

Year	Autumn		Spring		Summer	
	HT1	HT2	HT3	HT4	HT5	HT6
	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
7	<p><b>Cells</b></p> <p>BCL1.1 Living, dead and never been alive BCL1.2 Cells and cell structures BCL1.3 Cell shape and size BCL1.4 Diffusion and the cell membrane</p> <p><b>Materials</b></p> <p>CMS1.1 Combining materials CMS1.2 Classifying materials</p> <p><b>Particle Theory</b></p> <p>CPS1.1 Particle model for the solid, liquid and gas states CPS1.2 Particles in solutions</p>	<p><b>Solutions</b></p> <p>CSU1.1 Substance CSU1.2 Solutions CSU1.3 Separating solutions</p> <p><b>Forces</b></p> <p>PFM1.1 What forces do PFM1.2 Describing forces PFM1.3 Balanced and unbalanced forces PFM1.4 Friction PFM1.5 Energy stores and transfers</p>	<p><b>Elements and Compounds</b></p> <p>CPS2.1 Atoms and molecules CPS2.2 Symbols and formulae</p> <p><b>Designing Materials</b></p> <p>CMS2.1 Polymer properties</p> <p><b>Inheritance and the Genome</b></p> <p>BHL1.1 Heredity and genetic information BHL1.2 The structure and function of the genome</p>	<p><b>Variation</b></p> <p>BVE1.1 Differences within species BVE1.2 Changes in species over time – fossil evidence</p> <p><b>Changes Within an Organism’s Lifetime</b></p> <p>BHL2.1 Growth BHL2.2 Life cycles</p> <p><b>Reproduction</b></p> <p>BHL3.1 Sexual reproduction in humans BHL3.2 Contraception BHL3.3 Sexual and asexual reproduction in flowering plants</p>	<p><b>Solar System and Beyond</b></p> <p>PES1.1 Planets and the solar system PES1.2 Gravity PES1.3 The night sky, stars and galaxies</p> <p><b>Earth and Sun</b></p> <p>PES2.1 Days and seasons</p>	<p><b>Earth Resources</b></p> <p>EDE1.1 What’s in a rock? EDE1.2 Inside the Earth EDE1.3 Making rocks by heating</p> <p><b>Weathering and Erosion</b></p> <p>EEC4.1 Chemical weathering EDE2.1 Physical weathering and erosion</p> <p><b>Rock Changes</b></p> <p>EDE3.1 Making rocks by pressure and cementing EDE3.2 Making fossil fuels</p>

Year	Autumn		Spring		Summer	
	HT1	HT2	HT3	HT4	HT5	HT6
	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
8	<p><b>What are Health and Disease</b></p> <p>BHD1.1 Good and ill health BHD1.2 Disease</p> <p><b>Human Lifestyles and Health</b></p> <p>BHD2.1 Diet and exercise</p> <p><b>Health and Infectious Disease</b></p> <p>BHD3.1 Pathogens</p> <p><b>Sound and Light</b></p> <p>PSL1.1 Production and transmission of sound PSL1.2 Characteristics of light</p>	<p><b>Chemical Change</b></p> <p>CPS3.1 Rearrangement of atoms CCR1.1 Formation of new substance</p> <p><b>Solubility</b></p> <p>CSU2.1 Comparing solubility</p> <p><b>Moving by Force</b></p> <p>PFM2.1 Describing speed PFM2.2 Motion graphs PFM2.3 Changing motion PFM2.4 Drag</p>	<p><b>From Cells to Organ Systems</b></p> <p>BCL2.1 Working together – cells, tissues and organ systems BCL2.2 Supplying cells – the human circulatory, digestive and gas exchange systems BCL2.3 The human skeleton and muscles</p> <p><b>Heating and Cooling</b></p> <p>PMA1.1 Temperature PMA1.2 Heating and cooling PMA1.3 Thermal conduction PMA1.4 Thermal store of energy</p>	<p><b>Understanding Chemical Reactions</b></p> <p>CPS4.1 Representing reactions CPS4.2 Conservation of mass CCR2.1 Reactions in solution CCR2.2 Combustion</p> <p><b>Evaporation</b></p> <p>CPS5.1 Explaining evaporation</p> <p><b>Energy and Reactions</b></p> <p>CCR3.1 Exothermic and endothermic reactions</p>	<p><b>Interdependence of Organisms</b></p> <p>BOE1.1 Food chains and food webs BOE1.2 Interdependence within ecosystems</p> <p><b>Organisms in Their Environment</b></p> <p>BOE2.1 Ecosystem components and dynamics</p>	<p><b>Acids and Alkalis</b></p> <p>CSU3.1 pH scale CCR4.1 Neutralisation</p> <p><b>More About Force</b></p> <p>PFM3.1 Mass and weight PFM3.2 Hidden forces PFM3.3 Turning effects</p>

