



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	<p><b>Topic: C4 Chemical calculations</b></p> <p>Relative formula mass and moles Mass calculations and balanced equations Titration and titration calculations(T) Volumes of gases (T)</p> <p><b>Topic: C5 Chemical changes</b></p> <p>Extracting metals Displacement reactions Making salts Neutralisation and pH scale Strong and weak acids</p> <p><b>Topic: P1 Conservation and dissipation of energy</b></p> <p>Energy stores Energy and Work Gravitational Potential Energy Kinetic energy Energy and Power</p> <p><b>Topic: P2 Energy transfer by heating</b></p> <p>Conduction, convection and infrared radiation Specific heat capacity Energy from Renewable resources Energy issue</p>	<p><b>Topic: C6 Electrolysis</b></p> <p>Electrolysis of molten and aqueous ionic compounds Extraction of aluminium oxide Electrolysis of aqueous solutions</p> <p><b>Topic: C7 Energy changes</b></p> <p>Exothermic/endothermic reactions Energy profile diagrams Bond energy calculation Chemical cell, batteries and fuel cells</p> <p><b>Topic: P3 energy resources</b></p> <p>Energy from Renewable resources Energy issues</p> <p><b>Topic: P4 Electrical circuits</b></p> <p>Electric current, potential difference and resistance Series and parallel circuits Alternating current Electrical appliances and power Energy transfer and currents</p> <p><b>Topic: P5 Electricity in the home</b></p> <p>Alternating current Electrical appliances and power</p>	<p><b>Topic: C8 Rates and equilibrium</b></p> <p>Effect of temperature, concentration, surface area and catalyst Reversible reactions Dynamic equilibrium Altering conditions</p> <p><b>Topic: C9 Crude oil and fuels</b></p> <p>Hydrocarbons Fractional distillation Combustion Cracking hydrocarbons</p> <p><b>Topic: B6 Preventing and treating disease</b></p> <p>Vaccinations Antibiotics and pain killers Discovering and developing drugs Making and using monoclonal antibodies(T)</p> <p><b>Topic: B7 Non Communicable diseases</b></p> <p>Non communicable diseases Cancer Smoking and risk of disease Alcohol and other carcinogens</p> <p><b>Topic: B8 Photosynthesis Knowledge and skills</b></p> <p>Photosynthesis Rate of photosynthesis How plants use glucose Making the most of photosynthesis</p>	<p><b>Topic: C12 Chemical analysis</b></p> <p>Pure substances and mixtures Testing for gases Chromatography Positive/negative ions(T) Instrumental analysis(T)</p> <p><b>Topic: B9 Respiration</b></p> <p>Aerobic respiration The response to exercise Anaerobic respiration Metabolism and the liver</p> <p><b>Topic: B10 The human nervous system</b></p> <p>Principles of homeostasis Nervous system Reflex actions The brain (T) The eye (T)</p> <p><b>Topic: P6 Molecules and matter</b></p> <p>Density States of matter Change of states Internal energy Specific latent heat Gas pressure, temperature and volume(T)</p>	<p><b>Topic: B11 Hormonal coordination</b></p> <p>Hormonal control Blood glucose levels Diabetes Reproduction Menstrual cycle Fertility/infertility Plant hormones and responses (T) Using plant hormones(T)</p> <p><b>Topic: B12 Homeostasis Triple topic only</b></p> <p>Controlling body temperature(T) Removing waste products (T) Human kidneys(T) Dialysis and kidney transplants (T)</p> <p><b>Topic: P7 Radioactivity</b></p> <p>Atoms and radiation Discovery and changes in the nucleus Alpha, beta and gamma radiation Activity and half life Nuclear radiation in medicine(T) Nuclear fission/fusion(T) Nuclear issues (T)</p> <p><b>Topic: C10 Organic reactions: Triple Chemistry only</b></p> <p>Reactions of alkenes Structure ,properties of alcohol, carboxylic acids and esters</p>	<p><b>Topic: B13 Reproduction</b></p> <p>Types of reproduction Cell division in sexual reproduction The best of both worlds (T) DNA and the genome DNA structure and protein synthesis(T) Gene expression and mutation(T) Inheritance and genetics</p> <p><b>Topic: P12 Wave properties</b></p> <p>Waves and their properties Reflection/refraction Sound waves (T) The uses of ultra sound(T) Seismic waves(T)</p> <p><b>Topic: P13 Electromagnetic waves</b></p> <p>Electromagnetic spectrum Light, infrared, microwave. and radio waves Communications UV, X rays and gamma rays X rays in medicine</p> <p><b>Topic: C11 Polymers Triple Chemistry only</b></p> <p>Addition and condensation polymerisation</p>