

Subject on a page



At Springfield Academy, we want our children to be confident and curious scientists who explore and investigate the world around them with both critical thinking and creativity. We aim to inspire a love of learning that brings joy and excitement, helping children apply these skills across all areas of the curriculum and throughout life. We want every child to experience those "WOW" moments and approach the unknown and the unexplainable with awe and wonder.

Intent

- We aim to...

Discover new ideas and nurture curiosity by developing a passion for learning and understanding why things happen the way they do.

Foster curiosity and enthusiasm about the world, encouraging children to discover new opportunities and possibilities.

Gain essential skills and knowledge that enable scientific thinking and deepen understanding of scientific processes.

Build on previous learning by using precise vocabulary, helping children become confident, capable scientists who communicate clearly and effectively.

Help children understand that great scientists use investigations and experiments to explore ideas and discover more about the world.

Implementation

- How do we achieve our aims?

Working Scientifically

At Springfield Academy, we want our children to work like scientists, developing the following skills:

- Questioning
- Observing and Measuring
- Testing
- Hypothesising
- Interpreting and Reading Data
- Identifying and Clarifying

Enquiry Approaches:

- Comparative
- Research
- Observation
- Pattern Seeking
- Identifying, Grouping and Classifying
- Problem Solving

Impact

- How will we know we have achieved our aims?

Pupils retain scientific knowledge by connecting it to real-life situations and contexts.

Pupils understand how science is applied today and recognise its impact and implications for the future.

Pupils will be able to carry out an enquiry from start to finish, leading to a clear conclusion.

Pupils will grow into resilient, independent, and inquisitive scientists who ask questions and seek answers on their own.

Pupils possess the knowledge, skills and understanding needed to think, communicate, work and present like scientists.

The National Curriculum

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.

Lower Key Stage 2

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 different periods of 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.

Upper Key Stage 2

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

	KS1	LKS2	UKS2
Earth and Space			X
Seasonal changes	X		
Animals inc. humans	X	X	X
Plants	X	X	
Everyday materials	X		X
Rocks		X	
Forces		X	X
Light		X	X
Sound		X	
Electricity		X	X
Evolution			X
Living things and habitats	X	X	X
States of matter		X	