

Long Term Plan: Biology Year 11

Half term	Unit title	Key knowledge/ Content to learn and retain	Essential skills to acquire (subject & generic)	Link to subject ethos and driver (rename)	Anticipated misconceptions	Links to previous KS	Links to future KS	Opportunity for stretch for high prior attainers	SMSC & British Values	Cultural Capital	Career Link
One	Inheritance, variation and evolution	<p>Evolution by natural selection</p> <p>Evidence for evolution, including fossils and genetic evidence</p> <p>Classification</p> <p>How human understanding of genetics has changed over time,</p> <p>Cloning and genetic engineering</p>	<p>Calculation of simple probability</p> <p>Writing and interpreting tree charts</p> <p>Extended writing</p>		<p>Alleles as different genes rather than different versions of a gene</p> <p>Confusion between genotype and phenotype</p>	This unit builds on the study of heredity and evolution that is completed in year 8	Study of genetics forms the basis of an entire unit of study in both A-Level biology and Applied human Biology	<p>Advantages and disadvantages of sexual be asexual reproduction and why organisms capable of both would chose a strategy</p> <p>Why scientists did not initially accept ideas of evolution</p> <p>Comparison of Lamark and Darwin</p>	<p>Inherited disorders and issues around family planning</p> <p>Darwin as a British Scientist</p>	<p>Charles Darwin and the voyage of the beagle</p> <p>Historical debate around evolution</p>	<p>Medical research</p> <p>Family planning adviser</p> <p>Genealogist</p> <p>Conservationist</p>

Two	Ecology	<p>Biotic and Abiotic factors</p> <p>Competition between organisms</p> <p>Food chains, webs and trophic levels</p> <p>Sampling techniques</p> <p>Human impact on biodiversity</p> <p>(Triple Only) Decay and nutrient cycles</p> <p>(Triple Only) Human food production</p>	<p>Practical sampling techniques</p> <p>Recording accurate data</p> <p>Representing and interpreting data in tabular and graphical form</p> <p>Extended Writing</p> <p>Reading for comprehension</p>		<p>Students often think of humans as organisms beyond or outside of food webs and the larger ecosystem, so it is important that they understand the role humans play</p> <p>The difference between Quadrat and Transect sampling</p>	<p>This unit builds from the study of interdependence in KS3. Students should already have a basic understanding of food chains and how energy flows and is lost along them</p> <p>In KS3 students also study the importance of plants to human food security.</p> <p>This unit also follows directly on from HT1, in which students looked at evolution and how organisms compete with each other for survival</p>	<p>Ecology forms an entire unit of study at Biology A-Level, where students will study all of the concepts looked at here in greater depth.</p>	<p>Consider why and how energy is lost along a food chain</p> <p>Evaluate sampling techniques and suggest why a given technique may be used</p> <p>Suggest ways to improve food security</p>	<p>Humans as a wider part of the ecosystem and our place and role in protecting the environment; including the consequences if we fail to do so.</p>	<p>Study of different ecosystems, climates and habitats both in the UK And world wide</p>	<p>Conservationist</p> <p>Farmer</p> <p>Food Scientist</p> <p>Careers with the environment agency or DEFRA</p>
Three	Half term three is dedicated to revision of Paper Two, in preparation for March PPEs										

Four	Half Term Four is dedicated to revision of Paper One Topics
Five	Revision for final exams - Paper One is normally held toward the start of the exam season before the half term break
Six	Revision for final exams - Paper Two is normally held toward the end of the exam season before the half term break