



Curriculum Description for London IGCSE

BIOLOGY (4325)

There are two routes of assessment

1. 100% examination
2. 80% examination and 20% course work.

Summary of Scheme of Assessment

Paper/Component	Mode of Assessment	Weighting	Length
1 OR 2	Exam paper 1F, targeted at grades C-G(Foundation tier)	80%	1.5 hours
	Exam paper 2H, targeted at grades A ^B -D(Higher tier)	80%	2 hours
3 OR 4.	Examination paper 3, Targeted at grades A ^B -G(common to both tiers)	20%	1.25 hours
	Course work targeted at grades A ^B -G (common to both tiers)	20%	As advised

Students are entered at either foundation tier or higher tier, in consultation with their subject teacher.

SPECIFICATION OF CONTENTS

1. Life processes.

Cell structure
Enzymes
Movement of materials in and out of cells
Cell division and differentiation
Cells, tissues and organs

2. The variety of living organisms.

Plants, Animals, Fungi, Bacteria, Viruses.

3. Breathing and Gas exchange.

The structure of the gas exchange system
Ventilation of the lungs
Effects of smoking on the lungs and associated tissues

4. Food And Digestion

A balanced diet
Food tests
Energy from food
Digestion
Absorption in the small intestine

5. Blood and Circulation

Structure and function of human heart
Arteries , veins and capillaries
Composition of blood

6. Coordination

Central Nervous system
The eye
Reflex actions
The brain

7. Chemical coordination

Glands and hormones
Controlling blood glucose

8. Homeostasis and excretion

Kidneys
Control of body temperature

9. Reproduction in humans.

Sexual and Asexual reproduction
Reproduction in humans
Hormones controlling reproduction

10. Plants and food

Photosynthesis
Factors affecting photosynthesis
Mineral nutrition

11. Transport in plants

Osmosis
Uptake of water by roots
Transpiration

12. Chemical coordination in plants

Tropisms
Plant hormones

13. Reproduction in plants

Sexual and Asexual reproduction
Germination

14. Ecosystems

Interactions in ecosystems
Feeding relationships
Flow of energy through ecosystems
Cycling nutrients through ecosystems
Fertilisers and pesticides
Pollution

15. Chromosomes, Genes and DNA

DNA structure, code and replication
Mutations

16. Cell Division

Mitosis, Meiosis

17. Genes and Inheritance

Monohybrid inheritance, Test cross
Sex determination

18. Natural selection and Evolution

Evidence of natural selection and new species formation

19. Selective breeding

Traditional selective breeding
Modern selective breeding
Cloning animals

20. Using microorganisms

Fermentation and Biotechnology
Traditional Biotechnology

21. Genetic modification

Recombinant DNA

Additional Information

Grades for Higher Tier range from A⁸ - D

Grades for Foundation Tier range from C-G

Practical paper is compulsory and students can either sit for it in the form of coursework (under the supervision of the teacher) or written paper.