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)

September 2025

Approved by GB: September 2025
Next review due: September 2026

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.

Science activities at Foundation Stage are part of the early learning goals, mainly in the area of "Knowledge and Understanding of the World". Emphasis will be placed on exploring scientific concepts through play activities.

Science lessons will be adapted by individual teachers to cater for a range of abilities, including children with special educational needs and those highlighted as gifted and talented. Classroom organisation will vary with the approach used – activities may include whole class, group and individual work.

Science offers a range of contexts for the development of maths, English and ICT skills and contributes to the wider curriculum, particularly through its links with PSHE (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

Where possible, science is taught within themes in order to make it a real-life learning process and lessons are differentiated appropriately, although there are sometimes concepts which need to be taught discretely.

Children in the foundation stage are taught the scientific elements of the foundation stage document through the Early Learning Curriculum: Knowledge and Understanding of the World.

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 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' will always be taught through, and clearly related to, the teaching of the Science content in the Programmes of Study.

ASSESSMENT and MONITORING

At Key Stage 1 and Key Stage 2, children will be assessed on their understanding of the scientific knowledge outlined in each unit of work. Assessment is done through observation, discussion with pupils and work scrutiny and is further backed up by knowledge based testing/questioning towards the end of the unit, so that misconceptions can be addressed effectively before moving on to the next unit.

'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.

Scrutiny of work by the Science Leader will take place and progression throughout the school will be evaluated.

Lesson observations by the Science Leader will monitor the effectiveness of teaching and learning in science throughout the school.

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

The School's Health & Safety Policy for teaching Science is largely contained within 'Be Safe! Health & Safety in Primary School Science and Technology' (Third edition 2001 Association for Science Education). A copy is kept in the staff room. When children are handling and using food during science lessons, they are aware that this food is not for consumption and that it is disposed of in an environmental and safe manner.

Appendix 1

KINDS OF ENQUIRY

You can find out the answers to scientific questions by:

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.

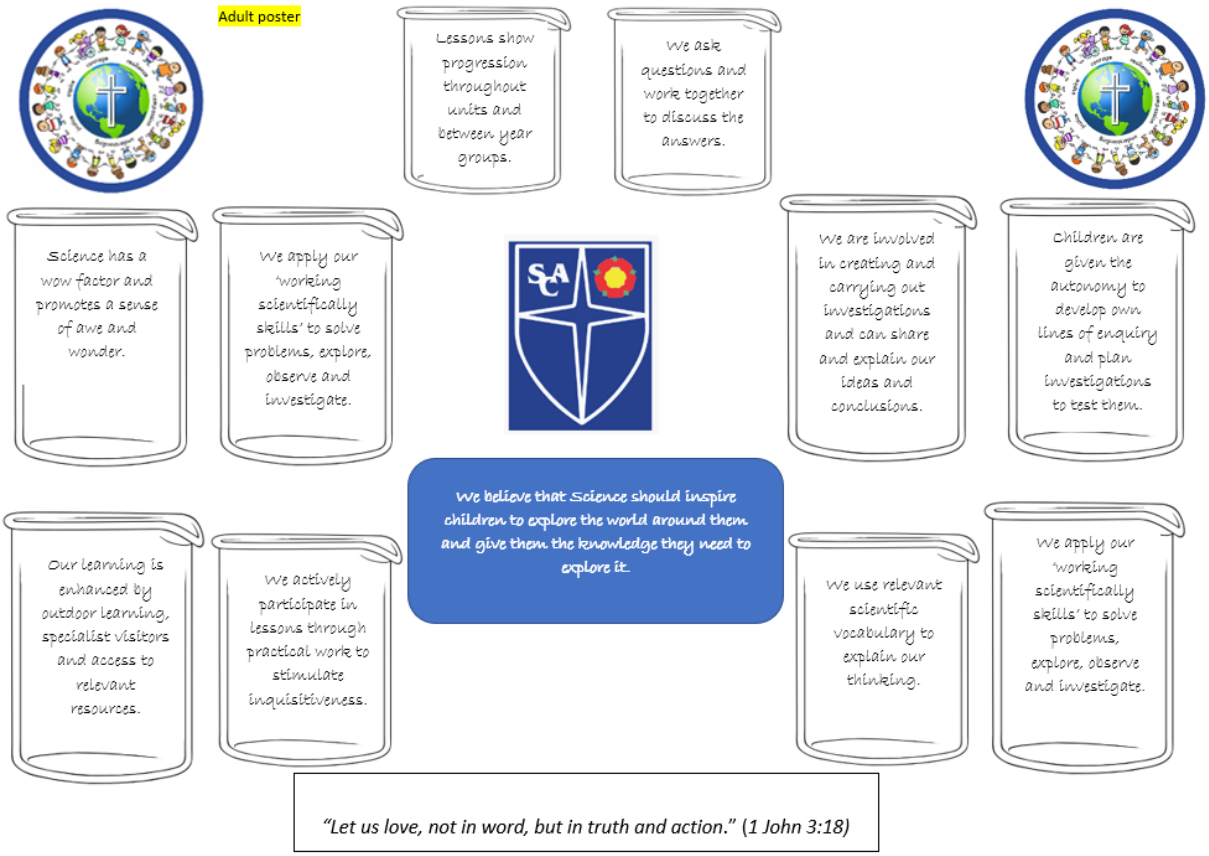
Observation over time
Observing changes that occur over a period of time ranging from minutes to months.

