2020 - 21 Y11 SOL Combined BIOLOGY 3Y

Date	Syllabus Ref	Content	Less	Required Practical
Half term 1 (7w)	4.2.2.3	Blood • Components and their functions • Adaptations of blood cells	2	
	4.2.2.2	Heart and blood vessels (includes lungs) • Structure and function of heart and lungs • Blood flow pathway • Aorta, vena cava, pulmonary vein and artery • Blood vessel structure and function • Pacemakers & blood flow calculations	6	
	4.2.2.4	CHD • Coronary heart disease • Stents and Statins • Heart valves • Heart transplants • Advantages and disadvantages of different types of treatments	4	
	4.3.1.7	Vaccination • How a vaccine works	1	
	4.3.1.2	Viral diseases • Measles symptoms and spread • HIV symptoms and spread • TMV (recap only if time permits)	1	
Half Term 2 (7w)		**Mock exam week in HT2**	**3**	
	4.3.1.5	Protist diseases • Malaria symptoms and spread	1	
	4.3.1.3	Bacterial diseases • Salmonella symptoms and spread • Gonorrhoea symptoms and spread	2	
		• **End of topic test on vaccination and viral, protist and bacterial diseases. Recap role of WBC.**	**2**	
	4.5.3.7	**HIGHER TIER ONLY** **Negative feedback** • **Adrenaline** • **Thyroxine**	1	
	4.5.3.2	Blood glucose control • Glucose regulation • Diabetes	3	

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		• Hormones test		
Half Term 3 (6w)	4.6.1.1	Sexual and Asexual reproduction • Types of reproduction • Gamete including pollen	1	
	4.1.2.2	Mitosis and cell cycle (+ application) • Reasons for mitosis • Basic description of mitosis (NOT IPMAT)	3	
	4.2.2.7	Cancer • What is cancer • Benign • Malignant	1	
	4.6.1.2	Meiosis (+ application) • Basic description on Meiosis • Chromosome numbers • Development after fertilisation • Comparing mitosis and meiosis	3	
	4.6.1.8	Sex determination • Inheritance of X and Y chromosomes - punnett square	1	
	4.6.1.6	Genetic inheritance • Definitions of genetic terms • Alleles - Dom/Rec • Punnett squares • Phenotypes usually due to multiple genes	3	
Half term 4 (5w)		**Y11 Light touch assessment**	**2**	
	4.6.1.7	Inherited disorders • Polydactyly • Cystic Fibrosis • Family tree application questions	3	
		• Test reproduction, cell division and genetics.	2	
	4.1.1.4 4.1.2.3	Cell differentiation • Definition Stem cells • Types -embryos, bone marrow, meristem • Uses - therapeutic cloning, crops • Risks	3	
Half Term 5 (7w)	4.2.3.1 4.2.3.2	Plant tissues and organs (RECAP) • Roots • Xylem and transport	2	

		• Structure of the leaf (5 tissues) • Transpiration (stomata and guard cells) (Plus 4 factors) • Structure of the phloem and movement of sap		
	4.4.1.1 4.4.1.2 4.4.1.3	Photosynthesis (RECAP) • Basic photosynthesis (endothermic) • Testing a leaf for starch • Factors affecting photosynthesis (graph skills) • Investigate the effect of light intensity on pondweed required practical. • Uses of glucose	3	RP6
		HIGHER TIER ONLY • **Interpreting limiting factors graphs** • **Green houses** • **Inverse square law**	1	
	4.2.2.6 (4.2.2.5)	Risk factors and lifestyle disease (plus allergies and mental health) • Costs of diseases • Effect of lifestyle factors at local, national, global level • Risk Factors • Allergies and mental health • Sampling and graphs	2	
	4.7.2.1	Levels of organisation • Producers • Consumers • Food chains • Predator - Prey Cycling	1	
	4.7.1.1 4.7.1.2 4.7.1.3	Communities, abiotic and biotic factors • Definitions of each • Competition • Interdependence • Examples of Abiotic factors • Examples of Biotic Factors • Quadrants Transects / sampling • (See Syllabus for list)	3	
	4.7.3.1 4.7.3.6	Biodiversity and maintaining biodiversity • Definition • Importance • Human Impact	Independent study project	
	4.7.3.3 4.7.3.4	Land use and Deforestation • Habitat reduction • Peat Bogs • Cattle, crops and biofuels - examples only	Independent study project	

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	4.7.3.2	Waste management ● Pollution (air, water and land)		
	4.7.2.2	Carbon Cycle ● Diagrams and descriptions ● Water cycle ● Diagrams and descriptions	1	
	4.7.3.5	Global warming ● Biological consequences ● methane	Independent study project	
Half term 6 (7 w)		**Consolidate independent study project on Ecology.**		
		Revision of required practicals		
		Revision of identified weak topic areas		
		Mathematics in Biology		
		Exam technique – literacy 6 mark answers		