

Langton Primary School

Science Curriculum



Intent

Here at Langton Primary School, our children are hands on scientists, experiencing an education covering all areas of science that is lead and delivered by an experienced, specialist science teacher. Following the science curriculum, we plan engaging, experimental work that goes beyond the statutory requirements outlined by the government.

Our **intent** of the science curriculum:

- For our children to love science, to remember their science lessons in our school, to cherish these memories and embrace the scientific opportunities they are presented with.
- To have no limits to what their ambitions are within the world of STEM and grow up wanting to be astronauts, forensic scientists, toxicologists or microbiologists
- To give every child a broad and balanced science curriculum which enables them to confidently explore and discover what is around them.
- To develop a deeper understanding of the world we live in by delivering exciting, practical hands on experiences that encourage curiosity and questioning.
- Our aim is that these stimulating and challenging experiences help every child secure and extend their scientific knowledge and vocabulary, as well as promoting a love and thirst for learning.
- To deliver a coherently planned curriculum which has been carefully designed and developed to equip our children with not only the minimum statutory requirements of the science National Curriculum, but to prepare them for the opportunities, responsibilities and experiences of later life at secondary school and beyond.

Implementation

At Langton, science subjects are taught within mixed year groups following the National Curriculum.

- At EYFS and KS1, science is topic taught by the class teacher, to allow the focus on developing their knowledge and skills in relation to their current class topic. At KS2 a specialist science teacher delivers 'stand-alone' science lessons following our own scheme of work, in depth study and coverage across the three sciences.
- Each class will build upon the learning from prior year groups, therefore developing depth of understanding and progression of skills. This is particularly important when delivering children's abilities to work scientifically.
- Teachers promote enjoyment and foster interest of the scientific disciplines; Biology, Chemistry and Physics.

- 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.
- In order to support children in their ability to 'know more and remember more' there are regular opportunities to review the learning taken place in previous areas as well as previous lessons.
- At the start of each unit of work children will review previous learning and will have the opportunity to share what they already know about a current topic.
- At KS2, children are given an overview at the start of each unit which details the learning objectives to be covered.
- Effective CPD and standardisation opportunities are available to staff to ensure high levels of confidence and knowledge are maintained.
- To support teaching, teachers access a range of resources and planning including our own scheme of work for KS2.
- The use of the National STEM Learning Centre in York proves an invaluable support for resources, training and advice to our science teachers.
- Effective use of education visits and visitors are planned, to enrich and enhance the pupil's learning experiences within the science curriculum.
- Teachers use highly effective assessment for learning in each lesson to ensure misconceptions are highlighted and addressed.
- Effective modelling by teachers ensures that children are able to achieve their learning intention, with misconceptions addressed within it.
- Cross-curricular links are planned for, with other subjects such as Maths, English and Computing.
- Termly assessment by written and practical methods allows us to use data to inform future practice.

EYFS

- The Early Years Foundation Stage Curriculum supports children's understanding of Science through the planning and teaching of 'Understanding the World.'
- Children find out about objects, materials and living things using all of their senses looking at similarities, differences, patterns and change.
- Both the environment and skilled practitioners foster curiosity and encourage explorative play, children are motivated to ask questions about why things happen and how things work.
- Our children are encouraged to use their natural environment around them to explore.
- Children enjoy spending time outdoors exploring mini-beasts and their habitats, observing the changing seasons, plants and animals.
- Children regularly participate in cookery and baking sessions which allows them to experience changes in state as ingredients are mixed, heated and cooled.

Impact

- The impact of our curriculum design will lead to outstanding progress over time, across key stages, relative to a child's individual starting point and their progression of skills.
- Children will therefore be expected to leave Langton reaching at least age-related expectations for science.
- Through specialist teaching, interactions with our local secondary school and the use of our National STEM Learning Centre, our science curriculum will lead pupils to be enthusiastic science learners and understand that science has and can change our lives and that it is vital to the world's future prosperity.
- 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 parental support, speaking to our pupils, their work and their overwhelming enjoyment for science.