

Science Intent, Implementation and Impact.

National Curriculum 2014 KS1

Purpose of study

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop 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
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Intent

Our curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to fly high and to reach their full potential, within the love of Jesus.

Science lessons, at Newton Solney Infant School, aim to engage and captivate pupils into the world of Science through providing the opportunities to develop knowledge and skills in conjunction with each other. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group.

The purpose of our Science curriculum is to ensure that all pupils are taught to be ready, willing and able to explore Science and make valid contributions to developing their own knowledge and range of scientific enquiry skills. We will ensure that the Working Scientifically skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, building arguments and explaining concepts confidently.

Our Science curriculum will also drive the use of subject-specific vocabulary as a priority to accessing the world of Science in order for our pupils to fully practise and apply learned facts and skills. Our broad and balanced curriculum aims to invigorate an excitement for Science as well as instil, in our pupils, the notion that they, too, can become Scientists of the future.

Implementation

In order to ensure a high standard of teaching and learning of Science, our curriculum is progressive in both knowledge and skills. Consistency is ensured between each class and year group by establishing a whole school approach to the teaching of Science. We believe in a hands-on approach where children learn by doing it for themselves. This approach encourages our children to build resilience and become creative, critical thinkers.

Our expectations for Science implementation include:

- Revising and consolidating previous learning in order to make progress and/or close gaps in learning that have arisen due to varying factors.
- Well planned science teaching embedded with meaningful, memorable, practical learning experiences.
- Fostering pupils' curiosity for Science by providing them with opportunities to question, to challenge and to research answers for themselves and to encourage regular use of questioning through effective modelling.
- Differentiated lessons and recording strategies to ensure all pupil needs are met and that writing is not a barrier to science learning.
- Having weekly Forest School lessons for all classes which also have a clear progression in knowledge and skills across all year groups.
- Having topics blocked to allow children to focus on developing their knowledge and skills, studying each topic in depth.
- Making links between Science and other curriculum areas.
- Engaging pupils through focussed Science days/weeks and/or extra-curricular Science projects.

Impact

The impact of Newton Solney's Science curriculum is the enthusiasm, engagement and curiosity evident in its learners. It results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world. Newton Solney pupils will know how to plan an investigation in its various stages as well as set one up and carry it out. Pupils will have the confidence to make predictions and know how to find answers to their questions. They will be able to explain their findings to others using evidence and scientific knowledge with confidence. They will see their own potential to pursue a career as a Scientist regardless of gender, ethnic origin, class, disability or aptitude. They will use subject-specific language with confidence, fluency and understanding both when speaking and when writing. They will learn from each other but not be afraid to ask for help. We want to empower our children so they understand they have the capability to change the world. This is evidenced in a range of ways, including pupil voice, their work and their overwhelming enjoyment for science.