

# AQA GCSE Biology: Foundation 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 F Paper 1

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

**Exam date: 17<sup>th</sup> May**

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Spec point	Concepts	CGP Biology revision guide pages	Bitesize	YouTube
<b>4.1.1</b> Cell Structure	<ul style="list-style-type: none"> <li>- Difference between prokaryotic and eukaryotic cells</li> <li>- Comparison of plant cells and animal cells</li> <li>- Function of organelles</li> <li>- Cell differentiation and specialised plant cells and animal cells</li> </ul>	11,14	<a href="https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1">https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1</a>	<a href="#">Prokaryotic and eukaryotic cells</a>  <a href="#">Animal cells</a>  <a href="#">Plant cells</a>
<b>Required practical 1:</b> use of light microscope to observe cells	<ul style="list-style-type: none"> <li>- How to prepare slides</li> <li>-How to use the microscope to improve field of view, clarify, change magnification</li> <li>- Microscopy calculations</li> <li>- Unit conversions (mm, micrometres etc)</li> </ul>	13	<a href="https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1">https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1</a>	<a href="#">Required practical - Use of microscopes</a>  <a href="#">Microscopy</a>  <a href="#">Orders of magnitude</a>
<b>4.1.3</b> Transport in cells	<ul style="list-style-type: none"> <li>- Diffusion</li> <li>- Factors affecting the rate of diffusion</li> <li>- Osmosis</li> <li>- Active transport</li> </ul>	20-25	<a href="https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/4">https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/4</a>	<a href="#">Osmosis</a>  <a href="#">Diffusion</a>  <a href="#">Active transport</a>
<b>Required practical 3:</b> Investigate the effect of a range of concentrations of salt solution on the mass of plant tissue	<ul style="list-style-type: none"> <li>- Calculate rate of water uptake</li> <li>- Identify independent, dependent and control variables</li> <li>- Calculate percentage change in mass</li> <li>- Interpret graph to find salt/ sugar concentration in potato</li> </ul>	21 bottom	<a href="https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/5">https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/5</a>	<a href="#">Required practical link</a>

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Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
<b>4.2.2</b> Animal tissues, organs and organ systems	<ul style="list-style-type: none"> <li>- Functions of tissues and organs in the digestive system</li> <li>-Digestive enzymes</li> <li>-Functions of tissues and organs in the circulatory system</li> <li>-Pathway of blood through the heart</li> <li>-adaptations of components of the blood</li> <li>-risk factors of non-communicable diseases</li> </ul>	28-40	<a href="#">Digestion</a>  <a href="#">Animal transport systems</a>	<a href="https://www.youtube.com/watch?v=4ui4oSHHnzA">https://www.youtube.com/watch?v=4ui4oSHHnzA</a>  <a href="https://www.youtube.com/watch?v=VLK2wANjQm0">https://www.youtube.com/watch?v=VLK2wANjQm0</a>  <a href="https://www.youtube.com/watch?v=bpYaKM2hVFY">https://www.youtube.com/watch?v=bpYaKM2hVFY</a>
<b>Required practical 4:</b> Use qualitative reagents to test for a range of carbohydrates, lipids and proteins	<ul style="list-style-type: none"> <li>- Reagents used to test for sugars, starch, proteins and lipids</li> <li>- Positive result for each food test</li> <li>- Conditions required to carry out food test</li> </ul>	32	<a href="#">Food tests</a>	<a href="#">Food tests – video summary</a>  <a href="#">Food tests - detailed methods</a>

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Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
<b>4.3.1</b> 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	46-52	<a href="https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/1">https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/1</a>	<a href="https://www.youtube.com/watch?v=rAJGnS_ktk4">https://www.youtube.com/watch?v=rAJGnS_ktk4</a>
<b>4.4.1</b> Photosynthesis	- Describe photosynthesis as an endothermic reaction - Use word and symbol equations - Use graphs to interpret rate of photosynthesis with one limiting factor	57-60	<a href="https://www.bbc.co.uk/bitesize/guides/zg8nrwx/revision/1">https://www.bbc.co.uk/bitesize/guides/zg8nrwx/revision/1</a>	<a href="https://www.youtube.com/watch?v=X81OIkeuHJw">https://www.youtube.com/watch?v=X81OIkeuHJw</a>
<b>Required practical 6:</b> Investigate the effect of light intensity on the rate of photosynthesis using pondweed		59 bottom	<a href="https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/5">https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/5</a>	<a href="https://www.youtube.com/watch?v=cBCKedXdFeE">https://www.youtube.com/watch?v=cBCKedXdFeE</a>

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Spec point	CGP Biology Revision Guide Pages
4.1.1.4 Cell Differentiation	14 top half
4.2.1 Principles of organisation	27
4.2.2.3 Blood	36
4.2.2.7 Cancer	41
4.3.1.5 Protist diseases	47 bottom
4.4.1.3 Uses of glucose from photosynthesis	57 middle
4.4.2.1 Aerobic and anaerobic respiration	62 bottom
4.4.2.2 Response to exercise	63
4.4.2.3 Metabolism	61 bottom

# Triple Biology F Paper 2

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**Exam date: 15<sup>th</sup> June**

