

Enthalpy Changes and Calorimetry: Matching Game

This matching game reviews the core vocabulary of the Chemistry 30 thermochemistry unit, in which students determine and interpret energy changes in chemical reactions ([Topic](#)) and explain and communicate those changes ([Topic](#)). The terms below cover enthalpy and molar enthalpy ([Outcome](#)), calorimetry data analysis ([Outcome](#)), Hess' law ([Outcome](#)), standard enthalpies of formation ([Outcome](#)), activation energy on energy diagrams ([Outcome](#)), classification of reactions as exothermic ([Outcome](#)), and the role of catalysts as developed across this unit's key concepts ([Topic](#)).

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 rest. Every term has exactly one correct match. When you are done, check your answers against the answer key at the bottom of the page, but try to complete the whole grid before looking.

Column A		Column B
A. enthalpy	_____	1. standard enthalpy
B. calorimetry	_____	2. $Q = mc\Delta T$
C. exothermic	_____	3. energy barrier
D. activation	_____	4. additive property
E. catalyst	_____	5. ΔH°
F. formation	_____	6. lowers activation energy
G. Hesslaw	_____	7. $\Delta H^\circ_{\text{rxn}} = \sum \Delta H^\circ_f(\text{products}) - \sum \Delta H^\circ_f(\text{reactants})$
H. molar	_____	8. per mole basis

Answer key

- A** matches **5** (enthalpy change of a reaction is communicated with the notation ΔH° enthalpy itself is symbolized H)
- B** matches **2** (calorimetry: $Q = mc\Delta T$)
- C** matches **7** (exothermic: $\Delta H^\circ_{\text{rxn}} < 0$)
- D** matches **3** (activation: energy barrier)
- E** matches **6** (catalyst: lowers activation energy)
- F** matches **1** (formation: standard enthalpy)
- G** matches **4** (Hesslaw: additive property)
- H** matches **8** (molar: per mole basis)