

FACULTY	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	<p>Speed Gravity Particle Model Separating Mixtures</p> <p>Use the formula: speed = distance (m)/time (s) or distance-time graphs, to calculate speed</p> <p>Use the formula: weight (N) = mass (kg) x gravitational field strength (N/kg)</p> <p>Use techniques to separate mixtures</p> <p>Analyse patterns Discuss Limitations Draw Conclusions Present Data* Communicate ideas Construct explanations Critique claims Justify Opinions Collect data Devise Questions* Plan Variables Test Hypotheses Estimate Risks* Examine Theories Interrogate Sources</p>	<p>Movement Cells Voltage, Resistance and Current*</p> <p>Calculate resistance using the formula: resistance (<math>\Omega</math>) = potential difference (V) ÷ current (A).</p> <p>Use a light microscope to observe and draw cells</p> <p>Analyse patterns Discuss Limitations Draw Conclusions Present Data* Communicate ideas Construct explanations Critique claims Justify Opinions Collect data Devise Questions* Plan Variables Test Hypotheses Estimate Risks* Examine Theories Interrogate Sources</p>	<p>Metals and Non metals Acids and Alkalis Interdependence* Plant Reproduction</p> <p>Analyse patterns Discuss Limitations Draw Conclusions Present Data* Communicate ideas* Construct explanations Critique claims Justify Opinions Collect data Devise Questions* Plan Variables Test Hypotheses Estimate Risks* Examine Theories Interrogate Sources</p>	<p>Energy Cost and Energy Transfer* Earth Structure Universe*</p> <p>Analyse patters Discuss Limitations Draw Conclusions Present Data Communicate ideas Construct explanations Critique claims Justify Opinions* Collect data Devise Questions Plan Variables Test Hypotheses Estimate Risks* Examine Theories Interrogate Sources</p>	<p>Variation Human Reproduction Sound Light</p> <p>Construct ray diagrams to show how light reflects off mirrors, forms images and refracts</p> <p>Analyse patters Discuss Limitations Draw Conclusions Present Data Communicate ideas* Construct explanations Critique claims Justify Opinions Collect data Devise Questions Plan Variables Test Hypotheses Estimate Risks* Examine Theories Interrogate Sources</p>	<p>Extended Investigation work</p> <p>Analyse patters Discuss Limitations Draw Conclusions Present Data Communicate ideas Construct explanations Critique Claims Justify Opinions Collect data Devise Questions Plan Variables Test Hypotheses Estimate Risks Examine Theories Interrogate Sources</p>
Year 8	<p>Periodic Table Contact Forces Pressure* Elements</p> <p>Sketch the forces acting on an object, and label their size and direction</p> <p>Use the formula: fluid pressure, or stress on a surface = force (N)/area (<math>m^2</math>).</p> <p>Use particle diagrams to classify a substance as an</p>	<p>Breathing Digestion* Magnetism Evolution</p> <p>Analyse patters Discuss Limitations Draw Conclusions Present Data Communicate ideas* Construct explanation*s Critique claims* Justify Opinions* Collect data Devise Questions Plan Variables</p>	<p>Respiration Chemical Energy Photosynthesis Types of Reaction</p> <p>Write word equations from information about chemical reactions</p> <p>Analyse patters Discuss Limitations Draw Conclusions Present Data Communicate ideas* Construct explanations* Critique claims*</p>	<p>Climate Earth Resources Work Heating and Cooling</p> <p>Use the formula: work done (J) = force (N) x distance moved (m) to compare energy transferred for objects moving horizontally</p> <p>Analyse patters Discuss Limitations Draw Conclusions Present Data Communicate ideas*</p>	<p>Electromagnetism Inheritance Wave Effects Wave Properties</p> <p>Analyse patters Discuss Limitations Draw Conclusions Present Data Communicate ideas* Construct explanations* Critique claims* Justify Opinions* Collect data</p>	<p>Extended Investigation work Preparation for GCSE</p>

