

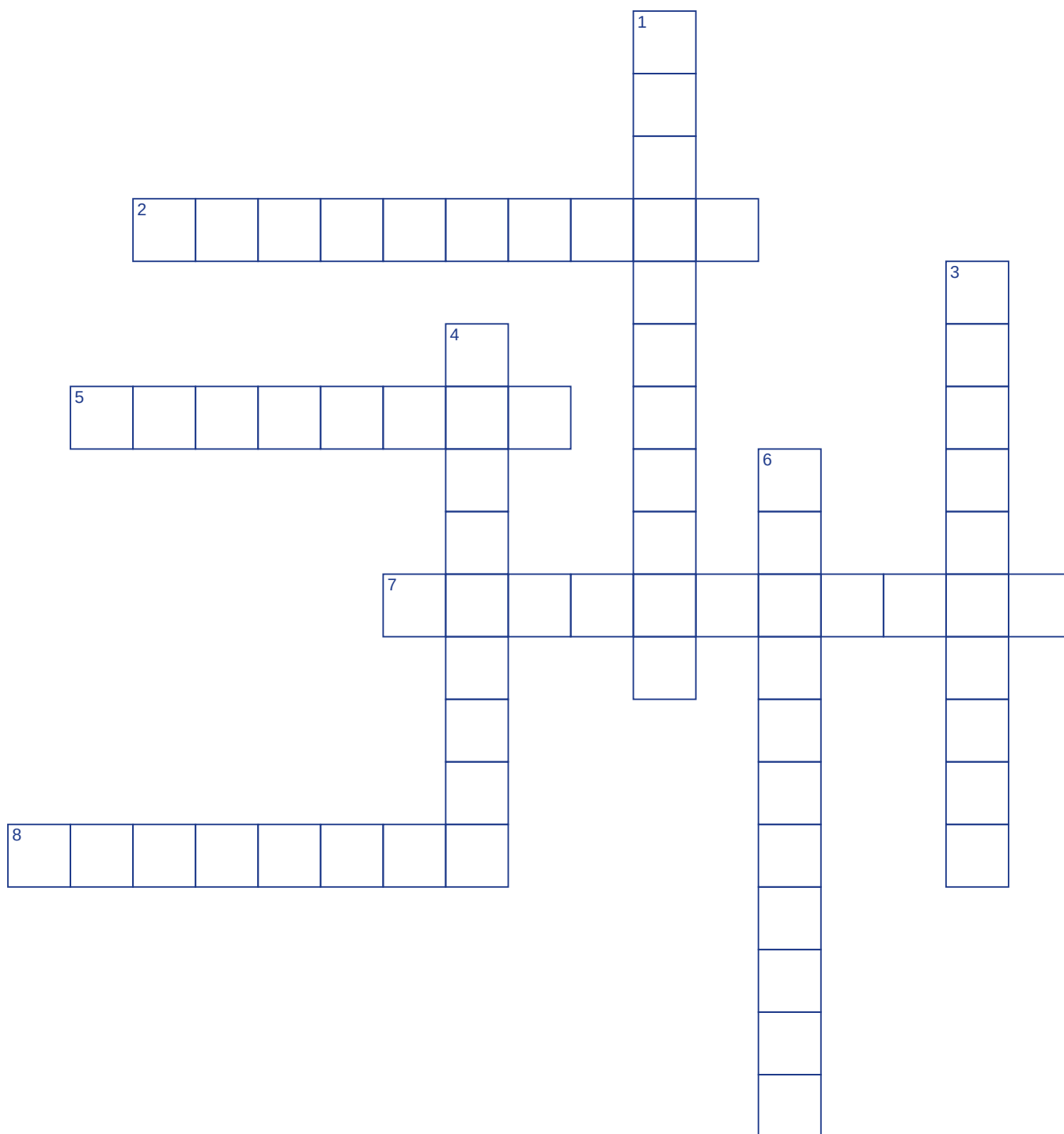
Enthalpy and Calorimetry Crossword

This puzzle reviews the vocabulary students need for Unit A: Thermochemical Changes, where the general outcome asks students to determine and interpret energy changes in chemical reactions ([Topic](#)). Students will recall that $Q = mc\Delta T$, specific heat capacity, and temperature change in heat-transfer analysis ([Outcome](#)), that calorimetry data can be used to determine the enthalpy change of a reaction ([Outcome](#)), and that ΔH indicates whether a reaction is exothermic or endothermic ([Outcome](#)). The puzzle also draws on the calorimetry and calorimeter-construction labs used in this unit ([Resource](#), [Resource](#)) and on the definitions of enthalpy and molar enthalpy required for the course ([Outcome](#), [Outcome](#)).

How to play

Read each clue and write the matching term into the grid, one letter per box. Numbers on the grid mark where each answer begins: across answers read left to right, down answers read top to bottom. All answers relate to enthalpy, heat transfer, and calorimetry as covered in Unit A. Check your spelling against the number of boxes provided before moving on. Use the answer key only after you have attempted every clue.

Puzzle grid



Clues

Across

2. Rapid chemical reaction between a fuel and oxygen that releases heat. (10)
3. Symbolic system used to represent energy changes in chemical equations. (8)
4. Insulated container used to measure heat transfer during a chemical reaction. (11)
5. Process in which substances combine or break down to form new substances. (8)

Down

1. Experimental technique for measuring heat released or absorbed in a chemical reaction. (11)
2. Chemical reaction that releases heat to the surroundings. (10)
3. Process of creating a compound from its elements in their standard states. (9)
4. Measure of the average kinetic energy of particles in a substance. (11)

Answer key

- **1 down:** CALORIMETRY
- **2 across:** COMBUSTION
- **3 down:** EXOTHERMIC
- **4 down:** FORMATION
- **5 across:** NOTATION
- **6 down:** TEMPERATURE
- **7 across:** CALORIMETER
- **8 across:** REACTION

