance of achieving the Early Learning Goal by the end of the foundation stage.

Key Stage 1 and Key Stage 2.

In Key Stages 1 and 2, there is an emphasis on **Working Scientifically**. This means developing key skills including:

- ▲ Asking questions
- ▲ Making accurate observations
- ▲ Using equipment
- ▲ Investigating ideas
- ▲ Identifying and classifying
- ▲ Using observations and ideas to suggest the answers to questions
- ▲ Gathering, recording and presenting data in different ways

The programmes of study show clear development and progression throughout the year groups so that by the end of Key Stage Two, children have a sound understanding of a wide range of scientific skills.

Key Stage 1

In Key Stage 1, pupils have opportunities to experience and observe science in the world around them. They learn mostly through practical experiences but also through appropriate secondary sources such as books and photographs. They are encouraged to be curious and to ask questions about what they notice. They are helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They begin to use, read and write simple scientific language and vocabulary and they have the opportunity to communicate their ideas in a variety of ways.

Pupils are taught about:

- ▲ Plants
- ▲ Animals (including humans)
- ▲ Everyday materials and their uses
- ▲ Seasonal changes

- ▲ Living things and their habitats

Lower Key Stage 2 (Years 3 and 4)

In Lower Key Stage 2, pupils broaden their scientific view of the world around them. 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 some scientific language, first, to talk about and, later, to write about what they have found out. They learn to read and spell scientific vocabulary with confidence.

Pupils are taught about:

- ▲ Plants
- ▲ Animals, including humans
- ▲ Rocks
- ▲ Forces and Magnets
- ▲ Living things and their habitats
- ▲ States of matter
- ▲ Sound
- ▲ Electricity

Upper Key Stage Two (Years 5 and 6)

In Upper Key Stage 2, pupils develop a deeper understanding of a wide range of scientific ideas. They do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. Children encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They also begin to recognise that scientific ideas change and develop over time. They select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. Pupils learn how to read, spell and pronounce scientific vocabulary correctly.

Pupils are taught about:

- Living things and their habitats
- Animals, including humans
- Properties and changes of materials
- Earth and space
- Forces
- Evolution and inheritance
- Light
- Electricity

Homework

Children receive some homework relating to science topics. Often, this will also develop skills in other subjects such as English and Maths. The school's learning platform is also used to support children in developing their understanding at home by completing activities or research.

Cross-Curricular Links

Science topics are taught in a way which supports and enhances a wide range of subjects and skills. Through science, teachers promote literacy skills such as learning scientific language, reading and writing vocabulary, speaking and listening skills and recording and presenting information in different ways. We recognise the importance of making links between Science, Technology, Engineering and Maths (STEM) and we work hard to develop STEM skills in science lessons (e.g. Maths - taking measurements, grouping and classifying, recording data; Computing - researching, taking measurements and recording, using programmes such as 'Seesaw'; Engineering/ Design Technology - drawing diagrams, learning about the suitability of materials for a purpose, etc...). We also have an annual Science week every year which includes lots of cross-curricular work. Additionally, important events in the scientific calendar are celebrated.

Assessment and Progress

We assess pupils' progress through:

- Ongoing formative assessment within lessons
- Summative assessment at the end of units
- End of Key Stage assessments

At the time of writing, assessment in Science is being developed so that it can be monitored and recorded on the school MIS. Data will then be analysed across the whole school by the Science leader to assess if children have understood the core content. The outcomes of the data

analysis will inform future planning and assess the impact of Science teaching. The Science leader can strategically analyse the data to unpick the attainment and progress of specific groups such as: boys, girls, PP, non PP and SEND.

Role of the Science Leader

The Science Leader:

- Oversees planning, teaching, and assessment of Science
- Supports staff with training and resources
- Monitors the quality of Science provision
- Stays up to date with key developments in primary science by attending termly meetings with a primary science advisor, and by liaising with STEM ambassadors

Links to Other Policies

This policy should be read alongside:

- Spiritual, Moral, Social, and Cultural Development Policy
- Behaviour Policy
- Equality and Inclusion Policy
- Teaching and Learning Policy
- Health and Safety Policy

Policy agreed by the Governing Body: January 2026

Date for review: January 2026