	<p>element, mixture or compound and as molecules or atoms. Name simple compounds using rules: change non-metal to -ide; mono, di, tri prefixes; and symbols of hydroxide, nitrate, sulphate and carbonate</p> <p>Analyse patterns Discuss Limitations Draw Conclusions Present Data Communicate ideas* Construct explanations Critique claims* Justify Opinions* Collect data Devise Questions Plan Variables Test Hypotheses Estimate Risks Examine Theories Interrogate Sources</p>	<p>Test Hypotheses Estimate Risks Examine Theories Interrogate Sources</p>	<p>Justify Opinions* Collect data Devise Questions Plan Variables Test Hypotheses Estimate Risks Examine Theories Interrogate Sources</p>	<p>Construct explanations* Critique claims* Justify Opinions* Collect data Devise Questions Plan Variables Test Hypotheses Estimate Risks Examine Theories Interrogate Sources</p>	<p>Devise Questions Plan Variables Test Hypotheses Estimate Risks Examine Theories Interrogate Sources</p>	
Year 9	<p><b>Biology Paper 1:</b> Eukaryotes &amp; Prokaryotes Animal &amp; Plant Cells Cell Specialisation &amp; Differentiation Principles of Organisation</p> <p>Use appropriate apparatus to record length and area.</p> <p>Use a microscope to make observations of biological specimens and produce labelled scientific drawings</p> <p>Use estimations to judge the relative size or area of sub-cellular structures.</p> <p><b>Chemistry Paper 1:</b> Atoms, elements &amp; compounds Mixtures Model of the atom Atom structure</p>	<p><b>Chemistry Paper 1:</b> The Periodic Table Metals and non-metals Group 0 elements Group 1 elements Group 7 elements Metal oxides Reactivity Series Extraction of metals* Redox reactions</p> <p><b>Physics Paper 1:</b> Circuit diagrams* Electrical Charge and Current Current, resistance and p.d. Resistors* Series and Parallel circuits* Use appropriate apparatus to measure and record length accurately.</p> <p>*Use appropriate apparatus to measure current,</p>	<p><b>Biology Paper 2:</b> Communities Biotic and Abiotic factors Adaptations Levels of Organisation Cycling of material Biodiversity Waste management* Land use* Deforestation*</p> <p>Use appropriate apparatus to record length and area.</p> <p>Use transect lines and quadrats to measure distribution of a species.</p> <p>Safe and ethical use of organisms and response to a factor in the environment.</p> <p>Application of appropriate sampling techniques to investigate the distribution</p>	<p><b>Chemistry Paper 2:</b> Pure substances, formulations and chromatography Tests for Hydrogen, Oxygen, Carbon dioxide and Chlorine The Earth's atmosphere (composition and changes)</p> <p>Calculating rates of reactions Factors which affect rates of reaction Collision theory and activation energy Catalysts</p> <p>Use of appropriate apparatus to make and record a range of measurements accurately, including mass, temperature, and volume of liquids and gases.</p>	<p><b>Physics Paper 2:</b> Transverse and Longitudinal Waves Wave properties Electromagnetic Spectrum Uses and Applications of electromagnetic waves</p> <p>use appropriate apparatus to make and record temperature accurately.</p> <p>Make observations of the effects of the interaction of electromagnetic waves with matter</p>	<p>Preparation for end of year 9 exam</p> <p>Begin year 10 Syllabus</p>

