



St Paul's Cray
CE Primary School

Act Justly, Love Mercy, Walk Humbly



SCIENCE POLICY

Approved by:	Liz Bennett	Date: 1 st September 2022
Reviewed on:	September 2022	
Next review due by:	September 2024	

Science policy

Introduction

At St Paul's Cray Primary School, we are deeply passionate about giving children a science curriculum which enables them to explore and discover the world around them so that they have a deeper understanding of the world we live in. We aim to inspire and excite our children and foster a thirst for knowledge by providing opportunities to enable our children to become life-long learners who continue to take an interest in the world around them after they leave us. We want to be known for science teaching that promotes and develops transferable skills such as observation, communication and teamwork.

The science policy for science reflects the consensus of opinion of staff and governing body.

Aims

The school's Science curriculum is coherently planned and sequenced to ensure that children build on knowledge from prior topics and support each other to learn about the world around them. Our Science curriculum links to key topical issues in the world around us to ensure that children are open-minded and are interested in addressing current dilemmas in their own lives and community. The Science Curriculum enables children to explore their surroundings, build positive relationships by working together with their peers and develop their scientific skills to analyse their environment. We aim to inspire and excite our children and foster a thirst for knowledge. They are able to make enquiries, investigate things which they don't originally understand and challenge each other's ideas to ensure they are critical thinkers. Through learning about a range of Scientists and Scientific discoveries, the children will develop high aspirations for themselves and recognise that there are endless possibilities for their future.

- To provide opportunities to develop experimental and investigative skills in a range of contexts.
- To acquire a body of scientific knowledge and conceptual understanding through specific discipline of biology, chemistry, physics and working scientifically.
- to develop questioning and enquiring minds through a range of enjoyable and interesting experiences.
- To develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific question and the world around them.
- To make good use of the school grounds and habitats.
- to provide opportunities for children to apply theoretical ideas to the solving of practical problems.
- To develop responsible attitudes towards health and safety; choosing appropriate apparatus with accuracy and care.
- To ensure that all children regardless of race, gender, disability, social background or learning ability have equal access to the Science National Curriculum.

Teaching and Learning

The curriculum is designed to build on prior learning to ensure that new knowledge is integrated into larger concepts and links can be made easily by the children. In addition, wherever possible, Science is linked to half-termly topics to enable the children to enjoy a curriculum which is intertwined to ensure they are able to make clear links in their learning. With this in mind, Science can then be taught cross-curricularly through English and Guided Reading. This ensures that children understand the importance of making links in their own learning so they are able to do this independently in the future. Through Science week, children are able to see how Science feeds into all other curriculum topics and are able to celebrate what they learn with their community.

Foundation Stage

We teach science in the EYFS classes as an integral part of the topic work covered during the year. As the classes are part of the foundation stage, we relate the scientific aspect of the children's work to the objectives set out in the Early Learning Goals included in Knowledge and Understanding the World.

Science is a core subject in the National Curriculum in KS1 and 2. All the children will be given the opportunity to be taught through the Kent scheme of work.

We use a variety of teaching and learning styles in science lessons. Our principal aim is to help develop children's knowledge, skills and understanding. Our science lessons are at least 40% based on investigative science. We engage the children as much as possible in an enquiry based research activity.

- We encourage the children to ask, as well as answer, scientific questions.
- Children have the opportunity to use a variety of data, such as statistics, graphs, pictures and photographs.
- Children use ICT in science lessons where it enhances their learning.
- They engage in a wide variety of problem solving activities.

Planning

- Science is taught in half termly blocks based on the Kent scheme of work. There will be a degree of flexibility with the structure of the lesson to respond to the needs of the children and the class profile.
- Medium term plans are developed using both the National Curriculum and the Kent scheme of work, plans including both enquiry based and knowledge based lessons.
- Teachers plan to teach scientific vocabulary for each unit as specified in the Kent scheme of work. Subject specific vocabulary to be displayed on science working walls.
- Marking should be consistent with the schools marking policy.

Recording

- Science lessons will be recorded in science books.

Classroom environment

Displays

Each class must have a science working wall that displays the relevant topic being taught for that half term.

The display must include:

- Vocabulary from the Kent scheme of work
- Diagrams from the current topic
- The school's scientific enquiry poster which indicates what type of enquiry they are focusing on that half term.

Teachers may also choose to include:

- Questions from the children
- Pictures of the children working scientifically
- Children's work

Additional Educational Needs

At St Paul's Cray, we believe that all of our children should have the opportunity to access the science curriculum. We are committed to providing a curriculum in which all the children can take part at a level appropriate to them. If necessary, the teaching methods or materials will be modified to their full potential. Extension activities are utilized to challenge able children at every available opportunity.

Resources

All science resources are stored centrally. These resources are for the whole school to utilise and should be collected/ returned by an adult. Any resources that are broken or not working accurately/ correctly should be reported to the science co-ordinator. Renewable resources will be monitored by the class teacher and when stock is running low they will inform the science co-ordinator who will order more.

Assessment and Recording

At St Paul's Cray summative assessments take place at the end of every topic, each half of term. Teachers assess if each child has achieved their expected level, exceeded this or are is towards it. Their progress is then recorded on target tracker half termly.

Pupil's scientific knowledge, understanding of skills are also assessed formatively through interaction with our children; whilst they are working (listening, observing and questioning). We believe that this ongoing observation, monitoring and assessment of skills and concepts gathered is essential.

Books are marked in line with the schools marking policy.

Health and Safety

The school's Health & Safety Policy outlines the safe codes of practice for our school and provides the necessary guidance on the response and the reporting of all incidents. The class teacher must risk assess for each lesson. We also have the Kent scheme of work and we are a member of CLEAPSS who can provide teachers with further guidance.

Children are encouraged to assess hazards and discuss the appropriate precautions. Children are taught the appropriate safe practice when using equipment.

This will include:

- How to use equipment correctly and in accordance with health and safety guidelines
- All equipment is maintained in good condition and stored safely.
- Staff will always make children aware of any dangers and take necessary precautions.
- A Risk Assessment will be completed for any educational visit.

Role of the Co-ordinator

- Review and revise policy on a yearly cycle.
- Monitor subject plans, following school policy, to ensure policy in practice.
- Monitor teaching, following school policy, to support the teaching and learning of science.
- Coordinator will supply up to date CPD training and advise on appropriate CPD opportunities outside of St Paul's.
- Encouraging staff to provide effective learning opportunities for all pupils
- Liaising with teachers of the subject in other phases.
- Use other monitoring techniques to ensure science progression, standards and range is maintained.
- Provide support and advice for colleagues on issues regarding children's science development.
- Manage science budget allocation to maintain resources.
- Audit resources for science.
- Ensuring common standards and formats for recording and assessment.
- Communicating all developments in the subject, eg. through staff meetings, distributing information, using notice boards.
- Organising and monitoring professional development in the subject.