



Year 9 Physics Learning Journey

When?	Knowledge	Understanding	Assessment
<p>P1 Conservation and dissipation of energy</p>	<p>Be able to:</p> <ul style="list-style-type: none"> • Describe the ways in which energy can be stored and transferred • Define the conservation of energy and describe why it is important • Define work done and be able to carry out calculations involving work • Name and describe different energy stores • Describe and calculate efficiency 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>P1 Conservation and dissipation of energy key words:</p> <p>conservation of energy dissipated energy / dissipation of energy efficiency elastic potential energy Hooke's Law input energy power spring constant useful energy wasted energy work</p>	<p>P1 Conservation and dissipation of energy assessment (30 marks)</p>
<p>P3 Energy resources</p>	<p>Be able to:</p> <ul style="list-style-type: none"> • Describe the ways in which energy demands are met • Describe the different renewable energy resources 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>P3 Energy resources key words:</p> <p>biofuel carbon-neutral geothermal energy national grid nuclear fuel nucleus reactor core renewable energy</p>	<p>P3 Energy resources assessment (30 marks)</p>

<p>P2 Energy transfer by heating</p>	<p>Be able to:</p> <ul style="list-style-type: none"> • Describe which materials make the best conductors and insulators • Carry out calculations using specific heat capacity • Describe the ways that homes are heated and insulated 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>P2 Energy transfer by heating key words: black body radiation infrared radiation specific heat capacity thermal conductivity</p>	<p>P2 Energy transfer by heating assessment (30 marks)</p>
<p>P6 Molecules and matter</p>	<p>Be able to:</p> <ul style="list-style-type: none"> • Carry out calculations using the density equation • Describe the different properties and molecular arrangements of solids, liquids and gases • Describe the different changes of state • Describe and calculate specific latent heat • Describe gas pressure and temperature 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>P6 Molecules and matter key words: boiling point Boyle's Law density freezing point internal energy latent heat melting point physical change pressure specific latent heat of fusion L_f specific latent heat of vaporisation L_v</p>	<p>P6 Molecules and matter assessment (30 marks)</p>