YEAR 12 CURRICULUM INFORMATION - Biology		
	Summer 1	Summer 2
What will students be learning?	B6 Organisms respond to changes in their internal and external environments (A-level only) B8 The control of gene expression (A-level only)	Revision of Units 1-8 in preparation for end of Y12 exams
How will students be assessed?	Summative assessments covering the following topics: 30% previous unit recall 70% current learning	**Paper 1** **What's assessed:** Any content from topics 1–4, including relevant practical skills Written exam: 2 hours 91 marks 35% of A-level Questions 76 marks: a mixture of short and long answer questions 15 marks: extended response questions **Paper 2** **What's assessed:** Any content from topics 5–8, including relevant practical skills Written exam: 2 hours 91 marks 35% of A-level Questions 76 marks: a mixture of short and long answer questions 15 marks: comprehension question 7

		Paper 3 **What's assessed** Any content from topics 1–8, including relevant practical skills Written exam: 2 hours 78 marks 30% of A-level Questions 38 marks: structured questions, including practical techniques 15 marks: critical analysis of given experimental data 25 marks: one essay from a choice of two titles
Literacy – What keywords will be taught?	Mutation Gene mutation Substitution mutation Nonsense mutation Mis-sense mutation Silent mutation Deletion Mutagen (mutagenic agent) Translocation Inversion Addition Duplication Reverse transcriptase Retrovirus Recombinant DNA Technology (genetic engineering) Recombinant DNA Promoter Terminator DNA polymerase Restriction endonuclease Gene machine Oligonucleotide	All Y13 key words will have been introduced at this point

	Genetically modified organism (GMO) Vector Germ-line gene therapy Somatic-line gene therapy CFTR adenovirus Gene replacement Gene supplementation liposome SCID Adenosine deaminase DNA probe DNA hybridisation DNA sequencing Cycle sequencing Stimulus Response Receptor Effector Coordinator Reflex arc Somatic/Voluntary Nervous System Autonomic Sympathetic Parasympathetic Pacinian corpuscle Stretch-mediated Na+ channels Photoreceptors Retina Rod cells Cone cells Retinal convergence Visual acuity Visual sensitivity Fovea	

	Blind spot Optic nerve Nerve impulse Na+ K+ Pump Resting potential Generator potential Threshold value Action potential Polarised Voltage gated channels Depolarised Hyperpolarisation Repolarisation Refractory period All-or-nothing principle Dendrons Axon Cell body Schwann cells Node of Ranvier Myelin sheath Synapse Cholinergic synapse Adrenergic synapse Neurotransmitter Hormonal or endocrine system Chemical mediators Acetylcholine Presynaptic neurone Postsynaptic neurone Presynaptic knob Synaptic cleft Synaptic vesicle ACh Receptors Acetylcholine esterase enzyme	

	Excitatory synapses Inhibitory synapses Summation Spatial summation Temporal summation Neuromuscular junction	
What employability skills are being developed?	Problem solving Communication Numeracy Literacy Extended writing Practical skills	Problem solving Communication Numeracy Literacy Extended writing Practical skills
Wider Curriculum Links?	Nervous system biotechnology Endocrinology IVF specialist Gene therapy / Modififcation	
What useful websites are there for this topic?	Save my Exams AQA website Seneca	Save my Exams AQA website Seneca
What wider reading could be done for this topic?	BBC news – Health or environment section	
What else can students be doing independently to develop their	Complete weekly homework set by class teachers Complete revision exam questions	Complete weekly homework set by class teachers Complete revision exam questions

understanding of this topic?	Read around the subject	Read around the subject