

# St. Martin's Catholic Primary School



## Science Policy.15

*This policy should be read in the light of our:*

- ❖ **Our Mission** to foster the personal development and academic achievement of each child by providing a caring and creative environment that adheres to the foundations and values of the Catholic Faith.
- ❖ **Our Vision** to inspire all to lead, through love and service, the life of purpose and excellence that God wants for us.

Approved by Committee:

\_\_\_\_\_  
October 15

Approved by FGB

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October 15

Next Review date:

\_\_\_\_\_  
October 18  
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# St Martin's Catholic Primary School Science Policy Autumn 2015

## Rationale

Science is a systematic investigation of the physical, chemical and biological aspects of the world which relies on first hand experiences and on other sources of information. The scientific process and pupils' problem-solving activities will be used to deepen their understanding of the concepts involved. The main aspects of science to be studied will be determined by the programmes of study of the National Curriculum. Where possible, links will be found through the Cornerstones curriculum and to ensure coverage of the content for each year group, some will be taught as a discrete subject using the Kent scheme of work.

Through science pupils at St. Martin's Catholic Primary School will continue to deepen their respect, care and appreciation for the natural world and all its phenomena.

## Aims

- to develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life
- to build on pupils' curiosity and sense of awe of the natural world
- to use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science
- to introduce pupils to the language and vocabulary of science
- to develop pupils' basic practical skills and their ability to make accurate and appropriate measurements
- to develop pupils' use of (ICT) in their science studies.
- to extend the learning environment for our pupils via our environmental areas and the locality
- to promote a 'healthy lifestyle'.

## Objectives

### **To develop pupils' 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 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 understand the concept 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 information and communication technology (ICT) in their science studies**

- to give pupils opportunities to use ICT (including digital microscope, video, digital camera, data logger) to record their work and to store results for future retrieval throughout their science studies
- to give pupils opportunities to develop research skills

**Principles of teaching and learning**

**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.

**Breadth and Balance**

We will ensure that all staff, including those in a supportive role, have a clear idea of the concepts and skills to be taught. The importance of Attainment Target 1 (Experimental and Investigative Science), will be stressed. The other Attainment Targets (AT2, AT3 and AT4) will be taught using an experimental and investigative approach.

We will plan the content to ensure a balanced coverage of the National Curriculum programmes of Study through the Cornerstones and the Kent Science Schemes.

**Variety.**

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 skills and links**

Science pervades every aspect of our lives and we will relate it to all areas of the curriculum. We will also ensure that pupils realise the positive contribution of both men and women to science and the contribution from those of other cultures. We will not only emphasise 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 Knowledge & Understanding of the World. 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 in Key Stage 2.

### **Equality of Opportunity**

All children have equal access to the science curriculum and its associated practical activities. The SLT, Class Teachers and TAs at St. Martin's Catholic Primary School are responsible for ensuring that all children, irrespective of gender, learning ability, physical disability, ethnicity and social circumstances, have access to the whole curriculum and make the greatest possible progress. Where appropriate, work will be adapted to meet pupils' needs and, if appropriate, extra support given. More able pupils will be given suitably challenging activities.

All children have equal access to the Science Curriculum, its teaching and learning, throughout any one year.

### **Health and safety**

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class teachers, TAs and the subject leader will check equipment regularly and report any damage, taking defective equipment out of action. A simple risk assessment will be carried out for all practical activities.

### **Assessment for Learning, recording and reporting**

Assessment opportunities will be identified within schemes of work.

Assessments will include end of topic assessments which will be used to determine pupils' retention of knowledge and vocabulary. The assessment of AT1 (experimental and investigative work) will rely on a mixture of evidence from pupils' everyday practical work throughout the key stage and other more independent investigations carried out by the pupils.

### **Marking for Improvement**

Much of the work done in science lessons is of a practical or oral nature and, as such, recording will take many varied forms. It is, however, important that written work is marked regularly and clearly, as an aid to progression and to celebrate achievement. When appropriate, pupils may be asked to self-assess or peer-assess their own or other's work.

Marking for improvement comments in a child's book must be relevant to the learning objective to help children to better focus on future targets. Children should be given the time to improve their work and teachers will support children by scaffolding improvements as necessary.

### **Management and administration**

An annual key stage meeting will be held to review the needs of science. Personal development of staff and training needs will be discussed. The Science Subject Leader will organise and lead these meetings.

### **Role of the subject Leader**

The Subject Leader will provide professional leadership and management for science and will ensure that it is managed and organised so that it meets the aims and objectives of the school. The Subject Leader will monitor teaching and learning within the subject and will initiate reviews of the scheme of work. The Subject Leader will manage the resources for science and carry out audits to ensure that resources are continuing to meet the needs of the curriculum.

The science Subject Leader will administer the allocated budget for science.

Teaching materials and background information on science are kept in the cupboard in the Y4 classroom.

The science section of the school library is continuously being developed to reflect curriculum and teaching needs.

### **Review**

The Science Subject Leader will monitor classroom teaching in all year groups according to the monitoring schedule. The effectiveness of the science curriculum will be evaluated in discussions with the Headteacher, Key Stage Phase Managers and the Science Subject Leader. Priorities for in service support and external review will be established.

This evaluation will form the basis for an action plan, which will then inform the School Improvement Plan.

This policy will be reviewed bi-annually by the Science Subject Leader or as necessary in view of government or LA initiatives, analysis of assessments or curriculum development.