



Science Policy

Person responsible: Head teacher

Ratified by the governing body: Summer 2017

Date for review: Summer 2020

A handwritten signature in black ink, appearing to read "Anne Marie Renshaw".

Revernd Anne Marie Renshaw

Chair of Governors

Aims and Objectives:

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st century. We, at Messing Primary School, believe that the teaching of science develops in children an interest and curiosity about the world in which they live; it builds in them a respect for the environment. Through the framework of the National Curriculum, science aims to:

- 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 hypothesizing, 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.
- Teach scientific enquiry through contexts taken from the National Curriculum for science.
- 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.
- Stress the need for personal and group safety by the correct usage and storage of resources.
- To enable children to appreciate that we do not always know the answers and results when carrying out scientific enquiry.
- To develop pupil's enjoyment and interest in science.
- To enable pupils to effectively communicate scientific ideas by using scientific vocabulary.

The Science Curriculum

Early Years Foundation Stage

Science is taught in the Reception class according to the Curriculum guidance for the Foundation Stage. It is incorporated in the Early Learning Goal 'Knowledge & understanding

of the world' in which pupils develop the crucial knowledge, skills and understanding that helps them make sense of their world.

Key Stages 1 and 2:

The knowledge and skills within The National Curriculum Programme of Study are met using The Chris Quigley Milestones Primary Science and appropriate cross curricular opportunities. In Key stages 1 and 2, a unit of work for science is covered each term.

The Learning Environment:

Children will have access to all necessary resources to enhance their understanding of the investigation.

Approaches to Teaching and Learning

Scientific Enquiry

Science is taught with an emphasis on the pupils engaging in practical enquiry to support/develop their understanding of scientific concepts and skills. Teachers use a range of strategies including: exploration, investigative enquiry and illustrative enquiry. Teachers try to ensure that some of the children's ideas are used as a basis for enquiry.

ICT

Pupils are taught to use a range of ICT equipment to enhance their scientific learning. E.g. cameras to record investigations, data loggers for accurate measurements of temperature and digital microscopes for close observation.

Programs such as Excel are used to create graphs and charts to record results.

Pupils are taught and encouraged to use and choose a range of recording strategies to communicate their ideas and scientific findings.

Assessment

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Children are continuously assessed by

- Observing children at work, individually, in pairs, in a group, and in classes.
- Questioning, talking and listening to children
- Considering work/materials / investigations produced by children together with discussion about this with them.
- Science assessment grid(Chris Quigley milestones) are handed in every even term.
- Marking is used to acknowledge achievements and to show the pupils what they need to do in order to improve. Scientific spellings are modelled and corrected.

Planning

Planning should be in three phases.

Long-term planning

- Maps the topics studied in each term during that year on a two year rolling programme. This aims to cover the three strands of science including chemistry, physics and biology. A curriculum map for each class can be obtained on the school website.

Medium-term planning

- By using the National Curriculum Learning Intentions, Medium term planning identifies; learning objectives, science activities, assessment opportunities, the vocabulary to be taught and used, safety issues, how information and communications technology and resources should be used.

Weekly planning

- The class teacher is responsible for tailoring the medium term plans for their class. These list the specific learning objectives, and outline how these objectives will be taught and should show how EAL, SEN and G&T children are to be supported.

Resources

Class teachers are responsible for informing the Science Leader of resources which are required in order to deliver their planned curriculum.

Health and Safety

The safe use of equipment and materials is promoted at all times. Teachers must also take into account the school's Health and Safety policy. Particular attention must be given to avoiding the use of anything that aggravates individual pupils' allergies. Where necessary, safety issues have been identified in medium term planning and risks must be included in weekly planning, when activities are identified that are unusual and beyond the scope of normal safety practice.

Equal Opportunities

The governors and staff of Messing Primary School are committed to providing the full range of opportunities for all pupils, regardless of gender, disability, ethnicity, social, cultural or religious background. All pupils have access to the curriculum and the right to a learning environment which dispels ignorance, prejudice or stereotyping.

Inclusion

In school we aim to meet the needs of all our children by scaffolding in our science planning and in providing a variety of approaches and tasks appropriate to ability levels. This will enable 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 more able children will be extended through differentiated activities. By

being given enhancing and enriching activities, more able children will be able to progress to a higher level of knowledge and understanding appropriate to their abilities.

The Role of the Subject leader

- To undertake monitoring of standards in science and use this to inform the science action plan.
- Provide leadership and management of their subject to secure high quality teaching and learning.
- Play a key role in motivating, supporting and modelling good practice for all staff, including the organisation and presentation of School INSET.
- Take a lead in policy development and review.
- To liaise with outside agencies and attend subject specific courses.
- To report to the Head teacher and Governing Body on science related issues.
- To plan and organise the allocation and purchase of resources in accordance with available budget.