

Biology Learning Plan 2020-2022

Specification: AQA Biology

Teacher A: Dr. Hidalgo-Curtis

Teacher B: Dr. Chipperfield

Year 12						
Term	Teacher A			Teacher B		
	Exam Focus	Classroom Learning	Independent Learning	Exam Focus	Classroom Learning	Independent Learning
1	Paper 1 and 3	Chapter 3. Cell structure <ul style="list-style-type: none"> Microscopes, measurements, calculations Eukaryotic cells Specialised cells Prokaryotic cells Mitosis Cell cycle 	For every chapter: <ul style="list-style-type: none"> Complete associated worksheets in shared area. Read 'Biological sciences review' Complete end of chapter questions from Text Book 	Paper 1 and 3	Chapter 1. Biological molecules <ul style="list-style-type: none"> Carbohydrates; mono- di- and poly-saccharides Starch, glycogen, cellulose Lipids Proteins enzymes 	For every chapter: <ul style="list-style-type: none"> Complete associated worksheets in shared area. Read 'Biological sciences review' Complete end of chapter questions from Text Book
2	Paper 1 and 3	Chapter 4. Transport across cell membranes <ul style="list-style-type: none"> Cell membranes Diffusion Osmosis Active transport Co-transport Chapter 5. Cell recognition and the immune system <ul style="list-style-type: none"> Phagocytosis T lymphocytes B lymphocytes Antibodies Vaccinations HIV 	<ul style="list-style-type: none"> Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder) At least once per fortnight practise a maths skill (see Independent learning folder) Watch a tutorial for the topic (Crash Course Biology, Mr. Pollock Biology, Amoeba Sisters are all great) 	Paper 1 and 3	Chapter 2. Nucleic acids <ul style="list-style-type: none"> Structure of RNA and DNA DNA replication Energy and ATP Water Chapter 8. DNA, genes and protein synthesis <ul style="list-style-type: none"> Genes and the triplet code DNA and chromosomes 	<ul style="list-style-type: none"> Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder) At least once per fortnight practise a maths skill (see Independent learning folder) Watch a tutorial for the topic (Crash Course Biology, Mr. Pollock Biology, Amoeba Sisters are all great)
3	Paper 1 and 3	Chapter 6. Exchange <ul style="list-style-type: none"> Exchange between organisms and their environment Gas exchange; single celled organisms and insects Gas exchange; fish Gas exchange; leaves Gas exchange; humans Digestion 	<ul style="list-style-type: none"> Highlight your specification Red, Amber, Green Use 'student knowledge checklist' (provided by teacher but also available in Independent learning folder) to RAG your understanding. Use this to focus your revision. 	Paper 1 and 3	Chapter 8. DNA, genes and protein synthesis <ul style="list-style-type: none"> RNA Transcription and translation Chapter 9. Genetic diversity <ul style="list-style-type: none"> Mutation Meiosis 	<ul style="list-style-type: none"> Highlight your specification Red, Amber, Green Use 'student knowledge checklist' (provided by teacher but also available in Independent learning folder) to RAG your understanding. Use this to focus your revision.
4	Paper 1 and 3	Chapter 7. Mass transport <ul style="list-style-type: none"> Haemoglobin Circulation in mammals Heart and cardiac cycle Blood vessels Transport in plants; water and organic molecules 		Paper 1 and 3	Chapter 9. Genetic diversity <ul style="list-style-type: none"> Genetic diversity and adaptation Types of selection Chapter 10. Biodiversity <ul style="list-style-type: none"> Species and taxonomy Diversity within a community Species diversity and human activity Investigating diversity Investigating variation 	
5	Paper 1 and 3	AS revision		Paper 1 and 3	AS revision	
6	Paper 2 and 3	Chapter 18. Populations and Evolution <ul style="list-style-type: none"> Population genetics Variation in phenotype Natural selection Isolation Speciation Chapter 19. Populations in ecosystems <ul style="list-style-type: none"> Variation in population size Competition Predation Investigating populations Succession Conservation 		Paper 2 and 3	Chapter 11. Photosynthesis <ul style="list-style-type: none"> Light dependent reaction Light independent reaction Chapter 12. Respiration <ul style="list-style-type: none"> Glycolysis Link reaction Krebs cycle Oxidative phosphorylation 	

Year 13						
Term	Teacher A			Teacher B		
	Exam Focus	Classroom Learning	Independent Learning	Exam Focus	Classroom Learning	Independent Learning
1	Paper 2 and 3	Chapter 17. Inherited Change <ul style="list-style-type: none"> • Monohybrid • Dihybrid • Codominance • Multiple alleles • Sex-linkage • Autosomal linkage • Epistasis • Chi-squared 	For every chapter: <ul style="list-style-type: none"> • Complete associated worksheets in shared area. • Read 'Biological sciences review' • Complete end of chapter questions from Text Book • Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder) • At least once per fortnight practise a maths skill (see Independent learning folder) • Watch a tutorial for the topic (Crash Course Biology, Mr. Pollock Biology, Amoeba Sisters are all great) • Highlight your specification Red, Amber, Green Use 'student knowledge checklist' (provided by teacher but also available in Independent learning folder) to RAG your understanding. Use this to focus your revision.	Paper 2 and 3	Chapter 12. Respiration <ul style="list-style-type: none"> • Anaerobic respiration Chapter 14. Responses to stimuli <ul style="list-style-type: none"> • Survival and response • Plant growth factors • Reflexes • Receptors • Control of heart rate Chapter 13. Energy and Ecosystems <ul style="list-style-type: none"> • Food chains, energy transfer • Nutrient cycles • Fertilisers 	For every chapter: <ul style="list-style-type: none"> • Complete associated worksheets in shared area. • Read 'Biological sciences review' • Complete end of chapter questions from Text Book • Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder) • At least once per fortnight practise a maths skill (see Independent learning folder) • Watch a tutorial for the topic (Crash Course Biology, Mr. Pollock Biology, Amoeba Sisters are all great) • Highlight your specification Red, Amber, Green Use 'student knowledge checklist' (provided by teacher but also available in Independent learning folder) to RAG your understanding. Use this to focus your revision.
2	Paper 2 and 3	Chapter 20. Gene expression <ul style="list-style-type: none"> • Gene mutations • Stem cells • Regulation of transcription and translation • Epigenetics • Gene expression and cancer • Genome projects 		Paper 2 and 3	Chapter 15. Nervous coordination and muscles <ul style="list-style-type: none"> • Neurones • Nerve impulses • Action potential • Synapses; structure and function • Transmission across synapses • Skeletal muscle; structure and contraction theory 	
3	Paper 2 and 3	Chapter 21. Recombinant DNA technology <ul style="list-style-type: none"> • producing DNA fragments • <i>in vivo</i> gene cloning • <i>in vitro</i> gene cloning • genetic screening • genetic fingerprinting • 		Paper 2 and 3	Chapter 16. Homeostasis <ul style="list-style-type: none"> • Feedback mechanisms • Hormones and blood glucose • Diabetes • Structure of the kidney • osmoregulation 	
4	Paper 2 and 3	Revision		Paper 3	Essay writing skills Maths for Biology	
5	Paper 1, 2 and 3	Revision		Paper 2 and 3	Revision	