



Stoke Prior First School

Science Policy

1. Aims and objectives

Science teaches an understanding of natural phenomena. The teaching of science aims to stimulate a child's curiosity in finding out why things happen in the way that 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.

Our objectives in the teaching of science are for all our children:

- to ask and answer scientific questions;
- to plan and carry out scientific investigations, with the correct use of equipment (including computer technology);
- to know about life processes; plants, animals;
- to know about materials, electricity, light, sound, and natural forces; magnets, rocks, states of matter;
- to know how to evaluate evidence, and to present conclusions both clearly and accurately.

2. Teaching and learning style

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 collect a variety of data, which they learn to present in formats such as statistics in a table, graphs, pictures and photographs. They may use Computing skills in science lessons to enhance 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.

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 complexity (we do not expect all children to complete all tasks);
- grouping children attainment in the room, and setting different tasks for each attainment group;
- providing resources of different complexity, matched to the ability of the child;
- using classroom assistants, where appropriate to support the work of individual children or groups of children.

3. Science curriculum planning

Science is a core subject in the National Curriculum. The school uses the national programmes of study for science as the basis of its curriculum planning. The [national](#) programmes has been adapted to the local circumstances of the school in that we make use of the local environment in our fieldwork, particularly the Forest School Area.

We carry out our curriculum planning in science in three phases (long-term, medium-term and short-term). The long-term plan (curriculum grid) maps the scientific topics studied in each term during the year.

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 term. In this way, we ensure complete coverage of the National Curriculum, without repeating topics.

The class 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.

We have planned the topics in science so that they 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 contribution of science to teaching in other curriculum areas

English

Science contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening.

Mathematics

Science contributes to the teaching of mathematics in a number of ways e.g. measuring, weighing, data handling including graphs and charts, estimating and predicting. They develop accuracy in their observation and recording of events

Personal, social and health education (PSHE)

Science makes a significant contribution to the teaching of PSHE and citizenship through themes such as recycling and environments (houses and homes).

Spiritual, moral, social and cultural development

Science teaching 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, 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, and how science can contribute to the way in which we manage the Earth's resources. Science teaches children that people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people.

5. Science and Computing

Computing enhances the teaching of science in our school. Children use Computing skills to record, present and interpret data, to review, modify and evaluate their work, and to improve its presentation (Y3 and Y4) Children learn how to find, select, and analyse information on the Internet and on other media and through the use of data handling on Purple Mash.

6. Science and inclusion

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

7. Assessment for learning

Teachers will assess children's work in science by making informal judgements during lessons. On completion of a piece of work, the teacher assesses it, and uses this assessment to plan for future learning. Written or

verbal feedback is given to the child to help guide his/her progress. Children are encouraged to make judgements about how they can improve their own work.

At the end of a unit of work, the teacher makes a summary judgement about the work of each pupil in relation to the national curriculum and this is recorded on a school tracking report . A summative judgement is made at the end of the year based on these each child and this information is passed on to the next teacher at the end of the year.

8. Resources

We are continuing to build resources for all science teaching units in the school. We keep these in a central store. The library contains a good supply of science topic books and ICT is used to support children's individual research.

9. Health and Safety

Science contributes to the understanding and need for good health and safety precautions. When undertaking practical investigations, teachers will make all possible efforts to ensure that pupils are well aware of any potential dangers and positive instructions will be given to pupils on how to stay safe and healthy during an activity.

Risk assessments are carried out where appropriate.

10. Monitoring and review

The coordination and planning of the science curriculum are the responsibility of the subject leader, who also:

- supports colleagues in their teaching, by keeping informed about current developments in science and providing a strategic lead and direction for this subject;
- gives the headteacher an annual summary report in which s/he evaluates the strengths and weaknesses in science and indicates areas for further improvement;
- uses specially allocated regular management time to review evidence of the children's work, and to review standards in science.

PERSON(S) RESPONSIBLE:	E Berrow
DATE POLICY AGREED:	January 2024
TO BE REVIEWED BY:	January 2027
DISTRIBUTION:	Staff / Governors / Website (delete as required)