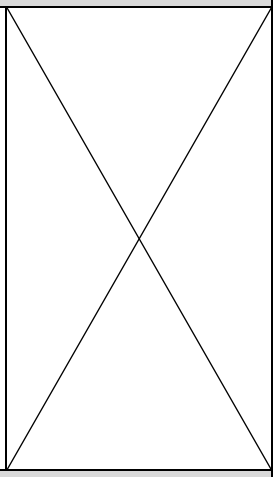
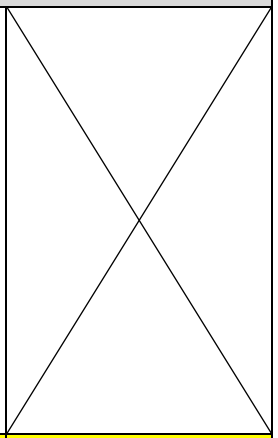
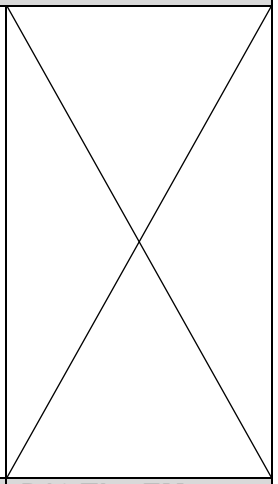
Term	HT	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn	HT1	**C5 Chemical Changes** • acid reactions – acids reacting with different substances. • explain redox reactions along with electron transfer		**C6 Electrolysis** • if a metal is more reactive than carbon, how can we extract it? • explain redox reactions along with electron transfer		**B8 Photosynthesis** • process of photosynthesis • factors that affect rate of photosynthesis	**B9 Respiration** • processes of aerobic and anaerobic respiration (symbol equations)	
		1. Recap 2. The reactivity series 3. Displacement reactions 4. Extracting metals 5. Salts from metals	1. Insoluble bases 2. Making more salts 3. RP – making salts 4. Neutralisation and pH scale 5. Strong and weak acids	1. Consolidation 2. Recap 3. Introduction to electrolysis 4. Changes at electrodes 5. Extraction of aluminium	1. Electrolysis of aqueous solutions 2. RP – electrolysis of a solution 3. Progress check 4. Feed forward 5. Recap	1. Photosynthesis 2. The rate of photosynthesis 3. RP – rate of photosynthesis 4. How plants use glucose 5. Making the most of photosynthesis	1. Consolidation 2. Recap 3. Aerobic respiration 4. Response to exercise 5. Anaerobic respiration	
	HT2	**P4 Electric Circuits** • series and parallel circuits – describing and calculating the difference between current flow and PD dropped in different branches and components		**P5 Electricity in the Home** • power, including calculations • alternating PD is supplied by mains electricity supply • electromagnetism as the magnetic effect of current flow			**C7 Energy Changes** • energetics • energy profiles: endo- or exothermic	
		1. Metabolism and the liver 2. Progress check 3. Feed forward 4. Recap 5. Current and charge	1. PD and resistance 2. RP – circuits 3. Component characteristics 4. RP – electrical components 5. Series circuits	1. Parallel circuits 2. RP – *I-V* 3. Consolidation 4. Recap 5. Alternating current	1. Cables+plugs 2. Electrical power & PD 3. Currents and energy trans. 4. Appliances and efficiency 5. Progress check	Assessment – cell biology, organisation, atomic structure, bonding, particle model, atomic structure.	1. Feed forward 2. Recap 3. Exothermic & endothermic 4. RP – temp. changes 5. Using energy transfers from reactions.	1. Reaction profiles 2. Bond energies 3. Progress check 4. Feed forward 5.
Term	HT	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7

Term	HT	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Spring	HT3	**C4 Chemical Calculations** • RFM • Moles • Concentration	**B10 The Nervous System** • nervous and hormonal coordination & control in humans • structure and function of human nervous system and reflex arc		**B11 Hormonal Coordination** • hormones in human reproduction, hormonal and non-hormonal methods of contraception • homeostasis		**C8 Rates and Equilibrium** • collision theory – how factors affect the rate of reaction and • equilibrium – forcing a reversible reaction to favour one direction.	
