

Separate Sciences

Biology Curriculum Grid



Examination Board: Edexcel

Further information:

<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/sciences>

Additional support: <https://www.senecalearning.com/>

<https://www.bbc.com/bitesize/subjects/z9ddmp3>

Biology GCSE

Topic 1 – Key concepts in Biology

Topic 2 – Cells and control

Topic 3 – Genetics

Topic 4 – Natural selection and genetic modification

Topic 5 – Health, disease and the development of medicines

Topic 6 – Plant structures and their functions

Topic 7 – Animal coordination, control and homeostasis

Topic 8 – Exchange and transport in animals

Topic 9 – Ecosystems and material cycles

Written Assessment

Students will sit 2 externally examined papers at the end of Year 11.

All papers are out of 100 marks and are 1 hour and 45 minutes in length.

Each paper contributes 50% of the Biology GCSE

Paper 1: Biology 1 – Topics 1, 2, 3, 4 and 5

Paper 2: Biology 2 – Topics 1, 6, 7, 8 and 9

Each paper consists of a mixture of different question styles, including multiple-choice questions, short answer questions, calculations and extended open-response questions.

Core Practicals

Students must carry out all eight of the mandatory core practicals listed below.

1.6 Investigate biological specimens using microscopes, including magnification calculations and labelled scientific drawings from observations

1.10 Investigate the effect of pH on enzyme activity

1.13B Investigate the use of chemical reagents to identify starch, reducing sugars, proteins and fats

1.16 Investigate osmosis in potatoes

5.18B Investigate the effects of antiseptics, antibiotics or plant extracts on microbial cultures

6.5 Investigate the effect of light intensity on the rate of photosynthesis

8.11 Investigate the rate of respiration in living organisms

9.5 Investigate the relationship between organisms and their environment using field-work techniques, including quadrats and belt transects.

Students will need to use their knowledge and understanding of these practical techniques and procedures in the written assessments.

Year 10

Autumn Term: SB1 Key concepts in Biology, SB2 Cells and Control

Spring Term: SB3 Genetics, SB4 Natural Selection and Genetic Modification

Summer Term: SB5 Health, Disease and the Development of Medicines

Year 11

Autumn Term: SB6 Plant Structures and their Functions, SB7 Animal Coordination, Control and Homeostasis

Spring Term: SB8 Exchange and Transport in Animals, SB9 Ecosystems and Material Cycles

Summer Term: SB9 Ecosystems and Material Cycles (continued), Revision