

Science Policy

Aims and objectives

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.

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

- Increase scientific knowledge and understanding of the world around us whilst developing scientific enquiry skills
- Ask questions and develop curiosity
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

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. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as graphs, pictures and photographs. They engage in a wide variety of problem-solving activities such as observation, identifying, sorting and investigation.

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)
- using classroom assistants to support the work of individual children or groups of children.

Science curriculum planning

Science is a core subject in the National Curriculum. The school uses the national scheme of work for science as the basis of its curriculum planning. Topics are planned to remedy any misconceptions and build upon prior learning. Children of all abilities are given opportunities to develop their skills and knowledge in each unit, ensuring they build secure foundations by using discussion to identify and remedy their misconceptions. Planning ensures the continuous development of progression and challenge each year as the children move through the school.

Early Years and Foundation Stage

Year R follow the Early Years Foundation Stage, teaching Science as an integral part of the Continuous Provision throughout the year. Resources are available throughout the year relating to the scientific objectives set out in the Early Learning Goals (ELGs). Observations are regularly recorded using Tapestry linking to the relevant ELG such as Understanding of the World. Wherever possible the children are provided with activities based on first-hand experience that encourage exploration, observation, problem solving, prediction, critical thinking, decision making and discussion. We provide an environment with a wide range of indoor and outdoor experiences that stimulate their interest and curiosity.

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The contribution of Science to teaching in other curriculum areas:

English

Science contributes to the teaching of English in our school by promoting the skills of reading, writing, speaking and listening. The children develop oral skills in Science lessons through discussions (e.g. of the environment) and through recounting their observations of scientific experiments. Teachers encourage and develop the use of scientific vocabulary and articulating scientific concepts clearly and precisely. They develop their writing skills through writing reports and projects and by recording information.

Mathematics

Science contributes to the teaching of mathematics in a number of ways. When the children are recording and comparing results they are learning to use and apply number. Through working on investigations, they learn to estimate and predict. They develop accuracy in their observation and recording of events. Many of their answers and conclusions include numbers.

Personal, social and health education (PSHE) and citizenship

Science makes a significant contribution to the teaching of PSHE and citizenship; raising matters of our health, citizenship and social welfare whilst providing opportunities to question and discuss.

Science and Computing

We use Computing to enhance the teaching of Science. Children may use ICT to record their findings or to find out about their current topic on the Internet.

Science and inclusion

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, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this.

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

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. Where appropriate children are encouraged to make judgements about how they can improve their own work.

At the end of each year teachers make individual assessment judgements based on the work of each pupil in relation to the National Curriculum levels of attainment, these are

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passed on to the next teacher or school. In addition, the teacher assessments made during the year are passed on to parents and carers during parents evening and school reports. The science subject leader keeps samples of children's work in a portfolio, and uses these to demonstrate the expected level of achievement in science for each age group in the school.

Monitoring and review

The coordination of the Science curriculum are the responsibility of the subjectleader, 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;
- observes science lessons across the school.

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Reviewed by staff: Summer 2022

Next review: Summer 2024