Beckfoot

Subject: Science (Physics)	Topic: Particle Model (Physics)	Year Group: 11

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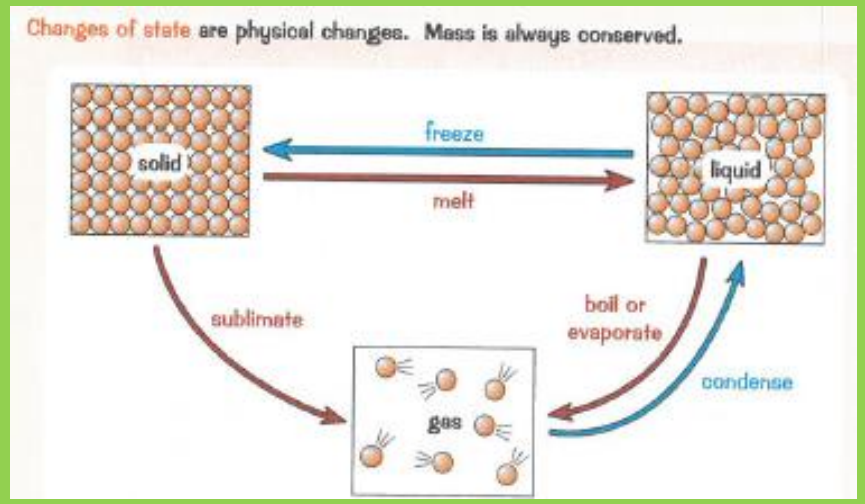
Key Vocabulary

Internal energy	Total energy stored by the particles that make up a system.
Specific latent heat	The energy required to change 1kg of a substance with no change in temperature.
Specific heat capacity	The amount of energy needed to raise the temperature of 1kg of the substance by 1°C.
Specific latent heat of fusion	The specific latent heat of changing between a solid and a liquid.
Specific latent heat of vaporisation	The specific latent heat of changing between a liquid and a gas.

Changes of state

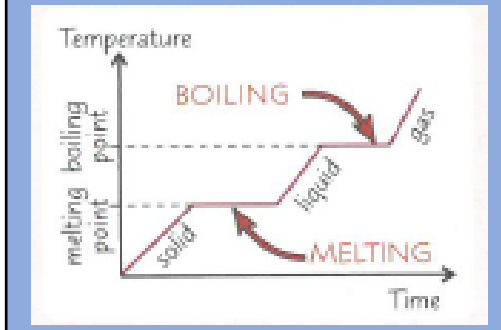


Particle model

	Particle arrangement	Forces between particles	Distance between particles	Particle motion
SOLID	Regular, fixed	Strong	Very small	Vibration only
LIQUID	Irregular	Weak	Small	Slow
GAS	Irregular	Very weak	Large	Fast

Density decreases

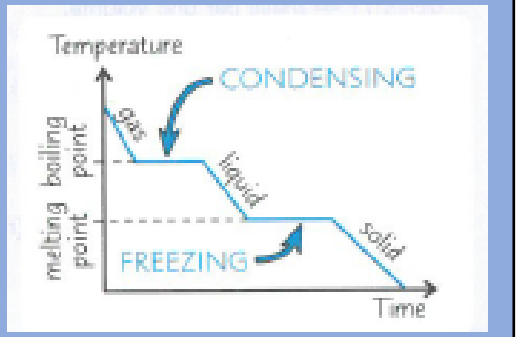
Heating graphs



1- Bonds between particles are broken

2- Internal energy increases- energy is transferred to particles potential energy store.

Cooling graphs



1- Stronger bonds form between particles.

2- Internal energy decreases- energy is transferred away from particles potential energy stores.

Calculating density