



SCIENCE POLICY-led by Mrs W Faber

Introduction

Science is the introduction to the world of life processes and living things, materials and their properties and physical processes. It is a fundamental part of everyday life and is essential to our understanding of the world. Science encourages individuals to become curious, to seek explanations and to respect the world. Through science, pupils understand how major scientific ideas contribute to technological change.

Aims

Through the provision of exciting, engaging science lessons we aim to build upon our children's natural curiosity about themselves and their world. By developing and investigating scientific ideas, we endeavour to;

- develop pupils' scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- develop their understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- ensure pupils are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- engage the children through the use of a variety of teaching and learning styles during science lessons such as research, investigation, exploration, collaborative and individual work.

Curriculum Planning

Planning for science is based on the programmes of study in the National Curriculum, and meets the needs of all learners.

We carry out the curriculum planning in three phases (long-term, medium-term and short-term). The National Curriculum gives an outline of what we teach in the long term, while our medium term planning identifies the key objectives that we intend to teach each term.

The class teacher is responsible for completing the weekly plans for the teaching of science. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught. Teachers are free to complete these weekly plans in any way that they see fit. From September 2019 instead of using WALTs as objectives at the beginning of a lesson questions are used – often class teachers have asked children what they would like to find out as well as these questions covering the National Curriculum.

Teaching and Learning

The study of science is twofold, as reflected in the National Curriculum document. Firstly, it is concerned with the approach to science that is the development of scientific thinking and working. This is referred to in the NC as Working Scientifically. This involves children planning, observing, predicting, obtaining, interpreting and presenting evidence. These are complex skills, which need developing over time and need to be systematically taught throughout the school. They are the tools of the subject and they should underpin all areas of study. Opportunities for investigative work are planned into each area of study where appropriate.

At Howley Grange we present each child with the opportunity to develop their scientific knowledge through investigation and discovery at the appropriate level for their ability, children should:

- Be actively involved in planning, exploration and investigation through first-hand experience.
- Pose questions and devise and conduct their own investigations.
- Choose and use appropriate equipment and materials with due regard for the safety of themselves and others.
- Work co-operatively, sharing ideas and the progress of their work with each other and adults.
- Record and present their findings in a variety of ways appropriate to the investigation, including computing for example creating graphs and videoing and taking photographs of their work and investigations.
- Draw reasoned conclusions from their findings, where appropriate.

Secondly, science is concerned with the acquisition of knowledge. The content to be covered across the key stages is outlined in the programmes of study. Learning activities will ensure that children have opportunities to work scientifically whilst acquiring the knowledge outlined in the National Curriculum.

Assessment

Assessment in Science follows school policy and procedures. At Howley Grange, we understand the value of formative, day to day assessment and incorporate assessment for learning opportunities within lessons, using teacher, self and peer assessment to inform future planning and delivery. At the end of each half term/unit teachers formally assess children's achievements against age related expectations to determine whether children are working towards, have met or are exceeding the expected standard for their age. These judgements are shared with parents through the children's termly reports.

At Howley Grange we use a variety of techniques, mainly discussion based activities, as a way of assessing the children's thoughts and knowledge around their current topic. Teachers choose whether to use 'concept cartoons' or create their own discussion activities. In Key stage two teachers use a combination of these more informal activities alongside mini written assessments. Children record their thoughts and opinions through annotated drawings and cartoons or verbally where necessary.

Resources

There is a science store room, located on the ground floor of the Early Years Department. Each unit of work has a box containing necessary resources for that unit.

Year groups have their own topic based science books in their classrooms so that the children can support their own learning through reading.

The role of science leader

- To ensure that the policy is being implemented

- To review the policy biannually
- To support and develop staff
- To liaise with Governors
- To keep up to date with developments in this area of the curriculum and incorporate these into plans for future development
- To analyse assessment data
- To monitor planning and delivery of lessons
- To provide strategic leadership for the development and improvement of science across the school

Reviewed September 2019

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Date of next review September 2021



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