

ST MARY'S SCIENCE POLICY

Rationale

At St Mary's Primary School, we believe that science education should ignite curiosity, develop scientific thinking, and provide pupils with the knowledge and skills to explore the world around them. Our curriculum aligns with the English National Curriculum and draws on resources from the Plymouth Science Scheme of Work, ensuring a structured and engaging learning journey from EYFS to Year 6.

We are committed to fostering an inclusive environment where all children, regardless of background or ability, develop confidence in science. Through practical investigations, outdoor learning in Forest School, and cross-curricular opportunities, pupils build a deep understanding of scientific concepts and methods.

Aims

Our science curriculum aims to:

- Develop **scientific knowledge and conceptual understanding** through biology, chemistry, and physics.
- Foster an understanding of the **nature, processes, and methods of science** through enquiry-based learning.
- Equip pupils with the **scientific skills needed to understand and evaluate** the role of science in today's world and the future.
- Promote a sense of **excitement and curiosity** about natural phenomena.
- Encourage pupils to see **science as a diverse and accessible field**, recognising contributions from underrepresented groups.

Implementation: Teaching and Learning in Science

Science is taught as a discrete subject each week, following the Plymouth Science Scheme of Work. Lessons integrate the 'Working Scientifically' strand of the National Curriculum, ensuring that pupils develop essential investigative and analytical skills alongside subject knowledge.

Early Years Foundation Stage (EYFS)

In EYFS, science is delivered through the 'Understanding the World' area of learning and also links to 'Communication and Language'. Pupils engage in hands-on experiences exploring nature, materials, and living things, both indoors in classroom provision and activities enhanced by resources from the Plymouth Science Scheme of Work and through weekly Forest School sessions.

Key Stage 1 (KS1) and Key Stage 2 (KS2)

- Science lessons are delivered weekly, based on the long-term plan.
- Mixed-year group classes follow a two year rolling curriculum that ensures coverage of key concepts while catering to pupils' needs.
- Investigative learning is prioritised, with opportunities to observe, question, experiment, and analyse.

- Computing is integrated where appropriate, using iPads, chromebooks, and interactive whiteboards to enhance learning.
- Forest School sessions reinforce science concepts, providing outdoor, practical experiences.
- Teachers differentiate learning to support SEND pupils and challenge more able learners.

Working Scientifically

Pupils will develop scientific skills through the following enquiry types:

- Observing over time
- Pattern seeking
- Identifying, classifying, and grouping
- Comparative and fair testing (controlled investigations)
- Researching using secondary sources

Working scientifically skills are taught alongside substantive knowledge within all lessons.

Inclusion and Equality

We ensure all pupils can access the science curriculum by:

- Providing differentiated tasks to meet individual learning needs.
- Using scaffolding, visual aids, and practical resources for SEND pupils.
- Promoting diversity in science, showcasing achievements from underrepresented groups.
- Encouraging group collaboration and independent enquiry to develop scientific thinking in all learners.

Health and Safety

Science teaching follows the school's Health and Safety Policy. Teachers can access guidance from CLEAPSS (helpline: 01895 251496) to ensure safe practice in practical investigations, as well as the ASE website.

Assessment

Assessment in science is ongoing and includes:

- Formative assessment through class discussions, observations, and practical work.
- Summative assessments at the end of units, following the Plymouth Science Scheme of Work.
- Working scientifically skills are assessed each lesson in line with our Working Scientifically Progression Ladders.
- Teacher assessments are recorded and reported to parents annually.
- Pupil voice feedback to ensure engagement and understanding.

Monitoring and Evaluation

The science subject leader and senior leadership team monitor science teaching through:

- Book scrutiny to evaluate pupil progress.
- Lesson observations and planning reviews.
- Teacher discussions and training to ensure continuous improvement.
- External evaluation (local authority reviews).

Impact: What Success Looks Like

By the end of **Year 6**, pupils at St Mary's will:

- Demonstrate a secure understanding of key scientific concepts.
- Show confidence in using scientific methods and enquiry skills.
- Communicate scientific ideas using appropriate vocabulary.
- Apply scientific knowledge to real-world problems.
- Appreciate the diversity of science, recognizing contributions from all backgrounds.

Our goal is to inspire the next generation of scientists, engineers, and critical thinkers, ensuring every child leaves St Mary's with the skills and curiosity to explore the world through science.