Science Policy

2025-2026

Star of the Sea Catholic Primary School

Coordinator: Claire Byrne

Updated: October 2025

To be reviewed: October 2026

Intent

Here at Star of the Sea we strive to deliver the National Curriculum for Science to engage our children and enable them to develop a greater understanding of the world around them. We aim to teach Science lessons that create excitement, inspire questions and enquiry and enable children to find answers to these questions in fun and stimulating ways. By challenging the children to learn through enquiry skills they will have a practical experience that will equip them with the scientific knowledge they need to navigate the world around them. A curriculum which promotes questioning, challenge, practical working, investigation, evaluation, working collaboratively and using correct scientific vocabulary will help our children grow confidently as they adapt to the ever changing world around them. Our children are supported in this by our links with local industry to give our Science curriculum a real world context that will spark curiosity and inspire future ambitions.

Implementation

Teachers ensure high standards of teaching and learning in Science. Each topic is taught as a sequence of weekly lessons designed around the statutory requirements for Primary Science and gives full coverage of the National Curriculum.

At the start of each topic teachers take time to find out what our children already understand and want to find out through a variety of 'Assessment for learning' activities. It is important at this stage to understand where our children are at and to invite them to wonder, marvel and question the world around them. Teaching and reinforcing key vocabulary runs through each lesson so our children can understand the subject better and enable them to speak like Scientists themselves. We are committed to providing exciting, hands on and practical experiences for all children at Star of the Sea. It promotes a love for the subject, triggers enthusiasm, develops curiosity and fosters independent learning. Through high level questioning, discussions with children and sharing of ideas teachers can make regular assessments to identify gaps in learning and plan for this as necessary.

Children's scientific knowledge is built upon as they move through the school. By developing their use of subject vocabulary, enquiry skills and knowledge their ability to plan, investigate and then interpret results increases.

Once a year, the whole school participates in British Science Week which enables the children to gain a wider understanding of Science in the real world. They undertake challenges and can immerse themselves in science and its vocabulary. Children also experience links with Siemens who bring real world challenges and understanding into the classroom. Through our connection to Siemens we also provide STEM experiences with the Lego Explore challenge.

Impact

The Science curriculum at Star of the Sea allows the children to develop:

- A love of Science and a fluent vocabulary that enables them to articulate their ideas.
- An understanding of the important concepts and an ability to make connections within Science.
- A broad range of skills in using and applying Science.
- The ability to ask questions about their Science learning and reflect on their knowledge and experiences.
- The ability to show initiative in solving problems and answering questions across a wide range of familiar and new contexts.
- Independent learning in Science and completing pupil lead investigations.

Impact is measured in a variety of ways. These include:

- EYFS through the use of the Early Learning Goals specific to Science
- Key Stage 1 Science assessment
- Key Stage 2 Science assessment
- Formative teacher assessment through effective questioning and feedback
- Beginning and mid/end of topic 'Assessment for learning' activities
- Learning walks
- Peer to Peer coaching
- Book monitoring
- Pupil voice

1. Our rationale for teaching science

Science is a body of knowledge built up through the experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. Science is also a collaborative activity where ideas and suggestions are shared and investigated together. Through practical activities and teamwork, children experience and learn how to work together, have mutual respect and value social cohesion.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our aims in teaching science include:

- Preparing our children for life in an increasingly scientific and technological world.
- Fostering concern about, and active care for, our environment.
- Helping our children acquire a growing understanding of scientific ideas.
- Helping develop and extend our children's scientific concept of their world.
- Developing our children's understanding of the international and collaborative nature of science.

Attitudes

- Encouraging the development of positive attitudes to science.
- Building on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and responsibility.
- Building our children's self-confidence to enable them to work independently.
- Developing our children's social skills to work cooperatively with others.
- Providing our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.

Skills

- Giving our children an understanding of scientific processes.
- Helping our children to acquire practical scientific skills.
- Developing the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.

- Developing the use of scientific language, recording and techniques.
- Developing the use of ICT in investigating and recording.
- Enabling our children to become effective communicators of scientific ideas, facts and data.

2. Our teaching aims

- Teach science in ways that are imaginative, purposeful, well managed and enjoyable.
- Encourage and support children to ask questions about the world and use scientific processes to try and answer them.
- Support children to make links between science and other subjects.

Science is a core subject in the National Curriculum.

3. How science is structured through the school

Planning for science is a process in which all teaching staff are involved. Delivering a broad and balanced science education to our children is a core principle of our school. Science teaching in the school is about excellence and enjoyment. We adapt and extend the curriculum to match the unique circumstances of our school.

Foundation stage teachers teach Science as part of Knowledge and Understanding of the World where it is the focus on a regular basis. They provide further opportunities through continuous provision in the indoor and outdoor learning environments.

KS1 teachers aim to teach science for up to 90 minutes per week.

KS2 teachers aim to teach science for up to two hours per week.

Science is taught every half term throughout the school year. The school ensures that a broad and balanced science curriculum is followed in which enquiry is at the heart of our children's scientific learning.

Our science scheme ensures progression between year groups and topics are revisited. Teachers plan to suit their children's interests, current events, their own teaching style, the use of any support staff and the resources available. As a maintained school we ensure that any modification does not omit any of the National Curriculum.

4. Our approach to science

- We have adopted planning from PLAN Assessment, the Bishop Bewick Catholic Education Trust, Twinkl and Hamilton Trust which are adapted to our learner's needs and used with very careful consideration.
- The school uses the SEERIH enquiry logos explicitly with the children to enable them to understand the various types of science enquiry to support them in enquiry design in upper KS2.
- We encourage children to ask and answer their own questions as far as practicable.
- We sometimes use cross-curricular links to teach science with, for example, Computing, History, Art and English.
- We develop science informally through school visits, guest visitors, British Science Week and the Lego First Lego League Challenge.

5. Equal opportunities in science

Science is taught to encourage equal opportunities for all our children.

- We ensure that all our children can gain science knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds, whether from history, underrepresented groups and modern scientists.
- We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences.
- In our teaching, science is closely linked with literacy and mathematics.
- We recognise the particular importance of first-hand experience for motivating children with learning difficulties.
- We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking.

6. Assessment and recording in science

We use assessment to inform and develop our teaching.

- Topics begin with an assessment of what children already know.
- We assess for learning (AfL). Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve. Activities during, and at the end of, each topic record achievement and celebrate success.
- We mark work positively, making it clear verbally, or on paper, where the work is good, and how it could be further improved. Marking is in line with our Marking and Feedback Policy.
- Assessment is used to highlight areas where further support and consolidation is needed. Equally important is the continuous assessment of children's work, much of which is informal. This assessment is used to inform teaching throughout the school.
- TAPS Focused Assessment tasks are regularly used to assess children's enquiry skills.
- The Y2 & Y6 staff assess children's attainment and progress at the end of each key stage. This is based on assessment records and work samples from across the key stage and is supported by the science coordinator and previous class teachers if needed.
- Reports to parents are made verbally in the autumn and spring terms, and written twice a year, describing each child's attitude to science, and where they are in relation to age related expectations.

Review

This science policy will be reviewed by the science curriculum leader and the senior management team. Date for next review of this document October 2026.