



State of Matter and Phase Changes

Upper Primary Advance Science

Phase Changes



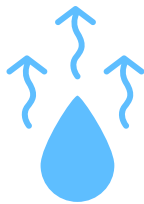
Sublimation

Sublimation is the process in which a substance changes directly from the solid state to the gaseous state without passing through the liquid state.



Melting

Melting is the physical process in which a solid changes into a liquid when heat is applied. This occurs when the solid reaches a specific temperature known as the melting point, at which the particles gain enough energy to break free from their fixed positions and move more freely as a liquid.



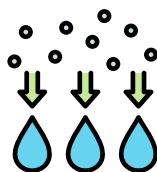
Evaporation

Evaporation is the process by which a liquid changes into a gas or vapor at temperatures below its boiling point. This happens when molecules at the surface of the liquid gain enough energy to break free from the liquid and enter the air as gas.



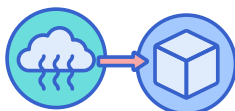
Freezing

Freezing is the process in which a liquid changes into a solid when its temperature is lowered to a certain point called the freezing point. During freezing, the molecules in the liquid slow down and line up tightly together, forming a solid structure.



Condensation

Condensation is the process where a gas (like water vapour) cools down and changes into a liquid. This happens when the gas loses heat and its particles slow down, coming closer together to form drops of liquid.



Deposition

Deposition is the process when a gas turns directly into a solid, skipping the liquid stage.

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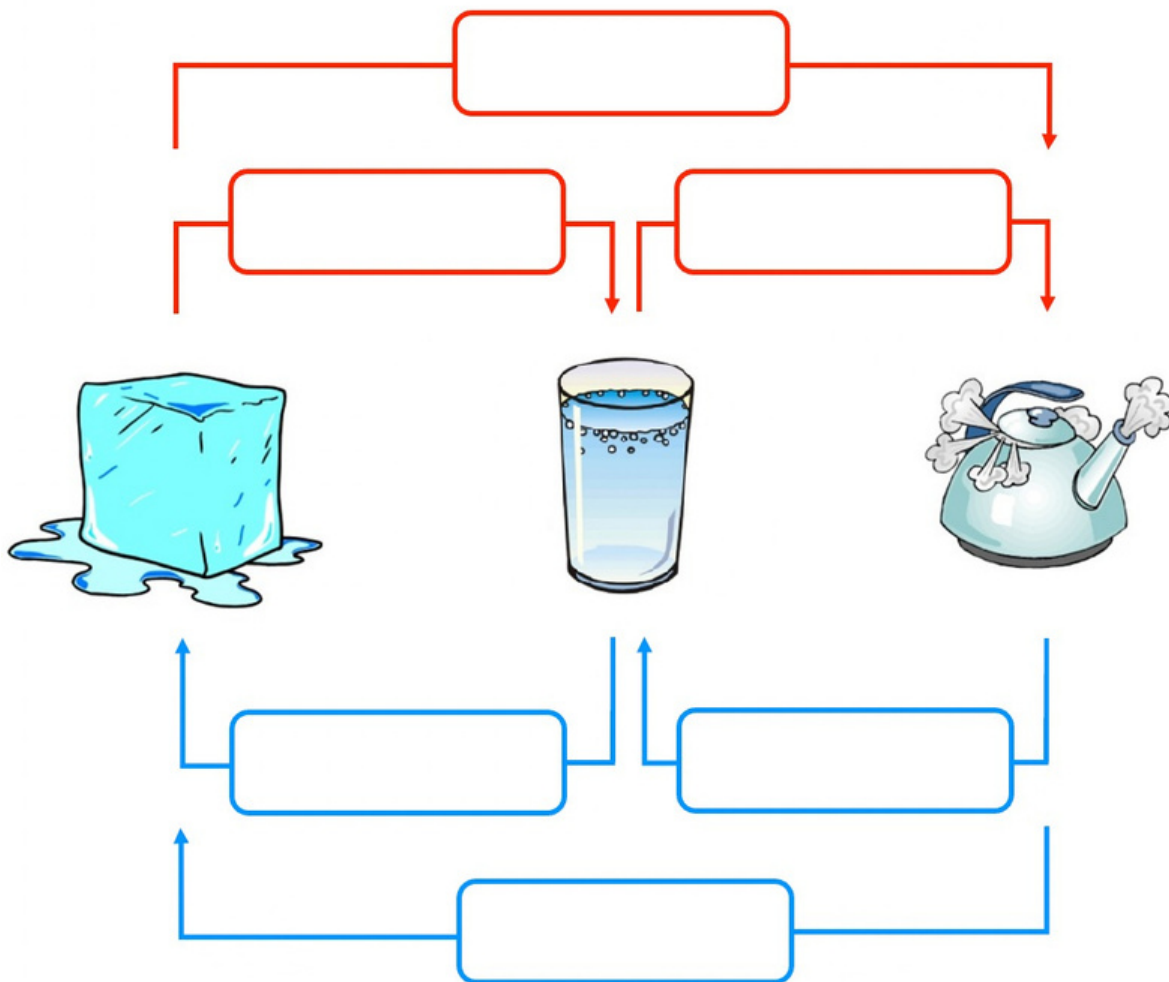
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Which of the following statements is incorrect?