Year	Autumn		Spring		Summer	
	HT1	HT2	HT3	HT4	HT5	HT6
	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
9	<p><b>Periodic Table</b></p> <p>CSU4.1 Trends in physical properties CPS6.1 Atomic model CCR5.1 Periodic patterns</p> <p><b>How we See</b></p> <p>PSL2.1 The 'passive eye' model of vision PSL2.2 Seeing in colour</p> <p><b>Making Images</b></p> <p>PSL3.1 The ray model of light to explain images PSL3.2 Refraction and lenses</p>	<p><b>Classification</b></p> <p>BVE2.1 Identifying and classifying organisms</p> <p><b>Adaptation and Evolution</b></p> <p>BVE3.1 Explaining evolution</p> <p><b>Floating and Sinking</b></p> <p>PMA2.1 Floating, sinking and density PMA2.2 Pressure in fluids PMA2.3 Convection</p>	<p><b>Biochemistry</b></p> <p>BCL3.1 Plant nutrition and photosynthesis BCL3.2 Cellular respiration</p> <p><b>Simple Electrical Circuits</b></p> <p>PEM1.1 Making circuits PEM1.2 Electric current PEM1.3 Voltage PEM1.4 Static electricity</p> <p><b>More Electrical Circuits</b></p> <p>PEM2.1 Resistance PEM2.2 Parallel circuits</p>	<p><b>Waves</b></p> <p>PSL4.1 Waves on water and ropes PSL4.2 A wave model of sound</p> <p><b>Biodiversity and Human Impacts</b></p> <p>BOE3.1 Biodiversity, conservation and sustainability</p> <p><b>Air Pollution</b></p> <p>EEC1.1 Air quality</p> <p><b>Water Cycle</b></p> <p>EEC2.1 Water cycle processes</p> <p><b>Acids and Alkalis</b></p> <p>EEC3.1 Acid rain</p>	<p><b>Magnets and Electromagnets</b></p> <p>PEM3.1 Magnetic fields PEM3.2 Electromagnets</p>	<p><b>KS4 Transition Unit</b></p>

Year	Autumn		Spring		Summer	
	HT1	HT2	HT3	HT4	HT5	HT6
	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
10	<p><b>B1 Building Blocks of Life</b></p> <ul style="list-style-type: none"> <li>Eukaryotic &amp; Prokaryotic Cells</li> <li>Specialised Cells</li> <li>Microscopy</li> <li>Cell Division</li> <li>Stem Cells</li> </ul> <p><b>C1 Chemical Building Blocks</b></p> <ul style="list-style-type: none"> <li>States of Matter</li> <li>Elements</li> <li>Compounds and Mixtures</li> <li>Methods of Separation</li> <li>Atomic Structure</li> <li>Electronic Structure</li> </ul>	<p><b>B2 Human Body</b></p> <ul style="list-style-type: none"> <li>Digestive System</li> <li>Enzymes</li> <li>Respiratory System</li> <li>Heart, Blood and Circulation</li> <li>Exchange Surfaces</li> </ul> <p><b>P1 Energy</b></p> <ul style="list-style-type: none"> <li>Energy Stores</li> <li>Energy Changes</li> <li>Power and Efficiency</li> <li>Energy Resources</li> </ul>	<p><b>C2 Metals</b></p> <ul style="list-style-type: none"> <li>Properties of Metals</li> <li>Metal Reactions</li> <li>Reactivity</li> <li>Metal Extraction</li> <li>Electrolysis</li> </ul> <p><b>P2 Matter</b></p> <ul style="list-style-type: none"> <li>States of Matter</li> <li>Density</li> <li>Pressure</li> </ul> <p><b>P3 Heating</b></p> <ul style="list-style-type: none"> <li>Specific Heat Capacity</li> <li>Specific Latent Heat</li> <li>Insulating Buildings</li> </ul>	<p><b>B2 Human Body</b></p> <ul style="list-style-type: none"> <li>Aerobic and Anaerobic Respiration</li> <li>Exercise</li> <li>Nervous System and Reflexes</li> <li>Hormones</li> </ul> <p><b>C3 Non-Metals</b></p> <ul style="list-style-type: none"> <li>Properties of Non-Metals</li> <li>Types of Bonding</li> <li>Forms of Carbon</li> <li>Polymers</li> </ul>	<p><b>P6 Forces</b></p> <ul style="list-style-type: none"> <li>Contact and Non-Contact Forces</li> <li>Gravity</li> <li>Work</li> <li>Elasticity</li> <li>Newton's Laws</li> <li>Speed, Velocity and Displacement</li> <li>Stopping Distances</li> </ul> <p><b>P8 Magnetism</b></p> <ul style="list-style-type: none"> <li>Permanent and Induced Magnetism</li> <li>Magnetic Fields</li> <li>Motor Effect</li> <li>Electromagnetism</li> </ul>	<p><b>B3 Plants</b></p> <ul style="list-style-type: none"> <li>Plant Tissues and Organs</li> <li>Photosynthesis</li> <li>Osmosis</li> <li>Plant Adaptations</li> <li>Plant Diseases</li> </ul> <p><b>C4 Compounds</b></p> <ul style="list-style-type: none"> <li>Compounds</li> <li>Conservation of Mass</li> <li>Equations</li> <li>Ionic Bonding</li> </ul>

