

**Curriculum Map: Physics GCSE 3 year delivery.**

Y9 Content and Topics	<p><b>Physics P1</b>  <b>Conservation and Dissipation of energy</b>  Changes in energy stores  Conservation of energy  Energy and Work  GPE  KE and elastic energy  Energy dissipation  Energy and efficiency  Electrical appliances  Energy and power</p>	<p><b>Physics P2</b>  <b>Energy transfer by heating</b>  Energy transfer by conduction  <i>Infrared radiation</i>  <i>More about infrared radiation</i>  Specific heat capacity  Heating and insulating buildings</p>	<p><b>Physics P3</b>  <b>Energy resources</b>  Energy demands  Energy from wind and water  Power from the Sun and the Earth  Energy and environment  Big energy issues</p>	<p><b>Physics P4</b>  <b>Electric circuits</b>  <i>Electrical charges and fields</i>  Current and charge  Potential difference and resistance  Component characteristics  Series circuits  Parallel circuits</p>	<p><b>Physics P5 Electricity in the home</b>  Alternating current  Cable and plugs  Electrical power and PD  Electrical currents and energy transfer  Appliances and efficiency</p>	<p><b>Physics P6 Molecules and matter</b>  Density  States of matter  Changes of state  Internal energy  Specific latent heat  Gas pressure and temperature  <i>Gas pressure and volume</i></p>
Y9 Skills		<p><i>Investigating thermal insulation required practical</i></p> <p>Determining Specific heat capacity required practical</p>		<p>Investigating resistance required practical</p> <p>Investigating electrical components required practical</p>		<p>Calculating density required practical</p>
Y9 Assessments/PPEs		<p>Tracking Assessment</p>		<p>Tracking Assessment</p>		<p>Tracking Assessment  End of Year Exam</p>
Y10 Content and Topics	<p><b>Physics P7</b>  <b>Radioactivity</b>  Atoms and radiation  The discovery of the nucleus  Changes in the nucleus</p>	<p><b>Physics P8</b>  <b>Forces in balance</b>  Vector and scalars  Forces between objects  Resultant forces  <i>Moments at work</i></p>	<p><b>Physics P9</b>  <b>Motion</b>  Speed and distance-time graphs  Forces between objects</p>	<p><b>Physics P10</b>  <b>Force and Motion</b>  Forces and acceleration  Weight and terminal velocity  Force and braking</p>	<p><b>Physics P12</b>  <b>Wave properties</b>  Nature of waves  The properties of waves  Reflection and refraction</p>	<p><b>Physics P13</b>  <b>Electromagnetic waves</b>  The electromagnetic spectrum  Light, infrared, microwaves &amp; radio</p>

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	<p>More about alpha, beta, and gamma Activity and half-life <i>Nuclear radiation in medicine</i> <i>Nuclear fission</i> <i>Nuclear fusion</i> <i>Nuclear issues</i></p>	<p><i>More about levers and gears</i> Centre of mass <i>Moments and equilibrium</i> The parallelogram of forces Resolution of forces</p>	<p>More about velocity-time graphs Analysing motion graphs</p>	<p>Momentum <i>Using conservation of momentum</i> <i>Impact forces</i> <i>Safety first</i> Forces and elasticity</p> <p><b>Physics P11</b> <b>Forces and Pressure</b> <i>Pressure and surfaces</i> <i>Pressure in a liquid at rest</i> <i>Atmospheric pressure</i> <i>Upthrust and flotation</i></p>	<p>More about waves <i>Sound waves</i> <i>The use of ultrasound</i> <i>Seismic waves</i></p>	<p>Communications Ultraviolet waves, x-rays &amp; gamma X-rays in medicine</p>
Y10 Skills				<p>Investigating the relationship between force and acceleration required practical</p> <p>Investigating the relationship between force and extension for a spring required practical</p>	<p>Investigating plane waves in a ripple tank and waves in a solid required practical</p>	<p>Investigating infrared radiation required practical</p>
Y10 Assessments/PPEs		Tracking Assessment		Tracking Assessment		Tracking Assessment End of Year Exam
Y11 Content and Topics	<p><b>Physics P15 Electromagnetism</b> Magnetic fields Magnetic fields of electric currents</p>	<p>Revision</p> <p><b>Physics P16 Space</b> <i>Formation of the solar system</i></p>	Revision	Revision	Exam Season	

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	<p><i>Electromagnets in devices</i>  <i>The motor effect</i>  <i>The generator effect</i>  <i>The AC generator</i>  <i>Transformers</i>  <i>Transformers in action</i></p> <p><b>P14 Light</b>  <i>Reflection of light</i>  <i>Refraction of light</i>  <i>Light and colour</i>  <i>Lenses</i>  <i>Using lenses</i></p>	<p><i>The life history of a star</i>  <i>Planets, satellites and orbits</i>  <i>The expanding universe</i>  <i>The beginning and future of the universe</i></p>				
Y11 Skills	<p><i>Investigating reflection and refraction of light required practical</i></p>					
Y11 Assessments/PPEs		Tracking Assessment GCSE Mock 1		Tracking Assessment GCSE Mock 2		