- a) Particles in a solid vibrate but do not move from their fixed positions.
- b) Gas particles move randomly and are widely spaced from one another.
- c) The particles in a liquid move faster than those in a gas.
- d) Particles in a solid are closely packed and strongly attracted to each other.

Fill in the box with the correct processes using the helping words provided.

• Condensation	• Deposition	• Evaporation
• Melting	• Sublimation	• Freezing



Which state of matter has the weakest attractive forces between particles?

- a) Solid
- b) Liquid
- c) Gas

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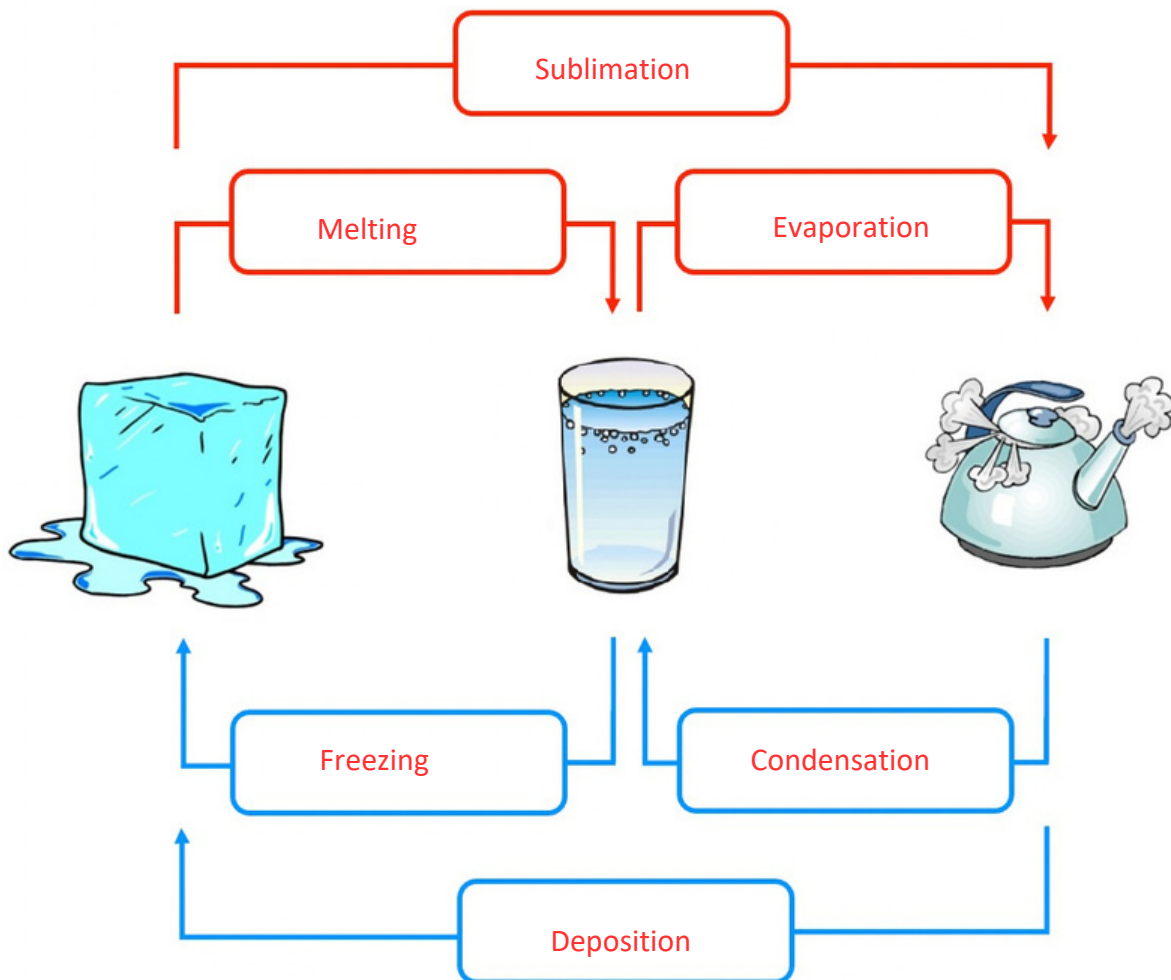
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