Hose Church of England Primary School

Science Policy

*"**Whatever you do, work at it with all your heart**" Colossians 3.23.*

Headteacher: Lianne Hough

Chair of Governors: Emily Greasley

Policy written by: J. Clifford

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Values

We give our children the chance to develop culturally, emotionally, intellectually, socially and spiritually so that they might prosper and flourish in all that they do.

The purpose of our curriculum at Hose Church of England Primary School is to open the door to the world beyond our village for our children. We aspire for our children to leave Hose full of knowledge and wonder for the world they live in and to be ready to take on challenges with confidence and pride. We believe that a high-quality science education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. The 2014 National Curriculum for Science sets out clear expectations for what should be taught, including essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. This policy outlines how science is taught and assessed at our school, in line with the expectations set by Ofsted.

Aims and Objectives

At Hose Church of England Primary School, we are committed to providing high-quality Science education that inspires curiosity, fosters scientific thinking, and develops a deep understanding of the world around us. Our Science curriculum is designed to meet the requirements of the 2014 National Curriculum in England and the expectations set by the relevant school inspectorate.

1. To develop curiosity and a love for Science.
2. To provide a broad and balanced Science curriculum.
3. To develop scientific knowledge and conceptual understanding.
4. To develop the skills of scientific inquiry and investigation.
5. To promote respect for the environment and sustainability.

National Curriculum Aims

The National Curriculum (2014) for Science aims to ensure that all pupils:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Curriculum Provision

Our school's Science curriculum is designed to be broad, balanced, and engaging. It is carefully planned to ensure progression in substantive knowledge and disciplinary skills throughout a pupil's time at Hose Church of England Primary School. The Curriculum follows a two-year planning cycle and allows for in-depth exploration of key themes and concepts across our mixed age classes, including continuous provision opportunities in the Early Years Foundation Stage (EYFS). Topics not only meet the statutory national curriculum requirements but are design to engage the children in the world around them. This allows the sequences of lessons to reflect the interests and experiences of our pupils, in an engaging manner.

Substantive knowledge

The programmes of study provide a sequence of knowledge and concepts which allows children to develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. Children are able to describe associated processes and key characteristics in common language and be familiar with and use technical terminology accurately and precisely. Children will be given opportunities to apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.

Disciplinary knowledge

Disciplinary knowledge or "working scientifically" specifies the understanding of the nature, processes and methods of science for each year group. This is not taught as a separate strand but is embedded within the content of each block focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions.

These types of scientific enquiry should include:

- observing over time;
- pattern seeking;
- identifying, classifying and grouping;
- comparative and fair testing (controlled investigations);
- researching using secondary sources.

Key Themes

Golden threads of diversity, health, environmental impact and innovation weave through our curriculum, making links between units and across year groups. Key themes are revisited over time, ensuring the development of deeper understanding of concepts and disciplinary knowledge.

Teaching and Learning

- In KS1 and KS2 Science is taught weekly across a 2-year rolling program of study.
- Lessons are interactive and engaging and utilise a range of teaching methods to meet the needs of learners.
- A variety of contexts, a diverse range of high-quality texts and resources are incorporated to engage pupils in scientific inquiry and motivate them to study science.
- Children are provided with opportunities for research and collaborative projects to develop scientific skills.

- In EYFS, curriculum links have been identified and opportunities for learning about the past and change over time are built into learning opportunities and continuous provision. These can be seen in our EYFS Curriculum Links document.

Resources and Enrichment

- Ensure access to a range of age-appropriate scientific texts, equipment, and digital resources.
- Use external resources such as Explorify and Twig Science Reporter to enrich children's understanding of science and the social and economic implications of science.
- Organise themed Science days, workshops, and educational visits to enhance learning experiences.

Assessment and Feedback

- Formative Assessment will be used consistently to inform teaching and learning, ensuring individual progress is monitored and supported.
- End-of-unit assessments and termly assessments will be carried out to evaluate pupils' understanding and inform future planning.
- Feedback Constructive feedback will be given to pupils to enhance their understanding and support their development.
- Further information on assessment and feedback can be found in the Marking and Feedback Policy.

Equal Opportunities

Each child is recognised as an individual in our learning community and adaptions will always be made to support every child to thrive. We will therefore adapt and ensure that:

- All pupils, including those with SEND, will have access to a broad and balanced Science curriculum.
- Science is taught in a way that respects and values the diversity of our school community and allows children to learn about life beyond the village's doors.
- Adaptive teaching approaches are utilised in all lessons to provide appropriate levels of support and to ensure all pupils can make progress.
- The curriculum is inclusive and accessible to all pupils, regardless of their background or ability.

Monitoring and Evaluation

The Science Leader is responsible for monitoring the quality of teaching and learning in Science, as well as the effectiveness of the curriculum implementation. This includes through the use of lesson visits, discussions with pupils and book-looks. Regular reviews of the curriculum ensure that it remains relevant, engaging and continues to fulfil the curriculum aims.

Summary of Expectations from Ofsted

- The most recent framework by Ofsted expects schools to deliver a Science curriculum that is ambitious, well-sequenced, and provides opportunities for pupils to acquire a secure understanding of key scientific concepts.
- Ofsted places an emphasis on developing pupils' skills of scientific inquiry, investigation, and evaluation.
- Inspectors will also look for evidence of how the school promotes a love for Science, encourages pupil-led investigations, and supports pupils of all abilities effectively.
- Effective assessment and feedback practices are key aspects that inspectors will consider when evaluating the quality of Science education in a school.

By following this Science Policy, our school aims to meet and exceed the expectations set by Ofsted and provide an outstanding geography education for all our pupils.