		<p>potential difference and resistance.</p> <p>Use circuit diagrams to construct and check series and parallel circuits</p> <p>Use an appropriate number of significant figures. Find arithmetic means.</p> <p>Understand that <math>y = mx + c</math> represents a linear relationship. Plot two variables from experimental or other data.</p> <p>Determine the slope and intercept of a linear graph.</p>	<p>and abundance of organisms in an ecosystem via direct use in the field.</p> <p>Estimates of population size based on sampling. Calculate arithmetic means.</p> <p>Understand the terms mean, mode and median as applied to ecological data.</p> <p>Plot and draw appropriate graphs selecting appropriate scales for the axes</p>	<p>Use of appropriate apparatus and techniques for conducting and monitoring chemical reactions.</p> <p>Making and recording of appropriate observations during chemical reactions including the measurement of rates of reaction by a variety of methods such as production of gas and colour change.</p> <p>Safe use and careful handling of gases, liquids and solids, including careful mixing of reagents under controlled conditions, using appropriate apparatus to explore chemical changes.</p>	<p>construct and interpret frequency tables and diagrams, bar charts and histograms</p>	
Year 10	<p><b>Biology Paper 1: Revisit year 9 content throughout and build/consolidate understanding</b></p> <p>Microscopy Chromosomes Mitosis and the Cell cycle Stem Cells The Heart and Blood vessels* Non communicable diseases* Communicable diseases*</p> <p>Extended writing – focus on accuracy of phrasing</p>	<p><b>Chemistry paper 1: Revisit year 9 content throughout and build/consolidate understanding</b></p> <p>Reactions of metals and acids Neutralisation Soluble salts pH and neutralisation Strong and Weak acids (HT) Exothermic and Endothermic reactions Reaction profiles Energy changes Conservation of mass* Balancing equations Relative formula mass Moles (HT) Reacting Mass Calculations (HT) Using moles (HT) Limiting reactance (HT) Concentration of Solutions (HT)</p>	<p><b>Physics Paper 1: Revisit year 9 content throughout and build/consolidate understanding</b></p> <p>Energy stores and systems Energy changes Power* Energy transfer Efficiency National and global energy resources* DC/AC Mains electricity* The National Grid</p> <p>Density Changes of State Internal Energy Temperature Change and Specific Heat Capacity Changes of heat and specific latent heat Particle motion in gases</p> <p>Use appropriate apparatus to make and record</p>	<p><b>Biology Paper 2: Revisit year 9 content throughout and build/consolidate understanding</b></p> <p>Homeostasis Nerves and hormones* Control of Blood Glucose* Hormones in reproduction Contraception* The use of hormones to treat infertility (HT) Negative feedback (HT)</p> <p>Variation &amp; Evolution Selective Breeding* Genetic Engineering* Evidence for Evolution Fossils Extinction Resistant Bacteria</p> <p>use appropriate apparatus to record time Selecting appropriate apparatus and techniques</p>	<p><b>Chemistry Paper 2: Revisit year 9 content throughout and build/consolidate understanding</b></p> <p>Crude Oil, hydrocarbons and alkanes Fractional distillation Properties of hydrocarbons Cracking and alkenes</p> <p>Atmospheric Pollutants Properties and effects of atmospheric pollutants Greenhouse gases Human Impact Global Climate Change Carbon Footprints</p>	<p><b>Physics Paper 2: Revisit year 9 content throughout and build/consolidate understanding</b></p> <p>Work done and energy transfer* Forces and elasticity</p> <p>Scalar and vector quantities Contact and non-contact forces Gravity Resultant forces</p> <p>Use appropriate apparatus to make and record length accurately.</p> <p>Use appropriate apparatus to measure and observe the effect</p>

		<p>Safe use of appropriate heating devices and techniques including use of a Bunsen burner and a water bath or electric heater.</p> <p>Use of appropriate apparatus and techniques for conducting chemical reactions, including appropriate reagents.</p> <p>Safe use of a range of equipment to purify and/or separate chemical mixtures including evaporation, filtration, crystallisation.</p> <p>Recognise and use expressions in decimal form.</p> <p>Use an appropriate number of significant figures.</p> <p>Find arithmetic means.</p> <p>Translate information between graphical and numeric form. Plot two variables from experimental or other data</p>	<p>measurements of mass, time and temperature accurately.</p> <p>Use, in a safe manner, appropriate apparatus to measure energy changes/transfers and associated values such as work done</p> <p>use appropriate apparatus to make and record measurements of length, area, mass and volume accurately. Use such measurements to determine the density of solid objects and liquids</p> <p>Use an appropriate number of significant figures. Find arithmetic means. Change the subject of an equation.</p> <p>Substitute numerical values into algebraic equations using appropriate units for physical quantities.</p> <p>calculate areas of triangles and rectangles, surface areas and volumes of cubes.</p>	<p>to measure the process of reaction time.</p> <p>Safe and ethical use of humans to measure physiological function of reaction time and responses to a chosen factor</p> <p>translate information between numerical and graphical forms.</p>		<p>of force on the extension of springs and collect the data required to plot a force-extension graph</p> <p>Use an appropriate number of significant figures in calculation.</p> <p>Use an appropriate number of significant figures.</p> <p>Find arithmetic means.</p> <p>Translate information between graphical and numeric form.</p> <p>Understand that <math>y = mx + c</math> represents a linear relationship.</p> <p>Plot two variables from experimental or other data</p>
Year 10 Separates	<p><b>As above plus:</b></p> <p>Culturing microorganisms Producing monoclonal antibodies Uses of monoclonal antibodies Detection and identification of plant disease Plant defences</p>	<p><b>As above plus:</b></p> <p>Titration Cells and batteries Fuel Cells % Yield Atom economy Using concentrations of solutions Using the amount of a substance in relation to a volume of a gas</p>	<p><b>As above plus:</b></p> <p>Static Electricity Electrical fields Pressure in a gas Increasing a pressure of a gas</p>	<p><b>As above plus:</b></p> <p>The Brain The eye Coordination and control in plants Maintaining water and nitrogen balance Cloning Theory of evolution (more depth) Speciation Understanding genetics</p>	<p><b>As above plus:</b></p> <p>Structure and formulae of alkenes Reactions of alkenes Alcohols Carboxylic acids Addition polymerisation Condensation polymerisation Amino acids</p>	<p><b>As above plus:</b></p> <p>Moments, levers and gears Reflection of waves Sound waves Waves for detection Lenses Visible light Emission and absorption Perfect black bodies and radiation</p>

