

Believe and Achieve Together



St Mary's CE Primary School

Science Policy

Adopted:	December 2019
Reviewed:	January 2023
Next Review:	January 2026

¹In the beginning God created the heavens and the earth.
Genesis 1:1

Aims

Our Science Policy follows the National Curriculum 2014 and we strive to develop children's scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics. This includes an understanding of nature, processes and methods of science through enquiries that help them to answer specific scientific questions about the world around them. This will equip them with the knowledge required to understand the uses and implications of science, today and in the future.

- To develop a positive attitude towards science and an awareness of its fascination
 - An understanding of science through a process of enquiry and investigation
 - Confidence and competence in scientific knowledge, concepts and skills
 - An ability to reason, predict, think logically and to work sympathetically and accurately
 - An ability to communicate scientifically
 - The initiative to work both independently and in cooperation with others
 - The ability and understanding to use and apply science across the curriculum and real life.
-

Teaching and Learning

Science is taught as part of a planned programmes of study which set out what should be taught through EYFS and KS1 and 2, often building on, consolidating and extending previous knowledge. Science is taught both indoors and outdoors, making use of our School and Community Garden.

Science enables children to develop skills across the curriculum, as all the areas of learning and development at the Foundation Stage are inter-connected. Through engaging in science activities, children learn about the world around them and develop key skills which in turn prepares the children for the Science Curriculum in KS1 and KS2.

The programmes of study for science are set out year by year for key stage 1 and 2. We are however only required to teach the relevant programme of study by the end of the key stage. Key Stage 1 and 2 follow a 2 year rolling programme to ensure coverage and progression.

We aim to include science teaching cross-curricular, when it is appropriate. In addition, several mathematic concepts can be taught through science, especially data collection, data presentation and interpretation. In addition, we also teach healthy living (including drug education) and RSHE (Relationships, Sex and Health Education) as part of the science curriculum.

Key Stage 1

The main focus of science teaching in KS1 is to enable pupils to:

- experience and observe phenomena,
- look more closely at the natural and humanly constructed world around them.
- be curious and ask questions about what they notice.
- 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.
- use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.

Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos. Pupils should read and spell scientific vocabulary at a level consistent with their reading and spelling knowledge at Key Stage 1.

Key Stage 2

The main focus of Science teaching in Lower Key Stage 2 (Year 3-4) is to enable pupils to broaden their scientific view of the world around them. They should 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.
- asking 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 fair tests and finding things out using secondary sources of information.
- drawing simple conclusions and using some scientific language, first, to talk about and, later, to write about what they have found out.
- reading and spelling scientific vocabulary correctly and with confidence, using their growing reading and spelling knowledge.

The main focus of Science teaching in Upper Key Stage 2 (Year 5-6) is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through:

- exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.
- encountering more abstract ideas and beginning to recognise how these ideas help them to understand and predict how the world operates.
- beginning to recognise that scientific ideas change and develop over time.
- selecting 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 fair tests and finding things out using a wide range of secondary sources of information.
- drawing conclusions based on their data and observations, using evidence to justify their ideas, and using their scientific knowledge and understanding to explain their findings.
- reading, spelling and pronouncing scientific vocabulary correctly.

‘Working and thinking scientifically’ is always taught through and clearly related to substantive Science content in the programme of study.

Assessment and monitoring

This is achieved through:

- observation of pupils engaged in scientific tasks and activities,
- marking of work
- tracking subject coverage across year groups and Key Stages using Target Tracker
- assessment of pupil knowledge at the end of each unit in order to establish learning related to age-related expectations.
- Completion of Subject Lead devised assessment sheets to ensure and monitor coverage by the end of KS1 and KS2.

- monitoring and evaluation of pupils' work;
- lesson observations;
- monitoring of teaching, learning and assessment

Health and Safety

Teachers must plan safe activities for science and complete a risk assessment if necessary. Teachers and teaching assistants need to be aware of health and safety procedures when using equipment/food in science lessons. Pupils must be aware of the need for personal safety and the safety of others during science lessons.