

AS/A2 Level Biology

Teachers: Each group is taught by two teachers

Exam Board Oxford and Cambridge

Course Outline

The Biology course is separated into two distinct areas, AS and A2. The AS is designed to be studied and examined in Year 12 and the A2 studied and examined in Year 13.

AS

This is comprised of three compulsory modules;

1. Cells, exchange and transport. 30%

This module builds upon prior knowledge of Cells, Cellular division and Ecology and introduces the basic biochemistry of cells. There is also sections on plant and animal transport systems

2. Molecules, Biodiversity, Food and Health 50%

In this module there is the opportunity to learn about how diseases occur, are spread and the factors, which affect disease, such as diet, smoking and exercise. In addition, the methods of controlling and combating diseases are discussed, in particular the immune system.

3. Experimental skills 20%

In both AS and A2, there is no coursework. Instead, there will be three short “practical examinations” each lasting approximately one double lesson. Students will be prepared by undertaking similar practical work to what will be involved in the examination. In total, this will contribute 20% of the marks both to AS and A2

A candidate should be able to:-

- use techniques, apparatus and materials.
- make and record observations, measurements and estimates.
- interpret and evaluate observations and experimental results.
- select techniques, apparatus and materials.
- evaluate methods and suggest possible improvements.

All three modules will be assessed at the end of Year 12.

A2

1. Communications, Homeostasis and Energy, 1 hour 30%.

In this module we will be investigating in more detail Mammalian Nutrition, Support and Locomotion, The Nervous System and Mammalian Behaviour.

2. Control, Genomes and Environment, 1 hour 45 minutes 50%

This module build upon knowledge gained in AS and looks in detail at the biochemistry and metabolic mechanisms of cells. In addition Genetics, Evolution and Population Ecology are introduced and there is also a section on homeostaticand other control mechanisms in animal and plants.

3. Experimental skills 20%

At A2, the skills are the same as AS but taken to a higher standard

3. *Unifying Concepts in Biology and Experimental skills*

This module again consists of two distinct areas. The first contains the synoptic element of the specification, which examines students on their ability to connect and analyse an array of biological information and data that they have studied. The remaining section comprises an assessment of practical skills, which will be undertaken as a piece of coursework. The subject of this coursework will be based on knowledge gained during the AS and A2 course.

Examination/Assessment details

Assessment is by examinations (excluding the experimental skills) which last between one to one and a half hours depending on the module

Homework

The homework given to students encompasses a wide range of styles. Students may be asked to produce a written piece of work, research into a topic using traditional methods and the Internet or prepare a presentation. In addition, students will also be expected (without prompting) to conduct research of their own in order to further increase both the breadth and depth of their understanding.

Key Skills

These will be assessed throughout the AS and A2 course