					DNA and other naturally occurring polymers	
Year 11	<p><b>Biology Paper 1:</b>  <b>Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>Diffusion  Osmosis  Active Transport  The Human Digestive System  Photosynthetic Reactions  Rate of Photosynthesis  Uses of Glucose  Aerobic Respiration  Anaerobic Respiration</p> <p>Plan experiments to test hypotheses.  Have due regard for accuracy of measurements and health and safety. WS  Make and record observations and measurements of mass.  Evaluate the method and suggest possible improvements and further investigations.  Present observations and other data in graphical form.  Translate mass data into graphical form.  Use simple compound measures of rate of water uptake.  Use percentages and calculate percentage gain and loss of mass of plant tissue.  Find mean mass of plant tissue.  Plot, draw and interpret appropriate graphs</p> <p><b>Chemistry Paper 1:</b></p>	<p><b>Chemistry Paper 1:</b>  <b>Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>States of Matter  State Symbols  Properties of Ionic Compounds  Properties of Small Molecules  Polymers  Giant Covalent Structures  Properties of metals and alloys  Metals as Conductors</p> <p>Diamond, Graphite and Fullerenes</p> <p>Electrolysis</p> <p>Use scientific theories and explanations to develop hypotheses.  Plan experiments or devise procedures to make observations, produce or characterise a substance, test hypotheses, check data or explore phenomena. Apply a knowledge of a range of techniques, instruments, apparatus and materials to select those appropriate to the experiment.  Carry out experiments appropriately having due regard for the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations.  Make and record observations and</p>	<p><b>Biology Paper 2:</b>  <b>Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>Sexual and Asexual Reproduction  Meiosis  DNA and the genome  Inheritance*  Sex Determination  Classification  Global Warming  Maintaining Biodiversity</p> <p><b>Chemistry Paper 2:</b>  <b>Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>Reversible reactions  Energy changes  Equilibrium  The effect of changing conditions of equilibria (HT)</p> <p>Apply a knowledge of a range of techniques, instruments, apparatus and materials to select those appropriate to the experiment.  Carry out experiments appropriately having due regard for the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations.  Recognise when to apply a knowledge of sampling techniques to ensure any samples collected are representative.</p>	<p><b>Chemistry Paper 2:</b>  <b>Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>Using Earth's Resources  Potable Water*  Waste Water Treatment  Alternative methods of extracting metals (HT)</p> <p>Life Cycle Assessment  Reducing the use of resources</p> <p><b>Physics Paper 2:</b>  <b>Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>Motion graphs  Distance and displacement  Speed and Velocity  Acceleration  Newton's Laws  Forces and Stopping  Distance  Reaction Times  Breaking Distance</p> <p>Momentum and Conservation of momentum</p> <p>Magnetism  Electromagnetism  Fleming's LHR (HT)  Motors (HT)</p> <p>Use scientific theories and explanations to develop hypotheses.  Plan experiments or devise procedures to make observations, produce or</p>	<b>Focussed exam preparation</b>	

