

Action Plan Exams 2022 – Biology Foundation

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>Contraception</i> - <i>Hormones in human reproduction</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"> - Site of auxin production - Role of auxin in producing phototropism / gravitropism 		W/B 28thFebruary	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	<ul style="list-style-type: none"> - Sexual and asexual reproduction - Gametes - Meiosis - DNA and the genome - Genetic inheritance - Inherited disorders - Sex determination 		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>
4.6.3 The development of understanding of genetics and evolution	<ul style="list-style-type: none"> - Evidence for evolution - Fossils - Extinction - 		w/b 14 th March	<p>Bitesize: Principles of evolution by natural selection - Evolution - AQA - GCSE Biology (Single Science) Revision - AQA - BBC Bitesize</p> <p>YouTube:</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 		HMW w/b 7 th March	<p>Focus E Learning: www.focuselearning.co.uk</p> <p>Focus E-learning: Username: student@theapleton3762</p> <p>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	Using transects and quadrats are used by ecologists to determine the		HMW W/B 14 th March	<p>Focus E Learning: www.focuselearning.co.uk</p> <p>Focus E-learning: Username: student@theapleton3762</p> <p>Focus E-Learning Password: 5xw2qyqc</p>

of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species	<p>distribution and abundance of species in an ecosystem.</p> <ul style="list-style-type: none"> -Understand the terms mean, mode and median -Calculate arithmetic means 			<p>Bitesize: https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/3</p> <p>YouTube: https://www.youtube.com/watch?v=2MW6nwf80XM https://www.youtube.com/watch?v=RhMOCxXcDrQ https://www.youtube.com/watch?v=yLHz2Ea10Mg&t=2s</p> <p>https://www.kerboodle.com/users/login</p>
Mock Exams			W/B 21 st March	
4.3.1 Communicable Diseases	<ul style="list-style-type: none"> - definition and examples of pathogen - how viruses and bacteria make us ill - 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 - 		w/b 28 th March	<p>Bitesize: https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/1</p> <p>YouTube: https://www.youtube.com/watch?v=rAJGnS_ktk4</p> <p>https://www.kerboodle.com/users/login</p>
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 ply21wtpht
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 - Culturing microorganisms 		w/B 18 th April	<p>YouTube: Prokaryotic and eukaryotic cells Animal cells Plant cells</p> <p>Bitesize: https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1</p>
Required practical 1: use of light microscope to observe cells	<p>How to prepare slides -How to use the microscope to improve field of view, clarify, change magnification</p> <ul style="list-style-type: none"> - Microscopy calculations - Unit conversions (mm, micrometres etc) 		HMW w/b 18 th April	<p>Focus E Learning: www.focuselearning.co.uk Focus E-learning: Username: student@theapleton3762 Focus E-Learning Password: 5xw2qyqc</p> <p>YouTube: Required practical - Use of microscopes Microscopy Orders of magnitude</p> <p>Bitesize: https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1</p>
4.1.3 Transport in cells	<ul style="list-style-type: none"> - Diffusion - Factors affecting the rate of diffusion - Osmosis - Active transport 		w/B 25 th April	<p>Bitesize: https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/4</p> <p>YouTube: Osmosis Diffusion Active transport</p>

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 w/b 25 th April	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 -adaptations of components of the blood -risk factors of non-communicable diseases		w/b 2 nd May	Bitesize: Digestion Animal transport systems YouTube: https://www.youtube.com/watch?v=4ui4oSHHzA https://www.youtube.com/watch?v=VLK2wANjQm0 https://www.youtube.com/watch?v=bpYaKM2hVFY
4.4.1 Photosynthesis	<ul style="list-style-type: none"> - Photosynthetic reaction - Rate of photosynthesis 		w/b 9 th May	Bitesize: https://www.bbc.co.uk/bitesize/guides/zg8nrwx YouTube:
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			Yes
14th April	Half Term		
21 st Feb	4.5.2 The human nervous system		Yes
28 th Feb	4.5.3 Hormonal Control in Humans		Yes
7 th March	4.6.1 Reproduction		Yes
14 th March	4.6.3 The development of understanding of genetics and evolution		Yes
21 st March	Mock Exam		
28 th March	4.3.1 Communicable Diseases		Yes
4th April	Easter Holidays		
11th April	Easter Holidays		
18 th April	4.1.1 Cell Structure		Yes
25 th April	4.1.3 Transport in cells		Yes
2 nd May	4.2.2 Animal tissues, organs, and organ systems		Yes
9 th May	4.4.1 Photosynthesis		Yes
16 th May	Paper 1 17 th May 2022		
23 rd May			
30th May	Half Term		
6 th June			
13 th June	<i>Paper 2 16th June 2022</i>		