



Oxford Cambridge and RSA

Autumn 2021

**GCSE (9–1) Combined Science Physics B
(Twenty First Century Science)**

J260 03/07

Data Sheet



INSTRUCTIONS

- Do **not** send this Data Sheet for marking. Keep it in the centre or recycle it.

INFORMATION

- This document has **2** pages.

Equations in physics

$(\text{final speed})^2 - (\text{initial speed})^2 = 2 \times \text{acceleration} \times \text{distance}$

$\text{change in internal energy} = \text{mass} \times \text{specific heat capacity} \times \text{change in temperature}$

$\text{energy to cause a change of state} = \text{mass} \times \text{specific latent heat}$

$\text{energy stored in a stretched spring} = \frac{1}{2} \times \text{spring constant} \times (\text{extension})^2$

$\text{potential difference across primary coil} \times \text{current in primary coil} =$
 $\text{potential difference across secondary coil} \times \text{current in secondary coil}$

Higher tier only –

$\text{force} = \text{magnetic flux density} \times \text{current} \times \text{length of conductor}$

$\text{change in momentum} = \text{resultant force} \times \text{time for which it acts}$

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