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Latent Heat

$L_f \equiv$ Latent Heat of Fusion

$L_v \equiv$ Latent Heat of Vaporization

$$\Delta Q = mL_f$$

$$\Delta Q = mL_v$$

Determine the amount of energy required to raise the temperature of 100 g of ice at 0 °C to liquid water at 0 °C.

$$\Delta Q = (100 \text{ g})(333 \text{ J/g}) = 33300 \text{ J}$$

Latent Heat Data Table

Substance	Melting Point (°C)	Latent Heat of Fusion (J/g)	Boiling Point (°C)	Latent Heat of Vaporization (J/g)
Lead	327	24.5	1750	870
gold	1063	64.4	2660	1580
mercury	-39	11.4	357	295
silver	961	88.2	2193	2330
iron	1538	247	2861	6090
zinc	420	112	907	1890
copper	1083	134	1187	5060
aluminum	660	397	2450	11400
water	0	333	100	2260