		1. Recap 2. Relative masses and moles 3. Equations and calculations 4. From masses to balanced equations 5. Expressing concentrations	1. Progress check 2. Feed forward 3. Recap 4. Principles of homeostasis 5. The structure and function of the human nervous system	1. RP – reflexes 2. Reflex actions 3. Consolidation 4. Recap 5. Principles of hormonal control	1. The control of blood glucose. 2. Treating diabetes 3. Negative feedback 4. Human reproduction 5. Hormones & menstrual cycle.	1. The artificial control of fertility 2. Infertility treatments 3. Progress check 4. Feed forward 5. Recap	1. Rate of reaction 2. Collision theory and SA 3. Effect of temperature 4. Effect of concentration or pressure 5. RP – rates	
	HT4		**P8 Forces in Balance** • vectors with magnitude and direction	**P9 Motion** • distance and displacement, speed and velocity as scalars and vectors. • different graphs to describe motion			**P10 Forces and Motion** • momentum of an object related to its velocity and mass • calculating stopping distances	
		1. The effect of catalysts 2. Reversible reactions 3. Energy and reversible rxns 4. Dynamic equilibrium 5. Altering conditions	1. Progress check 2. Feed forward 3. Recap 4. Vectors and scalars 5. Forces between objects	1. Resultant forces 2. Centre of mass 3. Parallelogram of forces 4. Resolution of forces 5. Consolidation	1. Recap 2. Speed and distance-time graphs 3. Velocity and acceleration 4. Velocity-time graphs 5. Analysing motion graphs	1. Consolidation 2. Assessment 3. Assessment 4. Assessment 5. Recap	1. Force and acceleration 2. RP – force and acceleration 3. Weight and terminal velocity 4. Forces and braking 5. Momentum	

Summer	**HT5**	**C11 The Earth's Atmosphere** • main changes of atmosphere over time and causes of these changes • how greenhouse effects operate • problems caused by air pollutants		**C12 The Earth's Resources** • differences between potable and pure water and how wastewater is purified • how to interpret LA's of products		**B12 Reproduction** • single gene inheritance & crosses with phenotypes		
		1. Forces and elasticity 2. RP – stretch tests 3. Progress check 4. Feed forward 5. Recap	1. The history of our atmosphere 2. Our evolving atmosphere 3. Greenhouse gases 4. Climate change 5. Atmospheric pollution	1. Progress check 2. Feed forward 3. Recap 4. Finite and renewable resources 5. Water safe to drink	1. RP – water 2. Treating wastewater 3. Extracting metals from ores 4. LCAs 5. Reduce, reuse and recycle.	1. Progress check 2. Feed forward 3. Recap 4. Types of reproduction 5. Cell division in sexual relationships	1. DNA and the genome 2. Inheritance in action 3. More about genetics 4. Inherited disorders 5. Screening for genetic disorders	
	HT6	**B13 Variation and Evolution** • genetic variation, natural selection, evolution and selective breeding			**B14 Genetics and Evolution** • what fossils can reveal. • mutation in antibiotic resistant bacteria.		**P11 Wave Properties** • ray diagrams • sound waves	**P12 The EM Spectrum**
		1. Consolidation 2. Recap 3. Variation and evolution 4. Evolution by natural selection 5. Selective breeding	1. Genetic engineering 2. Ethics of genetic technologies 3. Consolidation 4. Recap 5. Evidence for evolution	PPE	1. Fossils and extinction 2. More about extinction 3. Antibiotic resistant bacteria 4. Classification 5. New systems of classifications	1. Progress check 2. Feed forward 3. Recap 4. The nature of waves 5. The properties of waves	1. RP – plane waves and waves in solids 2. Reflection and refraction 3. More about waves 4. Consolidation 5. Recap	1. The EM spectrum 2. Light, infrared, microwaves and radio waves 3. RP - IR 4. Communication 5. UV waves, x-rays and gamma rays