St George's CE Primary School

Science Curriculum Statement

Vision and Ethos

At St George's CE Primary School, our vision—**"Living life in all its fullness"** (John 10:10)—shapes our approach to teaching Science. Rooted in our Christian values of compassion, love, truthfulness, thankfulness, forgiveness and hope, we aim to develop inquisitive, reflective and responsible learners who understand the world around them and their place within it.

Our science curriculum fosters curiosity, creativity and awe, enabling children to explore, observe and question God's world. Through rich scientific experiences and high-quality teaching, pupils learn to think critically, use evidence and communicate their ideas with confidence.

Intent

At St George's, our science curriculum is ambitious, coherently sequenced and designed to promote a deep understanding of scientific knowledge and working scientifically skills. In line with the **National Curriculum**, we intend that all pupils:

• Develop secure, connected knowledge across biology, chemistry and physics, revisiting concepts over time to deepen understanding.
• Learn to "work scientifically" through observing, testing, predicting, classifying, measuring, recording and drawing conclusions.
• Build the disciplinary knowledge needed to understand *how* scientists work, *why* evidence matters and *how* scientific ideas develop.
• Acquire and use rich scientific vocabulary and language to communicate findings with accuracy.
• Understand how science influences modern life, the environment and future innovation.
• Experience hands-on, practical science that inspires curiosity and develops resilience and problem-solving skills.
• See themselves as scientists—confident, capable and able to ask meaningful questions.
• Access a fully inclusive curriculum that challenges all learners, including SEND and disadvantaged pupils, with high expectations for success.

Our science curriculum reflects our school's broader aims: character development, oracy, digital competence and understanding of stewardship of the Earth.

Implementation

Our science curriculum is delivered through high-quality teaching, practical experiences and carefully structured progression from EYFS to Year 6.

Curriculum Design

• The long-term plan follows the statutory National Curriculum content, ensuring full coverage and logical sequencing.
• Learning builds year-on-year, revisiting key concepts such as plants, animals including humans, materials, forces, light, electricity and evolution.

• Knowledge organisers outline the core knowledge and vocabulary to be secured in each unit, supporting retrieval and coherence.
• Vocabulary is explicitly taught, displayed and revisited to ensure children can articulate scientific ideas.

Working Scientifically

Scientific enquiry is woven through every topic and includes opportunities for:

- Comparative and fair testing
- Research
- Pattern-seeking
- Observations over time
- Identifying, classifying and grouping
- Using scientific equipment accurately

Children record their learning in age-appropriate ways, from floor books and group observations in KS1 to increasingly formal scientific write-ups in KS2.

Pedagogy & Teaching Approach

• Lessons begin with retrieval practice (flashbacks, recap questions, prior learning connections).
• Teachers use modelling, questioning and practical demonstration to build secure conceptual understanding.
• Adaptive teaching ensures all children can access learning while being appropriately challenged.
• Digital tools (iPads/Chromebooks) are used to support research, data handling, simulations and recording, in line with our **Digital Strategy 2025–2028**.
• Outdoor learning, nature study and real-life examples help children connect scientific ideas to the world around them.

Enrichment and Cultural Capital

• Educational visits, workshops, visitors and science weeks enhance learning (e.g. museums, RSPB, STEM events).
• Links are made across the curriculum, including with Computing (data logging), Maths (measurement and graphs) and Geography (fieldwork).
• Children are encouraged to take on roles such as Eco Leaders, reflecting our commitment to environmental stewardship.

EYFS Foundations

In EYFS, children explore the natural world, observe changes, make predictions and develop early scientific language through hands-on activities. Continuous provision promotes curiosity, observation and exploration, forming strong foundations for KS1 science.

Impact

The impact of our science curriculum is seen in:

• Pupils who are enthusiastic, knowledgeable and confident in discussing scientific ideas.
• Books, floor books and digital evidence showing clear progression in knowledge, vocabulary and enquiry skills.
• Strong outcomes across school, with pupils “knowing more and remembering more” over time.
• Children who can plan and carry out investigations, interpret results and draw evidence-based conclusions.
• High levels of engagement in practical science, demonstrating curiosity and resilience.

• Pupil voice showing enjoyment of science and understanding of how it relates to real life.
• Teachers' assessment showing secure understanding across the curriculum, supported by quizzes, concept maps and ongoing retrieval.
• SEND and disadvantaged pupils achieving well due to timely support, scaffolding and practical approaches.

Our pupils leave St George's equipped with the scientific knowledge, curiosity and confidence needed for secondary school and for life in an ever-changing, scientific world.

Assessment

Assessment in Science at St George's is purposeful, embedded within teaching and closely aligned with the TAPS (Teacher Assessment in Primary Science) model. Assessment focuses on developing and evaluating pupils' Working Scientifically skills, as well as the secure acquisition of scientific knowledge.

TAPS Focused Assessment Lessons

• Each unit includes one TAPS-focused assessment activity, mapped on the long-term plan, which is designed to assess a single Working Scientifically skill in depth.
• These lessons use the TAPS plan, do, review cycle, enabling pupils to demonstrate planning, carrying out and reviewing an enquiry.
• Teachers use the TAPS activity guidance and assessment indicators to understand the extent to which pupils demonstrate the targeted skill.
• Any written evidence produced focuses solely on the skill being assessed, ensuring depth over quantity.

Working Scientifically Skills Over Time

• Each enquiry skill is visited multiple times across the year so teachers gain a clear picture of progression.
• A range of enquiry types (observing over time, comparing & classifying, pattern seeking, fair testing, research) are taught and revisited, supported by the TAPS enquiry symbols used on science front covers and displays.

Embedded Ongoing Assessment

• Teachers assess pupils' knowledge and understanding continuously through questioning, discussion, practical work and observation.
• Flashbacks are used at the start of sessions to assess retrieval of learning and address misconceptions quickly.
• Pre-unit assessments capture *previous learning*, and post-unit end-of-unit quizzes assess knowledge and vocabulary retention.

Impact of Assessment

Assessment outcomes inform:
• Adaptations to teaching and planning
• Identification of pupils requiring additional support
• Targeted vocabulary reinforcement
• Monitoring of coverage of Working Scientifically skills across the year

Over time, this approach ensures teachers have secure, reliable assessment evidence and pupils develop a strong understanding of both scientific knowledge and the disciplinary skills required to *work like scientists*.