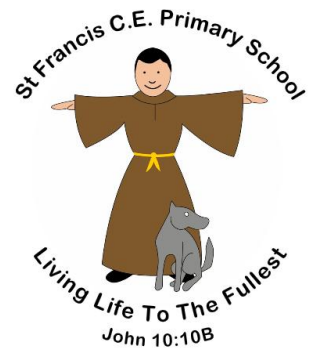




Science Policy

St Francis CE Primary School – Science Policy

Rationale

At St Francis CE Primary School, we believe that science stimulates and excites children's curiosity about phenomena and events in the world around them. It also satisfies this curiosity with knowledge. Because science links direct practical experience with ideas, it can engage learners at many levels.

We believe that science leads to a better understanding of ourselves and the world. It provides opportunities to appreciate scientific facts and concepts and to experience scientific discovery. Science at St Francis CE Primary 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 key process skills.

Aims

At St Francis CE Primary School, our aims in teaching science are to:

- Engage children as learners at many levels through linking ideas with practical experience.
- Help children learn to question and discuss scientific issues that may affect their own lives.
- Enable children to develop, model and evaluate explanations through scientific methods of collecting evidence using critical and creative thought.
- Show children how major scientific ideas contribute to technological change and how this impacts on improving the quality of everyday life.
- Help children recognise the cultural significance of science and trace its development.
- Increase children's knowledge and understanding of the world.
- Develop attitudes of curiosity, originality, cooperation, perseverance, open-mindedness, self-criticism, responsibility and independence in thinking.
- Enable children to communicate their scientific predictions and discoveries effectively and confidently, using appropriate scientific vocabulary.
- Develop children's understanding of the effects of their actions on the environment.

Key scientific vocabulary is explicitly taught, revisited and embedded to support understanding, communication and long-term retention.

Implementation of the Policy

At St Francis CE Primary School, scientific method is about developing and evaluating explanations through experimental evidence and modelling. This encourages critical and creative thinking. Through science, children understand how major scientific ideas contribute to technological change, impacting on industry, business and medicine, and improving quality of life. Children recognise the cultural significance of science and trace its worldwide development. They learn to question and discuss science-based issues that may affect their own lives, the direction of society and the future of the world.

Curriculum Design and Sequencing

The science curriculum at St Francis CE Primary School is carefully planned and sequenced to ensure that knowledge and skills build progressively from the Early Years through to Key Stage 2. Key scientific concepts are revisited and developed over time to strengthen understanding and retention. Prior learning is identified and built upon so that pupils develop a coherent and connected understanding of scientific ideas.

Teaching develops both substantive knowledge (scientific facts, concepts and vocabulary) and disciplinary knowledge (working scientifically, including enquiry, evidence, reasoning and evaluation), enabling children to understand both scientific content and how scientific knowledge is generated.

Curriculum Resources and Schemes

The National Curriculum forms the basis of our science curriculum. To support high-quality planning, progression and subject knowledge, we use the White Rose Science Scheme as a supplementary resource. This supports teachers in delivering well-sequenced lessons, developing scientific vocabulary and ensuring progression in both substantive and disciplinary knowledge.

Teachers adapt and enrich materials to meet the needs of all learners and to reflect the context and ethos of the school.

Teaching and Learning

Good science lessons should:

- Share a clear learning objective at the start, refer to it throughout the lesson and evaluate it at the end.
- Provide opportunities for speaking and listening.
- Include questions of different levels and styles, with opportunities for children to confer and discuss ideas.
- Include interesting and varied activities.
- Provide opportunities for assessment for learning, including verbal feedback and peer discussion.
- Allow for the discussion and correction of misconceptions.

Science is not just about knowing facts and understanding concepts. It is also about encouraging children to behave scientifically by posing questions, hypothesising, recording and analysing data, and drawing conclusions.

