



Science – Year 5-9 – 2025 - 2026

Purpose of study

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims

The national curriculum for science aims to ensure that all pupils:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the **uses and implications of science**, today and for the future.

Scientific knowledge and conceptual understanding

The programs of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is also vitally important that they develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. Insecure, superficial understanding will not allow genuine progression: pupils may struggle at key points of transition (such as between primary and secondary school), build up serious misconceptions, and/or have significant difficulties in understanding higher-order content.

Pupils should be able to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely. They should build up an extended specialist vocabulary. They should also apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. The social and economic implications of science are important and they are taught within the wider school curriculum.

The principal focus of science teaching is to develop a deeper understanding of a range of scientific ideas in the subject disciplines of biology, chemistry and physics whilst developing competent investigation skills. Pupils should begin to see the connections between different subject areas and become aware of some of the big ideas underpinning scientific knowledge and understanding. Examples of these big ideas are the links between structure and function in living organisms, the particulate model as the key to understanding the properties and interactions of matter in all its forms, and the resources and means of transfer of energy as key determinants of all of these interactions. They should be encouraged to relate scientific explanations to phenomena in the world around them and start to use modeling and abstract ideas to develop and evaluate explanations.

Yearly Overview

	Year 5	Year 6	Year 7	Year 8	Year 9
1	Lab Safety	Lab Safety	7A: Cells, Tissue, Organs and Systems	8A: Food and Nutrition	9A Genetics and evolution
2	Earth & Space	Light	7B: Sexual Reproduction in Animals	8B: Plants and their Reproduction	9B Plant growth
3	Forces	Electricity	7C: Muscles and Bones	8C: Breathing and Respiration	9C Transition to further study - Biology
4	Animal including humans	Living things and their habitats	7D: Ecosystems	8D: Unicellular Organisms	9D Biology STEM Projects
5	Properties and changes of materials	Evolution and inheritance	7E: Mixtures and Separations	8E: Combustion	9E Making materials
6	Scientists and Inventors	Scientists and Inventors	7F: Acids and Alkalis	8F: The periodic table	9F Reactivity
7			7G: The Particle Model (Solids, Liquids and Gases)	8G: Metals and their Uses	9G Transition to further study - Chemistry
8			7H: Atoms, Elements and Molecules	8H: Rocks	9H Chemistry STEM Projects Projects
9			7I: Energy	8I: Fluids	9I Forces and motion
10			7J: Current Electricity	8J: Light	9J Force fields and electromagnets
11			7K: Forces	8K: Energy transfers	9K Transition to further study - Physics
12			7L: Sound	8L: Earth and Space	9L Physics STEM