



Higher Lane Primary School

Science Policy

January 2017

Date	Review Date	Coordinator	Nominated Governor
January 2017	January 2018	Miss A Egan	

Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. It links ideas and knowledge with direct practical experience and can engage learners at many levels. Scientific method develops and supports inquiry through experimentation and proposition. It develops creativity in thought and analysis in practice.

In studying Science, pupils gain understanding about how ideas contribute to scientific change – impacting on industry, business and medicine and improving the quality of life. They learn to question and discuss issues that may affect their own lives, and the future of the world.

Aims

- To engage pupils as learners at many levels through linking ideas with practical experience;
- To stimulate and excite pupils' curiosity about changes and events in the world and to enable them to satisfy this curiosity with understanding.
- To link pupils' understanding with scientific thought and thus develop a greater understanding of the world in which we live and their responsibility to ensure its sustainability

Objectives

- To help pupils develop, model and evaluate experiments using critical and creative thought.
- To develop pupils' questioning and analytical skills.
- To provide a rich and varied science curriculum that will stimulate and interest all pupils.
- To ensure teaching styles and methods in science vary to suit the type of learning and the pupils' differing learning styles and abilities.
- To provide appropriate and sufficient scientific resources for all pupils that will support effective learning and teaching.
- To develop a variety of other skills, including those of enquiry, problem solving, ICT, investigation and different means of presentation in a cross-curricular way.

Teaching Guidelines

Science is a core subject of the National Curriculum.

The work covered at Key Stage 1 builds on the Early Learning Goal for Knowledge and Understanding of the World for children in the Foundation Stage for pupils aged under five. Pupils in Reception continue to develop their knowledge, understanding and skills through play activities and direct teaching which begin to develop the skills needed for further scientific enquiry.

Lessons all have clear learning objectives, which are shared with and understood by the children. They are at all times aware of what they are going to learn through the activity, and what skills the teacher is looking for in their learning.

Teachers use a range of learning and teaching styles, incorporating individual, pair, class and group work into lessons. Children are taught through discussion, practical activity, games,

investigations, problem solving, recording and practice, consolidation, and regularly use IT to record and support their work. The teaching style and methods are varied according to the subject matter and the pupils being taught.

Planned activities inspire the pupils to experiment and investigate the world around them. They are encouraged to raise their own questions such as “Why...?”, “How...?” and “What happens if...?”. Practical work develops the skills of enquiry, observation, research, experimentation, use of apparatus, measuring and checking results, making comparisons and communicating results and findings. Activities are challenging, motivating and extend pupils’ learning.

Pupils have frequent opportunities to develop their skills in planning investigative work, selecting relevant resources, making decisions about sources of information, carrying out activities safely and deciding the best form of communicating their findings. They are encouraged to take responsibility for their own learning as far as possible for their ages and abilities.

We recognise the fact that there are pupils of widely different abilities in all classes and we use a variety of methods to ensure suitable learning opportunities for all pupils, by matching the challenge of the task to the ability of the pupil. We achieve this by:

- setting common, open-ended tasks which can have a variety of responses;
- grouping pupils by ability and setting different tasks to each ability group;
- grouping pupils in mixed ability groups so they can support each other;
- providing resources that meet the needs of the group;
- using learning assistants to support the work of individual pupils or groups of pupils;
- giving additional teacher input to some pupils when needed

Curriculum Planning

This is organised in three stages:

Long Term Planning

This is based on the National Curriculum for science, which details what is to be taught over the Key Stages and provides the topic basis for planning science activities for each year group. This is undertaken by the science coordinator and varies little from year to year, unless there are changes to the National Curriculum. It is monitored regularly and evaluated annually.

Medium Term Planning

This takes the long term plan and organizes the teaching of science into termly or half-termly sections. The planning is more detailed and the objectives are more specific in nature. This planning is developed by the class teachers, who respond to the needs of their pupils. It also ensures a balanced distribution of work is undertaken across each term. At Higher Lane Primary School, we use The Science Learning Challenge Curriculum by Focus Education to ensure the National Curriculum coverage.

Short Term Planning

Short term planning details the science activities that take place in class. Lessons are planned in detail and specific class objectives are set, in accordance with the needs of the pupils. Individual learning goals might also be set for pupils in some lessons.

The teachers collaborate on the planning of science to ensure parity in provision and to share expertise.

Monitoring and assessment

The science curriculum is monitored by the science coordinator, who examines pupils' work, interviews pupils to ascertain learning in science, monitors planning and ensures parity of entitlement for all pupils across the school.

S/he attends training for Science coordinators run by the local authority and other providers.

There is no legal requirement for assessment against the end of key stage levels until the end of each key stage, when the National Curriculum assessments take place. However, at the end of each science unit, summative assessment takes place to ascertain what the pupil knows at that moment in time.

More important to the school, however, are the formative assessments, which are informal, continuous and ongoing, and identify the needs of the individual pupils. These are incidental, form part of the classroom activities, and are used to inform the pupil's future learning.

A variety of strategies, including questioning, discussion, concept mapping and marking, is used to assess progress. The information is used to identify the pupils' needs and to inform planning.

Additional Educational Needs

All classes consist of pupils of varying abilities and with varying needs, and our classroom practice ensures that most of these needs can be met within the classroom organization. (See Teaching Guidelines)

However when a child has very specific additional needs, support is provided firstly by the school's internal organizational structure, which gives personal assistance and additional practice and is administered by support assistants within the school, often within the classroom, during the lessons

Monitoring the Effectiveness of the Policy

Annually (or when the need arises) the effectiveness of this policy will be reviewed by the coordinator, the Headteacher and the nominated governor and the necessary recommendations for improvement will be made to the Governors.

Headteacher:	Ms C McLachlan	Date:	January 2017
Chair of Governing Body:	Mr D Lester	Date:	January 2017