Year 10 Biology curriculum overview for 2024 – 2025 (Following 2023 curriculum model).

	Key content (knowledge)	Key skills	Assessments	Challenge and enrichment
Autumn half term 1	Photosynthesis Respiration	Required practical 6 – investigate the effect of light intensity on the rate of photosynthesis. Inverse square law.	Test 1: Photosynthesis and respiration	**Cambridge Biology Challenge, run by Homerton College.** Wider reading – Biological Sciences review article "The future of food: Growing plants without soil".
Autumn half term 2	Communicable disease: How pathogens can cause disease and how their spread can be controlled. Aseptic technique for growing bacteria. The immune response. Plant diseases and their defences.	Required practical 2 – Aseptic technique and effect of antiseptics on bacterial growth.		Researching uses of plants in medicine. Starting with Wider reading – Biological Sciences review article "Plants versus pests". Wider reading – Biological Sciences review article "Putting antibodies to work".

	Preventing and treating disease.			
Spring half term 1	Non communicable disease. The cell cycle, differentiation of cells and stem cells. Human nervous system.	Understanding the difference between correlation and causation. Data analysis from graphs and several data sets to be used together. Evaluating the ethical considerations of using stem cells. Required practical 7 - Investigating human reaction times.	Test 2: Communicable disease and preventing and treating disease, immune response and vaccination, plus non – communicable disease.	**Microbiology in Schools Advisory Committee (MiSAC) annual poster competition.** Cauliflower cloning task.
Spring half term 2	Human nervous system – Brain and Eye function. Hormonal coordination – Control of blood glucose, negative feedback, reproductive hormones.		Test 3: cell cycle, stem cells and nervous system.	TED talk: How to look inside the brain. Wider reading – Biological Sciences review article "Hijacking Hormones to Regulate Fertility".

Summer half term 1	Plant hormones. Homeostasis, kidneys and temperature regulation. Adaptations, interdependence and competition.	Required practical 8 – Investigating the effect of gravity of newly germinated seeds.	END OF YEAR 10 exams	**UKBC: Biology Challenge competition.** Wider reading – Biological Sciences review article "Wolves: Yellowstone's missing link".
Summer half term 2	Feeding relationships. Material cycling, decomposition and rates of decay.	Required practical 9 – Measuring populations size (ecology field work). Required practical 10 Investigating effect of temperature on rates of decay.		• **Royal Society of Biology Nancy Rothwell Prize biological drawing competition.** • **Visit to the Royal Society Summer Science Exhibition.**