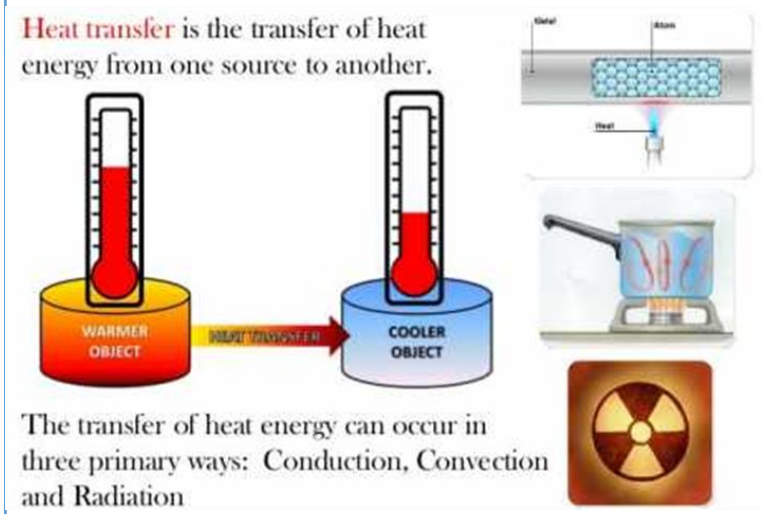
Energy Transfers 2

Key words	Definitions
Conduction	Thermal energy passed through a solid. Energy passed from particle to particle
Conductor	A material that allows energy to pass easily through it
Convection	Thermal energy is passed through a fluid, liquid or gas. Warm particles are less dense and rise. Cool particles are more dense and fall
Energy Efficiency	Describes how much energy in a system is useful and how much is wasted
Energy transfer	The movement of energy from one type of store to another
Radiation	Thermal energy is passed as a wave of Infrared Radiation. No particles are needed.
Useful energy	The energy transferred in to the energy you want. E.g. light from a lightbulb

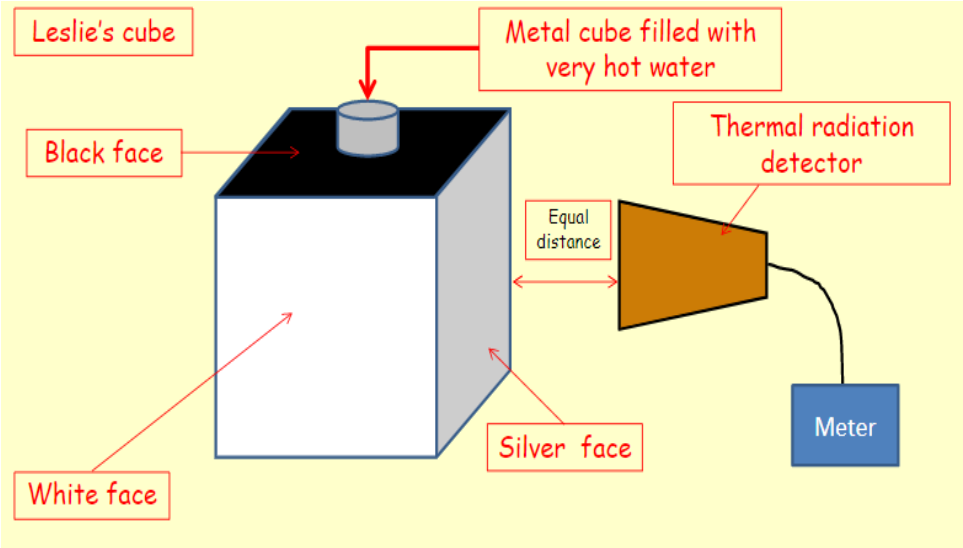
Key diagram – Heat transfer



Key knowledge

- Thermal energy always flows from high to low (hot → cold)
- Internal energy is the total amount of thermal energy an object has (Joules) The energy of every atom added
- Temperature is the average energy of the atoms in an object (°C)
- Air is a poor conductor of thermal energy
- Dark colours are good emitters and poor absorbers of thermal energy
- Light colours are poor emitters and poor absorbers of thermal energy

Practical – Investigating Radiation



Key process – Conduction, Convection and Radiation