AQA GCSE Biology (8461) specification checklist

How to use this checklist

Cross out what isn't on your route: Trilogy students cross out everything marked GCSE Biology only, and Foundation students cross out the Higher tier only parts. Rate each remaining row red, amber or green, practise the red and amber rows, then rate them again. "Part" means AQA labels only one sub-topic or a few lines inside the sub-section.

Paper 1: topics 1 to 4

Sub-section	Higher tier only	GCSE Biology only	Red / amber / green	Practised
4.1.1 Cell structure	Part: giving a bacterial population in standard form (4.1.1.6)	Part: 4.1.1.6 Culturing microorganisms		
4.1.2 Cell division	No	No		
4.1.3 Transport in cells	No	No		
4.2.1 Principles of organisation	No	No		
4.2.2 Animal tissues, organs and organ systems	No	No		
4.2.3 Plant tissues, organs and systems	No	No		
4.3.1 Communicable diseases	No	No		
4.3.2 Monoclonal antibodies	Yes	Yes		
4.3.3 Plant disease	Part: detecting and identifying plant diseases (4.3.3.1)	Yes		
4.4.1 Photosynthesis	Part: interacting limiting factors, the inverse square law, greenhouse costs (4.4.1.2)	No		
4.4.2 Respiration	Part: lactic acid taken to the liver, oxygen debt (4.4.2.2)	No		

Paper 2: topics 5 to 7

Sub-section	Higher tier only	GCSE Biology only	Red / amber / green	Practised
4.5.1 Homeostasis	No	No		

Sub-section	Higher tier only	GCSE Biology only	Red / amber / green	Practised
4.5.2 The human nervous system	Part: mapping the brain and why brain disorders are hard to treat (4.5.2.2); explaining temperature control in context (4.5.2.4)	Part: 4.5.2.2 The brain, 4.5.2.3 The eye, 4.5.2.4 Control of body temperature		
4.5.3 Hormonal coordination in humans	Part: glucagon (4.5.3.2); urea and ADH (4.5.3.3); how the menstrual cycle hormones interact (4.5.3.4); all of 4.5.3.6 (hormones to treat infertility) and 4.5.3.7 (adrenaline, thyroxine and negative feedback)	Part: 4.5.3.3 Maintaining water and nitrogen balance in the body		
4.5.4 Plant hormones	Part: gibberellins and ethene (4.5.4.1); all of 4.5.4.2 Use of plant hormones	Yes		
4.6.1 Reproduction	Part: protein synthesis and mutations (4.6.1.5); constructing a Punnett square to predict outcomes (4.6.1.6)	Part: 4.6.1.3 Advantages and disadvantages of sexual and asexual reproduction, 4.6.1.5 DNA structure		
4.6.2 Variation and evolution	Part: the main steps of genetic engineering (4.6.2.4)	Part: 4.6.2.5 Cloning		
4.6.3 The development of understanding of genetics and evolution	No	Part: 4.6.3.1 Theory of evolution, 4.6.3.2 Speciation, 4.6.3.3 The understanding of genetics		
4.6.4 Classification of living organisms	No	No		
4.7.1 Adaptations, interdependence and competition	No	No		
4.7.2 Organisation of an ecosystem	Part: all of 4.7.2.4 Impact of environmental change	Part: 4.7.2.3 Decomposition, 4.7.2.4 Impact of environmental change		
4.7.3 Biodiversity and the effect of human interaction on ecosystems	No	No		
4.7.4 Trophic levels in an ecosystem	No	Yes		
4.7.5 Food production	No	Yes		

The 10 required practicals

No.	What you do	Paper	Course	Done
1	Use a light microscope to observe, draw and label plant and animal cells, with a magnification scale	1	Shared	
2	Test how antiseptics or antibiotics affect bacterial growth on agar plates, measuring zones of inhibition	1	GCSE Biology only	
3	Find how the concentration of salt or sugar solution affects the mass of plant tissue	1	Shared	
4	Test for sugars (Benedict's), starch (iodine), protein (Biuret) and lipids	1	Shared	
5	Investigate how pH affects the rate of reaction of amylase	1	Shared	
6	Investigate how light intensity affects the rate of photosynthesis in an aquatic plant such as pondweed	1	Shared	
7	Plan and carry out an investigation into a factor that affects human reaction time	2	Shared	
8	Investigate how light or gravity affects the growth of newly germinated seedlings	2	GCSE Biology only	
9	Measure the population size of a common species and use sampling to see how a factor affects its distribution	2	Shared	
10	Investigate how temperature affects the rate of decay of fresh milk by measuring pH change	2	GCSE Biology only	

Section 4.8 Key ideas is built into all seven topics, so it has no row of its own.

The full guide is on medlyai.com under "AQA GCSE Biology specification (8461)".