

Curriculum Map

Year 13 Biology

Date	Week	Topic 5	Prep work	Topic 6	
01-Sep	1	Abiotic, biotic factors, adaptations and Succession	Memorise key definitions of key terms pg 100 and identify the key factors that affect a species abundance and distribution, pg 101	DNA profiling	
08-Sep	2	Required practical 10 carry out a study on the ecology of a habitat	Memorise definitions of key terms and the role of ATP pg 108, memorise structure of a chloroplast pg 109	PCR	
15-Sep	3	Photosynthesis + <i>consolidation lesson on all concepts taught</i>	Recap products of the light dependent reaction. Why does DCPIP go colourless when it accepts electrons? Why does this show that the light dependent reaction has happened? Pg 113	Required practical 14 gel electrophoresis + <i>consolidation lesson on all concepts taught</i>	What are the 5 ways of determining time of death? Pg 130, 131
22-Sep	4	Required practical 11 the Hill Reaction	What are the reasons that not all energy is transferred to the next trophic level? Pg 114	Determining time of death	What are the key differences between the structures of bacteria and viruses? Pg 136, 137
29-Sep	5	Energy Transfer and Assessment	What is climate change? How can temperature records be used as evidence for climate change? pg 116	Structure of viruses and bacteria + <i>consolidation lesson on all concepts taught</i>	How are TB and HIV transmitted? What are the symptoms? Pg 138
06-Oct	6	Evidence of climate change: temp, pollen, dendrochronology	Which two greenhouse gases contribute to climate change? What anthropogenic causes are contributing to their increase? Pg 84 Why do people	TB and HIV	What are the barriers that prevent infection? Pg 139



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			disagree whether humans are causing climate change? Pg 124		
13-Oct	7	The greenhouse effect and limitations of climate models	Summarise how climate change impact plants and animals? Pg 121, 122	Non specific and specific immune response	What is the structure of an antibody? Pg 142
20-Oct	8	Impact of climate change on organisms + <i>consolidation lesson on all concepts taught</i>	How can we measure growth rate? What does Q10 represent and what is the equation? Pg 122,123	Specific immune response	What are introns, exons and what is mRNA splicing? Pg 143
03-Nov	9	Required practical 12 investigate the effect of temperature on the initial rate of an enzyme-catalysed reaction and Required practical 13 effect of temp on the development of organisms	What is evolution? Pg 126	Protein synthesis - should this be moved earlier?	
10-Nov	10	Natural Selection and flashback fri T2 CP + <i>consolidation lesson on all concepts taught</i>	How do the scientific community validate new evidence? Pg 128, 129	Protein synthesis - should this be moved earlier?	How do memory cells give immunity? Pg 144
17-Nov	11	Evidence for evolution and flashback fri T3/4 CP and WTM	What are the definitions of allopatric and sympatric speciation? Pg 126 and 127	Preventing pathogen entry and immunity	What are bacteriocidal and bacteriostatic antibiotics? Pg 146
24-Nov	12	Speciation and flashback fri T4 CP	What are the key processes of carbon cycle and stores? Pg 124	Required practical 15 investigate the effect of different antibiotics on bacteria + <i>consolidation lesson on all concepts taught</i>	How are hospital acquired infections transmitted? Pg 147
01-Dec	13	The carbon cycle and article prep		Evolution of antibiotic resistance	
08-Dec	14	Revision and article prep		Revision	



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15-Dec	15	Revision	What are the four types of joint? Pg 102	Revision	What features do all neurones have? What are the functions of the 3 neurones in a reflex? How are their different structures different? What makes up a reflex arc? Pg 178
Date	Week	Topic 7	Prep work	Topic 8	Prep work
05-Jan	16				
12-Jan	17				
19-Jan	18	Joints and movement	What is a sarcomere made up of? Pg 149	Organisation and reflex arcs	What do the sodium potassium pumps and Potassium channel proteins do in resting membrane potential? Pg 178
26-Jan	19	Muscle structure and function	What are the reactants and products of glycolysis and how do they link to the other parts of aerobic respiration? Pg 152	The action potential	What is a synapse? How does the action potential cause the release of a neurotransmitter? Pg 182



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02-Feb	20	ATP and glycolysis and krebs cycle	Which products from the kreb cycle go into oxidative phosphorylation? What are the two processes involved? What are the products? Where does it happen? Pg 154	Conduction of impulse and synapses + <i>consolidation lesson on all concepts taught</i>	What are the similarities and differences between the nervous system and endocrine system? Pg 174 and 175
09-Feb	21	Electron transport chain + <i>consolidation lesson on all concepts taught</i>	Which equipment makes up a respirometer? Pg 156	Nervous and hormonal control, auxins	What are the photoreceptors in the eye ? Pg 176
23-Feb	22	Required practical 16 investigate the rate of respiration	What is the equation for anaerobic respiration? Pg 156	Detecting stimuli - rods and phytochromes	Where are and what are the functions of the cerebral hemispheres, the hypothalamus, medulla oblongata and cerebellum? Pg 186
02-Mar	23	Anaerobic respiration and aerobic capacity	How is the heart beat controlled? Pg 158	Regions of the brain and scanning + <i>consolidation lesson on all concepts taught</i>	What are the arguments for and against using animals for research? Pg 191 What are the causes, symptoms and treatments of parkinsons and depression? Pg 194



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09-Mar	24	Control of heart rate and breathing rate	What are tidal volume, oxygen consumption, breathing rate, respiratory minute ventilation? Pg 164	Depression and Parkinsons, Critical period, visual perception and nature vs nurture (hwk)	What were the key findings and ethics around the HGP? Pg 195
16-Mar	25				
23-Mar	26	Required practical 17 investigate the effects of exercise on tidal volume, breathing rate, respiratory minute ventilation and oxygen consumption using data from spirometer traces + <i>consolidation lesson on all concepts taught</i>	What are negative and positive feedback? Pg 167	Habituation theory, Required practical 18 Habituation , HGP	
13-Apr	27	Fast and slow twitch muscles (move to go after muscle str?) and temperature regulation	What are some of the options of treatments for sports injuries? Pg 172 and 173	GM and revision	
20-Apr	28	Homeostasis and disadvantages of exercising too much too little, treatments, Performance enhancing substances		Revision	
27-Apr	29	Revision		Revision	
04-May	30	Revision		Revision	
11-May	31	Revision		Revision	
18-May	32	Revision		Revision	