

Separate Sciences

Biology

Curriculum Overview



Examination Board: Edexcel

Further information:

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

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

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

Biology GCSE	
Biology	
<p>Topic 1 – Key concepts in Biology</p> <p>Topic 2 – Cells and control</p> <p>Topic 3 – Genetics</p> <p>Topic 4 – Natural selection and genetic modification</p> <p>Topic 5 – Health, disease and the development of medicines</p> <p>Topic 6 – Plant structures and their functions</p> <p>Topic 7 – Animal coordination, control and homeostasis</p> <p>Topic 8 – Exchange and transport in animals</p> <p>Topic 9 – Ecosystems and material cycles</p>	
Written Assessment	
<p>Students will sit 2 externally examined papers at the end of Year 11.</p> <p>All papers are out of 100 marks and are 1 hour and 45 minutes in length.</p> <p>Each paper contributes 50% of the Biology GCSE</p> <p>Paper 1: Biology 1 – Topics 1, 2, 3, 4 and 5</p> <p>Paper 2: Biology 2 – Topics 1, 6, 7, 8 and 9</p> <p>Each paper consists of a mixture of different question styles, including multiple-choice questions, short answer questions, calculations and extended open-response questions.</p>	
Core Practicals	
<p>Students must carry out all eight of the mandatory core practicals listed below.</p> <p>1.6 Investigate biological specimens using microscopes, including magnification calculations and labelled scientific drawings from observations</p> <p>1.10 Investigate the effect of pH on enzyme activity</p> <p>1.13B Investigate the use of chemical reagents to identify starch, reducing sugars, proteins and fats</p> <p>1.16 Investigate osmosis in potatoes</p> <p>5.18B Investigate the effects of antiseptics, antibiotics or plant extracts on microbial cultures</p> <p>6.5 Investigate the effect of light intensity on the rate of photosynthesis</p> <p>8.11 Investigate the rate of respiration in living organisms</p> <p>9.5 Investigate the relationship between organisms and their environment using field-work techniques, including quadrats and belt transects.</p> <p>Students will need to use their knowledge and understanding of these practical techniques and procedures in the written assessments.</p>	

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 (start)
Summer Term
SB9 Ecosystems and Material Cycles (finish), Revision