



IGCSE Biology 0610

Curriculum Content

Biology is the science of living organisms (including animals, plants, fungi and microorganisms) and their interactions with each other and the environment. The study of biology involves collecting and interpreting information about the natural world to identify patterns and relate possible cause and effect. Biology is used to help humans improve their own lives and to understand the world around them.

With this subject, students will be taught to understand how, through the ideas of biology, the complex and diverse phenomena of the natural world can be described in terms of a number of key ideas which are of universal application, and which can be illustrated in the separate topics set out below. These ideas include:

- life processes depend on molecules whose structure is related to their function
- the fundamental units of living organisms are cells, which may be part of highly adapted structures including tissues, organs and organ systems, enabling life processes to be performed more effectively
- living organisms may form populations of single species, communities of many species and ecosystems, interacting with each other, with the environment and with humans in many different ways
- living organisms are interdependent and show adaptations to their environment
- life on Earth is dependent on photosynthesis in which green plants and algae trap light from the Sun to fix carbon dioxide and combine it with hydrogen from water to make organic compounds and oxygen
- organic compounds are used as fuels in cellular respiration to allow the other chemical reactions necessary for life
- the chemicals in ecosystems are continually cycling through the natural world
- the characteristics of a living organism are influenced by its genome and its interaction with the environment

Affiliations





The Curriculum content below is a guide to the areas on which students are assessed. Students may follow the Core curriculum only **or** they may take the Extended curriculum, which includes both the Core and the Supplement.

Topic	Content
Characteristics and classification of living organisms	Living organisms, bacteria and viruses, plants, invertebrate animals, vertebrate animals and their classification
Organisation and maintenance of organisms	Cells and organization of living organisms, enzymes and their uses, food and the ideal diet, food from microorganisms, photosynthesis and plant nutrition, animal nutrition and health, transpiration, transport systems in animals, antibodies and the immune response, the circulatory system and related disease, respiration and related disease, excretion and related disease, homeostasis, nervous system, receptors and senses, the endocrine system, plants tropisms
Development of organisms and the continuity of life	Plant reproduction, humans reproduction, contraception, birth, growth and development, variation and inheritance
Organisms and their environment	Ecology and ecosystems, decay and cycles, human population growth, agriculture, environmental pollution, conservation, management of solid waste.

Affiliations





Assessment

Cambridge IGCSE Chemistry students are awarded grades ranging from A* to G.

Students expected to achieve grades D, E, F or G, study the Core Curriculum only and are eligible for grades C to G.

Students expected to achieve grade C or higher should study the Extended Curriculum, which comprises the Core and Supplement Curriculums; these candidates are eligible for all grades from A* to G.

All students must take **three** papers.

All Candidates Must Take:	
Paper 1 (45 minutes) Multiple choice question paper weighted at 30%	
and either:	or:
Paper 2 (1 hour 15 minutes) Core theory paper weighted at 50%	Paper 3 (1 hour 15 minutes) Extended theory paper weighted at 50%
Paper 6 (1 hour) Alternative to practical weighted at 20%	