

Science

The school uses the national scheme of work for science as the basis of the curriculum planning. The national scheme has been adapted to the local circumstances of the school in that we make use of the local environment – our field area and tree area. It is taught via the following units:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Identifying and classifying animals	Identifying and classifying animals	Everyday materials	Everyday materials	Plants	Seasonal changes Working scientifically
Year 2	Living things and their habitats	Animals including humans Working scientifically	Everyday materials weather Working scientifically	Everyday materials weather Working scientifically	Plants (Living things and their habitats)	Plants Working scientifically
Year 3		Rocks and soils Working scientifically	Forces and magnets Working scientifically	Light and shadow Working scientifically	Plants Working scientifically	Animals including humans Working scientifically
Year 4	Sound Working scientifically	Electricity Working scientifically	States of matter Working scientifically	Animals and Habitats Working scientifically	Digestion and teeth Working scientifically	Revisit misconceptions

Intent

We believe that all pupils at Lawnside Academy must have regular access to science appropriate to their age and stage of development. Learning opportunities will follow and build upon the National Curriculum guidelines.

Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national, and global level.

Aims

At Lawnside Academy we believe that science should:

- Allow children to explore their current scientific thinking through questions, discovery and exploration both inside and outside the classroom.
- There should be a balance between children acquiring factual knowledge and investigation, using equipment, including computers, correctly.
- Children should enjoy science and the science curriculum at Lawnside captures children's attention.
- Children are active learners, who find things out for themselves and bring their own knowledge that can be enhanced or challenged
- Be planned to ensure the teacher has the knowledge to elicit and further children's understanding.
- Endeavour to ensure a broad and balanced experience and opportunities are provided to develop skills and gain an understanding of scientific concepts through first-hand experience in a climate which encourages curiosity, perseverance, open-mindedness, critical reflection and co-operation.
- Enable children to evaluate evidence and present their conclusions clearly and accurately, in a variety of ways including drawings, diagrams, tables, charts and in speech and writing.
- Enable children to communicate scientific ideas and observations using appropriate scientific vocabulary.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Schools are not required by law to teach the content indicated as being 'non-statutory'.

Subject content

Key stage 1

The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

‘Working scientifically’ is described separately in the programme of study, but must always be taught through and clearly related to the teaching of substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content.

Pupils should read and spell scientific vocabulary at a level consistent with their increasing word-reading and spelling knowledge at key stage 1.

Lower key stage 2 – years 3 and 4

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

‘Working scientifically’ is described separately at the beginning of the programme of study, but must always be taught through and clearly related to substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content.

Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word-reading and spelling knowledge.