

<b>Key Stage 5 (12)</b>	
<b>Course title: Biology A level</b>	
<b>Exam board: AQA</b>	
<b>Specification code: 7402</b>	
<b>Autumn 1 (September – October) to Autumn 2 (October – December)</b>	<b>TEACHER 1-</b> Biological molecules (monomers and polymers, carbohydrates, lipids, proteins, nucleic acids, water, inorganic ions) Exchange (Surface area to volume ratio, gas exchange) Students are introduced to molecular biochemistry, building their understanding of the basic structures in biology. Information on a microcellular scale aids later understanding at larger scales. Students build on prior knowledge from year 10 when discussing exchange.
	<b>TEACHER 2-</b> Cells (cell structure, cell cycle, transport across cell membranes, cell recognition and immune system) Students build on the basic principles (cells and cell transport) of Biology introduced in years 9 and 10. These are the fundamentals on which all other biological knowledge is built. Understanding cell membrane structure and cell transport then leads onto the role of the immune system with antigens and phagocytosis as the link. Understanding antibodies requires knowledge of protein structure from teacher 1 as well as prior knowledge from year 10.
<b>Spring 1 (January – February) to Spring 2 (February – March)</b>	<b>TEACHER 1-</b> Exchange (Digestion and absorption, mass transport in animals and plants) Students build an understanding of organ systems linking to year 10 work on organisation. Understanding of digestion requires prior knowledge from enzymes and cell transport earlier in year 12. Understanding of transport in plants requires knowledge of properties of water and cell transport earlier in year 12.
	<b>TEACHER 2-</b> Genetic information, variation, and relationships between organisms (DNA, genes and chromosomes, DNA and protein synthesis, genetic diversity due to mutation and meiosis, genetic diversity and adaptation, species and taxonomy, biodiversity within a population, investigating diversity) Understanding of the genetic information topic requires knowledge of both DNA and protein structure from teacher 1 the previous term. This also builds on material covered in both years 10 and 11, with teachers being aware that combined science students do not have as much prior knowledge. Understanding of the genetic diversity topic is crucial for students to understand the teacher 2 content in year 13.
<b>Summer 1 (April – June) to Summer 2 (June – July)</b>	Key stage 5 (12) content review and assessment. Populations and ecosystems
	As we finish the year key stage 5 (12) content, the progress of students is assessed using AS papers, in order to inform predicted grades.  Student now move on to the ecology aspects of topic 7. This material suits this time of year with the better weather affording greater chance of practical opportunity. This material needs covering in advance of the field trip in the summer. Practical work completed throughout the year means that students now have sufficient skills to plan their own investigation as part of their practical endorsement.