

Energy stores		
Kinetic	The energy stored in moving objects.	$E_k = 1/2 m v^2$
Gravitational potential	The energy stored in lifted objects.	$E_p = m g h$
Elastic potential	The energy stored in deformed elastic objects.	$E_e = 1/2 k e^2$ <i>This is provided.</i>
Thermal	The energy stored due to their temperature.	
Chemical	The energy stored in food, fuels and batteries.	

AQA Physics GCSE Knowledge organiser Energy Part 2

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Units	
Energy / work	Joules (J)
Mass	Kilograms
Velocity	Meters per second (m/s)
Height	Meters (m)
Displacement	Meters (m)
Time	Seconds (s)
Force	Newtons (N)
Spring constant	Newtons per kilogram (N/Kg)
Power	Watts (W)

Energy transfers			
Doing work	Energy transferred. $W = F s$	Power	The rate of energy transfer. $P = w / t$
Ways to do work	Mechanically (any force), Electric current, Heat, Radiation (light, sound).	Efficiency	The percentage of energy usefully transferred. $Efficiency = useful\ transferred / total\ used \times 100$
		Dissipated energy	Energy is wasted to the surroundings usually as heat.
Conservation of energy	Energy cannot be created or destroyed, only transferred, in a closed system.	Closed system	A group of objects where the total energy remains constant.
Example energy transfer	A car starts with kinetic energy stored. When the brakes are applied the force of friction transfers energy from the kinetic store and dissipates it as heat to the surroundings. This is stored as thermal energy by the surroundings.		

Prefixes		
G	Giga-	10^9
M	Mega-	10^6
K	Kilo-	10^3
m	Milli-	10^{-3}
μ	Micro-	10^{-6}
n	Nano-	10^{-9}