SCIENCE CURRICULUM OVERVIEW

Pearson
iLowerSecondary

Pearson Edexcel iLowerSecondary is not just a curriculum, but a complete teaching toolkit.

As well as the English, Mathematics and Science curricula, developed specifically for the international student, a complete suite of teaching support is included as part of the whole-school package. Furthermore, a comprehensive programme of Professional Development support is also available face-to-face, via webinar, and as part of our community forum.

Exemplar schemes of work and mapping enable you to access Pearson's world-renowned teaching resources. In addition fully integrated internal (Progress Tests) and external (Year Nine Achievement Tests) assessments are available, all created through Pearson Edexcel's World Class Qualifications framework.

The iLowerSecondary curriculum is organised into three year groups, each building on the knowledge and skills of the last. Each provides comprehensive learning objectives that ensure clear targets and progression for students. For iLowerSecondary Science, the curriculum contains four main strands, with each split into topic areas. The curriculum promotes engagement and enjoyment while ensuring students are well placed to achieve highly in later examinations. The strands are:

Scientific Enquiry
Biology
Chemistry
Physics

Scientific enquiry is embedded within the other three strands and students are encouraged to take an engaged and investigative approach to their learning. Developed with the needs of second language learners in mind, the iLowerSecondary Science curriculum gives an excellent platform for later learning and ensures students are well-prepared for their International GCSEs learning from Year 10.

On the following pages are examples of objectives from the iLowerSecondary Science curriculum. These cover a range of Biology topics for Years 7, 8 and 9.



SAMPLE

Year 7

Biology: Cells and Organisation

- Know the structure of a typical animal cell
- Know the similarities and differences between plant and animal cells
- Understand the basic parts of a simple light microscope and their functions
- Understand the level of cellular detail that can be seen with a simple light microscope
- Know the cell wall, cell membrane, cytoplasm, nucleus, permanent vacuole, mitochondria and chloroplasts in a range of familiar and less familiar animal and plant cells
- Know the functions of the cell wall, cell membrane, cytoplasm, nucleus, permanent vacuole, mitochondria and chloroplasts
- Know the hierarchical organisation of multicellular organisms from cells to tissues to organs to organ systems to organisms
- Know the major organs and organ systems of the human body and describe their functions
- Apply knowledge of human organs and organ systems to other vertebrates

Year 8

Biology: Breathing and Respiration

- Recognise the main components of the respiratory system and their functions
- Explain the role of cartilage in keeping airways open
- Know and describe the mechanism of breathing to move air in and out of the lungs
- Understand the term gas exchange
- Describe the effects of smoking
- Understand the term *aerobic respiration* and correctly use the terms *breathing* and *respiration*

Year 9

Biology: Life Processes

- Know the basic structure of viruses and understand that viruses are obligate parasites causing harm to the cells of living things
- Know how a virus reproduces and use this to explain why viruses may not be classed as living organisms
- Know that plant and animal cells respire to produce ATP to provide energy for cells
- Know how to model respiration using a word equation and a balanced symbol equation



SAMPLE

Accessing the full programme for iLowerSecondary

Only registered iLowerSecondary centres will be able to access the full programme.
If you are not an iLowerSecondary centre and would like find out more then complete our Expression of Interest form on the Pearson Edexcel website.