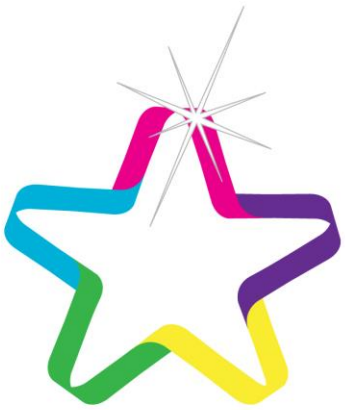

Trinity St. Peter's

Church of England Primary School

where children shine

Science Policy

At Trinity St. Peter's, we take pride in the teachings of our unique school values that underpin all learning. We promote the British fundamental values where British law, democracy and a mutual respect and tolerance for those of other faiths, cultures and beliefs is embedded through all areas of the curriculum.

Purpose of study

At Trinity St. Peter's we believe a high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed, and continues to change, our lives and all pupils should be taught 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. Children should be encouraged to look at the world around them with curiosity, understanding how science can explain the occurrences and help them to predict what will happen. Science should be taught in a relevant context ensuring that all children take an enjoyment in the concepts.

Aims

The 2014 Science National Curriculum is followed from Years 1-6 and 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 *ask and 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.

In line with the National Curriculum 2014, at Trinity St. Peter's we teach scientific enquiry through the recommended breadth of study; Scientific enquiry, Life processes and living things, Materials and their Properties and Physical Processes.

Teaching and Learning Style

At Trinity St. Peter's, Science is taught in imaginative and creative ways, reflecting the schools unique core values. As a school, where possible, we endeavour to link Science with the current theme or allow the units of study to lead the theme. Science is taught in a practical and investigative manner, exciting children and allowing them to form questions and hypothesise.

We believe children need the opportunity to observe 'science in action' and develop the skills of investigating, theorising, planning and forming conclusions through the context of real life learning and current themes/areas of study that are of a focus. Alongside these skills, we aim to teach children to be problem solvers so that they are able to work creatively and critically both independently and collaboratively. Teachers give clear and accurate explanations that offer skilful questioning and promote critical and scientific thinking.

Science Curriculum Planning

Science teaching in the school is about inquisition and enjoyment. Science is used to help enable our children to become creative and critical thinkers, by encouraging them to inquire and question. They are challenged to solve problems imaginatively and creatively. In order to do this, we support them carefully by giving well selected resources and stimulus, giving challenges that allow the children to come to a conclusion on their own.

EYFS

The EYFS Development Matters September 2021 curriculum guidance, 'Understanding the World' provides the opportunity for Foundation Stage children to make sense of their physical world and their community. There are a wide variety of opportunities for children in the Foundation Stage to develop their scientific knowledge and understanding through provision such as Forest School, sand and water play, planting and gardening, Moti-Lab and daily weather discussions. Nursery and Reception have created a curriculum overview to ensure that the curriculum starts in Nursery and progresses through the school building on children's knowledge and skills. Planning is taken from Twinkl units, which are saved on the shared drive. Teachers also plan for children's interest and fascination as and when is appropriate. This planning is modified in line with the school's 4C model so that the school's vision, values, and the characteristics of effective learning are embedded in classroom practice.

Key Stage 1 and Key Stage 2:

Key Stage 1 and Key Stage 2 follow the National Curriculum and have access to Grammarsaurus to aid planning. We build upon the knowledge and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusion based on real evidence.

Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. Teachers demonstrate how to use scientific equipment, and the various

Working Scientifically skills in order to embed scientific understanding. Teachers also find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.
In the Spring 2 Term, all children at Trinity St. Peter's engage in a Science focus term in order to explore scientists and their creations that have made the world the place it is today, engage in creative and 'wow' Science experiments and follow a whole school theme in support of British Science Week. Pupils in each class help to plan and inspire the Scientific coverage during this term.

Special Educational Needs

Pupils who are identified as having additional learning needs will access learning within the subject through Quality First Teaching resources and additional strategies as outlined in the child's SEN Support Plan.

Global Citizenship in Science

We wish to provide our pupils with the information and skills needed to become aware of the links between the local and the global, and enable them to become 'caring global citizens of the world' as stated in our school vision statement. This will involve challenging and supporting all our pupils to become critical thinkers, to develop independent learning skills and to learn about their rights and accept responsibilities. Global Citizen enriches the Science by enabling pupils to:

- Engage with the social, cultural and economic contexts in which scientific enquiry takes place
- Explore ethical issues surrounding science and its pursuit and uses
- Consider the contribution of science to debates around sustainable development and climate change
- Develop appreciation of interdependence within the natural world and between people and planet
- Provide opportunities to explore the contributions of different cultures to science

Staff also raise awareness of valid and up to date curriculum links, as well as national events relating to Science. Such examples include:

- February - Dental Health Month
- March - Brain Awareness Week
- March - British Science Week
- April - Earth Day
- May - Plastic Free Day
- June - Healthy Eating Week

Global Citizenship is assessed by the Subject Leader and Assistant Headteacher, in line with the Global Citizenship policy.

Spirituality in Science

Science has a huge potential for promoting spirituality as it opens up the wonders of the world to our young learners and by its very nature is a world of exploration, experimentation and investigation that can be both empirical and spiritual. The sense of awe and wonder in our world and our own place in it leads to many of life's biggest questions. Within Science lessons, children reflect on the outstanding beauty in our world and have the opportunity to ask and explore 'big questions' about life and living.

Assessment

In Reception, pupils are assessed against the EYFS Statutory Framework expectations for Understanding the World: The World.

In Key Stages 1 and 2 teachers assess children against the Science National Curriculum expectations through an end of unit quiz.

This provides data for assessment for each unit taught, which enables individual children to be tracked to monitor progress and identify any appropriate support.

This will be reviewed on a termly basis by the subject leader to monitor coverage and progression.

At the end of the Autumn, Spring and Summer Terms, children are then assessed as: 'working towards the expected standard', 'working at the expected standard' or 'working at a greater depth within the expected standard.'

Monitoring and review

The coordination and planning of the Science curriculum are the responsibility of the subject leader, who also:

- supports colleagues in their teaching, by keeping informed about current developments and by providing a strategic lead and direction for this subject;
- evaluates the strengths and weaknesses and indicates areas for further improvement and
- reviews the policy every 2 years to ensure that it complies with the latest legislation, guidance and best practice.

Revised and adopted by Governing Body – Spring 2024