



Science Policy

Science stimulates and excites children's curiosity about phenomena and events in the world around them. It also satisfies this curiosity with knowledge. Through play and observation children are learning scientific concepts from a very early age and because of its practical nature, science can engage learners at many levels. Children learn to question and discuss science-based issues that may affect their own lives and the direction of society and the future world.

Aims

In our approach to Science we aim to:

1. Give every opportunity to relate Science to everyday life and to consider the sensitivity needed when working with living things and the environment.
2. Encourage every child to investigate, question and discuss in order to acquire scientific knowledge, understanding and skills.
3. Encourage children to hypothesize and to find ways of testing their ideas to provide evidence to support their ideas.
4. Teach scientific vocabulary and to use a variety of ways to present the results of their investigations.
5. Promote key skills needed through school by offering a range of contexts for the development of:
 - Literacy – communicating facts, ideas and opinions
 - Mathematics – application of number through collecting, considering and analysing data.
 - Computing – through using a wide range of Computing
6. Provide opportunities to learn about aspects of personal, social and health education (PHSE) and citizenship.
7. Ensure children recognise hazards and risks when working with living things and materials and agree safety rules.
8. Provide opportunities that engage the children in relevant, interactive first hand experiences.
9. Encourage children to work co-operatively and collaboratively, developing children's confidence communicating ideas.

Objectives

We will fulfil these aims by:

1. Using the rich and stimulating environments that surround our schools to provide opportunities for learning about life processes and living things, through observation, questioning and wonder.
2. Providing a wide range of interactive, practical activities for individual and group work that encourage the children to explore and find out and develop their understanding of key scientific ideas and make links between different experiences.
3. Developing the children's investigative skills and understanding of Science through the use of questioning and giving them opportunity to express their findings and ideas to their peers and a wider audience.
4. Planning opportunities to develop skills predicting, asking questions, making inferences, drawing conclusions and making evaluations based on evidence and understanding.

5. Teaching scientific and mathematical language, including technical vocabulary and conventions, and drawing diagrams and charts to communicate scientific ideas.
6. Planning opportunities to extract information from sources such as reference books, Computing or CD-ROMs as well as through science visits and visitors to school.
7. Working collaboratively in pairs or groups, listening to and sharing ideas and treating these with respect.
8. We have links with the local High School to be able to carry out practical experiments using the facilities in their laboratory and in Upper Key Stage 2 we also visit Leeds University to try and encourage the children to have aspirations and knowledge of possible careers in science and engineering.

Statutory Requirements Early Years Foundation Stage

Children entering school will be expected by the end of their first year, to have made good progress towards (and where appropriate beyond) the early learning goals as outlined in the Early Years Foundation Stage Guidelines.

Opportunities for developing scientific knowledge and skills will be given as set out under the area of learning called Understanding the World. This area of the Foundation Stage prepares children for scientific learning in Key Stage 1 and is consistent with the National Curriculum.

National Curriculum

At Key Stage 1 and 2 the programmes of study set out what the children should be taught and the corresponding attainment targets set out the expected standards for knowledge, skills and understanding that children are expected to have reached by the end of each key stage.

There is an emphasis on the key skills in science throughout all the work covered. These key skills being: questioning, predicting, performing tests, using equipment, taking measurements, gathering data, recording data, concluding and planning.

Assessment

At the Foundation Stage, assessment is through observation and is mainly formative. The Foundation Stage Guidelines offer examples of what children do to help identify when knowledge, skills, understanding and attitudes have been achieved by individuals or groups of children to inform planning for the next stage in the children's learning. Children's progress in Science will be reported to parents in the end of year school report under the heading of Understanding the World. Observations during practical work and discussions help us to make informed judgements about children's understanding in science.

Throughout the rest of School the Rising Stars assessment scheme is used with diagnostic tests, middle topic tests and end of topic tests to establish the gaps in children's knowledge and then to assess their progress through the unit. These scores are recorded and then used towards an end of year assessment.

Equal Opportunities

All children are valued for themselves and taught as equals regardless of race, gender, ability or disability. Through planning the science curriculum with differentiated tasks, either by task or outcome, all children have access to the curriculum including children with Special Educational Needs.

Health and Safety

Health and safety is an integral part of teaching. As teachers and citizens in a dangerous world, we have a responsibility to encourage children to approach hazards in a safe way. There are few risks associated with Primary Science but children should be taught the importance of safety and the correct way of handling tools, materials and equipment. Existing advice about health and safety is stored in the Health and Safety file.

Resources

Science resources are easily accessible to all staff. The majority of equipment is stored centrally in topic or resource boxes in the Workroom.

Monitoring and Evaluation

The Science Leaders are based in EYFS, KS1 and 2 and monitor work through school.

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This Policy has been drawn up and written by the School Council and staff. This will be reviewed when updated legislation or guidance is issued by the DfE, Local Authority or other relevant organisation.

This will be reviewed annually by the Governing Body.

Drafted by: Miranda Judge

Date: Annually