

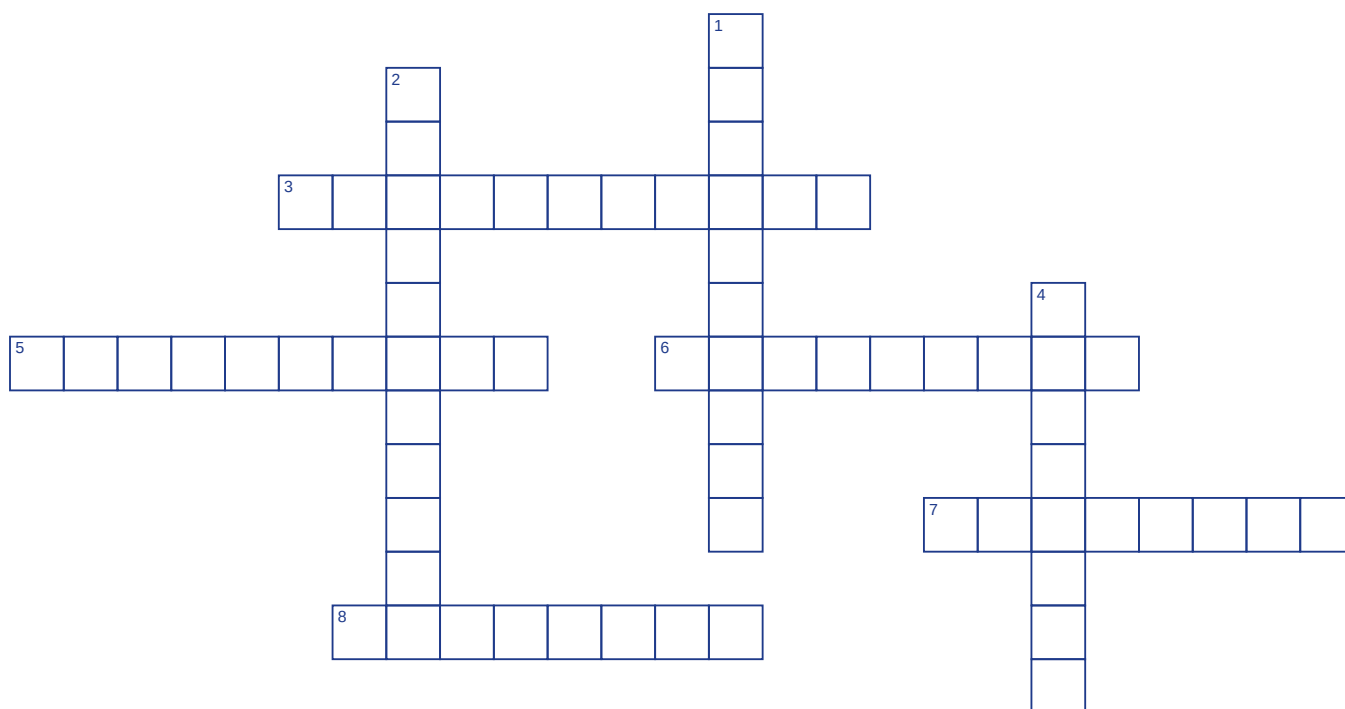
Enthalpy Changes and Calorimetry Crossword

In Chemistry 30, students investigate the energy released or absorbed during chemical reactions. This crossword reinforces key vocabulary and concepts in thermochemical analysis. Students will define enthalpy and molar enthalpy for chemical reactions ([Outcome](#)), apply the equation $Q = mc\Delta T$ for transfer analysis ([Outcome](#)), and use calorimetry data to determine enthalpy changes ([Outcome](#)). The puzzle covers essential terms: the study of heat flow in reactions, the device used to measure energy transfer, the energy content of a system, the symbolic language chemists use to express energy change, the process of burning a fuel, the accuracy required in experimental measurement, the heat released by burning reactions, and the movement of thermal energy between substances ([Outcome](#), [Resource](#), [Resource](#), [Resource](#)).

How to play

Complete the crossword by filling in the blank squares with letters. Read each clue and decide which word fits. Across clues run left to right. Down clues run top to bottom. A letter that appears in both an across word and a down word must be the same in both. Check your answers by ensuring all intersecting letters match.

Puzzle grid



Clues

Across

- Experimental technique for measuring heat transfer in chemical reactions ([Outcome](#)) (11)
- Burning of a fuel that releases thermal energy to surroundings ([Resource](#)) (10)
- Degree of accuracy and consistency in repeated calorimeter measurements ([Resource](#)) (9)
- Heat content of a substance at constant pressure, measured in joules ([Outcome](#)) (8)

7. Movement of heat energy from one object or substance to another ([Outcome](#)) (8)

Down

1. Chemical reaction that releases heat to the surroundings ([Outcome](#)) (10)
2. Insulated device used to measure energy released or absorbed during a reaction ([Resource](#)) (11)
3. System of symbols used to represent energy changes, such as ΔH ([Outcome](#)) (8)

Answer key

- **1 down:** EXOTHERMIC
- **2 down:** CALORIMETER
- **3 across:** CALORIMETRY
- **4 down:** NOTATION
- **5 across:** COMBUSTION
- **6 across:** PRECISION
- **7 across:** ENTHALPY
- **8 across:** TRANSFER

