KS5 Biology Curriculum Maps 2026–27

Edexcel A level Biology A (Salters-Nuffield) • 9BN0

Key: green = core practical (CP) • yellow = formal assessment / mock • orange = careers link. Two-teacher delivery (Teacher 1 / Teacher 2) runs topics in parallel.

Year 12

New Year 12 cohort — full Edexcel A (SNAB) sequence across the year, Topics 1–6.

	Autumn Term		Spring Term		Summer Term 1		Summer Term 2 (7 weeks)	
Delivery	Teacher 1	Teacher 2	Teacher 1	Teacher 2	Teacher 1	Teacher 2	Teacher 1	Teacher 2
Topic & key content	**Topic 1 — Lifestyle, Health & Risk** Heart & circulation; atherosclerosis; blood clotting; CVD risk (correlation vs causation); diet, carbohydrates, lipids & cholesterol; treatments for CVD. CP1 (vitamin C content); CP2 (caffeine on Daphnia heart rate).	**Topic 2 — Genes & Health** Gas exchange; cell membranes & transport; DNA/RNA & protein synthesis; enzymes; mutations & cystic fibrosis; genetic screening; monohybrid inheritance. CP3 (membrane permeability); CP4 (enzyme reaction rate).	**Topic 3 — Voice of the Genome** Prokaryotic & eukaryotic ultrastructure; cell cycle & mitosis; meiosis; gametes & fertilisation; stem cells, pluripotency & differentiation; gene expression. CP5 (root-tip squash — mitosis).	**Topic 4 — Biodiversity & Natural Resources** Biodiversity, niche & adaptation; natural selection & evolution; classification (three domains); plant cells; plant fibres & uses; mineral deficiencies; antimicrobial plant compounds; conservation & ethics. CP6–CP9 (mineral deficiency; tensile strength of fibres; antimicrobial properties of plants).	**Complete Topic 3; begin Topic 5 — On the Wild Side** Ecosystems & succession; photosynthesis (light-dependent & Calvin cycle); productivity; the carbon cycle & climate change. CP10 (ecological sampling — completed on the Y12 field trip; quadrats & transects).	**Complete Topic 4; begin Topic 6 — Immunity, Infection & Forensics** Estimating time of death; DNA profiling (PCR & electrophoresis); bacteria & viruses; barriers & the immune response; types of immunity.	**Complete Topic 5 — On the Wild Side** Evidence for climate change; rate of photosynthesis; evolution & speciation; the scientific community & peer review. CP11–CP13 (factors affecting photosynthesis rate).	**Complete Topic 6 — Immunity, Infection & Forensics** Antibiotics & antibiotic resistance; the evolutionary race; post-transcriptional modification; hospital-acquired infection & control. CP14–CP15 (microbial culture; aseptic technique).
Assessment	Two end-of-topic tests (Topics 1 & 2). Exam Week at the end of the Autumn Term covering Topics 1 & 2 to date. In-class assessment and homework (research tasks, past-paper questions). All cover AO1–AO3.		Exam Week at the end of the Spring Term — AS Paper 1 style (all of Topics 1 & 2). In-class assessment and homework. AO1–AO3.		Two end-of-topic tests (Topics 3 & 4). In-class assessment and homework. AO1–AO3.		Progress Exam Week at the end of June — AS Paper 1 style (all of Topics 1–4). In-class assessment and homework. AO1–AO3.	
Careers	Cardiologist; cardiothoracic & vascular surgeon; cardiac physiologist; dietitian; clinical biochemist; respiratory physiologist; geneticist; genetic counsellor; biomedical scientist.		Cell biologist; cytologist; stem-cell & regenerative-medicine researcher; clinical embryologist; oncologist; ecologist; conservation biologist; botanist; taxonomist; biomaterials scientist.		Environmental & climate scientist; field ecologist; forensic scientist; microbiologist; immunologist.		Conservation consultant; plant scientist; forensic biologist; epidemiologist; virologist; vaccine scientist; pharmacologist.	
Enrichment & super-curricular	Year 12 Biology field trip to Juniper Hall or Beckenham Place Park (ecological fieldwork; Core Practical 10). Potential visit to the Millennium Seed Bank, Wakehurst (Kew Gardens). Free online preparation courses for Medicine / Veterinary / Dentistry applications; Biology Olympiad (Year 12). Super-curricular reading and university taster lectures; intervention for Pupil Premium students and those working below target.							

	Autumn Term		Spring Term		Summer Term 1		Summer Term 2 (7 weeks)	
Delivery	Teacher 1	Teacher 2	Teacher 1	Teacher 2	Teacher 1	Teacher 2	Teacher 1	Teacher 2
Practical skills (CPAC)	**Science Practical Endorsement (CPAC).** Reported separately as Pass / Not Classified on the A-level certificate. 100% of the grade is by written examination, but at least 15% of those marks assess practical skills. Students complete a minimum of 12 practical activities (the SNAB Core Practicals, CP1–CP18) and are judged against the five Common Practical Assessment Criteria, met consistently and routinely by the end of the course: **CPAC 1** — Follows written procedures. **CPAC 2** — Applies investigative approaches and methods when using instruments and equipment. **CPAC 3** — Safely uses a range of practical equipment and materials. **CPAC 4** — Makes and records observations and measurements. **CPAC 5** — Researches, references and reports. Evidence is kept in each student's lab book; a CPAC tracker runs across Years 12–13; the centre is subject to JCQ monitoring visits.							
Assessment Objectives	Across every topic, students demonstrate knowledge and understanding (including the associated mathematical and practical skills) and construct a sustained, coherent, substantiated and logically structured line of reasoning. **AO1:** knowledge and understanding of scientific ideas, processes, techniques and procedures. **AO2:** apply that knowledge in theoretical and practical contexts and when handling qualitative and quantitative data. **AO3:** analyse, interpret and evaluate scientific information, ideas and evidence to make judgements, reach conclusions, and refine practical design and procedures.							

