Curriculum Plan	Subject	A level Biology	Year	12

		W/C 2nd November	W/C 9th November	W/C 16th November
How you will access home learning		The PowerPoint and lesson materials will be available in our Y12 group on Microsoft Teams. You will need access to your Biology AS textbook via Kerboodle.		
How you be able to interact with your teacher and gain feedback on your work		You can interact with your teacher by asking any questions about the work by using the chat function on your Year 12 Microsoft Team Class. Your will be able to submit written work for feedback through the online submission function on SHMW.		
Retrieval How we will help you to recall previously learnt knowledge		Retrieval practice will be included in the weekly PowerPoint set, and will include completing questions on content taught in the Autumn Term on **Biological molecules**. You will be able to self-mark your answers.	Retrieval practice will be included in the weekly PowerPoint set, and will include completing questions on content taught in the Autumn Term on **Biological molecules**. You will be able to self-mark your answers.	Retrieval practice will be included in the weekly PowerPoint set, and will include completing questions on content taught in the Autumn Term on **Biological molecules**. You will be able to self-mark your answers.
New Learning	What you will be learning about this week	Ultra structures of prokaryotic and eukaryotic cells. Process of mitosis and what cells look like during each stage of mitosis – mitosis practical	Stages within the cell cycle and where mitosis fits into it. You will also complete revision and the test on cells.	The structure of the cell membrane and how it relates to its function when allowing molecules to pass through by diffusion, active transport and osmosis. You will also complete the osmosis required practical.
	How we will teach you the new knowledge or ideas	PowerPoint content of new knowledge on the difference between prokaryotic cells and eukaryotic cells as well as the stages of mitosis. There will be a video clip to show the structure of prokaryotic cells as well as a sorting activity of true/false statements. During the mitosis practical you will observe cells in different stages of mitosis to calculate the mitotic index.	PowerPoint content of new knowledge on the cell cycle and how it can lead to cancer when the control mechanisms break down. There will be animations of the cell cycle and a table you will complete to identify the key events in the cell at each stage. You will go through the homework booklet in class and your teacher will answer any questions and help to identify misconceptions.	PowerPoint content of new knowledge on structure of the cell membrane, diffusion, osmosis and active transport. There will be animations to show you the difference in the membrane during each type of transport. You will also answer questions on this topic with answers on every slide and videos added where appropriate to explain complex concepts. During the osmosis required practical you will perform a serial dilution and plot a calibration curve.
	Activities that will help you learn and practice what you've been taught	You will be answering the summary questions on page 76 on viruses and 79 on mitosis. You will also look at cells in different stages of mitosis during the practical and annotate diagrams of each stage to explain the key processes occurring.	You will be matching key words to their definitions as there is a lot of new vocabulary in this topic. You will read pg 80-81 and answers the summary questions on the cell cycle. You will also get chance to practice exam style questions on this topic.	Answering exam style questions based on this topic. Labelling diagrams of the phospholipid bilayer and linking back to previous lessons on lipids. You will also answer the summary questions on pg 91 and 92 and drawing a comparison table to compare the different types of transport across membranes,
	What you can do if you are stuck	Use your online Kerboodle textbook to refer to any previous content. If you need to e-mail me to ask a question, then please attach a copy of the work that you have completed so far, so I can be specific in giving you feedback and help.		

		W/C 23rd November	W/C 30th November	W/C 7th December	W/C 14th December
How you will access home learning		The PowerPoint and lesson materials will be available in our Y12 group on Microsoft Teams. You will need access to your Biology AS textbook via Kerboodle.			
How you be able to interact with your teacher and gain feedback on your work		You can interact with your teacher by asking any questions about the work by using the chat function on your Year 12 Microsoft Team Class. Your will be able to submit written work for feedback through the online submission function on SHMW.			
Retrieval How we will help you to recall previously learnt knowledge		Retrieval practice will be included in the weekly PowerPoint set, and will include completing questions on content taught in the Autumn Term on **Cell structure**. You will be able to self-mark your answers.	Retrieval practice will be included in the weekly PowerPoint set, and will include completing questions on content taught in the Autumn Term on **Cell structure**. You will be able to self-mark your answers.	Retrieval practice will be included in the weekly PowerPoint set, and will include completing questions on content taught in the Autumn Term on **Cell structure**. You will be able to self-mark your answers.	Retrieval practice will be included in the weekly PowerPoint set, and will include completing questions on content taught in the Autumn Term on **Cell structure**. You will be able to self-mark your answers.
New Learning	What you will be learning about this week	Co transport and the absorption of glucose in the ilium. Cell structure test feedback & DIRT work. Review of chapter in preparation for the test. You will also complete the transport across membranes required practical.	The main defence mechanism of the body and explaining how the body distinguishes between its own cells and foreign cells. Students will also learn about the process of phagocytosis.	This week you will have the test on transport across membranes. You will also learn about the role of T and B cells in cell-mediated immunity	The structure of HIV and how it can replicate and be detected using an ELISA test. You will then move onto looking at exchange in single celled organisms, fish and insects.
	How we will teach you the new knowledge or ideas	PowerPoint content of new knowledge on co-transport of glucose. There will be answers available to the questions on every slide and videos added where appropriate to explain complex concepts. Students will also be reviewing their previous test and identifying common misconceptions and areas that they need to improve on. During the practical you will investigate how changing different variables effects membrane permeability.	PowerPoint content of new knowledge on defence mechanisms and the human defence system. Students will be completing match up and glossary activities on the key terms. They will also be creating cartoon strip diagrams to show the steps in phagocytosis.	PowerPoint content of new knowledge on T and B lymphocytes, vaccinations and the use of monoclonal antibodies. Students will order sentences to create a flow diagram of how T cells work within the body. You will view images of the immune responses and compare the specific and non-specific immune response in a table. There will be answers available to the questions on every slide and videos added where appropriate to explain complex concepts.	PowerPoint content of new knowledge on HIV, gas exchange in fish and in insects. Students will watch a series of animations on the replication of HIV and then create their own flow chart. Examples and model answers of how to calculate surface area: volume ratio will also be provided so allow students to practice calculation questions. You will also perform a fish head dissection to develop your understanding of their internal biological functions.

	Activities that will help you learn and practice what you've been taught	Reading page 96 and using this information to write out the stages in the cotransport system. Student's will also be answering the summary questions and marking their answers. Students will independently complete the Test Yourself and the teacher will go through the mark scheme allowing students to mark and correct their work.	Watching animation videos and using the information to answer summary questions on pg 103-105. They will be making a section of summarised notes on 'how lymphocytes recognise cells belonging to the body, and practicing exam style questions on the topic. Transport homework books will also be marked and reviewed with students. New homework book issued.	You will draw figure 2 and create summarised notes using pg 110. You will also answer the summary questions page 110 and green pen your answers. You will also research the MMR vaccine scandal and the effects it had on society, Finally, you will research the uses and ethics of monoclonal antibodies.	Students will complete calculation tables to allow them to practice SA:V ratio questions. They will also look at fick's law and how it can be applied to answering questions on exchange. You will also read pg. 134 and answer the green box summary questions on gas exchange in insects, You will also compete any DIRT work from the transport test
	What you can do if you are stuck	Use your online Kerboodle textbook to refer to any previous content. If you need to e-mail me to ask a question, then please attach a copy of the work that you have completed so far, so I can be specific in giving you feedback and help.			