## Science Five Year Overview – Year 11 for 2023- 2024 ONLY

Year	Autumn		Spring		Summer	
	HT1	HT2	HT3	HT4	HT5	HT6
	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
11	<p><b>B5 Homeostasis &amp; Response</b></p> <ul style="list-style-type: none"> <li>Homeostasis</li> <li>Human Nervous System</li> <li>Human Endocrine System</li> <li>Control of Blood Glucose</li> <li>Hormones in Reproduction</li> <li>Contraception</li> </ul> <p><b>C4 Chemical Changes</b></p> <ul style="list-style-type: none"> <li>Reactivity Series</li> <li>Metal Extraction</li> <li>Acids and Alkalis</li> <li>Electrolysis</li> </ul> <p><b>P6 Waves</b></p> <ul style="list-style-type: none"> <li>Types of Waves</li> <li>Properties of Waves</li> <li>Electromagnetic Spectrum</li> </ul> <p><b>P7 Magnetism and Electromagnetism</b></p> <ul style="list-style-type: none"> <li>Permanent and Induced Magnetism</li> <li>Magnetic Fields</li> </ul>	<p><b>B3 Infection &amp; Response</b></p> <ul style="list-style-type: none"> <li>Communicable Disease</li> <li>Viral Disease</li> <li>Bacterial Disease</li> <li>Fungal and Protist Disease</li> <li>Immune System</li> <li>Vaccination</li> <li>Antibiotics &amp; Painkillers</li> <li>Drug Discovery &amp; Development</li> </ul> <p><b>P2 Electricity</b></p> <ul style="list-style-type: none"> <li>Current</li> <li>Potential Difference</li> <li>Resistance and Resistors</li> <li>Series and Parallel Circuits</li> <li>Domestic Supply and Mains</li> <li>Power</li> <li>Energy Transfers</li> <li>National Grid</li> </ul>	<p><b>C7 Organic Chemistry</b></p> <ul style="list-style-type: none"> <li>Hydrocarbons</li> <li>Fractional Distillation</li> <li>Cracking</li> </ul> <p><b>C8 Chemical Analysis</b></p> <ul style="list-style-type: none"> <li>Purity</li> <li>Chromatography</li> <li>Gas Tests</li> </ul> <p><b>B6 Inheritance, Variation &amp; Evolution</b></p> <ul style="list-style-type: none"> <li>Sexual &amp; Asexual Reproduction</li> <li>Meiosis</li> <li>DNA &amp; The Genome</li> <li>Genetic Inheritance</li> <li>Inherited Disorders</li> <li>Variation</li> <li>Evolution</li> <li>Evidence for Evolution &amp; Extinction</li> <li>Selective Breeding &amp; Genetic Engineering</li> <li>Classification</li> </ul>	<p><b>B7 Ecology</b></p> <ul style="list-style-type: none"> <li>Communities</li> <li>Biotic &amp; Abiotic Factors</li> <li>Adaptations</li> <li>Levels of Organisation</li> <li>Material Cycling</li> <li>Biodiversity</li> <li>Waste Management, Land Use &amp; Deforestation</li> <li>Global Warming</li> </ul> <p><b>C9 Chemistry of the Atmosphere</b></p> <ul style="list-style-type: none"> <li>Early Atmosphere</li> <li>Changes to the Atmosphere</li> <li>Human Activities and Pollutants</li> </ul> <p><b>C10 Using Resources</b></p> <ul style="list-style-type: none"> <li>Earth's Resources</li> <li>Potable Water</li> <li>Lifecycle Assessment and Recycling</li> </ul>	<p><b>P3 Particle Model of Matter</b></p> <ul style="list-style-type: none"> <li>Density</li> <li>Changes in State</li> <li>Internal Energy and Temperature Change</li> <li>Pressure</li> </ul> <p><b>P4 Atoms and Isotopes</b></p> <ul style="list-style-type: none"> <li>Radioactive Decay</li> <li>Nuclear Equations</li> <li>Contamination</li> </ul> <p><b>C3 Quantitative Chemistry</b></p> <ul style="list-style-type: none"> <li>Conservation of Mass and Balanced Equations</li> <li>Formula Mass</li> <li>Concentration</li> </ul> <p><b>Revision</b></p>	Revision

