

*'Live Fully, Laugh Often, Learn Deeply,
Love as God Loves You and Let Your Light Shine!'*

Bishops' C of E & R C Primary School



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SCIENCE POLICY

The Policy was formally adopted by the Governing Board on:	Date: Summer 2026	Next Review Date: Summer 2029
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Science Policy

The Importance of Science in primary schools:

"The teaching of Science offers students the ability to access a wealth of knowledge and information which will contribute to an overall understanding of how and why things work like they do. Children and students are able to use this knowledge to understand new concepts, make well-informed decisions and pursue new interests. Science also helps to provide tactile or visible proof of many facts we read about in books or see on the television; this helps to increase understanding and helps children to retain that information." **Centre for Education in Science and Technology.**

Statement:

The Bishops' Primary School understands the need for all pupils to develop their scientific ability as an essential component of all subjects and as a subject in its own right. A good understanding of scientific knowledge and conceptual understanding helps to support pupils' work across the curriculum, and promotes a sense of wonder and exploration. Our school does not see scientific knowledge as conflicting with religious understanding, rather each are complementary.

Introduction:

This policy outlines our key objectives for the teaching of Science. The policy is based on the National Curriculum 2014 Science Guidelines and the EYFS Framework. We aim that all pupils:

- are curious and ask questions about why and how things work
- are prepared for life in an increasingly scientific and technological world
- are concerned about, and actively care for, the environment
- develop scientific knowledge and conceptual understanding through the linked disciplines of Biology, Chemistry and Physics
- develop understanding of the nature, processes and methods of Science through different types of scientific enquiries
- are equipped with the scientific knowledge required to understand the uses and implications of Science, today and in the future

Purpose of Study

A high-quality Science education provides foundations for understanding the world. Science has changed our lives and is vital to the world's future prosperity and survival. Through building key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation. They will also develop a sense of excitement and curiosity

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about natural phenomena. Pupils are encouraged to understand how key knowledge and concepts can be used to explain what is occurring, predict how things will behave, and analyse causes.

In teaching Science, we are developing in our children:

- a positive attitude towards Science
- 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 systematically and accurately
- an ability to communicate scientifically
- the ability and understanding to use and apply Science across the curriculum and real life

In order to achieve our aims, we will:

- provide a stimulating environment to promote effective learning in Science
- ensure continuity and progression in Science by liaising with colleagues on areas covered
- give children lots of opportunities to develop and apply investigative skills
- provide necessary resources for children to be taught effectively
- provide a safe environment in which to explore Science

Planning the School Curriculum

The programmes of study for Science are set out year-by-year for Key Stages 1 and 2 and in the EYFS on “Understanding the World”. We add to this our own Global Dimensions focus and an emphasis on the awe and wonder of God’s creation. The themes and topics for Science are mapped out clearly for each year group to ensure progression. As a core subject, Science is taught on a weekly basis, and from Year 2 upwards class work is recorded in a dedicated Science book. Science is topic linked where possible and emphasis is placed on practical investigative skills. Medium term planning is threaded through on to a main topic web and Science themes apply across the year. Future topics will link to eco and green themes.

Scientific Knowledge and Conceptual Understanding

The programmes of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is also essential that they develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage.

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Pupils should be able to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely. They should build up an extended specialist vocabulary.

The Science curriculum reflects the importance of spoken language in pupils' development. 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. They must be assisted in making their thinking clear, both to themselves and others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

They should also apply their mathematical knowledge to their understanding of Science, including collecting, presenting and analysing data.

The Nature, Processes and Methods of Science

'Working scientifically' specifies the understanding of the nature, processes and methods of Science for each year group. 'Working scientifically' should be taught through and clearly related to substantive Science content in the programme of study.

Key Stage 1

The main focus of Science teaching in Key Stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They will be encouraged to be curious and ask questions about what they notice. Pupils will be 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 will begin to 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.

Lower Key Stage 2 – Years 3 and 4

The main focus of Science teaching in Lower Key Stage 2 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. They should 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,

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noticing patterns, grouping and classifying things, carrying out simple fair tests and finding things out using secondary sources of information. Pupils should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing reading and spelling knowledge.

Upper Key Stage 2 – Years 5 and 6

The main focus of Science teaching in Upper Key Stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They will do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.

At Upper Key Stage 2, they will encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They will also begin to recognise that scientific ideas change and develop over time. Pupils will 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 fair tests and finding things out using a wide range of secondary sources of information. Pupils will 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 should read, spell and pronounce scientific vocabulary correctly.

Equal Opportunities

Science is planned to meet the varied needs of all learners regardless of their gender, background, and culture, physical or cognitive development. Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias. We recognise that Science may strongly engage our gifted and talented children, and we aim to challenge and extend them.

Health and Safety

Staff are aware of the need to check all Science resources for safety. Any unsafe items are removed from the resources cupboard and are reported to the Science subject leader. The children are taught to use equipment safely and carefully.

Records and Assessment

Levels in Science are reported formally at the end of the academic year, based on the National Curriculum statements. At the end of the academic year, class teachers will indicate whether a pupil is working towards, just at, securely at, or at greater depth when it

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comes to their year group level. Teachers use a bank of statements that are from the National Curriculum Statutory Requirements to help them identify a child's level. By the end of each Key Stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Judgements about pupil performance are informed by this assessment. There are also a variety of AfL strategies where the children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve.