



A Level Physics Online

Edexcel Physics – 9PH0

Module 9: Thermodynamics

You should be able to demonstrate and show your understanding of:	Progress and understanding:			
	1	2	3	4
Thermodynamics				
How to use the equations: $\Delta E = mc\Delta\theta$ and $\Delta E = L\Delta m$				
CORE PRACTICAL 12: Calibrate a thermistor in a potential divider circuit as a thermostat				
CORE PRACTICAL 13: Determine the specific latent heat of a phase change				
The concept of internal energy as the random distribution of potential and kinetic energy amongst molecules				
The concept of absolute zero and how average kinetic energy of molecules is related to the absolute temperature				
How to derive and use the equation: $pV = \frac{1}{3}Nm \langle c^2 \rangle$ whilst using the kinetic theory model				
Be able to use the equation $pV = NkT$ for an ideal gas				
CORE PRACTICAL 14: Investigate the relationship between pressure and volume of a gas at fixed temperature				
How to derive and use the equation: $\frac{1}{2}m \langle c^2 \rangle = \frac{3}{2}kT$				
What is meant by a black body radiator and be able to interpret radiation curves for black body radiators				
Stefan-Boltzmann equation: $L = \sigma AT^4$ (for black body radiators)				
Wien's law equation: $\lambda_{(\max)}T = 2.898 \times 10^{-3} \text{ m K}$ (for black body radiators)				

