

Action Plan Exams 2022 – Biology Higher

Advance information June 2022

GCSE Biology (8461)

Version 1.0

Because of the ongoing impacts of the Coronavirus (COVID-19) pandemic, we are providing advance information on the focus of June 2022 exams to help students revise.

This is the advance information for GCSE Biology (8461).

Information

- The format/structure of the papers remains unchanged.
- This advance information covers all examined components.
- For each paper the list shows the major focus of the content of the exam.
- Each paper may cover some, or all, of the content in the listed topic.
- Another list shows which required practical activities will be assessed.
- Topics **not** assessed either directly or through 'linked' content have also been listed.
- The information is presented in specification order and not in question order.
- Assessment of practical skills, maths skills, and Working Scientifically skills will occur throughout all the papers.
- It is **not** permitted to take this advance information into the exam.

Advice

- It is advised that teaching and learning should still cover the entire subject content in the specification, so that students are as well prepared as possible for progression to the next stage of their education.
- Topics not explicitly given in any list may appear in low tariff questions or via 'linked' questions. Linked questions are those that bring together knowledge, skills and understanding from across the specification.
- Students will still be expected to apply their knowledge to unfamiliar contexts.

Key Points

- *There are two papers in for Biology*
- *Paper 1 on 17th May 22*
- *Paper 2 on 15th June*
- *Homework is set weekly on SENECA*

Topic included in Exam	Concepts	Kerboodle Pages	When will this topic be covered/when will it be revised?	Links to resources to aid revision/learning
Paper 2				
4.5.2 The human nervous system	<ul style="list-style-type: none"> - Function of the NS - Control of body temperature - Response to high/ low temperatures 		WB 21 st February	YouTube https://www.youtube.com/watch?v=WoMPARSQPZw Bitesize: <u>Controlling body temperature</u> https://www.kerboodle.com/users/login
4.5.3 Hormonal Control in Humans	<i>The endocrine system</i> <ul style="list-style-type: none"> - <i>Function of hormones within the endocrine system</i> - <i>Control of blood glucose</i> - <i>Diabetes</i> - <i>Kidneys and the role of ADH</i> - <i>Adrenaline and thyroxine</i> 		w/B 21 st February	YouTube: Endocrine system Bitesize: https://www.bbc.co.uk/bitesize/guides/zttqfcw/revision/1 https://www.kerboodle.com/users/login
4.5.4 Hormonal control in plants	<ul style="list-style-type: none"> - <i>Site of auxin production</i> - <i>Role of auxin in producing phototropism / gravitropism</i> 		W/B 21 st February	Bitesize: https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/1 YouTube: https://www.youtube.com/watch?v=_Bf5WKEMB5o https://www.kerboodle.com/users/login

4.6.1 Reproduction 4.7.2	<ul style="list-style-type: none"> - Sexual and asexual reproduction - Gametes 		w/B 7 th March	<p>YouTube: https://www.youtube.com/watch?v=Fh9b6a-3DLQ</p> <p>Bitesize: https://www.bbc.co.uk/bitesize/guides/z9pkmsg/revision/1</p> <p>https://www.kerboodle.com/users/login</p>
4.7.2 Organisation of an Ecosystem	<ul style="list-style-type: none"> • interpret food chains and webs • -identify producers, consumers, predators and prey from food chains and webs • -describe the carbon and water cycles 			<p>Bitesize: https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/1</p> <p>YouTube: https://www.youtube.com/watch?v=dRFQ8rZCK6Q https://www.youtube.com/watch?v=urzpnjwazV0</p> <p>https://www.kerboodle.com/users/login</p>
Required Practical 8 Investigate The Effect of Light on the Growth of Seedlings	<ul style="list-style-type: none"> - identify independent, dependent and control variables • - Describe how variables can be controlled 			<p>Focus E Learning: www.focuselearning.co.uk Focus E-learning: Username: student@theapleton3762 Focus E-Learning Password: 5xw2qyqc</p> <p>Bitesize:https://www.bbc.co.uk/bitesize/guides/zc6cqhvr/revision/3</p> <p>YouTube:https://www.youtube.com/watch?v=fEo21LbnJIM</p> <p>https://www.kerboodle.com/users/login</p>

