



Please find below a detailed outline of the curriculum covered in Physics through Year 12 in Sixth Form.

## Year 12

Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7
<p><b>Unit 1 – Kinematics</b></p> <ul style="list-style-type: none"> <li>distance/ displacement</li> <li>speed/ velocity</li> <li>distance-time graphs</li> <li>vector addition</li> </ul> <p><b>Unit 2 – Accelerated motion</b></p> <ul style="list-style-type: none"> <li>acceleration</li> <li>measuring acceleration</li> <li>SUVAT-eqns.</li> <li>motion in 2D</li> </ul> <p><b>Unit 3 – Dynamics</b></p> <ul style="list-style-type: none"> <li>mass and inertia</li> <li>gravity</li> <li>motion in fluids</li> <li>Newton's laws</li> </ul> <p><b>Unit 4 - Forces, vectors and moments</b></p> <ul style="list-style-type: none"> <li>forces as vectors</li> <li>center of gravity</li> <li>torque</li> </ul>	<p><b>Unit 5 – Work, energy and power</b></p> <ul style="list-style-type: none"> <li>types of energy</li> <li>conservation of energy</li> <li>power</li> </ul> <p><b>Unit 6 – momentum</b></p> <ul style="list-style-type: none"> <li>linear momentum</li> <li>conservation of momentum</li> <li>impulse</li> <li>collisions in 2D</li> </ul> <p><b>Unit 7 - Matter and materials</b></p> <ul style="list-style-type: none"> <li>density</li> <li>Pressure</li> <li>elasticity of materials</li> </ul>	<p><b>Unit 8 - Electric current</b></p> <ul style="list-style-type: none"> <li>electric circuits</li> <li>equation for current</li> <li>voltage</li> <li>resistance</li> <li>power</li> </ul> <p><b>Unit 9 - Kirchhoff's laws</b></p> <ul style="list-style-type: none"> <li>Kirchhoff's 1st law</li> <li>Kirchhoff's 2nd law</li> <li>Applications to circuits</li> </ul> <p><b>Unit 10 - Resistance and resistivity</b></p> <ul style="list-style-type: none"> <li>Ohm's law</li> <li>I, V - characteristic</li> <li>resistivity</li> </ul>	<p><b>Unit 11 – Practical circuits</b></p> <ul style="list-style-type: none"> <li>internal resistance</li> <li>potential dividers</li> <li>potentiometers</li> </ul> <p><b>Unit 12 – Waves</b></p> <ul style="list-style-type: none"> <li>types of waves</li> <li>wave speed</li> <li>Doppler effect</li> <li>EM-waves</li> </ul> <p><b>Unit 13 - Superposition of waves</b></p> <ul style="list-style-type: none"> <li>superposition principle</li> <li>interference</li> <li>diffraction</li> <li>Young's experiment</li> </ul>	<p><b>Unit 14 – Stationary waves</b></p> <ul style="list-style-type: none"> <li>nodes and antinodes</li> <li>sound waves</li> </ul> <p><b>Unit 15 – Atomic structure</b></p> <ul style="list-style-type: none"> <li>models of the atom</li> <li>Rutherford's experiment</li> <li>subatomic particles</li> <li>decay law</li> <li>types of decay</li> <li>fundamental particles and forces</li> <li>ionising radiation</li> </ul> <p><b>Review</b></p> <p><b>Revision</b></p> <p><b>Past Papers</b></p>	<p><b>Revision</b></p> <p><b>Review</b></p> <p><b>Past papers</b></p> <p><b>Intervention</b></p>	
End of Unit Assessment	End of Unit Assessment	End of Unit Assessment	<b>Internal Mock Cambridge IGCSE Exam</b>	Self-Assessment and Intervention	Self-Assessment and Exam Skills	<b>External Cambridge Exam</b>
		Progress Data for Autumn Report		Mock Exam Data for Spring Report		Results
Autumn			Spring		Summer	