

Enthalpy Changes and Calorimetry

Central concept: **Enthalpy Changes**

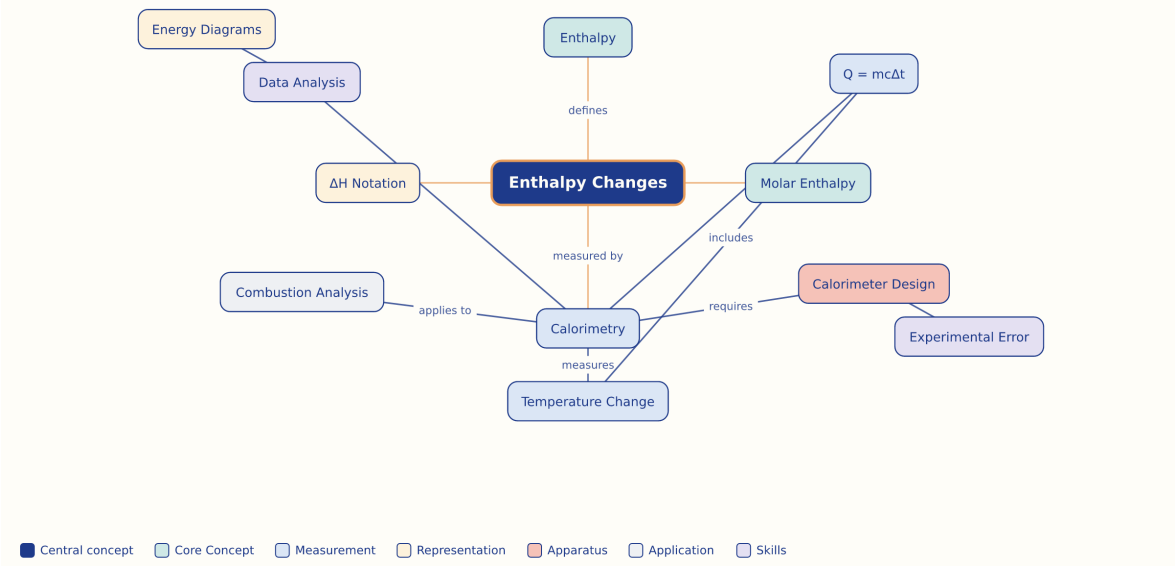
Connections

- Enthalpy Changes (defines) -> Enthalpy
- Enthalpy Changes (includes) -> Molar Enthalpy
- Enthalpy Changes (measured by) -> Calorimetry
- Enthalpy Changes (expressed as) -> ΔH , ΔH°
- Calorimetry (uses) -> $Q = mc\Delta T$
- Calorimetry (requires) -> Calorimeter Design
- Calorimetry (measures) -> Temperature Change
- Calorimetry (applies to) -> Combustion Analysis
- $Q = mc\Delta T$ -> Temperature Change
- Calorimeter Design (evaluated by) -> Experimental Error
- Data Analysis (produces) -> Energy Diagrams
- Calorimetry (generates) -> Data Analysis

Notes

- **Enthalpy Changes:** Energy released or absorbed in chemical reactions at constant pressure [Outcome](#), [Outcome](#)
- **Enthalpy:** A thermodynamic property of a system, equal to internal energy plus the product of pressure and volume, whose change equals the heat transferred at constant pressure [Outcome](#), [Outcome](#)
- **Molar Enthalpy:** Enthalpy change per mole of reactant or product in a chemical reaction [Outcome](#), [Outcome](#)
- **Calorimetry:** Experimental technique to measure heat transfer in chemical reactions [Outcome](#), [Resource](#), [Resource](#)
- **$Q = mc\Delta T$** Equation relating heat absorbed to mass, specific heat capacity, and temperature change [Outcome](#), [Outcome](#)
- **ΔH , ΔH°** Standard notation to express and calculate energy changes in chemical reactions [Outcome](#)
- Enthalpy and Molar Enthalpy: Definition of enthalpy and molar enthalpy for chemical reactions [Resource](#)
- **Temperature Change:** Change in system temperature used to calculate heat transfer [Outcome](#), [Outcome](#), [Resource](#)
- Enthalpy and Molar Enthalpy: Definition of enthalpy and molar enthalpy for chemical reactions [Resource](#)
- **Data Analysis:** Manipulation and presentation of calorimetry data using tools and spreadsheets [Outcome](#)
- **Energy Diagrams:** Visual representation comparing energy changes across different chemical reactions [Outcome](#), [Resource](#)
- Enthalpy and Molar Enthalpy: Definition of enthalpy and molar enthalpy for chemical reactions [Resource](#)

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