

Year 10 Physics	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	Energy <ul style="list-style-type: none"> • Energy stores • Energy transfers • Work • Mechanical energy • Elastic energy • Efficiency • Electrical appliances • Energy transfer by conduction, convection and radiation • Specific heat capacity • Energy resources 	Electricity <ul style="list-style-type: none"> • Static electricity • Current and charge • Potential difference • Resistance • IV characteristics • Series circuits • Parallel circuits • AC/DC • Plugs • Electrical power • Cost of electricity 	Molecules and Matter <ul style="list-style-type: none"> • Density • States of matter • Change of state • Internal energy • Latent heat • Pressure and temp • Pressure and volume 	Radioactivity <ul style="list-style-type: none"> • The atom • The nucleus • Isotopes • Radiation • Half life • Radiation in medicine • Fission and fusion • Nuclear issues 	Electromagnetism <ul style="list-style-type: none"> • Magnetic fields • Magnetic fields and current • Electromagnetic devices • Motor effect • Generator effect • AC generator • Transformers • 	Space <ul style="list-style-type: none"> • Solar system • Life cycle of a star • Planets satellites and orbits • The universe
Working Scientifically Skills	Use appropriate apparatus Use apparatus safely	Use appropriate apparatus Use instruments to measure pd and current Use circuit diagrams to construct and check circuits	Use appropriate apparatus to make and record a range of measurements to calculate densities of solids and liquids	Using graphs and calculations to calculate half-life of radioisotopes Numeracy	Analysing the processes	Making predictions with justifications
Core Practical	<ul style="list-style-type: none"> • Specific heat capacity • Thermal insulation 	<ul style="list-style-type: none"> • Resistance • IV characteristics 	<ul style="list-style-type: none"> • Density 			•
Independent Learning Link	Energy	Electricity	Particle Model of Matter	Atomic Structure	Magnetism	Space

Year 11 Physics	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	<p>Force and pressure</p> <ul style="list-style-type: none"> • Pressure on solids • Pressure in liquids • Atmospheric Pressure • Upthrust and floating 	<p>Waves</p> <ul style="list-style-type: none"> • Nature of waves • Properties of waves • Reflection and refraction • Sound • Ultrasound • Seismic waves <p>Electromagnetic spectrum</p> <p>To includes uses and dangers of</p> <ul style="list-style-type: none"> • Radio waves • Microwaves • Infra –red • Visible • Ultra violet • x-rays and • gamma rays <ul style="list-style-type: none"> • x-rays in medicine 	<p>Light</p> <ul style="list-style-type: none"> • Reflection • Refraction • Light and colour • Lenses • Ray diagrams 	<p>Forces</p> <ul style="list-style-type: none"> • Scalars and vectors • Resultant forces • Parallelogram of forces • Resolution of forces • Centre of mass • Moments • Equilibrium <p>Gears and levers</p>	<p>Motion</p> <ul style="list-style-type: none"> • Distance time graphs • Velocity • Velocity time graphs • Acceleration • Force and motion • Newton’s second law • Terminal velocity • Force and braking • Momentum • Application of momentum • Car safety 	
Working Scientifically Skills	<p>Numeracy in science</p> <p>Algebra</p> <p>Rearranging equations</p>	<p>Make observations of waves in fluids and solids to identify the suitability of apparatus to measure speed, frequency and wavelength</p>	<p>Make observations of the effects of the interaction of electromagnetic waves with matter</p> <p>Make observations of waves in fluids and solids</p>	<p>Carry out practicals safely to increase understanding of the concepts</p>	<p>Use appropriate apparatus</p> <p>Use apparatus safely</p> <p>Use appropriate techniques to measure motion</p>	
Core Practical		<ul style="list-style-type: none"> • Waves 	<ul style="list-style-type: none"> • Light • Radiation and absorption 		<ul style="list-style-type: none"> • Acceleration • Force and elasticity 	
Independent Learning Link	<p>Forces</p>	<p>Wave properties</p> <p>Sound Waves</p>	<p>Reflection and Refraction</p> <p>Lenses</p>	<p>Forces</p>	<p>Forces</p>	