



ST. ANNE'S COPP CHURCH OF ENGLAND PRIMARY SCHOOL, GREAT ECCLESTON



SCIENCE POLICY



"Let us love, not in word, but in truth and action." (1 John 3:18)

October 2026

Approved by GB: September 2026

Next review due: October 2027 (subject to Governing Body approval)

In building solid foundations for every unique individual and putting God's love at the centre of all we do, our children learn to embrace our diverse world. We encourage our children to learn universally in order to understand our heritage and roots as a village, town, region and nation. Through strong community links, our children grow in **compassion** and **understanding**, **promote justice** and possess commitment and **aspire** to make a positive difference. We offer an ambitious curriculum that ignites **curiosity** along with high personal expectations that fosters **resilience** and which enables them to flourish. Our children are easily distinguished by the **courage** they show when making brave choices and understand the importance of becoming the very best versions of themselves.

AIMS

The Science curriculum will stimulate interest and curiosity in the world around us, through developing knowledge and understanding of scientific ideas; encouraging the children to think critically, developing skills in prediction, testing, analysing and arriving at scientifically based conclusions.

Skills development will be acquired through a range of scientific enquiry following the National Curriculum requirements of study at KS1 and KS2, taught through allotted science lessons, and monitored by class teachers and the Science Leader.

Practical exploration and investigation (working scientifically) is a key component of the science curriculum in order that pupils learn to ask pertinent questions and can test their own conclusions about scientific processes or fair tests against accepted opinion. Much of our science curriculum is learned outside and, as we are at the heart of a rural community, we make full use of the natural world around us to engage our pupils in science.

In the Early Years Foundation Stage (EYFS), early scientific learning is developed primarily through Understanding the World, in line with the statutory EYFS framework effective from September 2026. Children explore their physical environment, observe changes, ask questions and develop vocabulary through purposeful play, practical experiences and adult-guided exploration. The early learning goals support assessment at the end of Reception and are not used as the curriculum itself.

Science teaching will be inclusive and ambitious for all pupils, including those with special educational needs and disabilities (SEND) and pupils ready for greater depth. Teachers will adapt teaching through clear explanations, carefully selected vocabulary, practical resources, visual prompts, flexible recording methods and appropriate adult support, while maintaining access to the intended scientific knowledge and enquiry. Pupils requiring

additional challenge will be encouraged to explain, apply and deepen their understanding. Activities may involve whole-class, group or individual work.

Science provides purposeful opportunities to apply mathematics, English and computing skills, including measuring, recording and presenting data, reading scientific information and communicating explanations. Connections may also be made with PSHE, environmental understanding and sustainability where they strengthen the science being taught (see appendices for additional information).

Guidelines on health and safety will be noted and followed by staff.

Practical investigation will be encouraged and a variety of recording techniques (photographs, video and audio recordings, models, drawings, notes, floor books) will be used. Children will be encouraged to work independently and to test their own conclusions about scientific processes or fair tests against accepted opinion.

To support, engage and challenge our more able children, or those who have a keen interest in science, we run an after-school club each year working on The Crest award where children gain a certificate and badge for completing a variety of science tasks.

NATIONAL CURRICULUM COVERAGE (Current statutory programmes of study apply pending the planned revised curriculum for first teaching in September 2028.)

Science is planned as a coherent, progressively sequenced subject, following the current statutory National Curriculum for England. Teachers identify the essential knowledge, scientific vocabulary and working-scientifically skills pupils should build on from year to year. Meaningful links with other subjects and real-life contexts are used where helpful, but scientific concepts are taught explicitly when needed to secure accurate understanding.

In the Early Years Foundation Stage, children develop foundations for science primarily through the Understanding the World area of learning, following the current statutory EYFS framework. Experiences include exploring the natural world, observing seasonal and other changes, noticing similarities and differences, and developing language to describe what they see.

The principal focus of science teaching in key stage 1 is to enable children to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should 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 should 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.

The principal focus of science teaching in lower key stage 2 is to enable children 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, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

The principal focus of science teaching in upper key stage 2 is to enable children 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. At upper key stage 2, they should encounter more abstract ideas and begin to recognise

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how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should 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. Children should 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.

Working scientifically is taught through, and clearly related to, the scientific knowledge in the programmes of study. Pupils encounter different approaches to enquiry, including observing over time, pattern seeking, identifying and classifying, comparative and fair testing, and researching using secondary sources. Teachers revisit these approaches with increasing independence and sophistication across the school.

