

St James the Great School RC
(VA) Primary and Nursery School



Policy for Science
Spring 2007

Science Policy

Introduction:

Science at St. James the Great School instils the acquisition of skills and knowledge primarily through investigation. A science curriculum, which harnesses and engenders children's innate desire to explore the world around them, develops active and receptive learners. Children who are encouraged to question, use their investigative skills and draw upon existing knowledge to explain their observations develop a self-motivating desire to learn.

Aims:

- To extend each child to his or her fullest potential, building on previous experiences and recognising individual capabilities.
- To develop interest and enthusiasm for the subject
- To develop skills, knowledge and understanding of Science
- To teach children how to communicate ideas effectively, making use of appropriate subject-specific vocabulary
- To develop an understanding of the relevance of Science in everyday contexts
- To help children to acquire knowledge of a range of scientific concepts
- To help children understand that scientific knowledge relies on evidence
- To teach that scientific evidence can be obtained in a variety of ways
- To help the children to acquire scientific process skills
- To make the children aware of health and safety issues

Curriculum:

Aspects of the four attainment targets in National Curriculum Science are taught in each year.

The emphasis is on practical investigation where the science curriculum is explored through enquiry and investigation. Within this, pupils will be required to plan experimental work in a form that can be investigated, obtain evidence and consider evidence when forming hypotheses.

At Foundation Level, Exploration and Investigation is an integral part of all aspects of the curriculum. Links will be made to other subjects so that pupils can develop and apply their scientific skills. Independent Exploration and Investigation activities are planned for in the pupils 'free choice' sessions.

Details of the topic cycle may be found under the 'Scheme Overview'.

Teaching and Learning in Science:

A variety of teaching styles are necessary to ensure the learning of science.

Approaches should be related to the topics themselves and to the abilities and experiences of the children.

Our teaching at all levels should include opportunities for:

- Teacher exposition

- Investigation and experimental work using key questions, predictions, hypotheses, measurement and presentation of results
- Discussion techniques
- Practice and consolidation of fundamental skills
- Problem-solving
- Enquiry
- Use of ICT
- The committing to memory and recall of facts
- Recording using a range of methods e.g. diagrams, graphs and charts

Planning:

We operate a system of planning agreed by the whole teaching staff, based upon the QCA Scheme of Work for Science at Key Stages 1 and 2, and the Early Learning Goals for Knowledge and Understanding of the World at the Foundation Stage.

Exploration and Investigation activities are planned in line with Curriculum Guidance for Foundation Stage.

The half-termly planning grid for Science is available on the staff desktop. This allows for the identification of learning intentions, differentiated tasks, vocabulary, cross-curricular links, homework and assessment.

Plans are submitted to the subject leader in advance. They are monitored by the subject leader in conjunction with work samples and feedback is provided where appropriate.

Assessment:

Children's work is marked according to the agreed school policy and their performance continually assessed in accordance with the National Curriculum by the class teacher. At all levels, assessments are used to inform planning.

Test activities, tasks and observations are carried out regularly to assess achievement and to support teacher assessments of their pupils. This information is recorded in tracking folders in line with the assessment policy.

Children are, where possible, involved in self-assessment, especially with regard to Scientific Enquiry.

The range of test materials include:

- Foundation Stage Profiles
- Rising Stars KS1 Assessment
- National Tests throughout KS2
- Test base assessment materials in KS2

Equal Opportunities:

The teaching of science is in accordance with the school's policy for equal opportunities. We aim to provide equal access to the science curriculum for all children, including those with special needs, and appropriate enrichment stimulation

for the able and gifted. Children are encouraged to work co-operatively and to respect each other's views and abilities.

How we cater for pupils who are more able

More able children will be challenged and motivated by differentiated work given by the teacher appropriate to his or her needs. Teachers will also use questions that allow the more able child to maintain their involvement in the lesson and demonstrate their knowledge and abilities. Teachers will aim to identify those children who are more able in Science so that they are given the opportunity to follow an individualized programme with more challenging concepts to tackle in science and many other areas of the curriculum.

How we cater for pupils with particular needs

Most Science lessons are appropriate for all children since the teacher will differentiate as necessary for those children with specific needs. Liaison with the special needs coordinator will sometimes be necessary.

Pupils with special educational needs and individual education plans

Teachers will aim to include all children in Science lessons. All children will benefit from aspects of the lesson, such as discussion, and other children communicating and sharing ideas. However, a pupil whose difficulties are severe or complex may need to be supported by a PSA in addition to appropriately differentiated tasks given by the teacher.

Environmental Education:

Environmental Education forms an integral and vital part of the science curriculum. Within the scheme of work, individual units naturally lend themselves to developing the children's knowledge, understanding, concern and care for the environment. There are many resources within our school grounds which allow effective teaching of environmental science, including our pond and wildlife area.

Health and Safety:

The National Curriculum requires teachers to promote amongst children a sense of personal responsibility for their health and safety.

Children are given clear guidance when undertaking activities that may pose risks and are carefully supervised.

Further guidance may be found in the 'Be Safe' booklet 2nd edition, issued by the ASE.

Resources:

Central resources are stored in the science stock cupboard located in the music room corridor. A 'signing in' and 'signing out' system is in place and every effort must be made to return resources to the labelled trays.

Book resources are stored in the junior corridor.

The Role of the Science subject leader is to:

- Provide support for all who teach science and so improve the quality and continuity of science teaching and learning throughout the school

- Monitor continuity and progression through classroom observations, moderation of plans and work samples
- Assist and promote professional development within science
- Manage a delegated budget and keep spending within it
- Purchase, organise and maintain teaching resources
- Keep up-to-date with initiatives within science
- Advise the Leadership Team of action required
- Encourage ways of involving parents in their children's learning
- Promote a collegiate approach to the implementation of the scheme of work

Parental and Governor Involvement:

Parents are informed about the year's programme of work for science at Parent's Evening in September. They are informed of children's achievements through reports and parent consultation evenings.

The Governor with responsibility for science liaises regularly with the science subject leader is informed of developments within the subject and is provided with opportunities to observe science lessons.

Parental and Governor support is valued and viewed as crucial to the success of the school.