

Revision Schedule 2026

Year 13 Revision Schedule 2026

Subject/Course:	A-level BIOLOGY
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October Trial exam content

Topic	Key knowledge/skills/questions	R		A	G	Revised	Resources/activities/links
Topic 1: Lifestyle, health, risk	The cardiac cycle (atrial systole, ventricular systole and cardiac diastole) Know how the relationship between heart structure and function						https://www.savemyexams.com/a-level/biology/edexcel/a-slab/15/revision-notes/
	The course of events that leads to atherosclerosis						
	The blood-clotting process and its role in cardiovascular disease						
	Know how factors increase the risk of cardiovascular disease						
	Know the difference between monosaccharides, disaccharides and polysaccharides, including glycogen and starch.						
	Know how a triglyceride is synthesised						
	CORE PRACTICAL 1: Investigate the effect of caffeine on heart rate in Daphnia.						https://snabbiology.co.uk/effect-of-caffeine-on-daphnia-heart-rate/
	CORE PRACTICAL 2: Investigate the vitamin C content of food and drink.						https://snabbiology.co.uk/measuring-the-content-of-vitamin-c-in-fruit-juice/
Topic 2: Genes and Health	Know the properties of gas exchange surfaces in living organisms						
	Know the structure and properties of cell membranes						
	CORE PRACTICAL 3: Investigate membrane structure						https://snabbiology.co.uk/the-effect-of-temperature-on-cell-membranes/

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	Understand what is meant by passive transport, active transport, endocytosis and exocytosis.						
	Know the basic structure of mononucleotides						
	Understand the nature of the genetic code						
	Know the basic structure of an amino acid						
	Understand the significance of a protein's structure in determining its three-dimensional structure and properties						
	Understand the mechanism of action and the specificity of enzymes						
	CORE PRACTICAL 4: Investigate the effect of enzyme and substrate concentrations on the initial rates of reactions.						https://snabbiology.co.uk/the-effect-of-changing-enzyme-concentration-on-the-rate-of-reaction/
	Understand the process of DNA replication, including the role of DNA polymerase.						
	Understand Meselson and Stahl's experiment						
	Understand how errors in DNA replication can give rise to mutations.						
	Understand cystic fibrosis						
	Understand the uses of genetic screening						
Topic 3: Voice of the genome	Know the ultrastructure of eukaryotic cells						
	Know the ultrastructure of prokaryotic cells						
	Understand how mammalian gametes are specialised for their functions						
	Know the process of fertilisation in mammals						
	Understand the linkage of genes on a chromosome and sex linkage						
	Understand the role of meiosis in ensuring genetic variation						

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	CORE PRACTICAL 5: Prepare and stain a root tip squash to observe the stages of mitosis.						https://snabbiology.co.uk/observing-mitosis/
	Understand what is meant by the terms 'stem cell, pluripotency and totipotency'						
	Understand how cells become specialised through differential gene expression						
	Know how epigenetic changes, including DNA methylation and histone modification, can modify the activation of certain genes						
Topic 4: Biodiversity and natural resources	Know how biodiversity can be measured within a habitat using species richness and within a species using genetic diversity by calculating the heterozygosity index						
	Understand how biodiversity can be compared in different habitats using a formula to calculate an index of diversity						
	Understand the concept of niche						
	Understand the Hardy-Weinberg equation						
	Know the ultrastructure of plant cells						
	Understand the structure and function of the polysaccharides starch and cellulose						
	CORE PRACTICAL 6: Identify sclerenchyma fibres, phloem sieve tubes and xylem vessels and their location within stems through a light microscope						https://snabbiology.co.uk/looking-at-plant-stems/
	Understand the importance of water and inorganic ions to plants						
	CORE PRACTICAL 7: Investigate plant mineral deficiencies.						https://snabbiology.co.uk/investigating-plant-mineral-deficiencies/
	CORE PRACTICAL 8: Determine the tensile strength of plant fibres.						https://snabbiology.co.uk/the-strength-of-plant-fibres/
	Understand the development of drug testing						

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	CORE PRACTICAL 9: Investigate the antimicrobial properties						https://snabbiology.co.uk/garlic-and-mint-as-antibiotics/
	Be able to evaluate the methods used by zoos and seed banks in the conservation of endangered species						
Topic 5: On the wild side	Understand the stages of succession from colonisation to a climax community						
	Understand the overall reaction of photosynthesis						
	Understand the structure of chloroplasts						
	Be able to calculate net primary productivity						
	Understand the different types of evidence for climate change						
	Understand the effect of temperature on the rate of enzyme activity						
	Understand how evolution can come about						
	allopatric or sympatric speciation						
	CORE PRACTICAL 12: Investigate the effect of temperature on the initial rate of an enzyme-catalysed reaction, to include Q10.						https://snabbiology.co.uk/the-effect-of-temperature-on-an-enzyme-catalysed-reaction/
	CORE PRACTICAL 13: Investigate the effects of temperature on the development of organisms						https://snabbiology.co.uk/the-effect-of-temperature-on-the-hatching-success-of-brine-shrimp/
Topic 6: Immunity, infection and Forensics	Understand how to determine the time of death of a mammal						
	Know the role of micro-organisms in the decomposition						
	Know how DNA profiling is used						
	Know how DNA can be amplified using the polymerase chain reaction						
	CORE PRACTICAL 14: Use gel electrophoresis to separate DNA fragments of different length.						

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	Understand how Mycobacterium tuberculosis (TB) and Human Immunodeficiency Virus (HIV) infect human cells,						
	Understand the roles of antigens and antibodies in the body's immune response						
	Understand how individuals may develop immunity						
	Understand how the theory of an 'evolutionary race'						
	CORE PRACTICAL 15: Investigate the effect of different antibiotics on bacteria						https://snabbiology.co.uk/the-effect-of-different-antibiotics-on-bacteria/
	Have an understanding of the contributory causes of hospital acquired infections						
Topic 7: Run for your life	Understand the overall reaction of aerobic respiration						
	Understand the process of contraction of skeletal muscle						
	Understand what happens to lactate after a period of anaerobic respiration						
	Understand how the normal electrical activity of the heart coordinates the heart beat						
	Be able to calculate cardiac output						
	Know the structure of a muscle fibre						
Topic 8: Grey matter	Know the structure and function of sensory, relay and motor neurones including the role of Schwann cells and myelination.						
	Understand how a nerve impulse (action potential) is conducted						
	Know the structure and function of synapses						



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