Required Practical 7: Measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species	Using transects and quadrats are used by ecologists to determine the distribution and abundance of species in an ecosystem. -Understand the terms mean, mode and median -Calculate arithmetic means		Homework W/B 7 th March	Focus E Learning: www.focuselearning.co.uk Focus E-learning: Username: student@theapleton3762 Focus E-Learning Password: 5xw2qyqc Bitesize: https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/3 YouTube: https://www.youtube.com/watch?v=2MW6nwf80XM https://www.youtube.com/watch?v=RhMOCxXcDrQ https://www.youtube.com/watch?v=yLHz2Ea10Mg&t=2s https://www.kerboodle.com/users/login
Mock Exams			W/B 21 st March	
4.3.2 Monoclonal antibodies	<ul style="list-style-type: none"> - Describe what a monoclonal antibody is - Describe how monoclonal antibodies are produced - Describe how monoclonal antibodies can be used 		W?B 28 th March	Bitesize: https://www.bbc.co.uk/bitesize/guides/zt8t3k7/revision/1 YouTube: Monoclonal antibodies Uses of monoclonal antibodies https://www.kerboodle.com/users/login
4.3.1 Communicable Diseases	<ul style="list-style-type: none"> - -definition and examples of pathogen - -how viruses and bacteria make us ill 			Bitesize: https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/1

	<ul style="list-style-type: none"> - examples of diseases caused by each type of pathogen - human defence mechanisms - what happens in a vaccine - comparing antibody production after active and passive immunity - 			YouTube: https://www.youtube.com/watch?v=rAJGnS_ktk4 https://www.kerboodle.com/users/login
Easter Holidays	Please see Satchel One for information re Holiday Revision Topics			<ul style="list-style-type: none"> • SENECA: www.senecalearning.com • SENECA: Username (School email) • SENECA: Password (you set this yourself) • Class Code xi0lrrqt3
Paper 2				
4.1.1 Cell Structure	<ul style="list-style-type: none"> - Difference between prokaryotic and eukaryotic cells - Comparison of plant cells and animal cells - Function of organelles - Cell differentiation and specialised plant cells and animal cells 		w/B 18 th April	YouTube: Prokaryotic and eukaryotic cells Animal cells Plant cells Bitesize: https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1
Required practical 1: use of light microscope to observe cells	How to prepare slides -How to use the microscope to improve field of view, clarify, change magnification <ul style="list-style-type: none"> - Microscopy calculations 			Focus E Learning: www.focuselearning.co.uk Focus E-learning: Username: student@theapleton3762 Focus E-Learning Password: 5xw2qyqc YouTube: Required practical - Use of microscopes

	<ul style="list-style-type: none"> - Unit conversions (mm, micrometres etc) 			Microscopy Orders of magnitude Bitesize: https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1
4.1.3 Transport in cells	<ul style="list-style-type: none"> - Diffusion - Factors affecting the rate of diffusion - Osmosis - Active transport 		w/B 2 nd May	Bitesize: https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/4 YouTube: Osmosis Diffusion Active transport
Required practical 3: Investigate the effect of a range of concentrations of salt solution on the mass of plant tissue	<ul style="list-style-type: none"> - Calculate rate of water uptake - Identify independent, dependent and control variables - Calculate percentage change in mass - Interpret graph to find salt/sugar concentration in potato 		HMK	Focus E Learning: www.focuselearning.co.uk Focus E-learning: Username: student@theapleton3762 Focus E-Learning Password: 5xw2qyqc Bitesize: https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/5 YouTube: Required practical link
4.2.2 Animal tissues, organs and organ systems	Functions of tissues and organs in the digestive system -Digestive enzymes -Functions of tissues and organs in the circulatory system -Pathway of blood through the heart			Bitesize: Digestion Animal transport systems YouTube: https://www.youtube.com/watch?v=4ui4oSHHnzA https://www.youtube.com/watch?v=VLK2wANjQm0 https://www.youtube.com/watch?v=bpYaKM2hVFY

	-adaptations of components of the blood -risk factors of non-communicable diseases			
4.2.3 Plant tissues, organs and systems	- cross section of a leaf - functions and adaptations of xylem and phloem - transpiration - translocation			Bitesize: Plant organisation YouTube: Plant organisation Transpiration Plant cell specialisations
Exam dates			Paper 1 – 17 th May 2022 Paper 2 – 15 th June 2022 Mock Exams – W/B 21 st March (GCSE)	

Timeline

Date W/B	What will be covered	Teacher	Identified as priority from Exam board?
7 th Feb		<i><u>This column may not be necessary if only one teacher</u></i>	Yes or No
14th April	Half Term		
21 st Feb			
28 th Feb			

7 th March	Mock Exam (A-Level)		
14 th March			
21 st March	Mock Exam (A-Level)		
28 th March			
4th April	Easter Holidays		
11th April	Easter Holidays		
18 th April			
25 th April			
2 nd May			
9 th May			
16 th May	Paper 1 17 th May 2022		
23 rd May			
30th May	Half Term		
6 th June	<i>Don't forget to put exam dates here too!</i>		
13 th June	<i>Paper 2 16th June 2022</i>		