

3.1 Thermal Concepts

- Temperature + scales
- Heat (form of energy)
- Specific heat cap. $Q = mc \Delta T$
- Phase changes, latent heat $Q = mL$

L_f L_v

3.2 Modelling a gas

- Ideal gases
- Equation of state $pV = nRT$
- $\frac{p_1 V_1}{T_1} = \frac{p_2 V_2}{T_2}$
- Boltzmann equation $\bar{E}_k = \frac{3}{2} kT$

T in K!

4.1 Oscillations

- SHM (springs!)

4.2 Travelling waves

- wave equation $v = f \cdot \lambda$
- transverse, longitudinal

4.3 Wave characteristics

- superposition
- polarisation

4.4 Wave behaviour

- reflection, refraction, diffraction...

4.5 Standing waves

- harmonics

(1.1 Included by default...)

ch. 3: p. 142 $\rightarrow$ 11, 14, (16)

ch. 4: p. 190 $\rightarrow$ 11, 12, 13, (16)