



Surrey Street Primary School

Science Policy



Introduction

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 and using and applying process skills. This policy was updated in March 2019 by Emma Jane McGrath and Nikki Thorn and will be reviewed annually in relation to existing school policies, national and LEA guidelines and curriculum orders.

What is Science?

Rationale

Science is a body of knowledge built up through 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.

Through science in our school we aim to:

- Continue to develop best practice through the Primary Science Quality Mark (PSQM)
- Encourage the development of positive attitudes to science.
- Deliver the National Curriculum Science orders in ways that are imaginative, 'hands on', purposeful, well controlled and enjoyable.
- Help in developing and extending the children's scientific concept of their world and encouraging them to ask deeper questions about the world around them.
- Deliver clear and accurate teacher explanations and skilful questioning. Providing guidance but at the same time allowing children the freedom to explore as independently as possible, investigating their own questions and making science relevant to them.
- Make strong, purposeful links between science and other subjects and create cross curricular pieces of work to ensure skills are transferable. Using ICT in a meaningful way to extend their learning (inc. video, photography, microscopes, laptops, ipads and the internet.)
- Develop the use of scientific language, recording and techniques.
- Enable children to become effective communicators of scientific ideas, facts and data whilst becoming experts at analysing the data they collect.

- Develop the following skills of investigation - observation, measuring, predicting, hypothesising, experimenting, communicating and interpreting.

Teaching and Learning of Science

As a school we have devised a set of key principles that are embedded in every science lesson (see appendix 1).

Content of the Curriculum

Science is important because: -

- It is a body of knowledge essential to our understanding of the world around us.
- The process of scientific investigation forms the basis of the most intellectual enquiry.
- The skills and knowledge of science have a wide application in everyday life.

Science is a core subject in the National Curriculum. The fundamental skills, knowledge and concepts of the subjects are currently set out in "Science in the National Curriculum" where they are categorised into four attainment targets.

1. Scientific enquiry, which is taught through contexts taken from;
2. Life processes and Living things
3. Materials and their properties
4. Physical processes

Early Years

Early Years classes are taught the required science elements of the foundation stage document through cross curricular themes. Careful planning, which is adapted to respond to children's actions and events, ensures that the children's learning is effective, varied and progressive.

Planning and delivery

Planning in science is a process in which all teachers are involved to ensure that the school delivers full coverage of the current National Curriculum and Foundation stage. The topics set out provide a vehicle to deliver the Science Curriculum and ensure that all objectives are covered. It ensures progression between year groups and guarantees topics are revisited. Teachers are expected to adapt and modify the model plans to suit their own teaching, the use of any support staff and the resources available.

- KS2, KS1 and Foundation stage teachers should be teaching science for a minimum of two hours each week or equivalent pro rata.
- Teachers should make cross-curricular links wherever possible (at least 1 piece of work per topic.)
- In KS2 a minimum of 50% of lessons should include practical Scientific Investigation.

- In KS1/Foundation stage a minimum of one third of lessons in each half term should include practical Scientific Investigation.

The science curriculum is delivered through co-operative group work, individual work, and whole class teaching.

Within this structure there will be: -

- Whole class and group discussions and presentations.
- Demonstrations, explanations and instruction by teachers to groups, individuals and the whole class as well as child-led when possible.
- Practical activities to advance and consolidate knowledge and skills.
- Problem solving and investigation tasks with a particular focus on children investigating their own questions.

Assessment

- Continuous assessment will form an integral part of the teaching and learning process.
- Assessment will be both summative (at the end of each unit) and formative.
- Examples of children's work will be kept to demonstrate their level of ability.
- Children will be involved in their own assessment (by assessing their knowledge before and after each unit.)
- Data will be input and tracked through SIMS.

Reports to parents on the attainment of their children are made verbally in the autumn and spring term and a written report is provided during the summer term.

Management and Development

Co-ordination

Science education throughout the school is co-ordinated by the Science Co-ordinator.

The role entails:

- To lead the development of science
- To provide individual guidance to members of staff
- To keep up to date with local and national developments and disseminate relevant information
- To take responsibility for the purchase and organisation of central science resources
- Review and monitor success of units of work
- Collect evidence of the teaching of science
- Moderate and monitor science - through book and planning scrutiny, pupil interviews and teach teaching

Resources

The majority of resources are stored centrally in cupboards outside the Year 3 classrooms. Resources have been audited and allocated this year so that each year group has a well-stocked bank of resources that children are able to use.

Equal Opportunities

We work to ensure that all children have the opportunity to gain scientific knowledge and understanding regardless of gender, race, and class, physical or intellectual ability. We will ensure that expectations do not limit pupils' achievements and that assessments do not involve any cultural, social, and linguistic or gender bias. We will endeavour to make science relevant to all by ensuring we study a diverse range of scientists.

Inclusion

We teach science to all children whatever their ability. Science forms part of the school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties or those who are achieving highly.

Health and Safety

- The teacher should be clear as to the purpose of the work and ensure that any testing/investigations carried out comply with the Health and Safety procedures and (if needed) has been practised prior to the lesson.
- Safety hazards should be pointed out to the children at the beginning of any work.

Review Date

The Surrey Street Primary School science policy is to be reviewed annually by the Science Co-ordinator.

- Next review Spring 2020.

Appendix 1

March 2019

EM and NT

What science looks like at Surrey Street

