

Curriculum Area

Science

Who this area of the curriculum is led by and how it is delivered.

The science curriculum is led by Sarah Earp at Stanley School.

Subject leaders play an essential role in the design of our school curriculum. The curriculum is carefully organised to ensure that children have opportunities to visit the different topic areas set out in the National Curriculum. This is set out in a three year rolling programme which is followed by all teachers.

Early Years will access the science curriculum as appropriate when looking at 'Understanding the World' as part of the Early Years Curriculum.

Each class in Key Stage 1 and 2 have one lesson of science per week.

Key Stage 1 incorporate science into their topic based programme of study. They cover the key areas as stated in the National Curriculum and deliver this in a meaningful, cross curricular approach.

The long-term plan maps the science modules studied over a three year rolling programme at Key Stage 2. Key Stage 2 learn about the following topic areas; '*Electricity*', '*Light*', '*States of Matter*', '*Rocks*', '*Evolution and Inheritance*', '*Forces and Magnets*', '*Living Things and their Habitats*', '*Animals*', '*Humans*', '*Earth and Space*', '*Sound*', '*Properties and Changes of Materials*' and '*Plants*'.

The LOTC department access science through exploration of the natural environment, taking their lessons outdoors. This enables them to cover the following topics '*Interactions*' in the Autumn term, '*Materials*' during the Spring and '*Living Things*' during the Summer in a rich and meaningful way.

How this area of the Curriculum is designed

All science lessons are designed to be delivered in a practical manner. Children are encouraged at an individual level to make predictions about what may happen, to experiment with prepared resources and to explore the results of their investigations. Where pupils are unable to make predictions, a multi-sensory activity is provided, enabling them to explore science at a sensory level. Children are supported on a 1:1 basis or in small groups to record the follow up of their experiments and evaluate their own learning and experiences. Here at Stanley School we pride ourselves on our ability to provide children with rich learning opportunities outside of the classroom. We see this as a key strength in enhancing children's scientific enquiry skills and natural curiosity of the world around them.

How we ensure breath, balance and depth

Science learning is revisited, practised and repeated to support the mastery of skills. This is particularly evident in investigative work that spans over a couple of weeks allowing children to observe, record and analyse changes over time.

We use a variety of teaching and learning styles in science lessons. Our principal aim is to help develop children's knowledge, skills and understanding. Sometimes we do this through larger group teaching, while at other times we engage children with small group or 1:1 led activities.

We encourage children to ask, as well as answer scientific questions which are effectively differentiated to meet their learning needs. Children use ICT in science lessons where it enhances their learning. Highly sensory and practical activities are also used to best engage children in their planned activities. Wherever possible, we involve children with opportunities to learn outside of the classroom. This promotes the exploration of the world around them and is particularly beneficial to enhance natural curiosity.

The teachers at Stanley School always look for meaningful links across curriculum areas and work out ways to teach these in partnership for deep learning to be achieved.

The Key skills and knowledge which will be gained through this area of the curriculum.

Science is the study of the physical world. It involves a collection of facts from observations, physical experiments and working scientifically. Such learning experiences help children to form ideas about the world around them. We believe that it is good practice for children to be encouraged to actively learn, through exploratory and investigative experiences and activities to develop their own ideas.

Science teaching and learning at Stanley School supports children's development with the following skills:

Scientific enquiry at Stanley School aims to develop: observational skills; communication; discussion and language skills; identifying, classifying and grouping skills; comparative and fair testing; and research skills using secondary resources.

At Stanley School, we teach our pupils to use the following practical scientific methods, processes and skills through the teaching of topic areas: asking and answering simple questions; observing closely using simple equipment; performing simple tests; identifying and classifying; using their observations to suggest answers to questions; and gathering and recording data in a way that is meaningful and appropriate to them.

Where this area of the curriculum fits in within our schools aims and culture

Science is an essential part of the curriculum which allows children to explore the world around them. We believe that it is good practice for children to be encouraged to actively learn, through exploratory and investigative experiences and activities to develop their own ideas. At Stanley School, we pride ourselves on the outdoor learning opportunities that we grant our children access to. This fits in with our schools aims and culture to promote Learning Outside of The Classroom (LOTC) which we have recently been recognised for with our LOTC Gold Mark.