

Statement of Intent

At Linton Primary School, we recognise the importance of Science in everyday life and that:

Learning is a change to long -term memory

Our aims are to ensure that our pupils experience a wide breadth of study and have, by the end of each key stage, built up knowledge in their long- term memory.

Threshold concepts tie together the subject topics into meaningful schema. Pupils return to the same concepts over both key stages and gradually build understanding of them

At Linton Primary School, based on the National Curriculum and Chris Quigley's Essentials Curriculum, our learning in Science offers opportunities for children to:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics;
- Develop understanding through different enquiries that help them to answer scientific questions about the world around them;
- Be equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future.
- Develop the essential scientific enquiry skills to deepen their scientific knowledge.
- Use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including IT, diagrams, graphs and charts.
- Develop a respect for the materials and equipment they handle with regard to their own, and other children's safety.
- Develop an enthusiasm and enjoyment of scientific learning and discovery.

At Linton Primary School:

Children in years one to six have weekly lessons in Science. In Early years, science is taught through the children learning about the world around them in adult led sessions and in continuous provision.

We endeavour to ensure that the Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.

Statement of Implementation

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving well in science.

Our curriculum design is based on evidence from cognitive science;

Learning is most effective with spaced repetition it helps pupils to discriminate between topics and aids long-term retention

Retrieval of previously learned content is frequent and regular, which increases both storage and retrieval strength

- Science will be taught in half termly topic blocks identified by the subject leader
- Learning from Milestone 1 will be in Years 1 and 2, learning from Milestone 2 will be in Years 3 and 4, learning from Milestone 3 will be in Years 5 and 6
- Threshold concepts i.e. Investigate materials, Investigate living things, Understand plants etc. will be repeated over the three milestones. Knowledge develops throughout. Although there is new content in each year, the over-arching concepts are repeated and learning can be retrieved.
- Scientific knowledge begins in Early Years and then Milestone one builds on that. Knowledge is identified in the key components of Biology, Chemistry and Physics
- Learning is organised over a two-year programme. For the mixed Y4/5 class, learning is taken from Milestones two and three.
- Planning involves teachers creating engaging lessons, which aid understanding of conceptual knowledge. Teachers use precise questioning in class to assess conceptual knowledge and to identify those children with gaps in learning, so that all children keep up.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's time in school, with new vocabulary and challenging concepts being introduced through direct teaching.
- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding.

Statement of Impact

The successful approach at Linton Primary results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world.

Our engagement with the local environment ensures that children learn through varied and first hand experiences of the world around them.

Pupil voice is used to further develop the Science curriculum, through questioning of children's views and attitudes to Science.