	<p><b>Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>Chemical Bonds Ionic Bonding Ionic Compounds Covalent Bonding Metallic Bonding</p>	<p>measurements using a range of apparatus and methods.</p> <p><b>Physics Paper 1: Revisit year 9 and 10 content throughout and build/consolidate understanding</b></p> <p>Atom structure Isotopes Radioactive decay Nuclear Equations Half Lives Contamination</p>	<p>Make and record observations and measurements using a range of apparatus and methods. Evaluate methods and suggest possible improvements and further investigations.</p>	<p>characterise a substance, test hypotheses, check data or explore phenomena. Apply a knowledge of a range of techniques, instruments, apparatus, and materials to select those appropriate to the experiment. Carry out experiments appropriately having due regard for the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations. Make and record observations and measurements using a range of apparatus and methods. Evaluate methods and suggest possible improvements and further investigations. Present observations and other data using appropriate methods. Translate data from one form to another. Carry out and represent mathematical and statistical analysis. Represent the distribution of results and make estimations of uncertainty. WS 3.5 – interpret observations and other data (presented in verbal, diagrammatic, graphical, symbolic or numerical form), including identifying patterns and trends, making inferences and drawing conclusions.</p>		
Year 11 Separates	As above	<p><b>As above</b></p> <p>Background Radiation Half Lives Uses of Radiation Nuclear Fission Nuclear Fusion</p>	<p><b>As above plus</b></p> <p>DNA Structure Decomposition Impact of Environmental Change Trophic Levels Pyramids of Biomass</p>	<p><b>As above plus</b></p> <p>Flames tests Identification of ions FES Corrosion and prevention</p>		

			transfer of Biomass Food Security Farming techniques Sustainable Fisheries Role of Biotechnology	Ceramics Polymers and Composites Haber Process  Changes in momentum Loud Speakers		
Year 12 Biology	<p><b>Module 2 (Foundation)</b> Cell Structure Biological Molecules</p> <p>apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification.</p>	<p><b>Module 2 (Foundation)</b> Nucleotides and nucleic acids Enzymes Membranes Cell division, diversity and organisation</p> <p>apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 3 (exchange and transport, disease)</b> Exchange surfaces Transport in Animals Transport in Plants</p> <p>Disease disease prevention immunity</p> <p>apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 4 (biodiversity)</b> Biodiversity Classification Evolution</p> <p>apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p>Focussed revision of Modules 1-4</p> <p>Module 1 covered with all practical skills work</p>	<p><b>Begin year 13 course following exams</b></p>

<p>Year 12 Chemistry</p>	<p><b>Module 2</b> Atoms and reactions Electrons, bonding and Structure apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 2</b> Atoms and reactions</p> <p><b>Module 3</b> Periodic table Physical Chemistry apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 4</b> Basic concepts and Hydrocarbons Alcohols, halo alkanes and analysis apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 4</b> Basic concepts and Hydrocarbons Alcohols, halo alkanes and analysis apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Focussed revision of Modules 1-4</b></p> <p><b>Module 1 covered with all practical skills work</b></p>	<p><b>Begin year 13 course following exams</b></p>
<p>Year 12 Physics</p>	<p><b>Module 2</b> Measurement of gravity Quantities and units Estimation Scalars and Vectors apply investigative approaches and methods to practical work</p>	<p><b>Module 3</b> Graphs of Motion SUVAT Projectiles Forces Equilibrium Moments Work, energy and power Efficiency Stopping Distances Kinematics Resolving vectors</p>	<p><b>Module 3 &amp; 4</b> Newton's laws of motion Momentum &amp; Impulse Collision</p> <p>Wave basics EM waves Polarisation Reflection &amp; refraction Materials Young Modulus</p>	<p><b>Module 4</b> Interference &amp; Superposition Young Double Slit Diffraction grating Stationary waves Stationary wave experiments Wave-particle duality Topic targeted revision Series &amp; Parallel circuits Kirchhoff's laws</p>	<p><b>Focussed revision of Modules 1-4</b></p> <p><b>Module 1 covered with all practical skills work</b></p>	<p><b>Begin year 13 course following exams</b></p>



	<p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p>Dynamics Centre of Mass Pressure apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p>Hooke's law</p> <p>Circuit basics Electron drift EMF &amp; PD Resistivity apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p>Potential Dividers Internal Resistance Photons The photoelectric effect apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>		
Year 12 Psychology	<p><b>Topic 1: Social Influence</b> Conformity: Types &amp; Explanations Asch's Research Zimbardo's Research Obedience: Milgram's Research Situational Variable Solical-psychological factors Dispositional explanations</p>	<p><b>Topic 2: Memory</b> Coding, capacity and duration The Multi-Store Model Types of Long Term Memory The Working Memory Model Explanations for Forgetting: Interference Retrieval Failure Factors affecting Eyewitness testimony</p>	<p><b>Topic 3: Attachment</b> Ainsworth's Strange Situation Cultural Variations Bowlby's theory of maternal deprivation Romanian Orphan Studies Influence of early attachment on later relationships</p>	<p><b>Topic 5: Psychopathology</b> Definitions of Abnormality Phobias Depression OCD Behavioural Approaches to explaining and treating Phobias The Cognitive Approach to explaining and treating depression</p>	<p><b>Topic 6: Research methods</b> <b>This will be a theme throughout topics 1-6 and studied in depth</b> Experimental methods Control of Variables</p>	<p><b>Begin year 13 course following exams</b></p>

