



SCIENCE POLICY

AIMS AND OBJECTIVES

- 1.1** Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way in which science will affect the future on a personal, national, and global level.
- 1.2** The objectives of teaching science are to enable children to:
- ask and answer scientific questions;
 - plan and carry out scientific investigations, using equipment (including computers) correctly;
 - know and understand the life processes of living things;
 - know and understand the physical processes of materials, electricity, light, sound, and natural forces;
 - know about the nature of the solar system, including the earth;
 - evaluate evidence, and present their conclusions clearly and accurately.

2 TEACHING AND LEARNING STYLE

- 2.1** We use a variety of teaching and learning styles in science lessons. Our principal aim is to develop children's knowledge, skills, and understanding. Sometimes we do this through whole-class teaching, while at other times we engage the children in an enquiry-based research activity. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as statistics, graphs, pictures, and photographs. They take part in discussions, and they present reports to the rest of the class. They engage in a variety of problem-solving activities. Wherever possible, we involve the pupils in real scientific activities, for example, carrying out a practical experiment and analysing the results.
- 2.2** We recognise that in all classes children have a wide range of scientific abilities, and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:
- setting tasks which are open-ended and can have a variety of responses;
 - setting tasks of increasing difficulty (we do not expect all children to complete all tasks);
 - grouping children by ability and setting different tasks for each ability group, providing individual help as needed;
 - providing resources of different complexity, matched to the ability of the child;

3 SCIENCE CURRICULUM PLANNING

- 3.1** The school uses the national scheme of work for science as the basis of its curriculum planning.
- 3.2** We carry out our curriculum planning in science in two phases (medium-term and short-term).

- 3.3** Our medium-term plans, which we have based on the national scheme of work in science, give details of each unit of work for each half term. The Headteacher keeps and reviews these plans. In Science, we have to repeat topics in each year, so all our planning takes into account mixed age classes.
- 3.4** The Science teacher is responsible for writing the daily lesson plans for each lesson (short-term plans). These plans list the specific learning objectives and expected outcomes of each lesson.
- 3.5** The topics in science build on prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit, and we also build progression into the science scheme of work, so that the children are increasingly challenged as they move up through the school.

4 THE FOUNDATION STAGE

- 4.1** Science is taught in reception classes as an integral part of the topic work covered during the year. The Reception class teacher includes this in her planning as part of the Early Learning Goals.

5 THE CONTRIBUTION OF SCIENCE TO TEACHING IN OTHER CURRICULUM AREAS

5.1 Personal, social and health education (PSHE) and citizenship

Science makes a contribution to the teaching of PSHE and citizenship. The subject gives children numerous opportunities to debate and discuss.

5.2 Spiritual, moral, social and cultural development

Science teaching offers children many opportunities to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Science raises many social and moral questions. Through the teaching of science, children have the opportunity to discuss, for example, the effects of smoking, and the moral questions involved in this issue. We give them the chance to reflect on the way people care for the planet.

6 SCIENCE AND INCLUSION

- 6.1** At our school we teach science to all children, whatever their ability and individual needs. Science forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our science teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities and those with special gifts and talents.
- 6.2** We enable all pupils to have access to a full range of activities involved in learning science. If children are to participate in activities outside the classroom (a trip to a science museum, for example) we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

7 ASSESSMENT FOR LEARNING

- 7.1** The Science teacher will assess children's work in science by making informal judgements during lessons. Written or verbal feedback is given to the child to help guide his/her progress, but not for every piece of work. Older children are encouraged to make judgements about how they can improve their own work.

7.2 The science teacher assesses children’s work in science during a lesson and at the end of each half termly topic (Years 1-7). Children in Year 3-7 also take the national tests (optional) in science at the end of Key Stage 2/3. We report the results of these tests to parents, along with the teacher assessments which we make whilst observing children’s work throughout the year. We use annual practice science tests in Key Stage 2/3 to assess children’s progress.

7.3 All the children’s work, from the last term, is kept at school for reference.

8 RESOURCES

8.1 We constantly review and replenish resources for all science teaching in the school. We keep these in a central store, where there is equipment for each unit of work. The Science Lab and library contains a supply of science topic books.

The science teacher also uses:

- Plan-bee Scheme of Work Year 1-6
- CPG Scheme of Work Years 3,4,5,6
- Primary Resources and many other resources available on the web for enrichment
- Rising Stars Assessment Year 1-6 / Headstart
- Other relevant assessment tests pitched to pupil ability

9 MONITORING AND REVIEW

9.1 It is the responsibility of the Director of Studies to monitor the standards of children’s work and the quality of teaching in science.

9.2 This policy will be reviewed at least every two years.

Principal:	Mrs Sharpe	Date:	November 2019
Subject Leader	Mr P Cochrane	Date:	November 2019

REVIEW DATE: September 2021