

KS5 Curriculum Overview (BIOLOGY)

Year 12

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<u>Topic 1: Biological Molecules</u> 1.1 Chemistry for Life 1.2 Biological Molecules 1 <u>Topic 2: Cells and Viruses</u> 2.1 Eukaryotic Cells	Chemistry Link: biochemical compounds. Math Link: Units and Calibration	Career links Genetics, ecology, environmental science British Values Mutual Respect & Tolerance, Individual Liberty: Ethics of Immunization HIV COVID HPV
TERM 2 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<u>Topic 1: Biological Molecules</u> 1.3 Biological molecules 2 1.4 Enzymes <u>Topic 2: Cells and Viruses</u> 2.2 Prokaryotic cells 2.3 Eukaryotic Division	Math Link: calculation of rate, units.	Career links Cell biologist
TERM 3 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<u>Topic 2: Cells and Viruses</u> 2.4 Meiosis and Sexual Reproduction <u>Topic 3: Classification</u> 3.1 Classification <u>Topic 4 Exchange and Transport</u> 4.1 Cell Transport Mechanisms		Career links Genetics, ecology, environmental science. British Values Mutual Respect & Tolerance, Individual Liberty: Ethic - embryo use – mutations. Rule of Law: Mutations - Laws on Stem Cell research.
TERM 4 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<u>Topic 3: Classification</u> 3.2 Natural selection 3.3 Biodiversity <u>Topic 4 Exchange and Transport</u> 4.2 Gas exchange 4.3 Circulation	Geography Link Math Link: Statistics	Career links Government services related to conservation and biodiversity, Healthcare and laboratory work involving biological samples, Research support for biodiversity projects, Sales and marketing of biodiversity products or services, Education and outreach on biodiversity topics, Production and manufacturing of biodiversity-related goods.

		British Values Rule of Law: Laws on Trading in endangered species and conservation.
TERM 5 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<u>Topic 4 Exchange and Transport</u> 4.4 Transport in Plants <u>Topic 3: Classification</u> 3.3 Biodiversity	Geography Link Math Link: Statistics	Career links Genetics, ecology, environmental science, Botanist.
TERM 6 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Continuation from Term 5 – rollover into Year 13 Course. <u>Topic 5: energy for Biological Processes.</u> 5.1 Cellular Respiration <u>Topic 10 Ecosystems</u> 10.1 The nature of Ecosystems	Chemistry Link: biochemical compounds. Geography Link: Ecosystems Math Link: Statistics	Career links Genetics, ecology, environmental science.

KS5 Curriculum Overview (BIOLOGY)

Year 13

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p><u>Topic 5: Energy for Biological Processes.</u> 5.1 Cellular Respiration 5.2 Photosynthesis</p> <p><u>Topic 10 Ecosystems</u> 10.1 The nature of Ecosystems</p> <p><u>Topic 7 Modern Genetics</u> 7.1 Using Gene Sequencing 7.2 Factors affecting Gene expression 7.3 Gene Technology</p>	<p>Chemistry Link</p> <p>Geography Link: Ecosystems</p> <p>Math Link: Statistics</p>	<p>Career links Genetics, ecology, environmental science.</p> <p>British Values Mutual Respect & Tolerance, Individual Liberty, Rule of Law: Gene Technology.</p>
TERM 2 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p><u>Topic 6 Microbiology and Pathogens</u> 6.1 Bacteria and Disease</p> <p><u>Topic 8 Origins of Genetic Variation</u> 8.1 Genetic Information 8.2 Gene Pools</p>		<p>Career links Genetics, ecology, environmental science, Microbiologist.</p> <p>British Values Mutual Respect & Tolerance, Individual Liberty, Rule of Law: Gene Pools.</p>
TERM 3 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p><u>Topic 6 Microbiology and Pathogens</u> 6.2 Non- Bacterial Pathogens 6.3 The response to Infection</p> <p><u>Topic 9 Control Systems</u> 9.1 Chemical control in Mammals and Plants 9.2 The mammalian Nervous system</p>		<p>Career links Nurse, microbiologist, mammologist</p> <p>British Values Mutual Respect & Tolerance, Individual Liberty, Rule of Law: Chemical control.</p>
TERM 4 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p><u>Topic 9 Control Systems</u> 9.3 Homeostasis</p> <p><u>Topic 10 Ecosystems</u> 10.2 The efficiency of Ecosystems 10.3 Human Effects in Ecosystems</p>	<p>Geography Link: Ecosystems</p> <p>Math Link: Statistics</p>	
TERM 5 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Revision	N/A	N/A
TERM 6 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Revision and Exams	N/A	N/A