

Y11 Combined Science Biology SOL 2021-2022

Date	Syllabus Ref	Content	Required Practical
Half Term 1 (7w)	4.5.3.5 4.5.3.6 4.5.3.7	5b The endocrine system L7 Contraceptives pros cons L8 Evaluating contraceptive methods L9 IVF (higher) L10 Thyroxine & adrenaline (higher)	
	Reinforce	L11 Revision L12 Nerves and hormones test	
	Practical catch up	Transpiration rate – potometer Stomata practical Recap Plant organisation	Practical catch up
	4.6 4.6.1 4.6.1.1 4.6.1.2 4.6.1.4	Topic 6 Inheritance, Variation & Evolution 6a DNA and reproduction L1 DNA chromosomes genes protein L2 Genomes L3 Reproduction (Sexual v asexual) L4 Meiosis L5 Revision	
Half term 2 (7w)	4.6.1.6 4.6.1.7 4.6.1.8 Reinforce	6b Genetics L1 Sex inheritance L2 Alleles & genetic diagrams L3 Cystic fibrosis (Recap non-communicable disease) L4 Polydactyly L5 Embryonic stem cells pros cons L6 Revision L7 Inheritance test	
	Practical catch up	Scientific drawing Heart dissection or flower dissection or cells Recap Heart,CHD and Non communicable disease Recap Communicable disease Recap drugs	Practical catch up
Half Term 3 (6w)	4.6.2 4.6.2.1 4.6.2.2 4.6.3.6 4.6.2.3	6c Evolution and Classification L1 Variation L2 Evolution L3 Speciation L4 Extinction L5 Selective breeding	
	4.6.3.6 4.6.2.3 4.6.2.4 4.6.3.4 4.6.3.5 4.6.3.7 4.6.4	6c Evolution and Classification L6 Genetic engineering L7 Fossils (evidence for evolution) L8 Antibiotic resistance bacteria (evidence for evolution) L9 Classification (Linnaean) L10 Classification (Woese) L11 Evolutionary trees	

	Reinforce	L12 Revision L13 Variation and evolution test	
Half term 4 (6w)	Practical catch up	Photosynthesis pondweed practical Recap Photosynthesis	RP6 Investigate the effect of light intensity on the rate of photosynthesis. Measure rate of oxygen Measure and control the temp of a large beaker (heat shield) Safe and ethical use of pondweed. Hypotheses, planning, observations, graphs, inverse square law calculations.
	Practical catch up	Reaction time if not completed last year Recap Nervous system	RP7 Reaction time Measure time and reaction time. Safe and ethical use of humans. Translate between numerical and graphical form.
	4.7 4.7.1 4.7.1.1 4.7.1.2 4.7.1.3 4.7.1.4	Topic 7 Ecology 7a Organisms and the environment L1 Competition and interdependence L2 Abiotic and biotic factors L3 Adaptations animals hot/cold L4 Behavioural adaptations & extremophiles L5 Adaptations plants L6 Food chains L7 Predator prey cycles	RP9 Measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of species. Quadrat sampling and line transects. Record length and area. Use transects and quadrats. Safe and ethical use of organisms. Estimate population sizes. Calculate mean, mode, median. Graphs.
Half Term 5 (6w)	4.7.2 4.7.2.1 4.7.2.2	L8-10 Distribution of organisms quadrat sampling RP9 L11 Belt transects and % cover L12 Cycling of materials (carbon & water) L13 Revision L14 Organisms and environment test	
	4.7.3 4.7.3.1 4.7.3.2 4.7.3.3 4.7.3.4 4.7.3.5 4.7.3.6 Reinforce	7b Human impact on the environment L1 Biodiversity and waste L2 Global warming (extend to research) L3 Deforestation and land use L4 Eutrophication L5 Maintaining ecosystems & biodiversity L6 Revision L7 Human impact test	

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		Topic 8 Maths skills Calculations L1 Standard form L2 Ratios L3 Percentages L4 Estimating values L5 Percentiles and range	
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Block Exams will take place as indicated in the school calendar. Topics to be taught for each Block exam will be communicated by SL prior to each exam.