

YR.9 GCSE	Science						
	Term 1 & 2	FLEX	Term 3	FLEX	Term 4	FLEX	Term 5 & 6
Biol 	Topic 1 - Key concepts in Biology - Animal cells – structure – mitochondria - Plant cells – structure - ribosomes - Bacteria – structure – plasmid DNA - Specialised cells & adaptation - Microscopy - Scaling & quantitative units *CORE PRACTICAL - Microscopy - Enzymes *CORE PRACTICAL – Enzymes - Osmosis *CORE PRACTICAL – Osmosis Assessment preparation		Topic 2 - Cells & control - Mitosis – phases & division - Cancer - in relation to mitosis - Growth in organisms - Cell differentiation - Percentile chart interpretation - Stem cells – animals & plants - Stem cell - use & research - Neurones – sensory & motor - Structure & role of reflex arc Assessment preparation		Topic 3 - Genetics - Meiosis – phases & division - DNA – structure - DNA – extraction from fruit - Alleles - Chromosomes & Genes - Monohybrid cross – Punnett		Topic 3 - Genetics - Genetic diagrams - Genetic variation - Environmental variation - Human Genome Project - Genetic mutations Assessment preparation
	Chem 	Topic 1 - Key concepts in Chemistry - Hazards - Structure of the atom (detailed) - DALTON - Atomic mass/number - Electronic configuration - Ions & Isotopes Calculations using isotopes - Periodic table/structure (METALS) - Chemical symbols/word equations - Mendeleev – Periodic Table - Ionic bonding - structure - Covalent bonding - structure - Diamond & graphite - Calculations involving masses Avogadro constant calculations Assessment preparation		Topic 3 - Chemical Change - Acids & alkalis - Indicators – MO, PP, UI & Litmus H⁺ concentration & pH *CORE PRACTICAL – pH - Bases - Acid/base reactions - Gas testing – H₂ & CO₂ Neutralisation – DETAILED - Preparation of salts (soluble) - Acid titration		Topic 3 - Chemical Change *CORE PRACTICAL – Preparation of Copper sulfate crystals - Salt solubility - Precipitation reactions - Preparation of an insoluble salt - Electrolysis & associated work Half equations *CORE PRACTICAL – Electrolysis (copper sulfate) Assessment preparation	
Phys 	Topic 2 - Motion & Forces - Scalar & Vector quantities - Velocity - Calculations – Speed - Distance/time graphs - Interpretation - Acceleration – calculations (rearranging equations) - Velocity/time graphs – Interpretation - Determination of speed – light gates - Speed in everyday context		Topic 2 - Motion & Forces - Newton’s laws of motion (1-3) - Weight - calculations - Weight & changes in gravity *CORE PRACTICAL – Trolleys Motion – circular orbits Momentum – calculations - Reaction times - Stopping distances – factors Deceleration – Estimates Assessment preparation		Topic 3 - Conservation of Energy - Calculation of gravitational PE - Calculation of kinetic energy - Energy transfer diagrams - Conservation of energy - Analysis of energy stores - Reduction of energy transfer - Thermal conductivity - Calculation of energy efficiency Increasing energy efficiency - Energy resources & use Assessment preparation		Topic 4 – Waves - Wave theory - Longitudinal & Transverse - Calculation of wave speed - Sound velocity - Wave refraction More wave refraction/reflection *CORE PRACTICAL – Waves Assessment preparation