

Enthalpy Changes and Calorimetry: Matching Game

Chemistry 30 students calculate heat transfer using $Q = mc\Delta T$ (Outcome, Outcome). They apply calorimetry data to determine the enthalpy changes of chemical reactions (Outcome). This game reviews vocabulary that connects laboratory measurement to thermochemical calculation. Key terms include enthalpy, molar enthalpy, ΔH , exothermic or endothermic character of a reaction (Outcome, Outcome, Outcome). Two related lab resources build these ideas through hands-on investigation. One uses combustion to transfer thermal energy to water (Resource). Another tests a constructed calorimeter for measurement precision (Resource).

How to play

Match each term on the left to its correct definition or description on the right. Work through the terms you know first. Then use the process of elimination for the remaining terms. Write your answers on a separate sheet before checking the answer key.

Column A		Column B
A. enthalpy	_____	1. ΔH
B. calorimetry	_____	2. H
C. calorimeter	_____	3. ΔH , $-\Delta H$
D. heat	_____	4. Measuring energy released or absorbed
E. combustion	_____	5. Burning a substance
F. exothermic	_____	6. Energy per mole of a specified substance
G. enthalpy change	_____	7. Insulated device for measuring energy transfer
H. molar enthalpy	_____	8. Energy transfer by heat

Answer key

- **A** matches **2** (enthalpy: H)
- **B** matches **4** (calorimetry: Measuring energy released or absorbed)
- **C** matches **7** (calorimeter: Insulated device for measuring energy transfer)
- **D** matches **8** (heat: Energy transfer by heat)
- **E** matches **5** (combustion: Burning a substance)
- **F** matches **3** (exothermic: ΔH , $-\Delta H$)
- **G** matches **1** (enthalpy change: ΔH)
- **H** matches **6** (molar enthalpy: Energy per mole of a specified substance)