

Year 10 Science Curriculum Teaching Sequence (GCSE)			
	Term 1	Term 2	Term 3
Biology <i>(Separate Sciences only – H= Higher only)</i>	<u>B4a Photosynthesis</u> L1 Basics of Photosynthesis and Uses of Glucose L2 Factors Affecting rate of Photosynthesis and Limiting Factors – Inverse Square Law (H) L3 Investigating Rate of Photosynthesis (& Greenhouses) (H) L4 Practical <u>B4b Respiration + Metabolism</u> L1 Aerobic Respiration L2 Anaerobic L3 Response to Exercise lactic acid transported to liver and broken down (H) L4 Metabolism <u>B2b Tissues and organ systems</u> L1 Levels of Organisation L2 Breathing System - Lungs L3 Circulatory System - Heart L4 Circulatory System - Blood Vessels L5 Circulatory System - Blood L6 Plant Cell Organisation L7 Transpiration & Translocation L8 Transpiration & Stomata	<u>B2c Enzymes + digestion</u> L1 Enzymes - Structure & Factors L2 Investigating Enzymes RP L3 Digestive System Structure and enzymes L4 Food Tests <u>B3a Communicable disease</u> L1 Communicable Diseases and Pathogens L2 Bacterial and Viral Diseases/Plant Diseases L3 Fungal and Protist Diseases/Animal Diseases L4 Plant Defences <u>B3 C Taking it further</u> <i>L1 Plant Diseases</i> <i>L2 Monoclonal Antibodies</i> <i>L3 Monoclonal Antibodies Uses</i>	<u>B3b Preventing disease</u> L1 Preventing Disease - Transmission L2 Preventing Disease - Vaccination L3 Preventing Disease - Non-specific Defences L4 Dealing - Specific Defences Dealing L5 Dealing - Painkillers and Antibiotics; Drug Development and Testing L6 Plant Defences (H) <u>B7a Organisms are interdependent</u> L1 Organisation of an Ecosystem (inc. Food chains) L2 Biotic, Abiotic Factors and Adaptations L4 Food Webs + Predator-Prey Cycles L5 Investigating Species Distribution L6 RP Investigating Species Distribution L7 Data Analysis/Estimating Population Sizes <i>L8 Impact of Environmental Change (H)</i> <i>L9 Pyramids of Biomass</i>
Chemistry <i>(Separate Sciences only H= Higher only)</i>	<u>C2 Chemical Bonding</u> L1 Ionic bonding L2 Ionic properties L3 Covalent bonding L4 Simple covalent properties L5 Giant covalent properties L6 Metallic bonding and properties L7 Polymers L8 States of matter <i>L9 Nanoparticles</i> <u>C4a Chemical changes</u> L1 Metal oxides L2 The reactivity series L3 Displacement reactions L4 Extraction of metals and reduction L5 Reactions of acids with metals L6 & L7 Acids and insoluble bases L8 pH & Neutralisation L9 Strong vs weak acid (H)	<u>C4b Electrolysis</u> L1 The process of electrolysis L2 Molten electrolysis L3 Using electrolysis to extract metals L4 Electrolysis of aqueous solutions L5 Electrolysis Required Practical <u>C5a Energy changes</u> L1 Energy transfer L2 Energy changes required practical L3 Energy profiles L4 Bond energies (H) <u>C5b Cells and batteries</u> <i>L1 Cells and batteries</i> <i>L2 Hydrogen fuel cells</i>	<u>C3b Quantitative Chemistry</u> L1 Moles L2 Reacting masses L3 Limiting reagents L4 Percentage yield and atom economy L5 RP Titration L6 Gas Calculations

Physics (Separate Sciences only H= Higher only)	<u>P4 Atomic Structure</u> L1 The Development of the Model of the Atom L2 Atoms and isotopes L3 Radioactive decay L4 Properties of Radioactive Decay L5 Nuclear equations L6 Activity and Half-life L7 Half-life calculations (HT) L8 Radioactive contamination <i>L9 Nuclear fission and fusion</i> <i>L10 Nuclear medicine</i> <i>L11 Background Radiation</i> <u>P2a: Electricity</u> L1 <i>Static Electricity</i> L2 Current & Charge L3 Potential Difference L4 Resistance L5 Investigating Resistance L6 Circuit Components L7 Investigating Circuit Components L8 Interpreting Graphs L9 Series Circuits L10 Parallel Circuits L11 Investigating Series & Parallel Circuits	<u>P2b: Electricity in the Home</u> L1 Generating Electricity L2 Alternating Current L3 Electrical Safety L4 Energy Transfer L5 Electrical Power L6 Appliances & Efficiency L7 The National Grid <u>P5a: Motion</u> L1 Scalar and Vector Quantities L2 Displacement, speed, and velocity L3 Distance-time graphs L4 Acceleration L5 Velocity-time graphs L6 Equation of motion	<u>P6a: Waves</u> L1 Transverse & Longitudinal Waves L2 Properties of Waves L3 Wave Speed Calculations L4 Investigating Wave Speed <i>L5 Reflection</i> <i>L6 Refraction</i> <i>L7 Investigating Refraction</i> <i>L8 Sound & Ultrasound</i> <i>L9 Seismic Waves</i>
How science works	<u>Required practicals</u> Photosynthesis Making salts	<u>Required practicals</u> Resistance IV characteristics Electrolysis Food tests Enzymes	<u>Required practicals</u> Temperature change Waves Field investigations