

Science [Biology] Syllabus (Higher Paper)

1. Keeping Healthy

- 1.1. Diet and exercise
- 1.2. How our bodies defend themselves against infectious diseases

2. Nerves and hormones

- 2.1. The nervous system:
- 2.2. Control in the human body
- 2.3. Control in plants

3. The use and abuse of drugs

- 3.1. Drugs

4. Interdependence and adaptation

- 4.1. Adaptations
- 4.2. Environmental change
- 4.3. Organisms and their environment
- 4.4. Energy and biomass in food chains
- 4.5. Waste materials from plants and animals

5. Genetic variation, its control and Evolution

- 5.1. Genetic variation and its control
- 5.2. Evolution
- 5.3. Speciation
- 5.3.1 Old and new species

6. Cells and simple cell transport

- 6.1. Cells and cell structure
- 6.2. Diffusion:
- 6.3. Tissues, organs and organ systems:
- 6.4. Photosynthesis

7. Proteins – their functions and uses

8. Cell division and inheritance

- 8.1. Interpret genetic diagrams, including family trees
- 8.2. Construct genetic diagrams of monohybrid crosses and predict the outcomes of monohybrid crosses
- 8.3. Cell division
- 8.4 .Genetic variation
- 8.5 .Genetic disorders

9. Gaseous exchange

- 9.1. Aerobic respiration:
- 9.2. Anaerobic respiration

10. Transport systems in plants and animals

- 10.1. The blood system
- 10.2. Transport systems in plants

11. Homeostasis

- 11.1. Removal of waste and water control
- 11.2. Temperature control
- 11.3. Sugar control

12. Humans and their environment

- 12.1. Waste from human activity
- 12.2. Deforestation and the destruction of areas of peat
- 12.3. Biofuels
- 12.4. Food production

ADVICE FOR BIOLOGY EXAM ONLY STUDENTS

The science exam has been created to look at your biological knowledge and its application to certain scenarios. You may wish to sit the exam without the home study.

Please consider the following tips when you get to the exam.

- Read the question carefully!
- There will be some simple recall questions but some will be asking you to interpret graphs/charts/tables or examine the results of an experiment.
- Always check how many marks are allocated to the question this is a good indication of how many points you need to include e.g. 2 marks usually means 2.
- Provide clear and concise answers.
- You must use the correct biological language and terminology.
- Watch your spelling as some words misspelt could mean something completely different, e.g. Glycogen and Glucagon.
- If the question is asking you to describe something then you need to just say what is happening in the scenario. However, if the question is asking you to explain then you must give the biological reasoning behind the process.
- If you have to suggest a reason for something then you must apply your biological reasoning and give a logical suggestion.
- If you are asked to show any working then you must as you may lose marks.
- Please do not repeat what you have written. This will not give any extra marks but will waste precious time.
- Some questions may also test the quality of your written communication, so watch out for those long answer questions.