

Subject	Year	Term
Physics	13	1
Topic		
Topic 9 Thermal Physics		
Content (Intent)		
<b>Prior Learning (Topic) Topic 2 (mechanics), Topic 3 (electricity)</b>		
<p>Ideal gases Equation of state <math>pV = NkT</math> Concept of absolute zero, <math>T = \vartheta + 273</math></p> <p>Kinetic theory: derive <math>pV = \frac{1}{3}Nm \langle c^2 \rangle</math> Temperature and molecular kinetic energy <math>\frac{1}{2}m \langle c^2 \rangle = \frac{3}{2}kT</math> Concept of internal energy Specific heat capacity, <math>\Delta E = mc\Delta\theta</math> Specific latent heat, <math>\Delta E = L\Delta m</math></p> <ul style="list-style-type: none"> <li><i>CORE PRACTICAL 12</i>: Calibrate a thermistor in a potential divider circuit as a thermostat.</li> <li><i>CORE PRACTICAL 13</i>: Determine the specific latent heat of a phase change.</li> <li><i>CORE PRACTICAL 14</i>: Investigate the relationship between pressure and volume of a gas at fixed temperature.</li> </ul>		
How will knowledge and skills be taught? (Implementation)	How will your understanding be assessed & recorded (Impact)	
<p>Investigate the relationship between pressure and temperature of a gas at fixed volume. Mathematical requirement: Derivation of both equations. Experiments to find the SHC of a solid and a liquid</p>	<p>Homework Booklet 9 marked and written feedback given Test 9 marked, graded and feedback given</p>	
How can parents help at home?		
Check that the homework booklet 9 is completed		
Helpful further reading/discussion		
<p><b>Reading</b> <b>Advanced Physics for you</b> <b>chapters 14,15</b></p>	<p><b>Vocabulary Lists</b> <i>See front of homework booklet</i></p>	<p><b>Careers Links</b></p>