

# Biology Topics

## Syllabus content at a glance:

<b>1. Characteristics and classification of living organisms</b>
1.1 Characteristics of living organisms
1.2 Concept and use of a classification system
1.3 Features of organisms
1.4 Dichotomous keys
<b>2. Organisation of the organism</b>
2.1 Cell structure and organisation
2.2 Levels of organisation
2.3 Size of specimens
<b>3. Movement in and out of cells</b>
3.1 Diffusion
3.2 Osmosis
3.3 Active transport
<b>4. Biological molecules</b>
<b>5. Enzymes</b>
<b>6. Plant nutrition</b>
6.1 Photosynthesis
6.2 Leaf structure
6.3 Mineral requirements
<b>7. Human nutrition</b>
7.1 Diet
7.2 Alimentary canal
7.3 Mechanical digestion
7.4 Chemical digestion
7.5 Absorption
<b>8. Transport in plants</b>
8.1 Transport in plants
8.2 Water uptake
8.3 Transpiration
8.4 Translocation (Extended candidates only)
<b>9. Transport in animals</b>
9.1 Transport in animals
9.2 Heart
9.3 Blood and lymphatic vessels
9.4 Blood

## **10. Diseases and immunity**

## **11. Gas exchange in humans**

## **12. Respiration**

- 12.1 Respiration
- 12.2 Aerobic respiration
- 12.3 Anaerobic respiration

## **13. Excretion in humans**

## **14. Coordination and response**

- 14.1 Nervous control in humans
- 14.2 Sense organs
- 14.3 Hormones in humans
- 14.4 Homeostasis
- 14.5 Tropic responses

## **15. Drugs**

- 15.1 Drugs
- 15.2 Medicinal drugs
- 15.3 Misused drugs

## **16. Reproduction**

- 16.1 Asexual reproduction
- 16.2 Sexual reproduction
- 16.3 Sexual reproduction in plants
- 16.4 Sexual reproduction in humans
- 16.5 Sex hormones in humans
- 16.6 Methods of birth control in humans
- 16.7 Sexually transmitted infections (STIs)

## **17. Inheritance**

- 17.1 Inheritance
- 17.2 Chromosomes, genes and proteins
- 17.3 Mitosis
- 17.4 Meiosis
- 17.5 Monohybrid inheritance

## **18. Variation and selection**

- 18.1 Variation
- 18.2 Adaptive features
- 18.3 Selection

## **19. Organisms and their environment**

19.1 Energy flow

19.2 Food chains and food webs

19.3 Nutrient cycles

19.4 Population size

## **20. Biotechnology and genetic engineering**

20.1 Biotechnology and genetic engineering

20.2 Biotechnology

20.3 Genetic engineering

## **21. Human influences on ecosystems**

21.1 Food supply

21.2 Habitat destruction

21.3 Pollution

21.4 Conservation