



Science Department Curriculum Plan A Level Biology September 2023

Curriculum Intent

Studying A-level Biology will enable students to develop:

- *essential knowledge of different areas of the subject and how they are linked*
- *competence in a variety of practical, mathematical and problem-solving skills*
- *a deep understanding of scientific methods*
- *interest in and enthusiasm for the subject*
- *an understanding of how society makes decisions about scientific issues*

	Autumn Term	Spring Term	Summer Term
Year 12 Content	B1 - Biological Molecules B2 - Nucleic Acids B3 - Cell structure B4 - Transport across membranes	B5 - Cell Recognition and Immunity B6 - Exchange B7 - Mass Transport start B8 - DNA, Genes and Protein Synthesis B9 - Genetic Diversity B19 - Populations in Ecosystems	B7 - Mass Transport finish B10 - Biodiversity After Mock- Year 2 Chapters
Year 12 Skills	Required Practicals covered: <ul style="list-style-type: none"> • RP1 - Enzymes (data collection, graphs, calculations) • RP2 – Mitotic Index (microscopic practice) • RP3 - Water Potential (calculating change in mass, drawing tables and graphs) • RP4 – Membrane permeability 	Required Practicals covered: <ul style="list-style-type: none"> • RP5 - Dissection (Specialist equipment use and instructions to follow) • RP6 - Microbial Growth (Aseptic technique, Maths skills) • RP 12 - Fieldwork (Data collection, kite diagrams, lab work, calculations) 	Required Practicals covered: <ul style="list-style-type: none"> •
Year 12 Key Points	Intro to Biology assessment Sept 2023 Interim tests on topics covered	Interim tests on topics covered January 2024 Mock covering Chapters 1-4 Cultural capital trip to Wildmoor Heath to collect ecological data (for fieldwork required practical 12)	Interim tests on topics covered June 2024 mock covering Chapters 1-10



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Year 13 Content	B13 - Nutrient Cycles B11 - Photosynthesis B12 - Respiration B17 - Inherited Change B18 - Population and Evolution	B14 - Response to stimuli B15 - Nervous control B16 - Homeostasis B20 - Gene expression B21 - DNA Technology	Finalising chapters and Required Practicals Prep for External exams: 15 week revision/prep timetable
Year 13 Skills	Required Practicals covered: <ul style="list-style-type: none">• RP8 - Hill Reaction (data collection)• RP9 – Respiration (data collection, rates of reaction)• RP 7 - Chromatography (Data collection and observations)	Required Practicals covered: <ul style="list-style-type: none">• RP10 - Choice Chambers• RP11 - Glucose Curve (data collection and graph drawing) Revision and Exam Technique	Required Practical check and CPAC coverage analysed with additional skill area pieces completed where necessary. Revision of all chapters 1-21 and Exam Technique
Year 13 Key Points	Interim tests on topics covered November 2023: Mock exam - 2 hour Paper 1 covering Chapters B1-10 Biology Clinic (intervention sessions) begin <ul style="list-style-type: none">➤ Optional at this stage	February 2024: Mock exam - Paper 2 <ul style="list-style-type: none">➤ Timed Synoptic Essay in class after mock Interim tests on topics covered Biology Clinic (intervention sessions) begin <ul style="list-style-type: none">➤ Invite particular candidates if necessary	External exams: June 2024