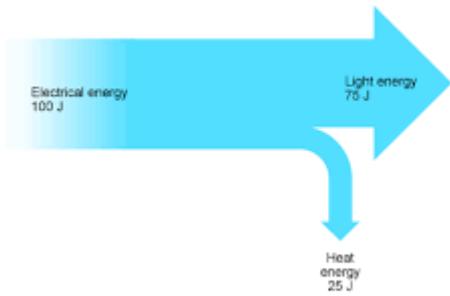


Physics 1 key facts

Energy	Measured in joules (J) or kilojoule (kJ)
Energy stores (8 stores)	Thermal, Kinetic, Elastic, Gravitational, Chemical, Magnetic, Nuclear, electrostatic
Energy pathways	mechanical , heat ,electrical , light , sound
Conservation of energy	Energy cannot be created or destroyed, it is transferred between stores
Fuel	A material that contains a store of chemical energy.
Useful energy	Energy that has been transferred into the required form. Eg a combustion engine transfers the chemical energy store in fuel into the kinetic store of the moving parts of the engine
Wasted energy	Energy transferred into a form that is not required. Eg a TV transfers some electricity into thermal energy
Efficiency	The proportion of energy usefully transferred. Calculated by useful energy output ÷ total input energy
Sankey diagram	Shows the proportion of energy transferred into useful and wasted energy  <p>The diagram shows a large blue arrow pointing right, labeled 'Electrical energy 100 J'. From the bottom of this arrow, a smaller blue arrow points down, labeled 'Heat energy 25 J'. The main arrow continues to the right, ending in a larger arrowhead labeled 'Light energy 75 J'.</p>
Temperature	A measure of how hot or cold something is
Heat	An energy pathway
Infrared Radiation	An electromagnetic wave(light ray) that transfers thermal energy
Absorb	To take in
Emit	To give out
Conduction	Heat transfer through solids. Vibrating particles pass on energy to the next particle.
Convection	Heat transfer through fluids (liquids and gasses). As particles gain thermal energy they become less dense and float. As they cool down they sink.
Thermal radiation	Thermal radiation is the emission of electromagnetic waves (infrared light rays) from all hot objects. Thermal energy is the kinetic energy of random movements of atoms and molecules in matter.
Work done	Measured in joules or newton metres $1J = 1Nm$ it is a measure of the energy transferred to or from an object which allows it to be moved. Work done (J or Nm) = force (N) X Distance (m)

1. What are the units of energy?

2. What are the 10 stores of energy and give an example of each one
 - a. F
 - b. g
 - c. H
 - d. I
 - e. j

3. How can energy be transferred?

4. What does conservation of energy mean?

5. What does useful energy mean?

6. What does wasted energy mean?

7. What is the equation for efficiency?

8. What does a Sankey diagram look like and what do they show?

9. What do we mean by temperature?

10. What do we mean by heat?

11. What are the three ways to transfer heat?

12. What state does conduction happen in?

13. What state does convection happen in?

14. What do we mean by absorb?

15. What do we mean by emit?