



Blue Coat Church of England Academy

Year: 12/13

Subject: Biology

AS Level

Subject content

- 1 Biological molecules (AS)
- 2 Cells (AS)
- 3 Organisms exchange substances with their environment (AS)
- 4 Genetic information, variation and relationships between organisms (AS)

Paper 1

What's assessed: Any content from topics 1–4, including relevant practical skills

Assessed: written exam, 1 hour 30 minutes, 75 marks, 50% of AS

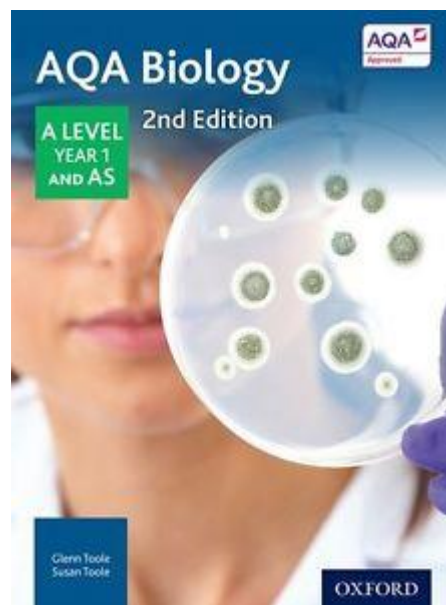
Questions: 65 marks: short answer questions, and 10 marks: comprehension question

Paper 2

What's assessed: Any content from topics 1–4, including relevant practical skills

Assessed: written exam, 1 hour 30 minutes, 75 marks, 50% of AS

Questions: 65 marks in short answer questions, and 10 marks in extended response questions



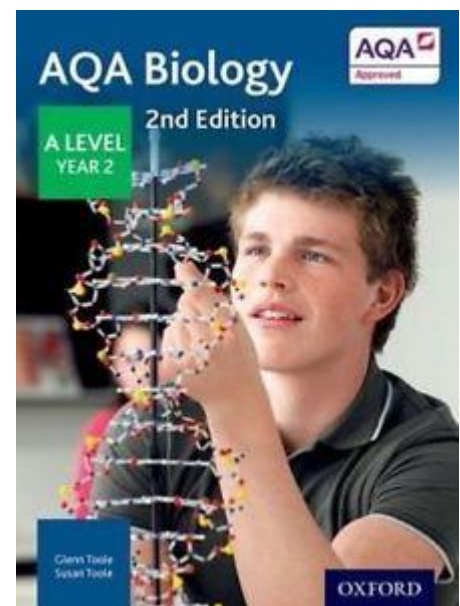
AQA AS level Biology Required practicals:

1. Investigation into the effect of a named variable on the rate of an enzyme-controlled reaction.
2. Preparation of stained squashes of cells from plant root tips; set-up and use of an optical microscope to identify the stages of mitosis in these stained squashes and calculation of a mitotic index.
3. Production of a dilution series of solutes to produce a calibration curve with which to identify the water potential of plant tissue.
4. Investigation into the effect of a named variable on the permeability of cell-surface membranes.
5. Dissection of animal or plant gas exchange system or mass transport system or of organ within such a system.
6. Use of aseptic techniques to investigate the effect of antimicrobial substances on microbial growth

A Level

Subject content

- 1 Biological molecules (AS)
- 2 Cells (AS)
- 3 Organisms exchange substances with their environment (AS)
- 4 Genetic information, variation and relationships between organisms (AS)
- 5 Energy transfers in and between organisms (A2)
- 6 Organisms respond to changes in their internal and external environments (A2)
- 7 Genetics, populations, evolution and ecosystems (A2)
- 8 The control of gene expression (A2)



Paper 1

What's assessed: Any content from topics 1–4, including relevant practical skills

Assessed: written exam, 2 hours, 91 marks, 35% of A-level

Questions: 76 marks: a mixture of short and long answer questions, and 15 marks: extended response questions

Paper 2

What's assessed: Any content from topics 5–8, including relevant practical skills

Assessed: written exam, 2 hours, 91 marks, 35% of A-level

Questions: 76 marks in a mixture of short and long answer questions, and 15 marks in comprehension question

Paper 3

What's assessed: Any content from topics 1–8, including relevant practical skills

Assessed: written exam, 2 hours, 78 marks, 30% of A-level

Questions: 38 marks in structured questions, including practical techniques, 15 marks in critical analysis of given experimental data, and 25 marks in one essay from a choice of two titles

AQA A level Biology Required practicals:

1. Use of chromatography to investigate the pigments isolated from leaves of different plants, eg leaves from shade-tolerant and shade-intolerant plants or leaves of different colours.
2. Investigation into the effect of a named factor on the rate of dehydrogenase activity in extracts of chloroplasts.
3. Investigation into the effect of a named variable on the rate of respiration of cultures of single-celled organisms.
4. Investigation into the effect of an environmental variable on the movement of an animal using either a choice chamber or a maze.
5. Production of a dilution series of a glucose solution and use of colorimetric techniques to produce a calibration curve with which to identify the concentration of glucose in an unknown 'urine' sample.
6. Investigation into the effect of a named environmental factor on the distribution of a given species.