

PCHS Curriculum Information – Year 12 A Level Biology

Course Title: A Level 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.		

Half term	KEY CONTENT- Teacher 1	KEY CONTENT- Teacher 2
1	Biological molecules Monomers and polymers Carbohydrates Proteins Lipids Assessment: Biological molecules	Cells Structure of eukaryotic cells Structure of prokaryotic cells Structure of viruses Methods of studying cells Assessment: Cells and microscopes
2	Biological molecules Many proteins are enzymes <i>Required practical 1 – Enzymes</i> Digestion and absorption ATP Water	Cells All cells arising from other cells <i>Required practical 2 – Root squash</i> Transport across cell membranes Assessment: Transport

	Inorganic ions Assessment: Enzymes	<i>Required Practical 3: Osmosis</i> <i>Required Practical 4: Cell membranes</i>
3	Genetics, variation and relationships between organisms Structure of DNA and RNA DNA replication DNA, genes and chromosomes DNA and protein synthesis Assessment: Transcription and translation	Organisms exchange substances with their environment Surface area to volume ratio Gas exchange Assessment: Gaseous exchange

4	Genetics, variation and relationships between organisms Genetic diversity and adaptation <i>Required Practical 6</i> Genetic diversity can arise as a result of mutation or during meiosis Species and taxonomy Biodiversity within a community Investigating diversity Assessment: Genetics, variation and relationships between organisms	Mass transport Mass transport in animals <i>Required practical 5 - heart dissection</i> Assessment: Mass transport in animals
5	Cells Cell recognition and the immune system Essay practice Practical skills Synoptic skills Preparation for paper 1 assessment	Mass Transport Mass transport in plants Essay practice Practical skills Synoptic skills Preparation for paper 1 assessment
6	Energy transfers	Energy transfers

	Photosynthesis <i>Required practical 7</i> <i>Required practical 8</i> Focus on practical work Paper one mock exam Paper two mock exam If time allows populations will be taught and fieldwork carried out <i>Required practical 12</i>	Respiration <i>Required practical 9</i> Focus on practical work Paper one mock exam Paper two mock exam If time allows populations will be taught and fieldwork carried out <i>Required practical 12</i>
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