Year 13

Topics 1–6 completed in Year 12. Two-week consolidation, then Topics 7 & 8 (more than a term); the course finishes by late January / mid-February, with the remainder dedicated to examination practice.

	Autumn Term		Spring Term		Summer Term	
Delivery	**Teacher 1**	**Teacher 2**	**Teacher 1**	**Teacher 2**	**Teacher 1**	**Teacher 2**
Topic & key content	*Weeks 1–2: consolidation of Topics 5 & 6 (bridging from Year 12).* **Topic 7 — Run for your Life** Muscle & skeleton; sliding-filament model; aerobic & anaerobic respiration (glycolysis, link reaction, Krebs, oxidative phosphorylation); control of heart rate & ventilation; homeostasis & negative feedback; thermoregulation; the kidney & osmoregulation; effects of exercise. CP16 (rate of respiration); CP17 (factors affecting exercise/physiology).	*Weeks 1–2: consolidation of Topics 5 & 6.* **Topic 8 — Grey Matter** Nervous system; neurones & the action potential; synapses; the eye & vision; the brain & its development; nature vs nurture; brain imaging; habituation & learning; Parkinson's (dopamine) & depression (serotonin); effects of drugs on synapses. CP18 (habituation to a stimulus in invertebrates).	**Complete Topic 7 by late January / mid-February.** Then examination practice: full past Papers 1–3; synoptic revision across Topics 1–8; targeted intervention.	**Complete Topic 8 by late January / mid-February.** Then examination practice: pre-release Paper 3 article work; timed papers; DIRT and feedback cycles.	**Examination practice & revision** Intensive timed-paper practice; pre-release Paper 3 preparation; bespoke pre-exam clinics; study leave per school policy. External A-level examinations (Papers 1–3) sit within the national timetable (typically May–June 2027).	
Assessment	End-of-topic tests on Topics 5 & 6 (consolidation, drawing on Year 12). Exam Week at the end of the Autumn Term — A-level Paper 1 style (Topics 1–6, plus early Topic 7/8). In-class and homework. AO1–AO3.		End-of-topic tests on Topics 7 & 8. Full mock examinations once content is complete (by February) — A-level Papers 1, 2 & 3 (all of Topics 1–8), including pre-release Paper 3 practice. AO1–AO3.		Bespoke timed full-paper practice and pre-exam clinics; pre-release Paper 3 work. External A-level examinations (Papers 1–3). AO1–AO3.	
Careers	Sports & exercise physiologist; physiotherapist; sports scientist; nephrologist; renal nurse; anaesthetist; neurologist; neuroscientist; neurosurgeon; ophthalmologist; clinical psychologist; psychiatrist; pharmacologist.		Medicine, dentistry & veterinary medicine; biomedical science; pharmacy; healthcare science; academic biology & biochemistry; allied health professions.		University progression — UCAS, admissions tests (UCAT) and interview preparation; research & laboratory careers; degree-apprenticeship routes.	
Enrichment & super-curricular	Potential trip to King's College London via their outreach programme (PCR / molecular techniques). Medicine / Veterinary / Dentistry application preparation: personal statements, admissions tests and interview practice. Year 13 students run revision sessions for Year 12 (consolidation and leadership). University open days, super-curricular reading and online courses; intervention for Pupil Premium students and those working below target.					
Practical skills (CPAC)	**Science Practical Endorsement (CPAC).** Reported separately as Pass / Not Classified on the A-level certificate. 100% of the grade is by written examination, but at least 15% of those marks assess practical skills. Students complete a minimum of 12 practical activities (the SNAB Core Practicals, CP1–CP18) and are judged against the five Common Practical Assessment Criteria, met consistently and routinely by the end of the course: **CPAC 1** — Follows written procedures. **CPAC 2** — Applies investigative approaches and methods when using instruments and equipment. **CPAC 3** — Safely uses a range of practical equipment and materials. **CPAC 4** — Makes and records observations and measurements. **CPAC 5** — Researches, references and reports.					

	Autumn Term		Spring Term		Summer Term	
Delivery	**Teacher 1**	**Teacher 2**	**Teacher 1**	**Teacher 2**	**Teacher 1**	**Teacher 2**
	Evidence is kept in each student's lab book; a CPAC tracker runs across Years 12–13; the centre is subject to JCQ monitoring visits. **Year 13:** outstanding Core Practicals (CP16–CP18) are completed early in the Autumn Term, and the Practical Endorsement judgement is finalised before the written examinations.					
Assessment Objectives	Across every topic, students demonstrate knowledge and understanding (including the associated mathematical and practical skills) and construct a sustained, coherent, substantiated and logically structured line of reasoning. **AO1:** knowledge and understanding of scientific ideas, processes, techniques and procedures. **AO2:** apply that knowledge in theoretical and practical contexts and when handling qualitative and quantitative data. **AO3:** analyse, interpret and evaluate scientific information, ideas and evidence to make judgements, reach conclusions, and refine practical design and procedures.					