

St George's C. E. Primary School



Science Policy

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St. Georges C of E (controlled) Primary School

Science Policy



Vision Statement:

Jesus said: 'Love each other as I have loved you'. John 15:12

Our school motto, 'Everyone matters, everyone achieves' is at the heart of everything we do and believe.

At St George's Primary School, we aim to prepare the children in our care to become well-rounded members of society on their journey through school life and beyond. We strongly believe that children learn best and can achieve their potential when they are happy and content. We endeavour to provide a safe learning environment with a warm, welcoming atmosphere which creates a sense of belonging amongst the children, the staff, the families and the community. We embrace their individuality and diversity, always encouraging respect and acceptance of each other regardless of race, religion or culture.

We have high expectations of the children and we work hard to support them to become the best that they can be. For our children to flourish, socially and academically, we aim to provide an outstanding education that is both challenging and inclusive. All children are encouraged to embrace the many opportunities and the support school provides, so that they become curious learners who are motivated and resilient with a 'Can do' attitude. Our aim is to provide the children of St George's with countless positive experiences, along with happy lifelong memories, from their time with us. We also have high expectations of attendance. We encourage families to be at school every day and to arrive on time in order to not miss any learning.

Through our supportive and inclusive Christian ethos, we are proud to foster our school values of kindness, respect, friendship, honesty, happiness, responsibility and forgiveness embedding these within everyday life at school. We believe that the emotional health and wellbeing of the whole school community is fundamental to the ongoing success of our school.

We aspire to make our school a place of excellence where we educate, nurture and value everyone; that ALL children will enjoy learning and achieve their potential in the 'St George's Way.'

'Let us always meet each other with a smile, for the smile is the beginning of love.'
Mother Teresa.

Philosophy

Science makes an increasing contribution to all aspects of life. Children are naturally fascinated by everything in the world around them and Science makes a valuable contribution to their understanding. Children learn by playing with things in their world. They pick up clues about what they see, touch, smell, taste and hear in order to make sense of it all. Eventually they come to conclusions which they match up with all the experiences they have had; the scientific process and pupils' problem solving activities will be used to deepen their understanding of the concepts involved. Through science, pupils will continue to deepen their respect, care and appreciation for the natural world and all its phenomena.

Aims and objectives

Through the teaching of science we expect our children to:

- Develop their enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life
- Build on their curiosity and sense of awe of the natural world
- Use a planned range of investigations and practical activities to gain a greater understanding of the concepts and knowledge of science
- Use the language and vocabulary of science
- Develop basic practical skills and increase their ability to make accurate and appropriate measurements

To enable our children to achieve these aims we plan to use the following objectives to form the basis of our decisions when planning a scheme of work:

- To develop pupil's enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life.
- to develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures
- to encourage pupils to relate their scientific studies to applications and effects within the real world
- to develop a knowledge of the science contained within the programmes of study of the National Curriculum.

To build on pupils' curiosity and sense of awe of the natural world

- to develop in pupils a general sense of enquiry which encourages them to question and make suggestions
- to encourage pupils to predict the likely outcome of their investigations and practical activities

To use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science

- to provide pupils with a range of specific investigations and practical work which gives them a worth-while experience to develop their understanding of science
- to develop progressively pupils' ability to plan, carry out and evaluate simple scientific investigations and to appreciate the meaning of a 'fair test'.

To develop the ability to record results in an appropriate manner including the use of diagrams, graphs, tables and charts

- to introduce pupils to the language and vocabulary of science
- to give pupils regular opportunities to use the scientific terms necessary to communicate ideas about science
- to develop pupils' basic practical skills and their ability to make accurate and appropriate measurements
- within practical activities give pupils opportunities to use a range of simple scientific measuring instruments such as thermometers and force meters and develop their skill in being able to read them.

To develop pupils' use of ICT in their science studies

- to give pupils opportunities to use ICT (video, digital camera, data logger) to record their work and to store results for future retrieval throughout their science studies
- to give pupils the chance to obtain information using the internet.

Differentiation and Additional Educational Needs

The study of science will be planned to give pupils a suitable range of differentiated activities appropriate to their age and abilities. Tasks will be set which challenge all pupils, including the more able. For pupils with SEN the task will be adjusted or pupils may be given extra support. The grouping of pupils for practical activities will take account of their strengths and weaknesses and ensure that all take an active part in the task and gain in confidence.

Pupils will be involved in a variety of structured activities and in more open-ended investigative work:

- activities to develop good observational skills
- practical activities using measuring instruments which develop pupils' ability to read scales accurately
- structured activities to develop understanding of a scientific concept
- open ended investigations.

On some occasions pupils will carry out the whole investigative process themselves or in small groups.

Relevance

Wherever possible science work will be related to the real world and everyday examples will be used.

Cross curricular links and skills

Science pervades every aspect of our lives and we will relate it to all areas of the curriculum. We will also ensure that pupils realize the positive contribution of both men and women to science and the contribution from those of other cultures. We will not only emphasize the positive effects of science on the world but also include problems, which some human activities can produce.

Continuity and Progression

Foundation Stage pupils investigate science as part of Understanding of the World. Children are encouraged to investigate through practical experience; teachers will guide the children and plan opportunities that allow the children to experience and learn whilst experimenting for themselves. By careful planning, pupils' scientific skills and knowledge gained at Key Stage 1 will be consolidated and developed during Key Stage 2.

Pupils in Key Stage 1 will be introduced to science through focused observations and explorations of the world around them. These will be further developed through supportive investigations into more independent work at Key Stage 2. The knowledge and content prescribed in the National Curriculum will be introduced throughout both key stages in a progressive and coherent way.

Assessment

Throughout the school, teachers will assess whether children are working at/above or below the expected level for their age based on their understanding and application of the content of the National Curriculum 2014. Assessment of work and progress is on-going and informs future planning. Prior knowledge is assessed at the beginning of each topic by a variety of methods, including mind maps. In each learning activity, children self-assess their work against the success criteria. At the end of a topic, overall summative assessment is carried out in various (age appropriate) ways and children are given the opportunity to find the answers to any questions they have after evaluating their learning in the topic. At the end of each year there will be a final assessment which will cover all aspects of science taught over the year.

Emotional Health and Wellbeing

At St George's, the emotional health and wellbeing of our children and staff is of utmost importance to us and we endeavour to support each other in this. Our school motto 'Everyone Matters, Everyone Achieves' is at the heart of all we do. We constantly aim to promote a positive approach to learning in Science and support the children who may find aspects of this subject challenging.

Resources

There is a central resource area which includes equipment that can be used during experiments and investigations. Resources which are specific to certain topics are kept within each appropriate year group and reviewed annually. For each topic there is a list of useful websites available for teachers; this includes teaching resources and suitable websites for children to use for research.

Health and safety

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action.

Roles and Responsibilities

Governor: Involved in the monitoring process, curriculum developments and any initiatives taking place. This is achieved by meeting with Head Teacher, SMT and Curriculum Coordinators.

Head Teacher/ Deputy Head: Responsible for the overall curriculum development and monitoring of teaching.

Subject Coordinator:

- Responsible for ensuring the development of subject resources and the curriculum.
- Supports the staff in planning for and teaching their subject.
- Monitors the quality of teaching and learning and the breadth of topics covered through observations of lessons and reviews of teacher's plans.
- Scrutiny of quality children's work during an annual book trawl.

Teacher: Individual teachers are responsible for implementation of each subject policy. They are responsible for planning appropriate learning experiences that teach key skills whilst developing the required knowledge and understanding. Teachers are responsible for assisting the coordinator in the monitoring and recording of pupil progress in each subject.