ASSESSMENT and MONITORING

At Key Stages 1 and 2, assessment considers pupils' understanding of the scientific knowledge and vocabulary identified in each unit. Teachers check relevant prior learning, use questioning, observation, discussion and pupils' recorded work to identify misconceptions during teaching, and review understanding at appropriate points, including towards the end of a unit. Opportunities to revisit important concepts help teachers evaluate retention and plan responsive teaching.

'Working scientifically' will be assessed in an ongoing manner and also through a focused lesson. It is based on observations and discussions with pupils, as well as analysing work in books. Progress throughout the area of 'working scientifically' will be monitored through the use of a target sheet

displayed in the classroom so that the children and staff are able to see development through the skills and ensure that lessons are tailored towards areas which have not been covered as frequently.

Prior assessment data will also allow us to monitor whether children have made slower progress than expected, allowing suitable intervention to be put into place.

The Science Leader will review samples of pupils' work and other available evidence across year groups to evaluate progression in knowledge, vocabulary and working scientifically, and identify priorities for subject development.

The Science Leader will evaluate the quality of science education through proportionate monitoring, which may include lesson visits, pupil discussions, staff dialogue, planning reviews and work scrutiny. Findings will inform support, professional development and curriculum improvement.

Double-page spreads will be monitored to monitor the impact of teaching on the children's understanding and to see if vocabulary is present that helps the child explain their understanding. These will be monitored each half term.

PRIMARY/SECONDARY LIAISON

St. Aidan's, Hodgson and Garstang High both offer opportunities for KS2 pupils to visit for science workshops.

RESOURCES

Resources for science are based mainly outside the staff room in the labelled drawers. Materials and reference books specific to particular age groups may be kept in the

classroom. Each year, staff will be asked to indicate any further resources needed. These will be collated by the Science Leader.

HEALTH & SAFETY

Science activities must follow the school's Health and Safety Policy and suitable activity-specific risk assessments. Staff should consult current guidance relevant to the activity, including the Association for Science Education's Be Safe! (fourth edition) and current CLEAPSS primary science guidance where accessible. Appropriate precautions must be taken for equipment, substances, hygiene, allergies, outdoor work and supervision. Food used for scientific investigation must not be eaten unless the activity has been specifically planned and risk-assessed for consumption. Staff should check the latest advice rather than rely on an outdated edition.

Appendix I

KINDS OF ENQUIRY

Scientific questions can be investigated using five main enquiry approaches: comparative and fair testing; research using secondary sources; observation over time; pattern seeking; and identifying, grouping and classifying. Problem-solving provides opportunities to apply scientific knowledge and may draw on more than one of these approaches. The diagram below illustrates these approaches and their application.

Comparative / fair testing

Changing one variable to see its effect on another, whilst keeping all others the same.



Research

Using secondary sources of information to answer scientific questions.



Observation over time

Observing changes that occur over a period of time ranging from minutes to months.



Pattern-seeking

Identifying patterns and looking for relationships in enquiries where variables are difficult to control.



Identifying, grouping and classifying

Making observations to name, sort and organise items.



Problem-solving

Applying prior scientific knowledge to find answers to problems.



What science looks like at St Anne's Church of England Primary School, Great Eccleston:



Adult poster

Lessons show progression throughout units and between year groups.

We ask questions and work together to discuss the answers.



Science has a wow factor and promotes a sense of awe and wonder.

We apply our 'working scientifically skills' to solve problems, explore, observe and investigate.



We are involved in creating and carrying out investigations and can share and explain our ideas and conclusions.

Children are given the autonomy to develop own lines of enquiry and plan investigations to test them.

Our learning is enhanced by outdoor learning, specialist visitors and access to relevant resources.

We actively participate in lessons through practical work to stimulate inquisitiveness.

We believe that Science should inspire children to explore the world around them and give them the knowledge they need to explore it.

We use relevant scientific vocabulary to explain our thinking.

We apply our 'working scientifically skills' to solve problems, explore, observe and investigate.

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Child poster

Science is great when we learn in small steps.

Science is great when we ask questions and work together.



Science is great when it makes us wonder.

Science is great when we explore, observe and investigate our ideas.



Science is great when we talk about our learning.

Science is great when we create and carry out investigations and work like a scientist.

Science is great when we learn outside, have visitors and have resources we need.

We believe that Science should inspire children to explore the world around them and give them the knowledge they need to explore it.

Science is great when we use scientific vocabulary to explain our thinking.

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