

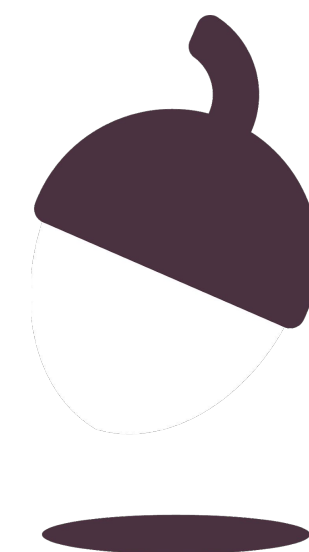
Chemistry - Key Stage 3
Particles - Lesson 4

Changes of state (Part 2)

Investigating changes of state

(Downloadable student document)

Miss Mason



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Recap - Changes of State (Part 1)

1. Identify the 4 changes of state.
2. Is a change of state a chemical or physical change? Give reasons for your answer.
3. Describe what happens to the particles in a substance when it melts.
4. Describe what happens to the particles in a substance when it freezes.



Copy and complete

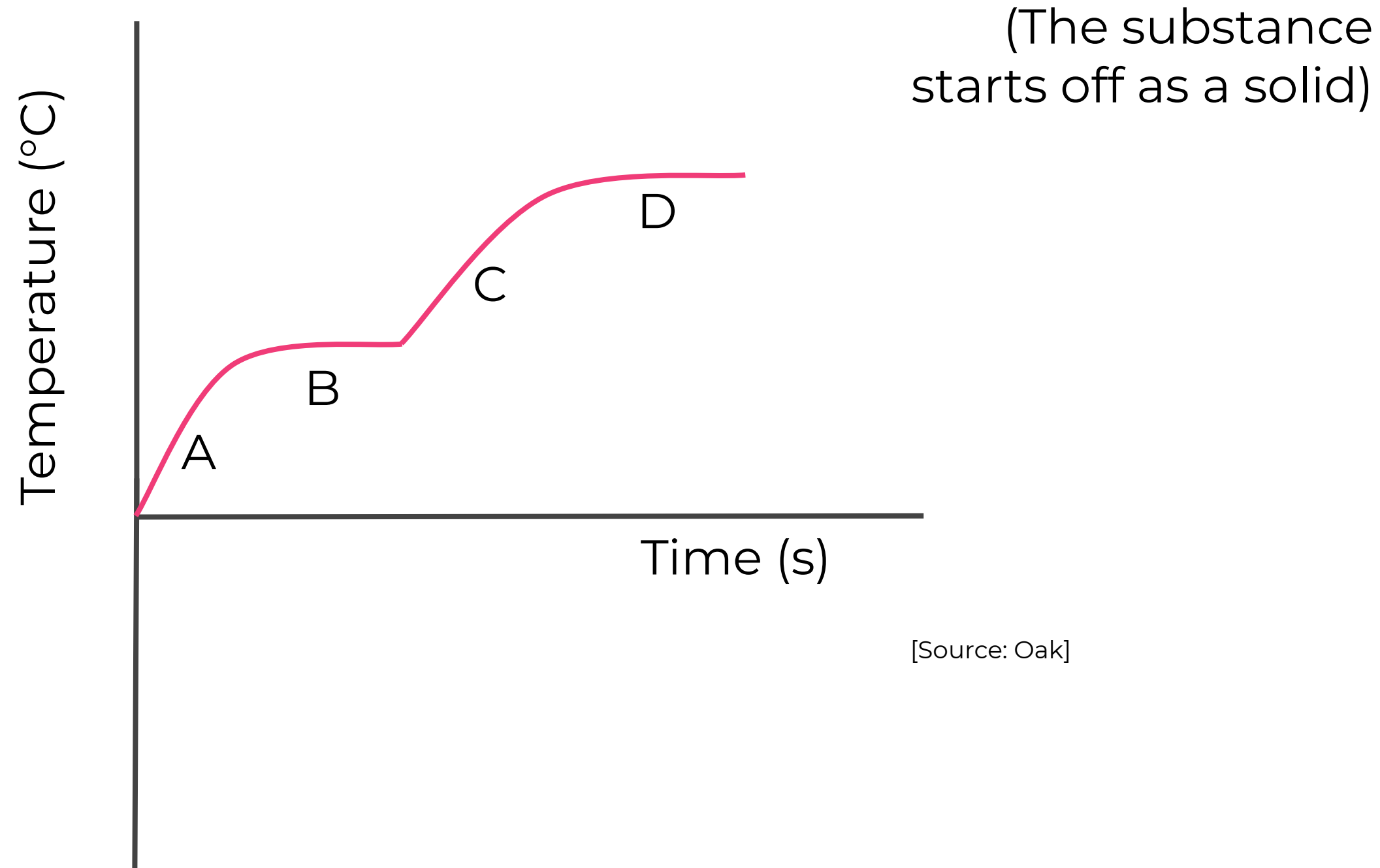
Changes of state can be represented either in a h_____ curve or a c_____ curve.

The sloped sections on these graphs represent one _____ of matter and a changing t_____.

The flat sections on these graphs represent a change of _____ and a constant t_____.



Describe what is happening at each stage of this graph in terms of temperature, arrangement and movement of particles.



Ethanol (pure alcohol)

Melting point (solid → liquid) = -114°C

Boiling point (liquid → gas) = 78°C

Temperature (°C)	State of matter	Reason
40		
-13		
105		
-200		
75		
Room temperature		



Identify which state each of the following substances would be in at 70°C. Give reasons for your answers.

Substance	Melting point (°C)	Boiling point (°C)
Nitrogen	-210	-196
Sodium	98	883
Oxygen	-218	-189
Ethanol	-114	78

