



Science Policy

May 2022

Version	Date	Author	Status	Summary
1.0	April 2022	Emma Walker		

Date of Review: April 2022

Expiry Date: April 2024

This policy outlines the purpose, nature and management of the science taught in our school.

The teaching of science is based on the National Curriculum in England and the Key Stage 1 framework document. In the foundation stage, the science activities areas are planned in line with curriculum guidance for the EYFS. The implementation of this policy is the responsibility of the Head Teacher, the Science Co-ordinator and all teaching staff.

1. Introduction

Science can no longer be looked upon as a body of knowledge to be transmitted. In a rapidly changing world where new developments in Science and Technology are occurring constantly, it is inappropriate to teach children only scientific 'truths' many of which become disproved. Instead at Southwood Infant School we aim to train the children to think and act as young scientists; carrying out their own experiments, inferring their own conclusions and understanding the relevance of their discoveries to the world in which they live.

2. Aims

- To foster children's wonder and natural curiosity about the world they live in through active engagement in learning experiences.
- To provide opportunities for children to develop a knowledge and understanding of key scientific ideas.
- To develop children's scientific enquiry skills in questioning, predicting, planning, observing, measuring, fair testing, recording, interpreting and working systematically through direct experience.
- To provide children with the ability to make informed decisions based on evidence and their own experiences and be able to apply scientific knowledge to new situations.
- To teach and model how to communicate scientific ideas effectively.
- To demonstrate an interest in and an enthusiasm for science and to have the confidence to participate in explorative and investigative work.
- To develop skills in discussing and recording work, maths skills to communicate scientific ideas through diagrams and charts and computing to extract scientific information.
- To develop values and attitudes, communicating with others, listening to ideas and treating these with respect

- To develop an awareness and sensitivity to the living and non-living environment through access to the natural environment.
- To develop a responsibility for their own health and safety and that of others when undertaking scientific activities.

3. Management and Organisation

(i). For Key Stage 1, the Primary Curriculum is organised into the following programmes of study:

- Working Scientifically
 - Plants
 - Animals inc Humans
 - Everyday Materials (Year 1 only)
 - Uses of Everyday Materials (Year 2 only) • Seasonal Changes (Year 1 only)
- Living Things and their Habitats (Year 2 only)

(ii). In the Early Years, children work to the Statutory framework for the early years foundation stage (EYFS) The section Understanding the World. (Early Learning Goal - The Natural World, children will - Explore the natural world around them, making observations and drawing pictures of animals and plants. Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them.

(iii). Throughout Key Stage 1 children carry out scientific investigations to develop their skills. Children's skills in 'Working Scientifically' are assessed via 'Active Assessment' techniques built into the planning.

(iv). As investigations follow the needs of the children's knowledge base, teachers operate an 'open-ended' approach to timing of lesson coverage. For example some scientific investigations may engage the class in discovery for a day some for a week or more.

(v). In Early Years and Key Stage 1, Understanding of the World and Science is taught using the teacher as a fellow investigator not the fount of knowledge, imparting his or her learning to the children. Southwood School's science equipment is stored in a central area organised by subject areas. It is readily available to take into classrooms and used as needed. However teachers are careful not to pre-empt following a certain path in an investigation by introducing children to resources too early on. Instead they encourage the children's opinions and ideas first regarding resource needs or application.

(vi). Our computing equipment and the Internet are crucial tools in the children's investigative journey as well as our school and class libraries. The children are encouraged to see these tools as ways of discovering the possible answers to questions they are looking for. Therefore, we place a high priority on developing the children's skills in accessing this equipment and using non-fiction books effectively.

(vii). All children are made aware of the relevance of health and safety when understanding work in science.

(viii). Science contributes to many subjects within the primary curriculum and opportunities are sought at the planning stage to link curriculum areas. This will allow children to begin to use and apply scientific skills and knowledge in real and relevant contexts.

4. Planning, Assessment and Recording

Curriculum planning is undertaken by the Science lead in line with the Primary Curriculum. Detailed schemes of work have been compiled and will continue to evolve, to ensure progression and breadth across the year groups.

Formal assessment of Science happens three times a year in Years 1 and 2. At the end of Key Stage 1 (Year Two) all children are assessed against the Interim Assessment Framework and will be either meeting or not meeting the current criteria.

- In the Early Years attainment Early Learning Goal achievement – The Natural World, is assessed and passed on to the Year 1 teacher and commented on in the end of year report.
- Informal assessment is undertaken continuously by class teachers and L.S.A.'s whilst pupils are engaged in tasks. Immediate feedback can be given to pupils about their work and teaching points can be emphasised. This also gives pupils the opportunity to assess and review their own work.

5. Differentiation

Consideration is always given by teachers to the diversity of ages and abilities within each class. Providing a range of experiences via the planning, ensures the fullest involvement of the whole class, encouraging the less able and extending the more able.

6. SEN

Staff will ensure that the delivery of the Science curriculum meets the needs of all pupils whatever the ability. Gifted or talented pupils will be discussed at the termly special needs meeting and provision is made if appropriate. (Refer to G&T and SEN policies)

7. Teaching and Learning

Science will be planned and delivered with specific reference to the School's Teaching and Learning Policy to ensure appropriate teaching and learning strategies are in place.

8. Children's Recording:

Although science teaching at Southwood Infant School is chiefly activity-based, there are occasions when it is necessary and desirable to make a record of what has been seen, done or discovered. Recording in this instance may take the form of: data handling, helping to plan an activity, comparing data and examining patterns, assessing data, sorting it and drawing conclusions, challenging pre-concepts, making further predictions from outcomes, observation skills, helping to assess/ evaluate what has gone on. We encourage children to record in as many varied ways as possible. Many of the ways are cross- curricula when English, Mathematical, Computing and Artistic skills may be developed at the same time. For example: pictorial, graphical, photographic, audio, video, collage or frieze, model making, data base, word processing, dramatization or orally.

9. Computing

Many elements of Science learning can be enhanced by the use of computing. Planning incorporates the use of DVDs, classroom computers, C.D. ROMs, the internet, data logging and portable laptops. These will be incorporated into the planning when they are an effective way to meet the Science learning objective but will always be available to the children if they deem them a necessary resource to aid their investigation.

10. Monitoring/Evaluation

Class Teachers continually monitor and evaluate the work of their pupils on a day to day basis. Each teacher keeps an Assessment file which is added to by the teacher and TA support staff. This informs planning, target setting and teaching. The Science Co-coordinator undertakes a yearly questionnaire with a cross section of pupils from each class in order:

- To ensure consistency of approach across the school
- To ascertain pupils understanding of science and the science lessons they have taken part in.
- To gain an insight into all pupils' thoughts about the nature of science.

