

“At Hilltop Infant School, everyone will work together in a nurturing environment to provide each child with challenging opportunities that encourage a desire for life-long learning.”



Hilltop Infant School Science Policy

Agreed by the Children and Curriculum Committee October 2015

Signature John Young
Chair of Governors

Due for Review Summer 2017

Science Policy 2015/2016

Introduction

Science is a core subject within the National Curriculum. This policy document outlines the purpose and management of the teaching and learning of Science at Hilltop Infant School. It is a statement of the school's agreed approach to the Science Curriculum and informs teachers, support staff, governors, parents and the wider community.

The Nature of Science

Science builds upon children's natural fascination with the world in which they live and their desire to find out more about the phenomena occurring around them. This fascination is developed through first hand exploration which fosters curiosity, critical reflection, co-operation, problem solving, observation, independent learning, perseverance and open mindedness. Science teaching leads to an appreciation of science as a fundamental part of everyday life and allows children to develop confidently within a scientific society.

Aims and Objectives:

Aims

At Hilltop Infant School we aim to:

- Promote an enjoyment of science
- Encourage children to enquire, explore and observe the world around them
- Develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences
- Encourage children to make connections with other curriculum areas
- Learn about ways of thinking and find out about and communicate ideas
- Explore values and attitudes through science

Objectives

In order to achieve our aims we will:

- Teach science in a positive, interesting and engaging way for all children
- Provide regular opportunities for children to plan, predict, carry out and evaluate their own investigations when appropriate
- Use practical, hands on approach wherever possible using everyday materials and experiences
- Ensure continuity and progression through adherence to the key objectives outlined for Reception and Key Stage 1
- Provide opportunities for children to use skills from other curriculum areas e.g. literacy, numeracy and I.C.T. to enhance science

Teaching and Learning

Organisation of Science in School

The aims and objectives for Science reflect the requirements of the new National Curriculum 2014 for Key Stage 1 children and the Early Years Foundation Stage for the Reception Year. We refer to these documents to inform our long-term planning and to plan differentiated learning objectives to be covered in each year group to ensure continuity and progression. Weekly planning by each year group provides appropriate teaching activities and learning outcomes.

Science is taught regularly so that children are able to sustain their progression throughout the Early Years Foundation Stage and Key Stage 1.

Early Years Foundation Stage

In the Early Years Foundation Stage children follow the objectives from the Foundation Stage Profile. The Early Learning Goals from the 'Understanding the World' strand have considerable scientific content. The children participate in activities based on first hand experiences that encourage exploration, observation, problem solving, predication, critical thinking, decision making and discussion and are provided with an environment which offers a wide range of activities indoors and outdoors that stimulate children's interest and curiosity. The skills acquired in the Early Years Foundation Stage are further developed and refined in Key Stage 1.

Year 1

Science is organised into five different areas of study

These are:

- Working scientifically
- Plants
- Animals, including humans
- Everyday materials
- Seasonal changes

Year 2

Science is organised into five different areas of study

These are:

- Working scientifically
- Living things and their habitats
- Plants
- Animals, including humans
- Uses of everyday materials

The children will attain a broad and balanced range of scientific activities that encompass the afore-mentioned areas of study and Attainment Targets.

Following a two year rolling topic / themes based programme encompassing all subject areas, science will be planned in and taught by the class teachers. The science leader will be responsible for monitoring continuity and progression.

The Role of the Teacher

It is the responsibility of the classroom teacher to select the most appropriate approach to achieving the learning objectives in the lesson. Learning in Science at Early Years Foundation Stage and Key Stage 1 very often means practical experiences but opportunities for other types of learning are also provided. Our teaching at all levels will include opportunities for

- observation
- first hand experience
- investigation and experimental work
- talking (child/child and child/teacher) - questioning
- teacher explanation
- the committing to memory and recall of a range of scientific facts
- the use of ICT
- consolidation and practice of basic skills and routines
- recording using a variety of methods, including, written work, pictures, diagrams, tables, labelling and photographs
- class work, group work and individual work

so that all children are extended in each area of the science curriculum and reach their full potential.

Writing in Science

During Science lessons there will be various opportunities for writing. All writing should be of high quality, in line with the English policy.

ICT in Science

ICT is used to support and complement children' learning in Science. All year groups use interactive whiteboards to support the teaching and learning of science within our school. Word processing and graphing software packages are utilised by all year groups to record and assist interpretation of data. We use a wide variety of websites and subscribe to Education City and Key Stage 1 can undertake research on the internet. Each class has a digital camera which can be used to record Science activities and a computer compatible microscope (Easyscope). Children have access to iPads to use for research, recording and observing. Also, each classroom has its own laptop which can be used as a DVD and CD player and are available for the support of Science.

Health and Safety

All science work will be carried out with reference to the 'Be Safe' (4th edition) book produced by the Association for Science Education. All staff will have access to this in Science Resource Box (in the Science resources cupboard).

Children need to recognise hazards and risks when working with living things and materials, and take actions to control these risks. They will be encouraged and supported in hazard assessment. Children are taught how to use resources appropriately and to learn responsibility for themselves and others.

Assessment, Recording and Reporting of Attainment

During the Early Years Foundation Stage ongoing assessment is taking place as part of the Foundation Stage profile for each child, via observations and dialogue with the children.

Each class teacher continually assesses performance in Key Stage 1 in accordance with the National Curriculum. A formative assessment of children's current knowledge and ideas is a common starting point for each new science topic. Children will often be assessed through teacher observation and verbal communication, and less frequently through written work. Key Stage 1 teachers assess summatively at the end of each topic using Target Tracker. Each year, there are opportunities to discuss children's progress in all subjects including science. Children's achievements are reported to parents at the end of each year in a written annual report.

Key Stage 1 teachers make an assessment of every child's progress against each attainment target at the end of the year using Target Tracker.

Equal Opportunities

At Hilltop Infant School, every child will have access to our curriculum regardless of gender, ethnic or religious background, disability or learning ability. We will make every effort to use science-based topic work and resources to exploit the full potential for multi-cultural education that celebrates cultural diversity.

Monitoring and Review

The science Leader works in conjunction with the S.L.T. monitoring of the standards of the children's work and the quality of teaching.

The role of the subject leader involves:

- keeping informed about developments and new initiatives to support the teaching of science and ensure staff are informed
- modelling good practice
- supporting teachers in planning and using resources
- being responsible for the upgrading and ordering of resources and arranging for their storage
- updating the school policy annually