

A-LEVEL BIOLOGY

Students should have at least a B grade at GCSE Double Science or Biology and Chemistry.

Awarding Body: **Edexcel**

The course comprises of six units. The first three units will be covered in the first year of the course and the AS examination will be taken. The second three units will be covered in the second year and the A2 examination will be taken. The marks of all six units will contribute to the A-level qualification.

The specification includes:

Unit 1 Molecules and Cells

- Cells and organelles
- Molecules
- Enzymes
- Chromosomes and the genetic code
- Protein synthesis

Unit 2 Exchange Transport and Reproduction

- Gas exchange in plants and animals
- Heterotrophic nutrition
- Transport in flowering plants and animals
- Adaptation to the environment
- Sexual reproduction in plants and animals

Unit 3 Energy and the Environment

Part a) a half unit covers the following topics

- Modes of nutrition
- Energy flow through the ecosystem
- Recycling of nutrients
- Energy resources
- Human influence on the environment

Part b) a half unit of practical assessment

Unit 4 Respiration, Co-ordination and Options

Part a) a part unit covers the following topics

- Internal respiration
- Co-ordination in living things

Part b) a part unit of option topics

Option C Human Health and Fitness

- Aspects of cardiovascular and pulmonary disease
- Defence against disease
- Exercise physiology

Unit 5 Genetics, Evolution and Biodiversity

- Autotrophic nutrition
- Biodiversity and classification of organisms
- Patterns of inheritance
- Continuity of species and speciation
- Gene technology
- Succession and stability in ecosystems

Unit 6

Part a) Questions that cover all parts of the syllabus except the options. These will be of a more challenging nature than normal unit questions.

Part b) Questions based on practical work..

The course involves a large amount of practical work but there is no practical examination.

Basic Textbooks

Adds, Larkcom & Miller	Molecules and Cells	(Nelson)
Adds, Larkcom & Miller	Exchange and Transport, Energy & Ecosystems	(Nelson)
Adds, Larkcom & Miller	Systems and their Maintenance	(Nelson)
Philips & Chilton	A-level Biology	(Oxford)
Roberts, Reiss & Monger	Biology – Principles and Processes	(Nelson)
Clegg & Mackean	Advanced Biology – Principles & Applications	(Murray)
Jones & Jones	Edexcel AS Biology	
	Molecules and the Cell	(Collins)
Jones & Jones	Edexcel AS Biology	
	Exchange, Transport and Reproduction	(Collins)
Jones & Jones	Edexcel AS Biology	
	Energy and Environment	(Collins)