



Force & Energy
Science – Junior Cert
Quick Notes

Force & Energy

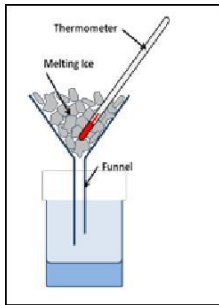
Force and Energy

*Forces occur throughout nature and affect all aspects of living and working.
Energy cannot be created or destroyed. It is converted from one form to another.
It is in the process of these conversions that useful work is done.
Natural resources need to be conserved.*

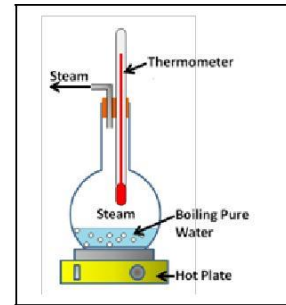
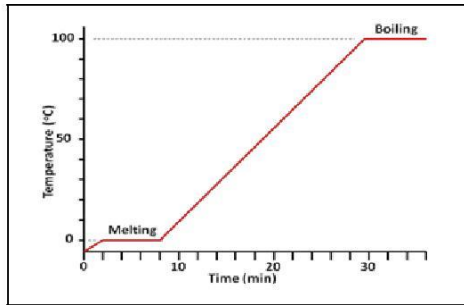
Measurement in Science

Temperature is the **hotness or coldness** of a body
Thermometer is used to **measure temperature**

Melting point of Ice (0°C)



Boiling Point of Pure Water (100°C)



Système International (SI) units

Scientists all over the world use these units for measurements to avoid confusion

Quantity	SI unit	Measuring Instrument
Length	m (metre)	Ruler, opisometer, callipers
Mass	kg (kilogram)	Torsion balance
Time	s (second)	Watch or timer

Derived Units are units which have to be work out, using a formula, from the basic units listed above

Quantity	SI unit	Formula
Area	cm ² (square centimetre)	Area = length × width
Volume	cm ³ (cubic centimetre)	Volume = length × width × Height
Density	gcm ⁻³ (grams per cubic centimetre)	Density = mass ÷ volume
Speed	ms ⁻¹ (metres per second)	Speed = distance ÷ time
Velocity	ms ⁻¹ in a named direction	Velocity = speed in a named direction
Acceleration	ms ⁻² (metres per second per second)	Acceleration = change in velocity ÷ time

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