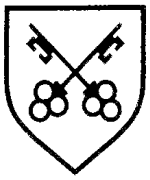
St. Peter's School



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Science Policy

1 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 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:

- ask and answer scientific questions;
- plan and carry out scientific investigations, observing carefully and measuring accurately
- know and understand the life processes of living things;
- know and understand the physical processes associated with materials, electricity, light, sound and natural forces;
- know about the nature of the sun moon and, 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 take part in role-play and discussions and they present reports to the rest of the class. They engage in a wide 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 there are children of 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, such as by:

- setting common 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 in the room and setting different tasks for each ability group;
- providing resources of different complexity, matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.

3 Science curriculum planning

3.1.1 The school uses the National Curriculum and Ginn Science as the basis of its curriculum planning. The national scheme has been adapted to the local circumstances of the school, in that we make use of the local environment and the science garden in our fieldwork.

3.2 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 The contribution of science to teaching in other curriculum areas

4.1 English

Science contributes to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. The children develop oral skills in science lessons through discussions (for example of the environment) and through recounting their observations of scientific experiments. They develop their writing skills through writing reports and projects and by recording information.

4.2 Mathematics

Science contributes to the teaching of mathematics in a number of ways. The children use a range of equipment to measure during investigations. Through working on investigations they learn to estimate and predict. They develop the skills of accurate observation and recording of events. They use numbers and data handling in many of their answers and conclusions.

4.3 Information and communication technology (ICT)

Children use ICT in science lessons where appropriate. They use it to support their work in science by learning how to find, select, and analyse information on the Internet and on CD-ROMs. Children use ICT to record, present and interpret data For this they use spreadsheets and graphing software. They review, modify and evaluate their work and use software to improve its presentation. They also use e-mail to exchange findings with other children in other schools. They also use data logging equipment to monitor events such as graphing a cooling liquid

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

Science makes a significant contribution to the teaching of personal, social and health education. The subject matter lends itself to raising matters of citizenship and social welfare. For example, children study the way people recycle material and how environments are changed for better or worse. Science promotes the concept of positive citizenship.

4.5 Spiritual, moral, social and cultural development

Science offers children many opportunities to examine some of the fundamental questions in life. 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 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 and how science can contribute to the way we manage the earth's resources.

5 Teaching science to children with special educational needs

5.1 At our school we teach science to all children, whatever their ability. 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 progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.

5.1.1 We enable pupils to have access to the full range of activities involved in learning science. Where children are to participate in activities outside the classroom, for example, a trip to a science museum, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

6 Assessment and recording

6.1 Teachers have drawn up a list of targets which they share with the children These targets are based on National curriculum requirements and are used by the teachers to assess children's progress during a unit of work. 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.. The teacher records the attainment of pupils in a mark book. We use these grades as the basis for assessing the progress of each child and to help in reporting to parents

6.2 Children take the national tests in science at the end of Key Stage 2. We report the results of these tests to parents along with the teacher assessments, which we make whilst observing the work of children throughout the year. We also use practice science tests to assess children's progress.

7 Resources

7.1 We have sufficient resources to teach all the units we have planned. We keep these in a central store where there is a box of equipment marked with letters of the alphabet for ease of locating equipment. The library contains a good supply of science topic books and computer software to support children's individual research. We also have a purpose built science garden, which is used by all the children to carry out scientific investigations. Here they have access to ponds, raised growing beds, a compost bin and an insect area.

8 Monitoring and review

8.1 It is the responsibility of the science subject leader to monitor the standards of children's work and the quality of teaching in science. The science subject leader is 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 leader has allocated time for fulfilling the task of reviewing samples of children's work and visiting classes to observe teaching in the subject.

Signed:

Date: