

Shorne Church of England Primary School

(A member of the Aletheia Anglican Academies Trust)



Science Policy

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Science is to observe, question, hypothesise and experiment with the world around us

1. Introduction

1.1 Policy Statement

At Shorne C of E Primary School we believe, an appreciation of science should be a fundamental part of everyday life and that good teaching will enable children to understand the world through the specific disciplines of biology, chemistry and physics. The development of scientific concepts is based on first hand investigations which will foster curiosity, critical reflection, co-operation, independent learning, open-mindedness and the development of English and Maths skills.

1.2 Aims and Objectives

Through the framework of the National Curriculum, science aims to:

- equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and natural sense of wonder about the world
- develop through practical work the skills of observation, prediction, investigation, interpretation, questioning and hypothesizing, and increased use of precise measurement skills and ICT (Information and Communication Technology)
- encourage and enable pupils to offer their own suggestions, and to be creative in their approach to science, and to gain enjoyment from their scientific work
- enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms which are relevant and meaningful to them
- use appropriate scientific and mathematical vocabulary to communicate ideas
- teach scientific enquiry through contexts taken from the National Curriculum for science
- encourage children to collect relevant evidence, question outcomes and ensure they have produced fair tests
- encourage children to treat the living and non-living environment with respect and sensitivity
- stress the need for personal and group safety with the correct usage and storage of resources
- enable children to appreciate that experiments can sometimes be incorrect and there are many ways to ensure they are as accurate as possible

2. Including All Children

2.1 Entitlement and Inclusion

In school we aim to set individual challenging targets which meet the needs of all our children in our science planning. Through providing a variety of approaches and tasks appropriate to ability levels, we ensure all children are able to achieve and make their own contributions to their scientific learning. Supporting each child individually through enhancing and enriching activities all children will be able to take control of their own learning and progress.

3. Planning and Progression

3.1 Key Stage 1 and 2 Science Programmes of Study

All lessons meet the Science programmes of study for key stages 1 and 2, National curriculum in England. All lessons have a clear learning intention and success criteria which are shared with the pupils effectively to ensure the children know the steps they need to take in order to meet the learning intention.

<u>Year 1</u> Plants Animals including Humans Everyday materials Seasonal changes	<u>Year 2</u> Living things and their habitats Plants Animals, including humans Uses of everyday materials
<u>Year 3</u> Plants Animals, including humans Rocks Light Forces and magnets	<u>Year 4</u> Living things and their habitats Animals including humans States of matter Sound Electricity
<u>Year 5</u> Living things and their habitats Animals including humans Properties and changes of materials Earth and space Forces	<u>Year 6</u> Living things and their habitats Animals including humans Evolution and inheritance Light Electricity

3.2 Implementation and Planning

Science is a core subject of the National Curriculum and pupils will normally undertake some science activity every week at both key stages. The work covered in Key Stage 1 builds on the nationally recognised curriculum for pupils aged under five years of age. Pupils in the Foundation Year develop their knowledge, understanding and skills through play activities and direct teaching from which the pupils undertake planned tasks.

Where possible, science is taught as part of a cross-curricular thematic approach to learning but on occasions it is taught as a discrete subject. The programmes of study are covered with reference to the National Curriculum and expected standards documents.

Our school places a high emphasis on the development of pupils' skills of:

- scientific enquiry (Sc1)
- the knowledge and understanding in life processes and living things (Sc2)
- materials and their properties (Sc3)
- physical processes (Sc4)

Please note that the skills of Sc1 are taught in the majority of all lessons when combined with Sc2/3/4.

4. Monitoring

4.1 Assessment, Recording and Reporting

Assessment should be built into the planning stages and is likely to be periodic, such as at the end of a topic, in addition to ongoing teaching assessment. Particular attention should be given to children's progress and attainment in experimental and investigative science. A variety of strategies including observing, questioning, discussion, concept mapping, self-assessment and marking are used to assess progress and children should be given opportunities to represent their learning in different ways. Marking of work and feedback to pupils should include achievement in relation to the learning objective and future targets.

Parents are provided with progress reports at Parent Consultation appointments and in a written statement as part of their child's end of year report.

4.2 Evaluation and Monitoring

All teachers are responsible for monitoring standards as well as the Head teacher, Senior Leadership Team and science co-ordinator. Monitoring activities may include the following:

- book/work scrutiny to analyse pupils' science work to evaluate standards (attainment and progress)
- subject leader to analyse teachers' planning to:
 - monitor coverage and balance of curriculum planned
 - consider the activities planned and their appropriateness
 - ensure there is effective differentiation
 - ensure there are clear objectives and relevant activities
- lesson observations when appropriate in line with the school's lesson observation protocol

5. The Learning Environment

5.1 Displaying Learning

Within classrooms science should reflect its place as a core subject in the curriculum. Classroom science displays should be visible and key vocabulary should be displayed where possible. Resources for the unit of work being covered should be appropriately accessible. Other sources of information should be available to include books, photos, CD ROMS and DVDs.

5.2 Resources and Equipment

The majority of resources will be stored centrally and should always be returned promptly after use. Items of a consumable nature e.g. batteries should be sent for recycling if they are no longer useable. Individual teachers are responsible for ensuring that the school has sufficient resources to enable the teaching of science for their year group.

5.3 Health and Safety

All staff must be:

- aware of potential risks and hazards that may arise as a result of investigative activities and every science lessons should be preceded with an informal risk assessment exercise
- familiar with the "Be Safe!" safety booklet which provides guidance and advice

Children are also taught safe procedures when carrying out investigations and using tools.