



Inspiring children to love learning and live in
the light of Christ

Science Curriculum

Science

Intent

Science teaching at St. Mary's aims to give all children an understanding of the world around them, whilst acquiring the skills and knowledge to help them think scientifically, to gain an understanding of scientific process and of the uses and implications of Science, today and for the future.

We aim to make learning relevant to our children by providing them with real life experiences linked to their science topics, giving them the understanding of the contribution that science makes in our lives, its importance in the real world and the world's future prosperity. Scientific enquiry skills are embedded in each topic and topics are revisited and developed throughout their time at school. Children will build on prior knowledge, vocabulary and embed their scientific knowledge and refine and enhance their investigative skills.

All children are encouraged to develop a variety of skills including observing, classifying, investigating as well as inferring, raising questions, predicting, experimenting, and researching.

We want our pupils to question the world around them and become independent learners who understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Implementation

Our whole school approach to the teaching and learning of science involves:

- Throughout the Programmes of Study, children acquire and develop the key skills and knowledge identified within each unit and across each year group in accordance with NC expectations.
- We use PLAN B, Planning for Assessment to ensure scientific knowledge and key skills are mapped for each year group and are progressive throughout the school.
- Working scientifically skills are embedded into lessons. The Ogden Trust Working Scientifically 'Big Questions' resource ensures that the 5 Types of Enquiry are developed and revisited throughout the key stages.
- Science is taught on a weekly basis and topics are covered sequentially allowing knowledge and skill to build and progress.
- When planning, it is expected that teachers will determine previous knowledge and experience and allocate time to activities appropriately.
- Lessons are engaging and challenging, in line with the school's inclusion policy, with practical tasks and demonstrations that allow pupils understanding of conceptual knowledge.
- Enrichments and 'real life' experiences to the science curriculum will give pupils a deeper understanding of the relevance and importance of science in their own lives.
- Children are exposed to and strongly encouraged to use scientific vocabulary specific to each topic in every lesson.
- Pupils will be able to build on prior knowledge and link ideas together, enabling them to ask questions and become enquiry based learners. They will become more proficient in selecting, using equipment, collating, interpreting results and drawing conclusions.
- Gaps in the children 's knowledge and skills will be addressed through effective verbal and written feedback.
- Assessment is used throughout each topic, assisting teachers to identify next steps for pupils.
- Children will be taught both through investigations and how to carry out investigative and experimental science.
- The class should be organised to match the nature of the activity and the defined learning objectives.

- The science units can be integrated with other curriculum areas, where appropriate but it is important not to dilute the scientific content or skills when this happens.
- EYFS will explore scientific concepts through Understanding the World (Statutory Framework for the Early Years Foundation Stage). In the EYFS the children learn through being active and interactive. They use all of their senses to learn about the world around them and make connections between new information and what they already know. They are provided with opportunities to explore and share their thoughts, ideas and feelings through a variety of art, mathematics, design and technology, music, movement, dance and being imaginative and role-play activities. Science based activities and experiments play an essential part in the acquisition and development of early language skills. In the EYFS children will be describing, questioning and making predictions as well as extending their vocabulary. This promotes and develops prerequisite skills for Science in the National Curriculum for Key stage 1.

Impact

- The children enjoy and are enthusiastic about science at St Mary's.
- Children are motivated learners with sound scientific understanding.
- There is a progression of the children's work and teacher expectations are high.
- Children's work shows a range of topics and evidence of coverage of NC requirements.
- Children are becoming increasingly confident in science, using scientific vocabulary, selecting their own tools and materials, completing pupil led investigations and choosing their own strategies for recording.
- Children can work collaboratively and practically.
- The feedback from teachers, next step questions extend learning.
- Children will understand the importance of science in their own lives and in the wider world.
- Children will have the enthusiasm to continue their science education at secondary school.



Science Curriculum Overview

	Autumn	Spring <i>(British Science Week 2022: 'Growth')</i>	Summer
Year 1	<ul style="list-style-type: none"> Seasonal change plants Everyday materials 	<ul style="list-style-type: none"> Seasonal changes Animals and their habitats 	<ul style="list-style-type: none"> Seasonal changes plants Animals including humans
Year 2	<ul style="list-style-type: none"> All living things & their habitats Animals, including humans 	<ul style="list-style-type: none"> Uses of everyday Materials 	<ul style="list-style-type: none"> Plants All living things & their habitats
Year 3	<ul style="list-style-type: none"> Rocks Animals, including humans 	<ul style="list-style-type: none"> Animals, including humans Forces and magnets 	<ul style="list-style-type: none"> Plants Light
Year 4	<ul style="list-style-type: none"> Living things and their habitats States of matter 	<ul style="list-style-type: none"> Electricity Sound 	<ul style="list-style-type: none"> Animals, including humans Working Scientifically
Year 5	<ul style="list-style-type: none"> Properties and changes of Material Earth and Space 	<ul style="list-style-type: none"> Living things and their habitats Animals, including humans 	<ul style="list-style-type: none"> Forces Working Scientifically
Year 6	<ul style="list-style-type: none"> Animals, including humans 	<ul style="list-style-type: none"> Electricity Living things and their habitats 	<ul style="list-style-type: none"> Light Evolution & inheritance

