

Science Policy



2018-2020

Coordinator J. Shaw.



Review

This science policy will be reviewed by the science curriculum leader and the senior management team.

Date for next review of this document Autumn 2020.

Science Policy



1. Our rationale for teaching science

Science is a body of knowledge built up through the experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. Science is also a collaborative activity where ideas and suggestions are shared and investigated together. Through practical activities and team work, children experience and learn how to work together have mutual respect for one another and value social cohesion.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability.

Our aims in teaching science include:

- Preparing our children for life in an increasingly scientific and technological world.
- Fostering concern about, and active care for, our environment.
- Helping our children acquire a growing understanding of scientific ideas.
- Helping develop and extend our children's scientific concept of their world.

Attitudes

- Encouraging the development of positive attitudes to science.
- Building on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and responsibility.
- Providing our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.

Skills

- Giving our children an understanding of scientific processes.
- Helping our children to acquire practical scientific skills.
- Developing the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Developing the use of scientific language, recording and techniques.
- Developing the use of ICT in investigating and recording.

2. Our principles

Our principles were developed collaboratively between staff and children. We display our principles in every classroom and they will be seen throughout our learning.

- Wherever possible our science learning will be hands on.
- We will learn outside as well as inside the classroom.
- We can make links between science in school and the world around us.
- We can create, plan and carry out our own scientific enquiries safely.
- We are confident to ask questions and make mistakes because that's where learning happens

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3. How science is structured through the school

Science is a core subject and is taught every week.

Planning for science is a process in which all teaching staff are involved. Delivering a broad and balanced science education to our children is a core principle of our school. Science teaching in the school is about excellence and enjoyment. We follow the national curriculum but also extend our learning opportunities wherever possible to provide children with engaging and relevant investigations that link to their wider learning.

KS1 and Foundation stage teachers teach science for a minimum of one hour each week.

KS2 teachers teach science for a minimum of one and half hours per week.

In KS1 and Foundation stage, a minimum of one third of lessons overall include practical scientific enquiry.

In KS2, a minimum of 50% of lessons overall include practical scientific enquiry.

The school ensures that a broad and balanced science curriculum is followed in which enquiry is at the heart of our children's scientific learning.

4. Our approach to science

- We use ICT widely in science. Children are given the opportunity to practice science skills and enhance presentations using carefully-chosen software.
- We use ICT for enquiry work, including microscopes, video capture, activities, data logging, measuring and recording.
- The school combines secondary sources with first-hand scientific enquiries, building children's science skills.
- We actively teach science skills, and reinforce learning with selected enquiry simulations only when a hands-on practical activity cannot be done.
- We encourage children to ask and answer their own questions as far as practicable.
- Children complete at least two full enquiries each term, taking increasing responsibility for their planning, carrying them out and recording/interpreting the results.
- We use homework to support school and class activities. This relates to the school's overall homework policy.
- We sometimes use cross-curricula links to teach science with, for example, technology units.

5. Equal opportunities in science

Science is taught within the guidelines of the school's equal-opportunities policy.

6. Assessment and recording in science

We use assessment to inform and develop our teaching. Topics begin with an assessment of what children already know.

- We assess for learning (AfL). Children are involved in the process of self-improvement, recognising their achievements and recording their progress in their books (inside front cover) . Activities during, and at the end of, each topic record achievement and celebrate success.
- We continually assess children's work and contributions to discussions to ascertain their knowledge and understanding of a topic.
- We mark work positively, making it clear verbally, or on paper, where the work is good, and how it could be further improved. Children's work is compared with age appropriate exemplification (ASE PLAN resources on sharepoint) Assessment records are reviewed regularly.
- We track children's progress against each curriculum target and these records can be found in sharepoint along with levelling advice and examples. The school science coordinator monitors progress through the school by sampling children's work at regular intervals. Children who are not succeeding, or children who demonstrate high ability in science, are identified and supported.
- The Y2 & Y6 staff assess children's attainment and progress at the end of each key stage. This is based on assessment records and work samples from across the key stage and is support by the science coordinator and previous class teachers if needed.
- Reports to parents are made verbally at parent consultation evenings and written once a year, describing each child's attitude to science, his/her progress in scientific enquiry and understanding of the content of science.