

AQA GCSE Biology: Higher tier

Advance Information of Assessed Content 2022

Link to specification:

[GCSE Biology Specification](#)

Link to advance information document:

[AQA Advanced information - GCSE Biology](#)

Triple Biology Paper 1

These specification points will be the **major focus** of this paper.

Exam date: 17th May

All other specification points from B1, other those on the [next slide](#) that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision

Spec point	Concepts	Pearson Biology revision guide pages	Bitesize	YouTube
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 	2,3,4,5	https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1	Prokaryotic and eukaryotic cells Animal cells Plant cells
Required practical 1: use of light microscope to observe cells	<ul style="list-style-type: none"> - How to prepare slides -How to use the microscope to improve field of view, clarify, change magnification - Microscopy calculations - Unit conversions (mm, micrometres etc) 	6	https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1	Required practical - Use of microscopes Microscopy Orders of magnitude
4.1.3 Transport in cells	<ul style="list-style-type: none"> - Diffusion - Factors affecting the rate of diffusion - Osmosis - Active transport 	11,12,13,14,15	https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/4	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 	14	https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/5	Required practical link

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4.2.2 Animal tissues, organs and organ systems	<ul style="list-style-type: none"> - 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 	17,19,22,23,24,26,27	Digestion Animal transport systems	https://www.youtube.com/watch?v=4ui4oSHHnzA https://www.youtube.com/watch?v=VLK2wANjQm0 https://www.youtube.com/watch?v=bpYaKM2hVFY
Required practical 4: Use qualitative reagents to test for a range of carbohydrates, lipids and proteins	<ul style="list-style-type: none"> - Reagents used to test for sugars, starch, proteins and lipids - Positive result for each food test - Conditions required to carry out food test 	18	Food tests	Food tests – video summary Food tests - detailed methods
4.2.3 Plant tissues, organs and systems	<ul style="list-style-type: none"> - cross section of a leaf - functions and adaptations of xylem and phloem - transpiration - translocation 	29,30,31,32,	Plant organisation	Plant organisation Transpiration Plant cell specialisations

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Spec point	Concepts	Pearson revision guide pages	Bitesize	YouTube
4.3.1 Communicable Diseases	-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	35,36,37,38,39	https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/1	https://www.youtube.com/watch?v=rAJGnS_ktk4
4.3.2 Monoclonal antibodies	- Describe what a monoclonal antibody is - Describe how monoclonal antibodies are produced - Describe how monoclonal antibodies can be used	42	https://www.bbc.co.uk/bitesize/guides/zt8t3k7/revision/1	Monoclonal antibodies Uses of monoclonal antibodies

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Spec point	Biology Revision Guide Pages
4.2.2.3 Blood	21
4.2.2.7 Cancer	
4.3.1.8 Antibiotics and painkillers	40
4.3.1.9 Discovery and the development of drugs	41
4.4.2.2 Response to exercise	50

Triple Biology Paper 2

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Exam date: 15th June

All other specification points from B2, other those on the [next slide](#) that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision

Spec point	Concepts	Pearson revision guide pages	Bitesize	YouTube
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 	54,55,56,60	Controlling body temperature.	https://www.youtube.com/watch?v=WoMPARSQPZw
4.5.3 Hormonal control in humans	<ul style="list-style-type: none"> - The endocrine system - Function of hormones within the endocrine system - Control of blood glucose - Diabetes - Kidneys and the role of ADH - Adrenaline and thyroxine 	61,62,63,64, 65,66,71	https://www.bbc.co.uk/bitesize/guides/zttqfcw/revision/1	Endocrine system
4.5.4 Plant hormones	<ul style="list-style-type: none"> - Site of auxin production - Role of auxin in producing phototropism / gravitropism 	72,73,74,	https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/1	https://www.youtube.com/watch?v=Bf5WKEMB5o
Required practical 8 – Investigate the effect of light on the growth of newly germinated seedlings	<ul style="list-style-type: none"> - identify independent, dependent and control variables - Describe how variables can be controlled 	73	https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/3	https://www.youtube.com/watch?v=fEo21LbnJJM

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Triple Biology Paper 2

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Exam date: 15th June

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Spec point	Concepts	Pearson revision guide pages	Bitesize	YouTube
4.6.1 Reproduction	<ul style="list-style-type: none"> - Sexual and asexual reproduction - Gametes - Meiosis 	76,77	https://www.bbc.co.uk/bitesize/guides/z9pkmsg/revision/1	https://www.youtube.com/watch?v=Fh9b6a-3DLQ
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 	98,100,103,104	https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/1	https://www.youtube.com/watch?v=dRFQ8rZCK6Q https://www.youtube.com/watch?v=urzpnjwazV0
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	<ul style="list-style-type: none"> -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 	101,102	https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/3	https://www.youtube.com/watch?v=2MW6nwf80XM https://www.youtube.com/watch?v=RhMOCxXcDrQ https://www.youtube.com/watch?v=yLHz2Ea10Mg&t=2s

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Spec point	Revision Guide Pages
Topic 5: Homeostasis and response	
4.5.2.1 Structure and function	54
4.5.2.2 The brain	57
4.5.2.3 The eye	58,59
4.5.2.3 Hormones in human reproduction	67,68
4.5.3.5 Contraception	69
4.5.3.6 The use of hormones to treat infertility	70
4.5.3.7 Negative feedback	Bottom of p71
4.5.4.2 Uses of plant hormones	72
Topic 6: Inheritance, variation and evolution	
4.6.1.3 Advantages/ Disadvantages of sexual and asexual reproduction	77 middle
4.6.1.8 Sex determination	83 bottom
4.6.2 Variation and evolution	84
4.6.3 The development of understanding of genetics and evolution	91
4.6.4 Classification of living organisms	94

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Spec point	Pearson Revision Guide Pages
Topic 7: Ecology	
4.7.1.4 Adaptations	99
4.7.2.4 Impact of environmental change	106
4.7.3.1 Biodiversity	110
4.7.3.4 Deforestation	108
4.7.4.1 Trophic levels	111
4.7.4.2 Pyramids of Biomass	111
4.7.5.3 Sustainable fisheries	114
4.7.5.4 Role of biotechnology	115