Heat and Temperature Relationships

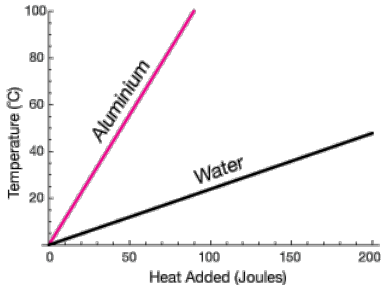
Heat (q) is a direct relationship to Temperature (T) (m = +)

Heat Capacity

The amount of heat required to raise the temp of a sample 1°C

$$q_{matter} = \Delta H \cdot T$$

q = Heat (J) ΔH = Heat Capacity (J/°C)
T = Temperature (°C)



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Heat and Temperature Relationships

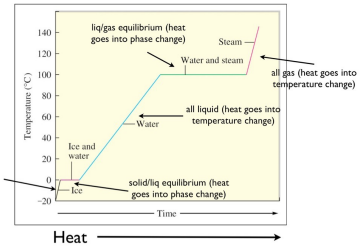
Heat (q) is a direct relationship to Temperature (T) and mass (m)

Specific Heat Capacity

The amount of heat required to raise the temp of a 1g sample 1°C

$$q_{matter} = c \cdot m \cdot \Delta T$$

q = Heat (J) c = Specific Heat (J · g/°C)
m = Mass (g) T = Temperature (°C)



Heat (q) vs. Temperature (T) with a constant mass (m) as a direct relationship

State changes shown as flat heat curve

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