Science

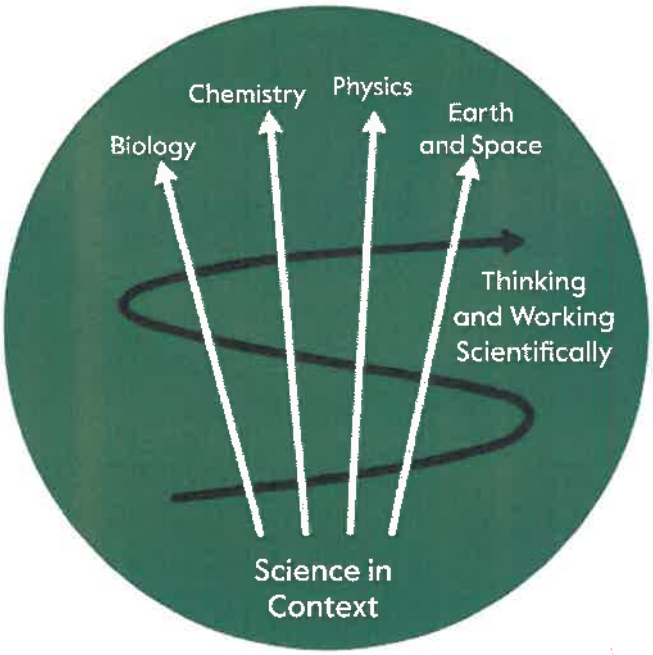
Cambridge Lower Secondary Science (0893) develops lifelong curiosity about the natural world and helps learners seek scientific explanations of the phenomena around them.

Students develop a holistic approach to science by considering scientific thinking and practical skills alongside knowledge and understanding, which is vital for explaining the world around us. This approach provides learners with the knowledge and skills they need to excel at science in later stages of education. It also helps them to make informed choices, including considering sustainability issues and meeting the challenges facing our environment.

What will students learn?

This curriculum is divided into six main areas called 'strands':

- **Biology** – living things and their interaction with each other.
- **Chemistry** – the study of matter.
- **Physics** – the interaction of matter and energy.
- **Earth and Space** – planet Earth, the wider Solar System and beyond.
- **Thinking and Working Scientifically** – develops understanding and skills of scientific models and representations, scientific enquiry and practical work.
- **Science in Context** – unique to our Science curriculum, this helps teachers demonstrate the relevance of science to learners.



The curriculum and progression

Due to the nature of developing science, some learning objectives are developed over multiple years, for example in Thinking and Working Scientifically, to support mastery of a skill. Other scientific concepts are introduced in one year and then further developed after a gap, for example learning about chemical and physical properties in Stage 7 and further developing it in Stage 9. This gives you time to cover the breadth of scientific content as well as developing learners' depth of understanding over the whole curriculum. The table on the next page shows some examples of how knowledge, understanding and skills progress across the stages.

Improving learners' awareness of science in the world around them develops their sense that **'science is for me'**, helping to connect them **to the subject**

Support for teachers

We provide a wide range of support to help deliver Cambridge Lower Secondary Science, including activities that you can adapt to suit your context:

Curriculum framework	✓
Teacher guide	✓
Schemes of work	✓
Online training	✓
Face-to-face training	✓
Textbooks and resources from publishers	✓
Cambridge Lower Secondary Progression Tests and analysis tool	✓
Equipment list	✓
Community online forum	✓

Learning objective examples

Strand	Stage 7	Stage 8	Stage 9
Thinking and Working Scientifically	Carry out practical work safely.	Carry out practical work safely, supported by risk assessments where appropriate.	
Biology	Understand that all organisms are made of cells and microorganisms are typically single celled.	(No relevant learning objective in the progression sequence)	Know that chromosomes contain genes, made of DNA, and that genes contribute to the determination of an organism's characteristics.
Chemistry	Use the particle model to describe chemical reactions.	Use word equations to describe reactions.	Use word equations and symbol equations to describe reactions (balancing symbol equations is not required).
Physics	Describe changes in energy that are a result of an event or process.	(No relevant learning objective in the progression sequence)	Know that energy is conserved, meaning it cannot be created or destroyed.
Earth and Space	Describe the model of plate tectonics, in which a solid outer layer (made up of the crust and uppermost mantle) moves because of flow lower in the mantle.	(No relevant learning objective in the progression sequence)	Explain the movement of tectonic plates in terms of convection currents.
Science in Context	Discuss how the uses of science can have a global environmental impact.		