



Limehurst Primary School



Subject Leader Report: Science by Matt Todd

INTENTION: Subject Overview

At Limehurst, our 7 year Science curriculum has been purposefully structured to enable pupils to sequentially develop the knowledge and skills required to think and behave like scientists. We aspire that our pupils leave Limehurst having developed a curiosity to learn about the world around them, motivated to ask questions from a scientific perspective, utilising the knowledge and skills they have developed to carry out their own enquiries and form their own conclusions. To become successful scientists our pupils learn to combine the scientific knowledge they learn with a strong understanding of the importance of the 6 different types of scientific enquiry and their differing purposes. We want our pupils to be equipped with the knowledge to make decisions about which enquiry type is best suited to investigate a scientific idea and how to implement their chosen enquiry type both successfully and fairly, whilst critically evaluating their findings. This forms the core principle of our science curriculum and is embedded from EYFS through to Year 6.

Within the curriculum, the different aspects of scientific knowledge are combined carefully with the 6 types of scientific enquiry throughout each unit of study. This ensures the pupils are provided with a balanced and broad curriculum where they can discover the interconnections between the scientific knowledge they are learning and the choice of scientific enquiry they are using. Through consistent application of the 6 types of scientific enquiry within the different strands of science, pupils are challenged and their confidence and understanding of both the knowledge and suitability of each enquiry type develops. This consistent use of scientific investigation builds on prior learning and develops our pupils' confidence in generating their own questions and ideas, evaluating findings and drawing conclusions in a scientific manner. We aim for our pupils to progress to Key Stage 3 equipped with the confidence needed to conduct a variety of scientific enquiries alongside a deep knowledge within biology, chemistry and physics.

At Limehurst we follow 2 schemes. EYFS use Play, Observe & Ask, which is provided by the Primary Science Teaching Trust (PSTT). It is specifically designed to allow pupils to explore the key principles of the different types of scientific enquiry within understandable contexts related to the EYFS goal of Understanding the world. It has many cross curricular links and provides a sound foundation from which the pupils can develop their scientific knowledge and skills ready for the Key Stage 1 curriculum. Hamilton Trust provides our curriculum coverage for Key Stage 1 and Key Stage 2. It provides clear progression in knowledge and skills throughout the different scientific strands. It ensures that the 6 different types of scientific enquiry are consistently revisited and embedded throughout the Key Stages. Where possible Hamilton Trust provides a context and a purpose to each unit, providing pupils with a deep understanding of how science is relative to their everyday lives. This allows us to develop passionate scientists that enjoy their learning both now and in the future.

Our intentions for all our pupils are that progressively they are able to:

- 1) Develop and build upon a deep knowledge within the 11 scientific strands that make up the curriculum.
- 2) Understand and be able to independently use the 6 different types of scientific enquiry.
- 3) Behave like scientists, asking, answering, investigating and evaluating findings correctly.

IMPLEMENTATION: Planning, sequencing and skills progression

At Limehurst, our pupils' learning journey within Science begins in the Early Years Foundation Stage Curriculum. Pupils learn about science through 'Understanding the World' and the aim is to provide our pupils with a strong foundation ready for Science in Year 1. The PSTT scheme has strong links to both the EYFS and national curriculum and ensures that our pupils have the necessary scientific knowledge and skills when they progress from EYFS to Year 1. Science is taught through a mixture of provision, carpet time and the use of shared books with many cross curricular links. Teacher led scientific investigations that explore the 6 types of scientific enquiry form a large part of our curriculum. The pupils are also introduced to simple scientific vocabulary and learn the important features of science investigations, such as fair testing.

In KS1 and KS2 Hamilton Trust provides the basis for teaching the National Curriculum. It ensures that all the aims of the curriculum are met through the long, medium and short term planning that also includes the different scientific enquiries being used within that unit. The scheme builds on prior learning and sequentially develops the knowledge and skills of our pupils through understandable contexts and relates it to their everyday lives enabling a deeper understanding. Science is taught in a variety of ways. Whole class teaching, small group work and carousel activities provide the opportunities to learn about science in a variety of ways. Pupils will explore the different types of scientific enquiry as both teacher lead and independent activities and be provided with the opportunity to use their own ideas and curiosities to create further questions to investigate.

Learning is supported with the use of class displays that show the 6 types of scientific enquiry alongside any vocabulary related to the current unit of work. When planning an investigation using the enquiry types a bespoke planning template is used throughout Limehurst from EYFS through to KS2. They are used in a progressive way whilst providing consistency that enables the pupils to spend more time performing the science. These will often be completed as a whole class activity, though pupils occasionally complete them independently when performing further scientific enquiry.

IMPLEMENTATION and IMPACT: Assessment, monitoring and evidence

The impact of the Limehurst curriculum is measured using a variety of approaches and tools. Learning walks, book scrutiny and pupil and staff voice are conducted by the subject lead to ensure the correct implementation of the curriculum. The Science lead will also host staff meetings to ensure the correct teaching of the subject and update teachers on any amendments or changes to the curriculum. They will also liaise closely with EYFS on a regular basis to ensure that foundation stage learning supports the Key Stage 1 curriculum. At the end of each unit the teacher will complete assessments showing the pupils' achievements. The Science lead has access to these and can monitor progress across each year group.