Broad Chalke CE VA Primary School
Science Policy 2017

'With the love of God we learn, care, grow and share'

1 Aims and objectives

1.1 Science teaches an understanding of natural phenomena and can be an opportunity to reflect on the wonders of the natural world. We aim 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 science will affect their future on a personal, national, and global level.

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1.2 The aims of science are to enable children to:

- learn to work scientifically
- ask and answer scientific questions;
- plan and carry out scientific investigations, using equipment (including electronic devices) correctly;
- know and understand the life processes of living things;
- know and understand the properties of materials and the physical processes of 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 use ICT in science lessons where it enhances their learning. They engage in a wide variety of problem-solving activities. Wherever possible, we involve the pupils in 'real' scientific activities, for example, researching a local environmental problem or carrying out a practical experiment and analysing the results. We make sure that all visitors to school who are going to work with children are DBS checked. We carry out appropriate risk assessments for all trips.

2.2 We recognise that there are widely different scientific abilities in all classes 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:

- by setting common tasks which are open-ended and can have a variety of responses;
- by setting tasks of increasing difficulty (we do not expect all children to complete all tasks);
- by grouping children by ability and setting different tasks for each ability group;
- by providing resources of different complexity, matched to the ability of the child;
- by using classroom assistants to support the work of individual children or groups of children.

3 Science curriculum planning

3.1 The school uses the new curriculum as the basis of its curriculum planning, supported by the Hamilton Trust resources.

3.2 We carry out our curriculum planning in science in three phases (long-term, medium-term and short-term). The long-term plan maps the scientific topics studied in each term during the key stage. In some cases we combine the scientific study with work in other subject areas, especially at Key Stage 1; at other times the children study science as a discrete subject.

3.3 Our medium-term plans give details of each unit of work for each term.

3.4 The class teacher is responsible for writing the daily lesson plans for each lesson (short-term plans). These plans list the specific learning objectives of each lesson.

3.5 We have planned the topics in science so that they build upon 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 Early Years Foundation Stage

4.1 We teach science in EYFS as an integral part of the topic work covered during the year. We relate the scientific aspects of the children's work to the objectives set out in Development Matters which underpin the curriculum planning for children aged 16 months to five years. Science makes a significant contribution to developing a child's knowledge and understanding of the world, e.g. through investigating what floats and what sinks when placed in water.

5 The contribution of science to teaching in other curriculum areas

5.1 Cross-Curricular Links

Science contributes significantly to the teaching of many subjects e.g. English, Maths and ICT.

5.2 Personal, social and health education (PSHE) and Sex and relationships education (SRE)

Science makes a significant contribution to the teaching of PSHE and SRE.

5.3 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. Through many of the amazing processes that affect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children have the opportunity to discuss, for example, healthy eating and exercise. Science teaches children about the reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people .

6 Teaching science to children with special needs

6.1 We teach science to all children, whatever their ability. Science forms part of the school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties.

7 Assessment and recording

7.1 We assess children's work in science by making informal judgements as we observe them during lessons. On completion of a piece of work, the teacher marks the work and comments as necessary. At the end of a unit of work s/he makes a summary judgement about the work of each pupil in relation to the age related expectations in the National Curriculum. We report on attainment, effort and progress in the child's annual report.

7.2 Children take the optional national tests in science at the end of Key Stage 2. Teachers in Key Stage 1 and 2 carry out assessments at the end of each unit and update Classroom Monitor accordingly at the end of each of the 5 units.

8 Resources

8.1 Some resources are kept in classrooms; some are in the upstairs resource room. Science equipment is kept in the corridor near the Library. Children's science reference books are kept in the library and there are a number of science based texts kept with the literacy resources.

9 Monitoring and review

9.1 It is the responsibility of the science subject leaders and the headteacher to monitor the standards of children's work and the quality of teaching in science. The science subject leaders are also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The science subject leaders complete a position statement evaluating progress in the subject and indicating areas for further improvement. The science subject leader has allocated time for fulfilling the vital task of reviewing samples of children's work and visiting classes to observe teaching in the subject. There is a governor with responsibility for monitoring science.

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