Teachers aim to present science in practical contexts that are relevant to children's experiences. Learning takes place in whole-class, group and individual situations. Some content is taught directly and enhanced through practical demonstrations. Small group activities follow on from class discussion and encourage collaboration. Where possible, children are encouraged to investigate their own questions, make decisions independently and maintain high levels of motivation.

ICT is used widely in science. Children have opportunities to practise science skills and enhance presentation using appropriate software and equipment, including microscopes, digital cameras, video capture and data logging.

Science is celebrated around the school through displays of work, materials and objects. Cross-curricular links are made, particularly with design and technology. Science is embedded within the National Curriculum topics and further developed through Nature Club, Forest School, outdoor learning, school visits and other out-of-school activities.

Early Years

In the Foundation Stage, children are introduced to science through the EYFS Curriculum Guidance. The Early Learning Goals for 'Understanding the World' form the foundation for later work in science.

Children are provided with first-hand experiences that encourage exploration, observation, problem solving, prediction, critical thinking, decision making and discussion. A rich indoor and outdoor environment stimulates interest and curiosity. Children develop understanding through sensory exploration and holistic learning experiences incorporating science into everyday activities.

Key Stage 1

Children observe, explore and ask questions about living things, materials and physical phenomena. They begin to collect evidence, link it to simple scientific ideas and evaluate their findings. Reference materials, including ICT, are used to support learning. Children communicate ideas using scientific language, drawings, charts and tables.

The KS1 curriculum follows the National Curriculum topics, ensuring coverage across Years 1 and 2 and progression from the Foundation Stage.

Key Stage 2

Children learn about a wider range of living things, materials and physical phenomena. They make links between ideas, explain using models and theories and apply knowledge to everyday contexts and personal health. They carry out more systematic investigations and use a wide range of sources, including ICT. Children communicate using scientific language, diagrams, charts, graphs and digital tools.

Children are encouraged to work independently, plan investigations, evaluate outcomes and develop their own methods for presenting ideas.

Progression

As children move from Early Years through KS1 to KS2, teaching and assessment provide opportunities for progression:

- From everyday language to precise scientific vocabulary and notation.
 - From limited personal knowledge to broader, connected understanding.
 - From describing to explaining phenomena.
 - From personal ideas to accepted scientific models.
 - From adult-led to independent investigations.
 - From unstructured exploration to systematic enquiry.
 - From simple drawings to conventional diagrams and graphs.
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More Able Learners

More able learners are identified through formative and summative assessment. Provision includes high-quality first teaching, appropriate challenge, and development of learning behaviours such as reflection, problem solving, enquiry and independent learning. Progress is rigorously tracked to ensure full potential is achieved.

Health and Safety

Children are explicitly taught health and safety procedures when undertaking scientific work. Additional adults support the safe delivery of investigations when required.

Resources

Resources for each topic are stored in the science cupboard, alongside generic equipment. Resources are updated as required within the allocated budget.

ICT

Children apply and develop ICT skills through data logging, interactive microscopes, graphing software and internet research.

Monitoring

The science coordinator monitors standards and quality of teaching, leads subject development, evaluates provision annually and formulates action plans for improvement.

Equal Opportunities and Inclusion

All children have equal access to science education. Teaching reflects cultural diversity, supports bilingual learners and promotes a rich scientific enquiry environment. Teaching is adapted where necessary to ensure that pupils with special educational needs and disabilities can access, participate in and succeed in science learning.

Assessment

Assessment includes observation, discussion, tasks and end-of-year summative assessments, reported to parents. Ongoing assessment informs planning and teaching.

Assessment information is used to identify gaps, inform future planning and support pupils in securing and retaining key scientific knowledge and skills over time.

Role of the Science Subject Leader

The subject leader:

- Develops the curriculum
 - Supports staff
 - Manages resources
 - Leads monitoring and evaluation
 - Analyses data and plans improvement
 - Reviews policy
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Disability Equality Impact Assessment

This policy reflects the school's Disability Equality Scheme and considers the needs of disabled children, staff and parents.

Any questions or concerns regarding this policy please speak to Chloe Alcock