Y10 Combined Science Biology SOL 2020-21

Date	Syllabus Ref	Content	Required Practical
Half Term 1 (7w)	4.2.3 4.2.3.1 4.2.3.2	**4 Plant organisation** • L1 Plant tissues in a leaf • L2 Xylem and transpiration stream • L3 Phloem and translocation • L4 Factors affecting transpiration • L5 Tranpiration rate – potometer • L6 Stomata practical	
	Reinforcement	• L7 Revision • L8 Plant organisation test	
	4.2.2.4 4.2.2.5	**2b Health and non- communicable disease** • L1 Disease and interactions • L2-L4 Cardivascular disease (CHD)	
		Y10 Assessment	
Half term 2 (7w)	4.2.2.6 4.2.2.7	• L5 Risk factors – correlation not cause • L6 The cost of non-communicable disease • L7 Cancer	
	Reinforcement	• L8 Revision • L9 Health and disease test	
	4.3 4.3.1.1 4.3.1.2 4.3.1.3 4.3.1.4 4.3.1.5 4.3.1.6 4.3.1.7 4.3.1.8 4.3.1.9	**Topic 3 Infection and response** **3a Communicable disease** • L1 Pathogens and spread • L2 Diseases VBFP • L3 First line of defence • L4 Phagocytosis • L5 Specific immunity • L6 Vaccination pros cons **3b Drugs** • L7 History of drugs • L8 Antibiotics, painkillers and resistance • L9 Developing drugs	
Half Term 3 (6w)	Reinforcement	• L10 Revision • L11 Communicable disease & drugs test	
	4.4 4.4.1.1 4.4.1.3	**Topic 4 Bioenergetics** **4a Photosynthesis** • L1 The basics of photosynthesis • L2 Testing a leaf for starch practical • L3 Uses of glucose	**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.

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	Reinforce	• L10 Revision • L11 photosynthesis test	
	4.4.2 4.4.2.1 4.4.2.2 4.4.2.3	**4b Respiration** • L1 Aerobic respiration • L2 Anaerobic respiration • L3 Exercise • L4 Comparison of aerobic and anaerobic • L5 Metabolism	
Half term 4 (5w)	**Reinforce**	• L6 Revision • L7 Respiration and metabolism test	
	4.5 4.5.2 4.5.2.1 4.5.3.7	**Topic 5 Homeostasis and response** **5a The nervous system** • L1 Homeostasis and negative feedback • L2 The nervous system • L3 The synapse • L4 Reflex arcs • **L5 RP7 Reaction time** • L6 Revision	**RP7 Reaction time** Measure time and reaction time. Safe and ethical use of humans. Translate between numerical and graphical form.
	4.5.3 4.5.3.1	**5b The endocrine system** • L1 The endocrine system • L2 Controlling blood glucose	
Half Term 5 (7w)	4.5.3.1 4.5.3.2 4.5.3.4	• L3 Diabetes • L4 Blood glucose graphs • L5 Puberty and menstrual cycle • L6 Hormone interaction (higher)	
	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	
	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 6 (7w)		**Block C Assessment**	
	4.6.1.6 4.6.1.7	**6b Genetics** • L1 Sex inheritance • L2 Alleles & genetic diagrams	

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	4.6.1.8	• L3 Cystic fibrosis (Recap non-communicable disease) • L4 Polydactyly • L5 Embryonic stem cells pros cons	
	Reinforce	• L6 Revision • L7 Inheritance test	
	4.6.2 4.6.2.1 4.6.2.2	**6c Evolution and Classification** • L1 Variation • L2 Evolution • L3 Speciation	