

1) Energy

Stores

MICK GREEN

- 1 Magnetic
- 2 Internal
- 3 Chemical
- 4 Kinetic

- 5 Gravitational
- 6 Electrostatic
- 7 Elastic
- 8 Nuclear

Pathways

Real Energy Makes it
Happen

- 1 Radiation
- 2 Electrical
- 3 Mechanical
- 4 Heating

Renewable Energy

Biofuel

Wind

Hydroelectric

Geothermal

Solar

Wave

Tidal

Non Renewable Energy

Coal

Oil

Gas

Nuclear

Equations

Kinetic energy $E_k = \frac{1}{2} \times \text{mass (kg)} \times \text{velocity (m/s)}^2$

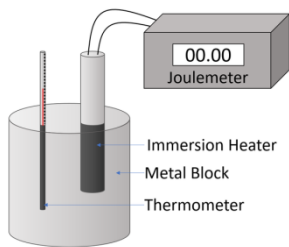
Elastic energy $E_e = \frac{1}{2} \times \text{spring constant (K)} \times \text{extension(m)}^2$

Gravitational Potential Energy G.P.E $E_p = \text{mass (kg)} \times \text{gravity} \times \text{height (m)}$

Power (W) = Energy (J) / time (s)

Power (W) = Work done (J) / time (s)

Efficiency = useful energy / total energy



Specific heat capacity

- Measure the mass of the block with a balance.
 - Take the temperature with a thermometer.
- Heat the block with the heater,

- Measure the energy transferred with the joulemeter.
- Measure the temperature at the end to see the increase in temperature

Definitions

Renewable energy - comes from natural sources or processes that won't run out.

Work done - energy has been transferred from one energy store to another

Kinetic energy - energy in a moving object

Potential energy - stored energy

Pathway - a way that energy can be moved between stores.

Specific heat capacity - the amount of energy needed to raise the temperature of 1kg of a substance by 1o Celsius.

Efficiency - The amount of useful energy transferred into an object.

Conservation of energy - energy can not be created or destroyed, only transferred from one form to another.

How to change energy transfers - to STOP energy transfers
INSULATE. To REDUCE friction LUBRICATE.