

WARDEN HILL PRIMARY SCHOOL

Science Policy

Member of staff responsible	Science Leadership Group
Governor responsible	
Sub-Committee responsible	Curriculum
Date agreed with staff	
Date discussed with pupils	
Date agreed at Sub-Committee	
Date approved at Governing Body	
Frequency of policy review	
Date next review due	

Document Version Control

Issue Number	Issue Date	Summary of changes
1.0	FEB 16	In line with Curriculum 2014

INTRODUCTION

1. This policy explains the nature of science and its contribution to Warden Hill Primary School curriculum.
2. This policy satisfies the requirements of the September 2014 version of the National Curriculum. It was developed through discussion with teaching and non-teaching staff.
3. Its purpose is to:
 - i. assist members of staff in their planning of science teaching especially those new to the school.
 - ii. provide a reference for visitors to the school.
 - iii. enable the Head and Governing Body to identify priorities, or issues pertaining to the position of science in the school.
4. Its philosophy is that all pupils are entitled to a broad and balanced Science curriculum in order that they may better understand the nature of the world in which they live. It is important that children should begin to learn about science from an early age.
5. It is the Science Leadership Group's role to support and monitor the implementation of this policy.

Aims and Objectives for Science Education.

Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national and global level.

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and understanding to prepare them for life in the 21st century. Through the framework of the National Curriculum 2014, science aims to:

- stimulate children's interest and enjoyment in the area of science.
- Equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and natural sense of wonder about the world.
- Develop through practical work the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesising, and increased use of precise measurement skills and ICT.
- Encourage and enable pupils to offer their own suggestions, and to be creative in their approach to science, and to gain enjoyment from their scientific work.
- Enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms which are relevant and meaningful to them.
- Encourage children to collect relevant evidence and to question outcome and to persevere.
- Encourage children to treat the living and non-living environment with respect and sensitivity.
- To encourage children to raise questions and learn how to investigate and explore these using both first hand experience and secondary sources.
- To help children understand the nature of scientific ideas and to obtain and test the evidence for them.
- To help children recognise and assess risks and hazards to themselves and to others when working with living things and materials and to take action to control them.

Organisation and Methodology:

There is a whole school approach to planning and assessment, based on the National Curriculum 2014 We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Through the Programmes of Study in the National Curriculum 2014, children will acquire and develop these skills throughout their Primary years.

We believe that science promotes communication in a specific and precise language involving mathematical and logical thinking. It allows children to develop ways of finding out for themselves and gives them practice in problem solving.

In science, pupils are encouraged to be open-minded and to try and make sense of what they see and find out.

Programmes of Study

Provision is made for different ages and levels of ability

Children are given opportunities to:

- Take increasing responsibility for their work.
- Work independently and in groups.
- Be involved in tasks of varying duration.
- Undertake teacher directed and child initiated tasks.

Children undertake a range of activities designed to enhance their scientific knowledge and understanding including:

- Planning experimental work, obtaining, considering and presenting evidence. Scientific enquiry should include: observations over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing and research using secondary sources.
- Using ICT where appropriate.
- Evaluating their work.
- Taking part in investigative activities both in the local and wider environment.
- Undertaking trips and visits where appropriate.

All children, regardless of race or gender, will have equal opportunities to participate in all activities. Positive attempts will be made to develop and use a wide range of resources and activities, which reflect the interests, and cultural background of all pupils.

Appropriate provision will be made for children with special educational needs. Individual staff expertise and skills will be utilised to the benefit of both children and staff.

Careful monitoring and evaluation of policy will be undertaken to ensure maximum effectiveness.

The help of parents and other interested people will be encouraged and used where appropriate.

Content:

Statutory requirements, as laid down in the National Curriculum 2014, are delivered throughout the school.

For each science topic covered, planning covers:

- Working Scientifically skills
- Topic related key concepts
- Links with other areas of the curriculum
- Vocabulary to be developed
- Resources required to deliver the work
- Teaching activities
- Health and safety points and risk assessments

Foundation Stage

We teach Science in the Reception classes as an integral part of the topic work covered during the year. As the reception classes are part of the Foundation Stage of the National Curriculum, we relate the scientific aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs), which underpin the curriculum planning for children aged three to five. Science makes a significant contribution to the objective in the ELGs of developing a child's knowledge and investigating of the world, e.g. through investigating what floats and what sinks when placed in water.

Equal Opportunities:

At Warden Hill Primary School we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, gender, culture or class.

Inclusion:

In school we aim to meet the needs of all our children by differentiation in our science planning and in providing a variety of approaches and tasks appropriate to ability levels. This enables children with learning and/or physical difficulties to take an active part in scientific learning and practical activities and investigations and to achieve the goals they have been set. Some children will require closer supervision and more adult support to allow them to progress whilst children who are 'rapid graspers' will be extended through

differentiated activities. By being given enhancing and enriching activities, children who are 'rapid graspers' will be able to progress to a higher level of knowledge and understanding appropriate to their abilities.

Cross Curricular Links:

Teachers are committed to linking the children's learning in science to other curricular areas. Speaking and listening will be actively promoted during scientific investigations. The children develop many of their non-fiction reading and writing skills in science. Mathematical skills such as weighing and measuring are an important part of science lessons. Where appropriate, children will record their findings using charts, tables and graphs using ICT.

Assessment and recording

Assessment for learning is continuous throughout the planning, teaching and learning cycle. We assess children's work in science by making judgments as we observe children during lessons, question, talk and listen to children, and review their written work. We also make use of end of topic assessments.

At the end of each Key Stage teachers make a formal overall judgement using assessment frameworks issued by the Government.

Resources:

- Appropriate books will be available in the classroom libraries at all times.
- Children will be taught to use a range of scientific equipment.
- Children will have regular use of ICT resources during science sessions.
- Newspapers, magazines etc. will be used as appropriate.
- Children will have direct access to resources, within health and safety limitations, which they will be taught to use with respect.
- Parents will be informed of the science topics so that they can support the work at home if appropriate.

Health and Safety:

- A risk assessment will be made, as part of the planning process, before any potentially dangerous scientific activity is undertaken.
- Children will be informed of any risks or hazards but will also be

encouraged to assess and identify risks for themselves.

- Children will be shown how to use scientific equipment safely.
- Safety glasses will be used where appropriate.

Authorised by:

Head Teacher

Effective: Immediately