	<p>Resistance to Social Influence Minority Influence Social Influence and Social Change</p> <p>Demonstrate knowledge and understanding of psychological concepts, theories, research studies, research methods and ethical issues</p> <p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>	<p><b>Topic 3: Attachment</b> Schaffer's Stages of Attachment Animal Studies Explanations of Attachment</p> <p>Demonstrate knowledge and understanding of psychological concepts, theories, research studies, research methods and ethical issues</p> <p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>	<p><b>Topic 4: Approaches (including Biopsychology)</b> Origins of Psychology The learning approach The cognitive approach The Biological approach Biopsychology</p> <p>Demonstrate knowledge and understanding of psychological concepts, theories, research studies, research methods and ethical issues</p> <p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>	<p>The Biological approach to explaining and treating OCD</p> <p>Demonstrate knowledge and understanding of psychological concepts, theories, research studies, research methods and ethical issues</p> <p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>	<p>Experimental Design Types of Experiment Sampling Ethical Issues Pilot Studies Observational Techniques and Design Self-report techniques and design Correlation Data analysis</p> <p><b>Revision and exam preparation</b></p>	
Year 12 Env Sci	<p><b>Chapter 1:</b> Conditions for Life on Earth <b>Chapter 2:</b> Conservation of Biodiversity <b>Chapter 4:</b> The Atmosphere</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p>	<p><b>Chapter 3:</b> Life Processes in the Biosphere <b>Chapter 5:</b> The Hydrosphere</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p>	<p><b>Chapter 7:</b> Biogeochemical Cycles <b>Chapter 5:</b> The Hydrosphere continued</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p>	<p><b>Chapter 8:</b> Soils <b>Chapter 6:</b> The Lithosphere</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p>	<p><b>Chapter 8:</b> Soils continued <b>Chapter 15</b> Research methods and fieldwork</p>	<p><b>Chapter 11 (y13)</b> Agriculture <b>Chapter 9 (y13)</b> Energy resources <b>Chapter 15 (y13)</b> Research methods and Field wok</p>

	<p>comment on experimental design and evaluate scientific methods</p> <p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>	<p>comment on experimental design and evaluate scientific methods</p> <p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>	<p>comment on experimental design and evaluate scientific methods</p> <p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>	<p>comment on experimental design and evaluate scientific methods</p> <p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>		
Year 13 Biology	<p><b>Module 5 (Communication, Homeostasis and Energy)</b>  Communication and Homeostasis  Excretion  Hormonal Control  Neuronal Control  apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical</p>	<p><b>Module 5 (Communication, Homeostasis and Energy)</b>  Photosynthesis  Respiration  Plant responses and Animal responses  apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and</p>	<p><b>Module 6 Genes evolution and ecosystems</b>  Cellular Control  Patterns of Inheritance  Manipulating genomes  Cloning and Biotechnology  apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and</p>	<p><b>Module 6 Genes evolution and ecosystems</b>  Cellular Control  Patterns of Inheritance  Manipulating genomes  Cloning and Biotechnology  apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and</p>	<p><b>Focussed revision of Modules 1-6</b></p> <p><b>Module 1 covered with all practical skills work</b></p>	

	instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification	techniques appropriate to the knowledge and understanding included in the specification	techniques appropriate to the knowledge and understanding included in the specification	techniques appropriate to the knowledge and understanding included in the specification		
Year 13 Chemistry	<p><b>Module 5</b> Rates, Equilibrium and pH Transition Elements apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 5</b> Rates, Equilibrium and pH Energy apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 6</b> Aromatic compounds, carbonyls and acids Nitrogen compounds, polymers and synthesis apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Module 6</b> Aromatic compounds, carbonyls and acids Chromatography and qualitative analysis apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p><b>Focussed revision of Modules 1-6</b></p> <p><b>Module 1 covered with all practical skills work</b></p>	
Year 13 Physics	<p><b>Module 5</b> Circular Motion Oscillations Gravitational Fields Thermal Physics Ideal Gases</p>	<p><b>Module 6</b> Electric Fields Magnetic Fields Particle Physics Radioactivity</p>	<p><b>Module 5</b> Stars Cosmology</p> <p><b>Module 6</b> Nuclear Physics Medical Imaging</p>	<p><b>Module 6</b> Capacitance Topic targeted revision apply investigative approaches and methods to practical work</p>	<p><b>Focussed revision of Modules 1-6</b></p> <p><b>Module 1 covered with all practical skills work</b></p>	

