

Science at Horncastle

The aim of science teaching, here at Horncastle, is to stimulate the children's knowledge and understanding of how science affects our everyday life. Children develop an awareness of the nature, processes and methods of science using different kinds of scientific enquiries that help them to answer specific questions about the world around them. The opportunities that science provides to work practically, in a variety of contexts, underpins their learning journey. Children do not simply learn science at Horncastle Primary; they become scientists.

" To me there has never been a higher source of earthly honour or distinction than that connected with the advances in science."

Isaac Newton

Aims and Purpose

Develop scientific knowledge through the disciplines of chemistry, biology and physics.

Encourage children to develop a curiosity and interest in science.

Children talk confidently about learning in science using appropriate and technical vocabulary.

Children are prepared for their next stage of their scientific journey.

Children confidently apply their scientific knowledge to other areas of learning.

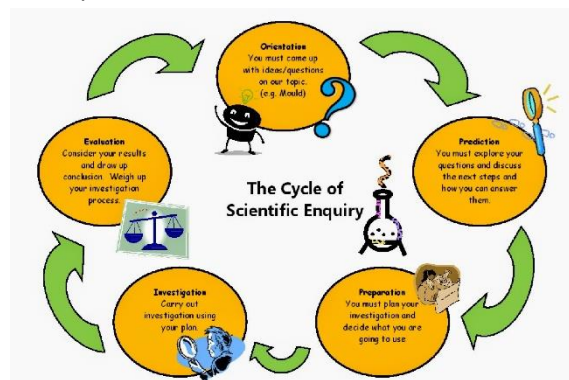


How do we do it?

Our science curriculum is cyclical: Pupils return to the same disciplinary and substantive concepts during their time in primary school. It increases in depth: Each time a concept is revisited, it is covered with greater complexity. Upon returning to each concept, prior knowledge is utilised so pupils can build on previous foundations, rather than starting again.

Science teaching focuses on enabling children to think as scientists. Whenever possible, children are encouraged to work using scientific enquiry whereby they answer their own questions through practical investigations. Children will then explain their findings using scientific vocabulary making comparisons to the substantive knowledge they have learned.

We give children the opportunity to access a wide range of science resources. Where possible, we encourage visitors to come into the school and carry out scientific investigations with the children.



The fundamentals

Science in the National Curriculum can be summed up in just a few statements: develop **scientific knowledge and conceptual understanding** through specific disciplines of biology, chemistry and physics, develop understanding of the **nature, processes and methods** in science through different types of science enquiries that help them answer scientific questions about the world around them, children are equipped with the scientific knowledge required to understand the **uses and implications of science**, today and for the future.

Planning

Our science curriculum aims to ensure that all pupils:

Learn science in a fun and logical way

Are encouraged to ask questions and work scientifically

Have access to scientific equipment to solve science problems

Can articulate scientific concepts using scientific vocabulary

Strategies

We follow the White Rose Science scheme, adapting to the needs of our children.

Planned retrieval exercises at the beginning of each lesson to ensure children are secure with their knowledge.

How do we support our SEND learners?

- Visual, tactile, auditory and kinaesthetic approaches are used, such as supporting teacher talk with visual aids.
- Alternatives to written recording are offered, eg drawing, scribing, word processing, mind maps, digital images, video, voice recording
- Learning through practical investigations where possible
- Pictures and symbols are used to illustrate abstract, new or scientific concepts.
- Pre-teaching of important science vocabulary, concepts and/or processes, where appropriate.
- Scaffolding speaking or writing eg by using sentence starters, writing or speaking frames.