

Heating and cooling

<u>Question</u>	<u>Answer</u>
Define heat transfer	The movement of thermal energy across a temperature gradient
Describe the process of conduction	Conduction is the process by which heat energy is transmitted through collisions between neighboring atoms or molecules. Conduction occurs more readily in solids and liquids, where the particles are closer to together, than in gases, where particles are further apart.
Describe the process of convection	Convection is the circular motion that happens when warmer air or liquid – which has faster moving molecules spaced further apart, making it less dense – rises, while the cooler fluid drops down
Describe how heat energy travels as radiation	Emission or transmission of energy in the form of infra red waves through a vacuum or materials
Define temperature	Temperature is a measure of how hot something is.
Define thermal energy	Thermal energy is the internal energy of an object due to the kinetic energy of its atoms and/or molecules.
Define insulator	a substance which does not readily allow the passage of heat
Explain how we can use a cooling/heating curve to determine melting and boiling point of a pure substance	If we heat a pure substance and record its temperature over time we will see points on the graph where temperature no longer rises. These plateaus indicate a change in state which happens at the melting and boiling points of that substance.

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