

Science - Year 7 Long Term Curriculum Map		
TERM 1	TERM 2	TERM 3
<p>Students will develop a deeper understanding of a range of scientific ideas in the subject disciplines of biology, chemistry and physics. Pupils should become aware of some of the big ideas underpinning scientific knowledge and understanding.</p> <p><b>‘Working scientifically’ will be taught throughout the course and clearly related to the science content. Pupils will also develop their use of scientific vocabulary, including the use of scientific nomenclature and units and mathematical representations.</b></p>		
<p>Topics taught:</p> <ul style="list-style-type: none"> <li>• <b>Forensics – safety and investigative work.</b></li> <li>• <b>Living organisms – cells and the human body.</b></li> </ul>	<p>Topics taught:</p> <ul style="list-style-type: none"> <li>• <b>Forces and motion – mass, weight, pressure and speed.</b></li> <li>• <b>Circle of life – DNA, inheritance and reproduction.</b></li> </ul>	<p>Topics taught:</p> <ul style="list-style-type: none"> <li>• <b>Electricity and magnetism – circuits and magnets.</b></li> <li>• <b>Madagascar – adaptations, classification, food chains, food webs and plants.</b></li> </ul>
Science - Year 8 Long Term Curriculum Map		
TERM 1	TERM 2	TERM 3
<p>Students will develop a deeper understanding of a range of scientific ideas in the subject disciplines of biology, chemistry and physics. Pupils should become aware of some of the big ideas underpinning scientific knowledge and understanding.</p> <p><b>‘Working scientifically’ will be taught throughout the course and clearly related to the science content. Pupils will also develop their use of scientific vocabulary, including the use of scientific nomenclature and units and mathematical representations.</b></p>		
<p>Topics taught:</p> <ul style="list-style-type: none"> <li>• <b>Alchemists – chemical reactions.</b></li> <li>• <b>Waves and energy – sound and light.</b></li> </ul>	<p>Topics taught:</p> <ul style="list-style-type: none"> <li>• <b>Casualty – the function of the body.</b></li> <li>• <b>Dr Who – the periodic table.</b></li> </ul>	<p>Topics taught:</p> <ul style="list-style-type: none"> <li>• <b>Fossil hunters – earth, fossils and rocks.</b></li> <li>• <b>Star wars – the solar system.</b></li> </ul>
Science - Year 9 Long Term Curriculum Map		
<p><b>Combined Science: Biology, Chemistry, Physics</b></p> <p>Students will continue with the process of building upon and deepening scientific knowledge and the understanding of ideas developed in years 7 and 8.</p>		
<p><b>B1 – Cell level systems</b> -Cells, respiration and photosynthesis.</p> <p><b>B2 – Scaling up</b> - Cell functions and the challenges of size.</p> <p><b>C1 – Particles</b> - The particle model and atomic structure.</p> <p><b>C2 – Elements, compound and mixtures</b> - Purity, separating mixtures, bonding and properties of materials</p> <p><b>P1 – Matter</b> - The particle model and changes of state.</p> <p><b>P2 – Forces</b> - Motion, Newton’s laws and forces in action.</p> <p>Students will also be taught one of the following:</p> <p><b>Topic CS7 (Combined science).</b></p> <p><b>Topic B7 (Biology).</b></p> <p><b>Topic C7 (Chemistry).</b></p>		

**Topic P9 (Physics)**

These are practical-based topics which provide learners with the necessary skills to undertake the 15% practical content in the examinations.

**Science - Year 10 Long Term Curriculum Map**
**Combined Science: Biology, Chemistry, Physics**

Students will continue with the process of building upon and deepening scientific knowledge and the understanding of ideas developed in years 7, 8 and 9.

**B3 – Organism level systems** - The nervous system, the endocrine system and maintaining internal environments.

**B4 – Community level systems** - Ecosystems.

**C3 – Chemical reactions** - Types of chemical reactions, energetics and electrolysis.

**C4 – Predicting and identifying reactions and products** - Predicting chemical reactions.

**P3 – Electricity and magnetism** - Static and charge, simple circuits and magnets and magnetism.

**P4 – Waves and radioactivity** - Wave behaviour, the electromagnetic spectrum and radioactivity.

Students will also be taught one of the following:

**Topic CS7 (Combined science).**

**Topic B7 (Biology).**

**Topic C7 (Chemistry).**

**Topic P9 (Physics)**

These are practical-based topics which provide learners with the necessary skills to undertake the 15% practical content in the examinations.

**Science - Year 11 Long Term Curriculum Map**
**Additional Science**

Students will continue with the process of building upon and deepening scientific knowledge and the understanding of ideas developed in years 7, 8, 9 and 10

**B3 – Living and growing** - Molecules of life, proteins, mutations, cell division, the circulatory system, genes and cloning.

**B4 – It's a green world** - Ecology, photosynthesis, diffusion, osmosis, decay and farming.

**C3 – Chemical economics** - Rates of reaction, percentage yield and atom economy, energy, allotropes of carbon and nanochemistry.

**C4 – The periodic table** - Atomic structure, bonding, group 1 elements, group 7 elements, transition elements and water.

**P3 – Forces for transport** - Speed, forces and motion, work and power, energy and terminal velocity.

**P4 – Waves and radioactivity** - Wave behaviour, the electromagnetic spectrum and radioactivity.

Biology	<b>B5 – The living body</b> - Skeletons, circulatory systems, respiratory systems, digestion and growth and repair <b>B6 – Beyond the microscope</b> - Microorganisms, biofuels, enzymes and gene technology.
Chemistry	<b>C5 – How much? (Quantitative analysis)</b> - Moles, empirical formula, titrations, equilibria, strong and weak acids and precipitation. <b>C6 – Chemistry out there</b> - Electrolysis, energy transfers, redox reactions, alcohols, the ozone layer, hardness of water, natural fats and detergents.
Physics	<b>P5 – Space for reflection</b> - Satellites, gravity, equations of motion, satellite communication, refraction of waves and optics. <b>P6 – Electricity for gadgets</b> - Resistance, logic gates, motors, generating electricity and transformers.