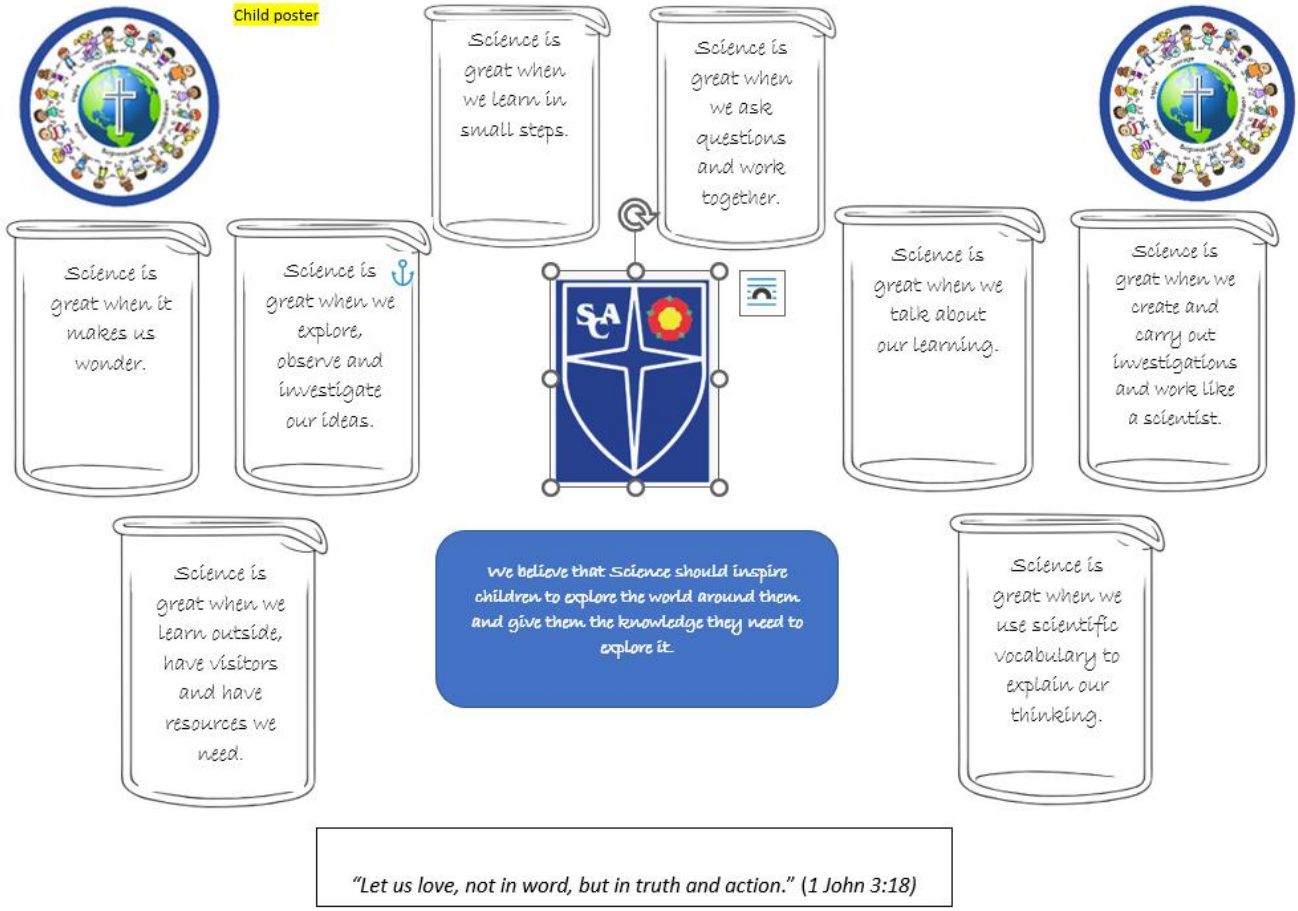
Pattern-seeking
Identifying patterns and looking for relationships in enquiries where variables are difficult to control.

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:





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