



Science Curriculum

Intent

The aim of our science curriculum is to encourage children to:

- Enquire, explore and observe so that they can ask questions about themselves and their environment
- Stimulate their curiosity in finding out why things happen in the way that they do
- Appreciate the way science affects their everyday lives, and how it will affect their future on a personal, national and global level
- Develop a passion for science: how it has been used in the past and present and how it can be used in the future

The teaching of science will provide children with the opportunities to work as scientists. By doing this they will develop a range of knowledge such as:

- Planning and carrying out scientific investigations
- Using scientific knowledge and understanding to make predictions
- Choosing the appropriate equipment to carry out an investigation
- Using equipment safely and accurately
- Observing and recording results accurately
- Presenting results in a range of different ways
- Evaluating results and drawing conclusions based on these

Implementation

How we teach science:

From years 1-6, science is taught as a discrete subject for at least 1 hour a week. Teachers deliver science according to the long-term plan (based on the National Curriculum expectations) where the topics are sequential and build on prior learning. Children are given opportunities to develop their knowledge in each unit.

- Teachers use The Primary Knowledge Curriculum and plan in investigations to enable regular opportunities for practical enquiries.
- Children have access to key language and meanings through their Knowledge Organisers and working walls in classrooms in order to understand and apply scientific language to their written and verbal learning. This language progresses in complexity through the years.
- Children will have opportunities to reflect on their previous learning and cross-curricular links will be made wherever possible
- Children will have opportunities to build on prior knowledge enabling them to become inquiry-based learners
- Where applicable, the outdoor environment is used to enhance the learning experiences of the children and allow them to apply their knowledge to different settings.

What you will see in a science lesson

- Science lessons include a mixture of substantive and disciplinary knowledge
- Every lesson begins with a discussion about the previous learning in the unit which gives opportunities to recall key facts
- Knowledge Organisers are used to discuss the vocabulary that has previously been covered and the new vocabulary to be introduced – widget symbols are used to support this

- New knowledge is introduced and progression of how this develops from the previous knowledge obtained
- If appropriate to the lesson, children apply the knowledge gained to a scientific enquiry which includes making predictions, carrying out an investigation, making observations, completing results and conclusions
- If appropriate to the lesson, new knowledge is applied to a task to embed it further

Enrichment

Enrichment opportunities are an important part of our science curriculum at Long Itchington. These aim to enhance the knowledge-rich curriculum by allowing children discrete time to focus and deepen their learning while developing a sense of awe and wonder. Educational trips and visits to the school by experts enhance the high-quality science lessons delivered by class teachers. All classes have access to our forest school and pond area to support science learning where appropriate.

EYFS

Children in Reception are taught science through learning about the world around them and through teaching knowledge. They are given a range of experiences and opportunities to develop this knowledge through guided adult-led sessions which are carefully planned to support children in acquiring this scientific knowledge through play and exploration. This allows the children to access a broad and balanced curriculum. Scientific learning in EYFS is also developed through interest-led activities and topics.

Children with SEND

Children with SEND have access to a broad and balanced curriculum where they are exposed to the experiences and opportunities available to all children. Children with SEND, where reading and writing are a barrier, are given the opportunity to record their scientific knowledge through structured activities or through the use of computing programmes which allows their scientific knowledge to be accurately assessed.

How we monitor provision in Science

- Learning walks – seeing science lessons in action
- Pupil voice – discussing scientific knowledge and learning with students
- Book Trawls – teaching and learning is captured in books through the use of written work, tables, graphs and pictures

Impact of the curriculum - Assessment

Throughout each topic, teachers will monitor pupils' progress in scientific knowledge and understanding through:

- Observations during lessons
- Marking written work
- Discussions with pupils
- Completion of regular assessment for learning – both formative assessments and metacognitive quizzes at the end of units

In KS1 and EYFS, the emphasis is on observations during practical and oral work to assess children's scientific knowledge.