ST. HELEN'S CATHOLIC INFANT SCHOOL

Science Policy

Written by	Date	Ratified by	Date
J. Seaman	June 2023	Governors	June 2023

To be reviewed	Annually	Every 3 Years

Reviewed on	Reviewed by	Next review date
		2026

With Jesus alive in our hearts, we celebrate each other and learn together as a family.

Subject Intent

Our intent is to provide a broad and balanced curriculum, which develops children's independence and resilience.

- To ensure it is a broad and balanced science curriculum we use many opportunities to work in a cross curricular manner with many other subject areas. This then ensures a cross-curricular approach in each year group and across many science topics. For example, in Year 2 during the materials topic the children will also study art using textiles the skill of printing and then combine it with DT to design, create and evaluate a weaving frame.
- We enrich the curriculum further with a cultural calendar that enhances children's understanding of diversity and celebrates differences/similarities in line with our mission statement. We especially use these opportunities in science to: look at the work of scientists and their achievements in the world; by observing and trying foods across the world; by studying how the diversity of our world's environments affect species of animals and plants.
- We have embedded a Teaching and Learning Framework of strategies that are relevant to scientific skills and knowledge in each class to ensure independence and resilience skills are developed across the curriculum. In our science lessons, you will see prediction, observation, questioning and answering skills that prepare the child for their future scientific learning.

This ensures that children have a lifelong love of learning and are equipped for the next stage of their journey.

Legislation and Guidance

The National Curriculum 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 Senior staff and governors will always check for any known changes in legislation or local requirements before applying this policy.
- are equipped with the scientific knowledge required to understand the use and implications of science, today and for the future.

KS1 children will be taught the following five topics:

- Animals including Humans
- Plants
- Seasonal Change (Year 1 only)
- Everyday Materials
- Living Things and their Habitats (Year 2 only)

Statutory requirements for working scientifically:
During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying

- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

Safety
The school is aware of the importance of safety in all areas of school life, but particularly where Science is concerned. Teachers follow safety rules and regulations where necessary and try to develop an awareness and appreciation of safety amongst the children.

Roles and Responsibilities

The Science leader is responsible for providing an overview of the subject across the school to inform staff planning and to offer advice in the ways in which the curriculum can be delivered in an effective and engaging way. They should have an up-to-date knowledge of the subject requirements and ensure that these are met across the school, as well as having an overview of assessment. The Science leader also has a sound knowledge of the resources, which are available within school, and ensures that resources are replenished and updated as necessary.

Individual teachers are responsible for the day to day planning, delivery and assessment of the Science curriculum.

Organisation and Planning

The Science leader is responsible for the planning and implementation of any subject specific events, which are ran in the school.

All class teachers have the freedom to develop their teaching of science in a way that suits their class. This may include a variety of teaching and learning opportunities, such as: whole-class teaching, enquiry-based research, asking and answering science questions, reports, using a variety of data, such as graphs, pictures, and photographs, drama, discussions, collecting and presenting data, problem solving and researching scientific problems or current issues.

At Foundation stage, Science is taught through a topic based approach. Open ended and child-led activities are planned so as to provide opportunities for children to find out, investigate, ask questions and experiment.

Throughout Key Stage 1, our Science Curriculum is being taught through topic based lessons linked to the Science National Curriculum. Lessons across the school are mainly practical and there is less written evidence in books. Adults record children's observations and thoughts on post- it notes and other recording sheets which help gain a much better understanding of children's Scientific knowledge and understanding (rather than solely Literacy based ability). Evidence is collected in the form of photos, diagrams, quotes or other appropriate means of practical recording.

Our Long term and Medium Term Plans show which area of Science is being covered by Year 1 and Year 2 and at what time of year.

Resources
Most items of Science Equipment are kept in the Science Resource cupboard. It is all labelled and kept in sections dependent on topic. The resources are reviewed and updated regularly by the Science Leader.

Inclusion

'We believe that every learner is entitled to a full range of Science activities and that these are relevant to all children irrespective of their gender, age, ethnic background or disability'
Essex Every Learner Document

By following and closely monitoring progress of individuals, teachers can assess the needs of pupils in their care. There should be enough flexibility to plan appropriate activities and starting points for children with learning difficulties and those who are more able.

Monitoring Arrangements

Assessment and record keeping
Assessment of Scientific learning is an ongoing process, needing to be constantly updated, changed and acted upon. By nature, it is flexible and informal and may take many forms. This informs and influences the levels at which children are encouraged to work and the teaching methods employed. A number of strategies can be employed when assessing the child's Scientific skills including

- Discussion and questioning
- The child's own written account of an activity
- Video recording
- Models and detailed drawings
- The child's ability to see further scope for applying the skills
- Observing the child at work and making a note of what they say and do
- Testing

Progression, Continuity and Record Keeping

In order to identify the next steps of learning and challenge for each individual child we look at previous class records. At the beginning of each programme of study we find out what the children already know and plan activities accordingly. This will help each child increase their knowledge and understanding of a given Science topic.

Evaluation and Review

We discuss each topic as a year group at the beginning of each tern and during weekly planning and then review each topic after it has been taught. By doing this, we aim to ensure the effectiveness of our Science Scheme of Work.

The overall effectiveness will be assessed by the Science Leader through discussions with staff and reviewing the results of our ongoing teacher assessments.

This policy will be evaluated and amended every three years.

Links with Other Policies

We integrate curriculum areas together so that children can build concrete links between their developing knowledge and understanding and applying skills. For example, teachers ensure that whenever possible, the application of information and communication technology, literacy and/or mathematics is embedded when teaching the wider curriculum subjects. Through Knowledge and Understanding of the World and Science we incorporate where possible activities which contribute to the children's health education. The subject also lends itself to raising matters of care for the environment allowing us to promote the concept of positive citizenship.