	<p>apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p>apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p>apply investigative approaches and methods to practical work</p> <p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>	<p>safely and correctly use a range of practical equipment and materials</p> <p>follow written instructions</p> <p>make and record observations/measurements</p> <p>keep appropriate records of experimental activities</p> <p>present information and data in a scientific way</p> <p>use appropriate software and tools to process data, carry out research and report findings</p> <p>use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification</p>		
Year 13 Psychology	<p><b>Topic 1: Schizophrenia</b> Biological Explanations Psychological Explanations Biological Therapies: Drug therapy Psychological Therapies The interactionist approach</p> <p><b>Topic 2: Relationships</b> Sexual Selection and Human Reproductive Behaviour Factors affecting attraction Theories of Romantic relationships</p> <p>Demonstrate knowledge and understanding of</p>	<p><b>Topic 2: Relationships</b> Virtual relationships in social media Parasocial relationships</p> <p><b>Topic 3: Addiction</b> Describing Addiction Risk Factors in Developing Addiction Nicotine Addiction: Brain Neurochemistry and learning theory Gambling Addiction: Learning theory and Cognitive theory</p>	<p><b>Topic 3: Addiction</b> Reducing addiction: Drug Therapy Behavioural Intervention CBT Applying the theory of planned behaviour to addictive behaviour Applying Prochaska's model</p> <p><b>Topic 4: Research Methods</b> Correlations Case Studies Reliability and Validity Statistical tests Probability and Significance Test of Difference</p>	<p><b>Topic 5: Approaches in Psychology</b> Origins of Psychology Behaviourism Social Learning Theory The Cognitive Approach The Biological Approach The Psychodynamic Approach Humanistic Approach Comparison of Approaches</p> <p>Demonstrate knowledge and understanding of psychological concepts, theories, research studies, research methods and ethical issues</p>	Focussed revision of all Topics	

	<p>psychological concepts, theories, research studies, research methods and ethical issues</p> <p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>	<p>Demonstrate knowledge and understanding of psychological concepts, theories, research studies, research methods and ethical issues</p> <p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>	<p>Tests of Correlation Test of Association Reporting Psychological Investigations</p> <p>Demonstrate knowledge and understanding of psychological concepts, theories, research studies, research methods and ethical issues</p> <p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>	<p>Apply psychological knowledge and understanding in a range of contexts</p> <p>Analyse, interpret and evaluate psychological concepts, theories, research studies and research methods</p> <p>Evaluate therapies and treatments including in terms of their appropriateness and effectiveness</p>		
<p>Year 13 Environmental Science</p>	<p><b>Chapter 11:</b> Agriculture continued <b>Chapter 9:</b> Energy resources continued</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p> <p>comment on experimental design and evaluate scientific methods</p>	<p><b>Chapter 12:</b> Aquatic food production systems <b>Chapter 10:</b> Pollution</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p>	<p><b>Chapter 13:</b> Forest resources <b>Chapter 14:</b> Sustainability <b>Chapter 10:</b> Pollution</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p>	<p><b>Focussed revision of all Topics</b> Research methods, statistics and field work Revision</p> <p>solve problems set in practical contexts</p> <p>analyse and evaluate existing scientific knowledge</p> <p>apply scientific knowledge to practical contexts</p> <p>plan scientific investigations and apply investigative approaches and methods to practical work.</p>	<p><b>Focussed revision of all Topics</b> Research methods, statistics and field work Revision</p>	

	<p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>	<p>comment on experimental design and evaluate scientific methods</p> <p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>	<p>comment on experimental design and evaluate scientific methods</p> <p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>	<p>comment on experimental design and evaluate scientific methods</p> <p>evaluate results and draw conclusions with reference to measurement uncertainties and errors</p> <p>process and analyse data using appropriate mathematical skills as exemplified in the mathematical requirements</p>		
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Careers link can be anything associated with **employability skills\*** as well as developing **careers awareness**

\*e.g. developing students' **self-management, team working skills, problem solving skills, communication skills** (for example, letter writing)