Year	Autumn		Spring		Summer	
	<ul style="list-style-type: none"> <li>• Electromagnetism</li> </ul> <p><b>C5 and C6 Exothermic and Exothermic Reactions/ Rate and Extent of Chemical Change</b></p> <ul style="list-style-type: none"> <li>• Exothermic and Endothermic Reactions</li> <li>• Reversible Reactions</li> </ul>					

## Science Five Year Overview – Year 11 for 2024-2025

Year	Autumn		Spring		Summer	
	HT1	HT2 (18)	HT3	HT4	HT5	HT6
	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
11	<b>B6 Our Environment</b> <ul style="list-style-type: none"> <li>Communities and Organisation</li> <li>Sampling</li> <li>Adaptations</li> <li>Material Cycling</li> <li>Biodiversity</li> <li>Global Warming</li> </ul> <b>P7 Electricity</b> <ul style="list-style-type: none"> <li>Series and Parallel Circuits</li> <li>Current, Potential Difference and Resistance</li> <li>Domestic Supply and Mains</li> <li>Power</li> <li>Energy Transfers</li> </ul>	<b>C5 Chemical Reactions</b> <ul style="list-style-type: none"> <li>Exothermic and Endothermic Reactions</li> <li>Acid Reactions</li> <li>Rate of Reaction</li> </ul> <b>B4 Healthy Lifestyles</b> <ul style="list-style-type: none"> <li>Communicable and Non-communicable Diseases</li> <li>Immune System</li> <li>Vaccination</li> <li>Drug Testing</li> <li>Heart Disease</li> <li>Cancer</li> </ul>	<b>P5 Waves</b> <ul style="list-style-type: none"> <li>Types of Wave</li> <li>Wave Properties</li> <li>Electromagnetic Spectrum</li> </ul> <b>C6 Fuels</b> <ul style="list-style-type: none"> <li>Hydrocarbons</li> <li>Fractional Distillation</li> <li>Cracking</li> </ul> <b>P4 Radioactivity</b> <ul style="list-style-type: none"> <li>Radioactive Decay</li> <li>Nuclear Equations</li> <li>Contamination</li> </ul>	<b>B5 Reproduction &amp; Inheritance</b> <ul style="list-style-type: none"> <li>Sexual &amp; Asexual Reproduction</li> <li>Menstrual Cycle and Fertility</li> <li>DNA &amp; The Genome</li> <li>Genetic Inheritance</li> <li>Inherited Disorders</li> <li>Evolution</li> <li>Selective Breeding &amp; Genetic Engineering</li> <li>Classification</li> </ul> <b>C7 Chemistry of Our World</b> <ul style="list-style-type: none"> <li>Our Atmosphere</li> <li>Greenhouse Effect</li> <li>Potable Water</li> </ul>	Revision	Revision



## Science Curriculum Overview