

Intent – Why do we teach what we teach

At Newton Leys Primary School and Nursery, it is our intention to give every child a broad and balanced Science curriculum which enables them to confidently explore and discover what is around them, so that they have a deeper understanding of the world we live in. We want our children to love science. We want them to have no limits to what their ambitions are and grow up wanting to be astronauts, forensic scientists, toxicologists or microbiologists. To achieve this, it involves practical hands on experiences that encourage curiosity and questioning. Our curriculum will enable children to become enquiry-based learners and will encourage respect for living organisms and for the physical environment. They will be encouraged to ask questions about the world around them and work scientifically to further their conceptual understanding and scientific knowledge. Children will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. It will provide opportunities for the evaluation of evidence and rational explanation of scientific phenomena as well as an opportunity to apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. Children will be immersed in key scientific vocabulary, which supports the acquisition of scientific knowledge and understanding.

Implementation – How do we teach what we teach

At Newton Leys Primary School and Nursery, we use a mixture of the Cornerstones Curriculum and discrete science units to deliver our Science curriculum. The curriculum is planned to build increasingly sophisticated knowledge of the products (substantive knowledge) and practices (disciplinary knowledge) of science.

Early Years

The science curriculum is taught through the learning area 'Understanding the World'. EYFS staff have a good understanding of how the ELG's feed into the National Curriculum through robust planning, cross phase meetings and CPD opportunities. Exciting, purposeful and contextual activities are planned to build on children's natural curiosity.

Key Stage 1 and 2

Every year group will build upon the learning from prior year groups therefore developing depth of understanding and progression of skills. Our teaching and learning supports our curriculum by ensuring that lessons build on prior learning and provide opportunities for guided and independent practice. Children explore, question, predict, plan, carry out investigations and observations as well as conclude their findings. Children present their findings and learning using science specific language, observations and diagrams.

CPD opportunities are available to staff to ensure high levels of confidence and knowledge are maintained. Teachers are aware of common misconceptions that can occur in each topic and assessment for learning in each lesson ensures misconceptions are highlighted and addressed.

Events, such as Science Week, allow all pupils to come off timetable, to provide broader provision and the acquisition and application of knowledge and skills. Use of education visits and visitors are encouraged, to enrich and enhance the pupil's learning experiences within the Science curriculum.

Impact - How do we know what pupils have learnt and how they have learnt it

Children at Newton Leys Primary School and Nursery will have:

- A wider variety of skills linked to both scientific knowledge and understanding and scientific enquiry/investigative skills.
- Meaningful, memorable learning experiences
- A richer vocabulary which will enable to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work.
- An ability to question ideas and reflect on knowledge.
- The ability to work collaboratively and practically to investigate and experiment.
- The opportunity to achieve age related expectations in Science at the end of their cohort year.