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Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
<b>4.5.2</b> The human nervous system	<ul style="list-style-type: none"> <li>- Function of the NS</li> <li>- Control of body temperature</li> <li>- Response to high/ low temperatures</li> </ul>	66-67, 72	<a href="#">Controlling body temperature.</a>	<a href="https://www.youtube.com/watch?v=WoMPARSQPZw">https://www.youtube.com/watch?v=WoMPARSQPZw</a>
<b>4.5.3</b> Hormonal control in humans	<ul style="list-style-type: none"> <li>- The endocrine system</li> <li>- Function of hormones within the endocrine system</li> <li>- Control of blood glucose</li> <li>- Diabetes</li> <li>- Kidneys and the role of ADH</li> <li>- Adrenaline and thyroxine</li> </ul>	73 - 75	<a href="https://www.bbc.co.uk/bitesize/guides/zttqfcw/revision/1">https://www.bbc.co.uk/bitesize/guides/zttqfcw/revision/1</a>	<a href="#">Endocrine system</a>
<b>4.5.4</b> Plant hormones	<ul style="list-style-type: none"> <li>- Site of auxin production</li> <li>- Role of auxin in producing phototropism / gravitropism</li> </ul>	81-82	<a href="https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/1">https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/1</a>	<a href="https://www.youtube.com/watch?v=Bf5WKEMB5o">https://www.youtube.com/watch?v=Bf5WKEMB5o</a>
<b>Required practical 7</b> – Carry out an investigation into human reaction times		68	<a href="https://www.bbc.co.uk/bitesize/guides/z2374qt/revision/4">https://www.bbc.co.uk/bitesize/guides/z2374qt/revision/4</a>	<a href="https://www.youtube.com/watch?v=Ws5qVXYHRnQ">https://www.youtube.com/watch?v=Ws5qVXYHRnQ</a>
<b>Required practical 8</b> – Investigate the effect of light on the growth of newly germinated seedlings	<ul style="list-style-type: none"> <li>- identify independent, dependent and control variables</li> <li>- Describe how variables can be controlled</li> </ul>		<a href="https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/3">https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/3</a>	<a href="https://www.youtube.com/watch?v=fEo21LbnJJM">https://www.youtube.com/watch?v=fEo21LbnJJM</a>

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Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
<b>4.6.1</b> Reproduction	<ul style="list-style-type: none"> <li>- Sexual and asexual reproduction</li> <li>- Gametes</li> <li>- Meiosis</li> </ul>	87, 88,84,91, 92, 93	<a href="https://www.bbc.co.uk/bitesize/guides/z9pkmsg/revision/1">https://www.bbc.co.uk/bitesize/guides/z9pkmsg/revision/1</a>	<a href="https://www.youtube.com/watch?v=Fh9b6a-3DLQ">https://www.youtube.com/watch?v=Fh9b6a-3DLQ</a>
<b>4.6.3</b> The development of understanding of genetics and evolution	<ul style="list-style-type: none"> <li>- Evidence for evolution</li> <li>- Fossils</li> <li>- Extinctions</li> </ul>	101, 96 bottom	<a href="https://www.bbc.co.uk/bitesize/guides/zcqbdxs/revision/6">https://www.bbc.co.uk/bitesize/guides/zcqbdxs/revision/6</a> Take care to only revise parts of this topic	<a href="https://www.youtube.com/watch?v=VjIE5Qzl1S0">https://www.youtube.com/watch?v=VjIE5Qzl1S0</a> Take care to only revise parts of this topic
<b>Required Practical 9:</b> 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"> <li>-Using transects and quadrats are used by ecologists to determine the distribution and abundance of species in an ecosystem.</li> <li>-Understand the terms mean, mode and median</li> <li>-Calculate arithmetic means</li> </ul>	110-111	<a href="https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/3">https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/3</a>	<a href="https://www.youtube.com/watch?v=2MW6nwf80XM">https://www.youtube.com/watch?v=2MW6nwf80XM</a>  <a href="https://www.youtube.com/watch?v=RhMOCxXcDrQ">https://www.youtube.com/watch?v=RhMOCxXcDrQ</a>  <a href="https://www.youtube.com/watch?v=yLHz2Ea10Mg&amp;t=2s">https://www.youtube.com/watch?v=yLHz2Ea10Mg&amp;t=2s</a>

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Spec point	CGP Revision Guide Pages
<b>Topic 5: Homeostasis and response</b>	
4.5.2.2 The brain	69
4.5.2.3 The eye	70-71
4.5.3.3 Maintaining water and nitrogen balance in the body	75-76
<b>Topic 6: Inheritance, variation and evolution</b>	
4.6.1.3 Advantages and disadvantages of sexual and asexual reproduction	89
4.6.1.5 DNA structure	85
4.6.1.8 Sex determination	90
4.6.2 Variation and evolution	95, 96, 98, 99, 100
4.6.3.1 Theory of evolution	96, 97
4.6.3.2 Speciation	96, 102
4.6.3.3 The understanding of genetics	94
4.6.3.7 Resistant bacteria	103

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<b>Spec point</b>	<b>CGP Revision Guide Pages</b>
<b>Topic 7: Ecology</b>	
<b>4.7.1.4 Adaptations</b>	108
<b>4.7.2.2 How materials are cycled</b>	112,113
<b>4.7.2.3 Decomposition</b>	114
<b>4.7.3.1 Biodiversity</b>	116 top
<b>4.7.3.3 Land use</b>	118
<b>4.7.3.4 Deforestation</b>	118
<b>4.7.3.5 Global warming</b>	117
<b>4.7.3.6 Maintaining biodiversity</b>	119
<b>4.7.4 Trophic levels in an ecosystem</b>	120
<b>4.7.5 Food production</b>	123-124