



Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Teacher 1: Biological Molecules Teacher 2: Cell structure and Studying Cells, Transport Across Membranes		Teacher 1: Cell division and Immunity Teacher 2: Exchange surfaces and Mass Transport Systems		Both teachers: variation and relationships between organisms. Completion of course, revision and exams	
Content	Teacher 1: -Carbohydrates -Lipids -Proteins -Enzymes -Genetic material -ATP -Water -Ions Teacher 2: -Eukaryotic cells -Prokaryotic cells and Viruses -Microscopy - Ultracentrifugation -Membranes - Transport Across Membranes		Teacher 1: -DNA Replication -Protein Synthesis -Mitosis and Meiosis -The Immune System Teacher 2: -Surface Area : Volume -Gas Exchange -Digestion -The circulatory System -Transport in Plants		Both teacher: -Genetic diversity -Natural Selection -Classification and Taxonomy - Investigating Variation -Biodiversity - Ecology and Field Skills Exam practice, review of required practical's and key content	
Rationale/ Linking	We follow the AQA syllabus again at A-Level, which builds directly onto the work covered at GCSE level. The course starts by ensuring that the key knowledge that underpins much of Biology (biological molecules and cell biology) is established early on in the course. Students then study how substances are transported across membranes, as well as how exchange surfaces are adapted to increase the rate of these processes. This helps to set the foundation for further work on exchange and transport systems.		Students move on to study key processes that build on their understanding of biological molecules and cell structure, looking at DNA replication and protein synthesis and then onto cell division. Students then study the complex interaction of cells during the immune response and also about applications of monoclonal antibodies. They also start to apply their understanding of key processes such as facilitated diffusion and co-transport to organ systems such as the digestive system. The content on transport in plants challenges students to apply their understanding of osmosis, active transport and co-transport, as well as requiring through understanding of the work on the structure properties of biological molecules including water and polysaccharides.		Preparation for end of year 12 trial exam, including key content revision that focuses on common areas of weakness that have been identified through class and trial assessments. Continued focus on exam practice and technique, as well as an introduction to some statistical testing, notably the Spearman's Rank.	
Assessment	Regular exam-style assessments throughout the course at specific points. Trial exam at the end of year 12.			Learning Resources		CGP revision guide Miss Estruch Youtube channel Revision resources available on TEAMS



Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Teacher 1: Inheritance, populations and evolution. Teacher 2: Energy transfers		Teacher 1: Genomes and Genetic technologies. Teacher 2: Homeostasis and Response		Completion of course, revision and exams	
Content	Teacher 1: -Dihybrid crosses –Linkage and Epistasis –Chi-Squared test –Hardy Weinberg Principle –Natural selection – Speciation –Ecosystems –Populations Teacher 2: Energy transfer in ecosystems – Farming and efficiency –Nutrient cycles – Eutrophication		Teacher 1: Mutations –Cancer –Stem cells –Regulation of transcription and translation –Epigenetics –Genome projects –Amplifying DNA –Diagnosis using DNA probes –Genetic fingerprinting Teacher 2: Nervous communication – Responses in organisms – Neurones – Muscles – Homeostasis –The Kidneys		Completion of content. Exam practice, review of required practical's and key content	
Rationale/ Linking	The work on inheritance and natural selection builds on the work in both GCSE and in year 12 as students link the properties of DNA and chromosomes, and the process of meiosis, to the inheritance of characteristics. Students continue to develop their understanding of natural selection too, having studied the process in outline in year 11 and more fully in year 12. Students also build on their understanding of biochemistry when we look at the reactions of photosynthesis and respiration, and are now able to describe the processes that lead to the formation of ATP, which they became familiar with in year 12.		We build on students' understanding of DNA, DNA and protein synthesis, as well as the cell cycle. Students have studied the structure and properties of DNA in year 12 and now learn about the applications of DNA technologies. The final module looks at physiology and the overarching principle of homeostasis, where students continue to build on their understanding of organ systems and apply fundamental ideas, such as tertiary structure of proteins, complementary shapes and transport of substances, and apply this concepts such as the action potential and muscle contraction.		Key content revision focuses on common areas of weakness that have been identified through class and trial assessments. Students review the required practical's reinforce the disciplinary skills developed through the course. Continued focus on exam practice and technique, as well as synoptic essay practice to prepare students for the final exams, in particular AO2 and AO3 style questions. At this stage we reinforce the use of standard deviation and statistical tests, including Chi squared, T-test and Spearman's Rank to fully prepare students for the exams.	
Assessment	Regular exam-style assessments throughout the course at specific points. Trial exam in the Autumn term.			Learning Resources		CGP revision guide Miss Estruch Youtube channel Revision resources available on TEAMS