

Section 16.3 Thermochemical Equations

In your textbook, read about writing thermochemical equations and about changes of state.

Use the following terms to complete the statements. Some terms will be used more than once.

thermochemical equation	enthalpy of combustion	released
molar enthalpy of vaporization	molar enthalpy of fusion	absorbs
cool	heat	

- A(n) _____ is a balanced chemical equation that includes the physical states of all reactants and products and the energy change that accompanies the reaction.
- The enthalpy change for the complete burning of one mole of a substance is the _____.
- The _____ is the heat required to vaporize one mole of a liquid.
- The _____ is the heat required to melt one mole of a solid substance.
- Converting two moles of a liquid to a solid requires an amount of energy that is twice the _____.
- $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{H}_2\text{O}(\text{g}) \quad \Delta H = -572 \text{ kJ}$ is a(n) _____.
- The conversion of a gas to a liquid involves the _____.
- When a gas condenses to a liquid, heat is _____ to the surroundings.
- Sweating makes you feel cooler because, as it evaporates, the water on your skin _____ heat from your body.
- If you put an ice cube in a glass of soda pop, the heat absorbed by the ice will cause the ice to melt, and the soda pop will become _____.
- If it takes 100 joules to melt a piece of ice, _____ must be absorbed by the ice.
- In the equation $\text{H}_2\text{O}(\text{s}) \rightarrow \text{H}_2\text{O}(\text{l}) \quad \Delta H = 600 \text{ kJ}$, the positive value for ΔH means that _____ is absorbed in the reaction.