PCHS Curriculum Information - Year 12

Course Title: Biology	**Exam Board: AQA**	**Specification Code:7401**

How will students be assessed?

Students will sit three two-hour external exams at the end of Year 13. During the course, along with other practical work, students will carry out 12 assessed practical's which will lead to the students being awarded their practical skills endorsement.

Biology Paper 1: (91 marks)

Students will complete short and long answer questions on the topic areas mainly from year 12. Questions will be knowledge based including a large proportion of knowledge application, as well as drawing on the practical work that students have completed throughout the course.

Biology Paper 2: (91 marks)

Students will complete short and long answer questions as well as a comprehension question on the topic areas from year 13. Questions will be knowledge based including a large proportion of knowledge application, as well as drawing on the practical work that students have completed throughout the course.

Biology Paper 3: (78 marks)

Students will complete structured questions including practical techniques, critical analysis and an essay.

KEY CONTENT	
Half Term 1 **Biological molecules** Monomers and polymers Carbohydrates, proteins and lipids **Assessment on biological molecules**	**Half Term 1** **Cells** Structure of eukaryotic cells Structure of prokaryotic cells and viruses Methods of studying cells **Assessment on cells and microscopes**
Half Term 2 **Biological molecules** Many proteins are enzymes *Required practical 1 - Enzymes* Digestion and absorption ATP Water Inorganic ions **Assessment on enzymes**	**Half Term 2** **Cells** All cells arising from other cells *Required practical 2 - Root squash* Transport across cell membranes **Assessment on transport** *Required practical 3 - osmosis* *Required practical 4 - cell membranes*

Half Term 3 **Genetics, variation and relationships between organisms** Structure of DNA and RNA DNA replication DNA, genes and chromosomes DNA and protein synthesis **Assessment on transcription and translation**	**Half Term 3** **Organisms exchange substances with their environment** Surface area to volume ratio Gas exchange **Assessment on gaseous exchange**
Half term 4 **Genetics, variation and relationships between organisms** Genetic diversity and adaptation *Required Practical 6* Genetic diversity can arise as a result of mutation or during meiosis Species and taxonomy Biodiversity within a community Investigating diversity **Assessment on Genetics, variation and relationships between organisms**	**Half Term 4** **Mass transport** Mass transport in animals *Required practical 5 - heart dissection* **Assessment in mass transport in animals**
Half Term 5 **Cells** Cell recognition and the immune system Essay practice Practical skills Synoptic skills Preparation for paper 1 assessment	**Half Term 5** Mass transport in plants Essay practice Practical skills Synoptic skills Preparation for paper 1 assessment
Half Term 6 **Energy transfers** Photosynthesis *Required practical 7* *Required practical 8* Focus on practical work **Paper one mock exam** **Paper two mock exam** **If time allows populations will be taught and**	**Half Term 6** **Energy transfers** Respiration *Required practical 9* Focus on practical work **Paper one mock exam** **Paper two mock exam** **If time allows populations will be**

fieldwork carried out ***Required practical 12***	**taught and fieldwork carried out** ***Required practical 12***