



SCIENCE POLICY

Review Date: September 2019

Introduction

Science is one of the four core subjects in the National Curriculum.

This policy outlines the purpose, nature and the management of the science taught in our school.

The school policy for science reflects the consensus of opinion by all the staff. It has been drawn up as a result of staff discussion and has the full agreement of the Governing body.

The implementation of this policy is the responsibility of the Headteacher and all the teaching staff.

Statement

Monkshouse Primary School understands the need for all pupils to develop their scientific ability as an essential component of all subjects and as a subject in its own right. A solid understanding of scientific knowledge and conceptual understanding helps to support pupils' work across the curriculum.

Aims

At Monkshouse Primary School we believe that scientific knowledge is built up through the experimental testing of ideas. Science is a practical way for children to find reliable answers to questions which they may ask about the world around them. Through science in our school we aim to:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Develop understanding of the nature, processes and methods of science through different types of scientific enquiries that help them to answer questions about the world around them.
- Equip the children with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- Work with increasing independence and confidence.

Organisation and approach

At Monkshouse Primary School science is taught, where possible, through cross curricular lessons using the Cornerstones scheme of work. Objectives not covered by the Cornerstones approach will be taught discretely to ensure full coverage of the National Curriculum.

Early Years (Nursery and Reception)

Children will explore Science through making predictions, using their senses and investigating materials and their properties. Science is taught through the strand of, 'Understanding the World'. Science teaching is also linked to other strands of the EYFS framework for learning 2014.

Teachers and Teaching Assistants support children to develop a solid understanding of things occurring around them in their day-to-day lives. Children are encouraged to be creative and inquisitive as they participate in activities. Children are encouraged to use their natural inquisitiveness, whilst taking part in exploratory play in specific scientific areas as well as areas which link across the EYFS framework.

Key Stage One (Years 1 and 2)

During Key Stage one, pupils observe, explore and ask questions about living things, materials and the world around them. They begin to work together to collect evidence to help them answer questions, find patterns, classify and group objects, research using a variety of sources and become familiar with the concept of a fair test. Children will use reference material to find out about scientific ideas. They will share their ideas and communicate them using scientific language, drawings, charts, and tables.

Key areas of Science to be covered include: Everyday Materials, Plants, Animals including humans, Seasonal Change and Living Things in Their Habitats.

Lower Key Stage Two (Years 3 and 4)

Children are encouraged to extend the scientific questions which they ask and answer about the world around them. They will explore everyday phenomena and the relationships between living things and familiar environments and begin to develop their ideas about functions, relationships and interactions. Children will make some decisions about which types of enquiry will be the best way of answering questions including observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative and fair tests, finding things out using secondary sources.

They will make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including new equipment including thermometers and data loggers. Children will begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them and help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.

Key areas of Science to be covered include: Plants, Animals, including humans, Living Things in Their Habitat, Light, Electricity and Sound.

Upper Key Stage Two (Years 5 and 6)

The principal focus of Science teaching in Upper Key Stage 2 is to enable children to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.

In Upper Key Stage 2, children should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. Children will take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate, choosing the most appropriate equipment and explaining how to use it accurately. They will identify patterns that might be found in the natural environment.

They will make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them.

Key areas of Science to be covered include: Plants, Living Things in Their Habitat, Animals including humans, Earth and Space, Light, Forces, Electricity, Properties and Changes of Materials and Evolution and Inheritance.

Assessment

Staff will make a variety of ongoing assessments over a period of time based on the evidence from a variety of activities.

Children are given a teacher assessment level inputted into Scholarpack at the end of each academic year.

Assessment is made with thorough AFL and annotation of planning.

Working Scientifically

Working scientifically is a key skill integral to Primary Science and is embedded and developed throughout the whole of Monkshouse Primary School.

Inclusion and Equal Opportunities

Monkshouse Primary School is proud of its inclusive approach to the whole curriculum and we aim to provide for all children in order that they achieve as highly as they can according to their individual ability. We value Science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their Science experiences.

We work to ensure that all children have the opportunity to gain scientific knowledge and understanding regardless of gender, race, class, physical or intellectual ability. We will ensure that expectations do not limit pupils' achievements, supporting where there is a need and extending children who need further challenging.

Role of the Teacher

Teachers at Monkshouse Primary School will:

- Plan and deliver the Science curriculum following the guidelines in this document.
- Follow the Science Programmes of Study in the Cornerstones topics or as laid down in discrete planning documents.
- Undertake CPD as recommended by the Science Coordinator.
- Look after the resources and keep Science areas neat, safe and accessible.
- Ensure, where appropriate, work is displayed in an informative and stimulating way.
- Consider and minimise risks for all activities and systematically teach pupils to take responsibility for determining the risks to themselves and others.
- Notify the co-ordinator of any extra resources required, of any breakages or losses that occur and of any new materials, books, DVDs etc. that might prove useful.

Role of the Subject Coordinator

The Science Coordinators at Monkshouse Primary School will:

- Be responsible for the development of Science in school.
- Monitor the Science curriculum and update school policy when and where necessary.

- Monitor the effectiveness of Science in school by means of book scrutinies, ensuring the quality of the learning environment and overseeing assessment in line with the current school assessment policy.
- Support teachers in their planning and strategies for classroom management.
- Disseminate new information.
- Support teachers in delivering the curriculum and arrange staff development and INSET training where appropriate.
- Be responsible for purchasing and providing appropriate Science resources
- Consider and minimise risks for all activities in line with current Health and Safety regulations.

Signed on behalf of the Governors _____ Headteacher

Date _____