

Subject	Physics		
Interpretation of National Curriculum into Year group Endpoints			
Year	Term 1	Term 2	Term 3
9	<p>Students will describe and explain the concepts of:</p> <p><b>Forces</b></p> <ul style="list-style-type: none"> <li>• forces and fields: electrostatic, magnetic, gravity</li> <li>• forces as vectors</li> <li>• calculating work done as force x distance; elastic and inelastic stretching</li> <li>• speed of sound, estimating speeds and accelerations in everyday contexts</li> <li>• interpreting quantitatively graphs of distance, time, and speed</li> <li>• acceleration caused by forces; Newton’s First Law</li> <li>• weight and gravitational field strength</li> <li>• decelerations and braking distances involved on roads, safety.</li> </ul>	<p>Students will describe and explain the concepts of:</p> <p><b>Heating and cooling</b></p> <ul style="list-style-type: none"> <li>• Temperature what does it really mean</li> <li>• Heating and cooling with thermal conduction</li> <li>• Thermal energy store</li> </ul> <p><b>P6 Waves</b></p> <ul style="list-style-type: none"> <li>• amplitude, wavelength, frequency, relating velocity to frequency and wavelength</li> <li>• transverse and longitudinal waves</li> <li>• electromagnetic waves, velocity in vacuum; waves transferring energy; wavelengths and frequencies from radio to gamma-rays</li> <li>• uses in the radio, microwave, infra-red, visible, ultra-violet, X-ray and gamma ray regions, hazardous effects on bodily tissues.</li> </ul>	<p>Students will describe and explain the concepts of:</p> <p><b>P1 Energy</b></p> <ul style="list-style-type: none"> <li>• energy changes in a system involving heating, doing work using forces, or doing work using an electric current: calculating the stored energies and energy changes involved</li> <li>• conservation of energy in a closed system, dissipation</li> <li>• power as the rate of transfer of energy</li> <li>• calculating energy efficiency for any energy transfers</li> <li>• renewable and non-renewable energy sources used on Earth, changes in how these are used.</li> </ul>