Curriculum Plans – *Year 12 - Physics*

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

Block	1	2	3	4	5	6	7
Dates	**August - September** (5 weeks)	**October** (4 weeks)	**November - December** (6 weeks)	**January - February** (5 weeks)	**February - March** (6 weeks)	**April - April** (4 weeks)	**May - June** (7 weeks)
Topics	**Kinematics** (Unit 1) ● Distance/ displacement ● Speed/ velocity ● Distance-time graphs ● Vector addition **Accelerated motion** (Unit 2) ● Acceleration ● Measuring acceleration ● SUVAT-equations ● Motion in 2D **Dynamics** (Unit 3) ● Mass and inertia ● Gravity ● Motion in fluids ● Newton's laws **Forces, vectors and moments** (Unit 4) ● Forces as vectors ● Center of gravity ● Torque **Practical skills**	**Work, energy and power** (Unit 5) ● Types of energy ● Conservation of energy ● Power **Momentum** (Unit 6) ● Linear momentum ● Conservation of momentum ● Impulse ● Collisions in 2D **Matter and materials** (Unit 7) ● Density ● Pressure ● Elasticity of materials **Practical skills**	**Electric current** (Unit 8) ● Electric circuits ● Equation for current ● Voltage ● Resistance ● Power **Kirchhoff's laws** (Unit 9) ● Kirchhoff's 1st law ● Kirchhoff's 2nd law ● Applications to circuits **Resistance and resistivity** (Unit 10) ● Ohm's law ● I, V - characteristic ● Resistivity **Practical skills**	**Practical circuits** (Unit 11) ● Internal resistance ● Potential dividers ● Potentiometers **Waves** (Unit 12) ● Types of waves ● Wave speed ● Doppler effect ● EM-waves **Superposition of waves** (Unit 13) ● Superposition principle ● Interference ● Diffraction ● Young's experiment **Past papers and exam technique** **Practical skills** **MOCK exam** **Intervention**	**Stationary waves** (Unit 14) ● Nodes and antinodes ● Sound waves **Atomic structure** (Unit 15) ● models of the atom ● Rutherford's experiment ● subatomic particles ● decay law ● types of decay ● fundamental particles and forces ● ionizing radiation **Revision** Units 11-13 Units 14 and 15 **Past papers and exam technique** **Practical skills** **Intervention**	**Revision** Units 1-4 Units 5-7 Units 8-10 **Past papers and exam technique** **Practical skills** **Intervention**	**Revision Lessons** **AS Exam**
Assessments	Unit 1 - 4 Assessment	Unit 1-7 Assessment	Unit 1-10 Assessment	Unit 1-13 Assessment	Unit 1-15 Assessment	Unit 1-15 Assessment	**External AS Exam**
Academic Theme	Planning for Tomorrow	The World around us	Better Together	The Working World	Opportunities for Everyone	Keep it Green, Keep it Clean	Healthy Body, Healthy Mind