

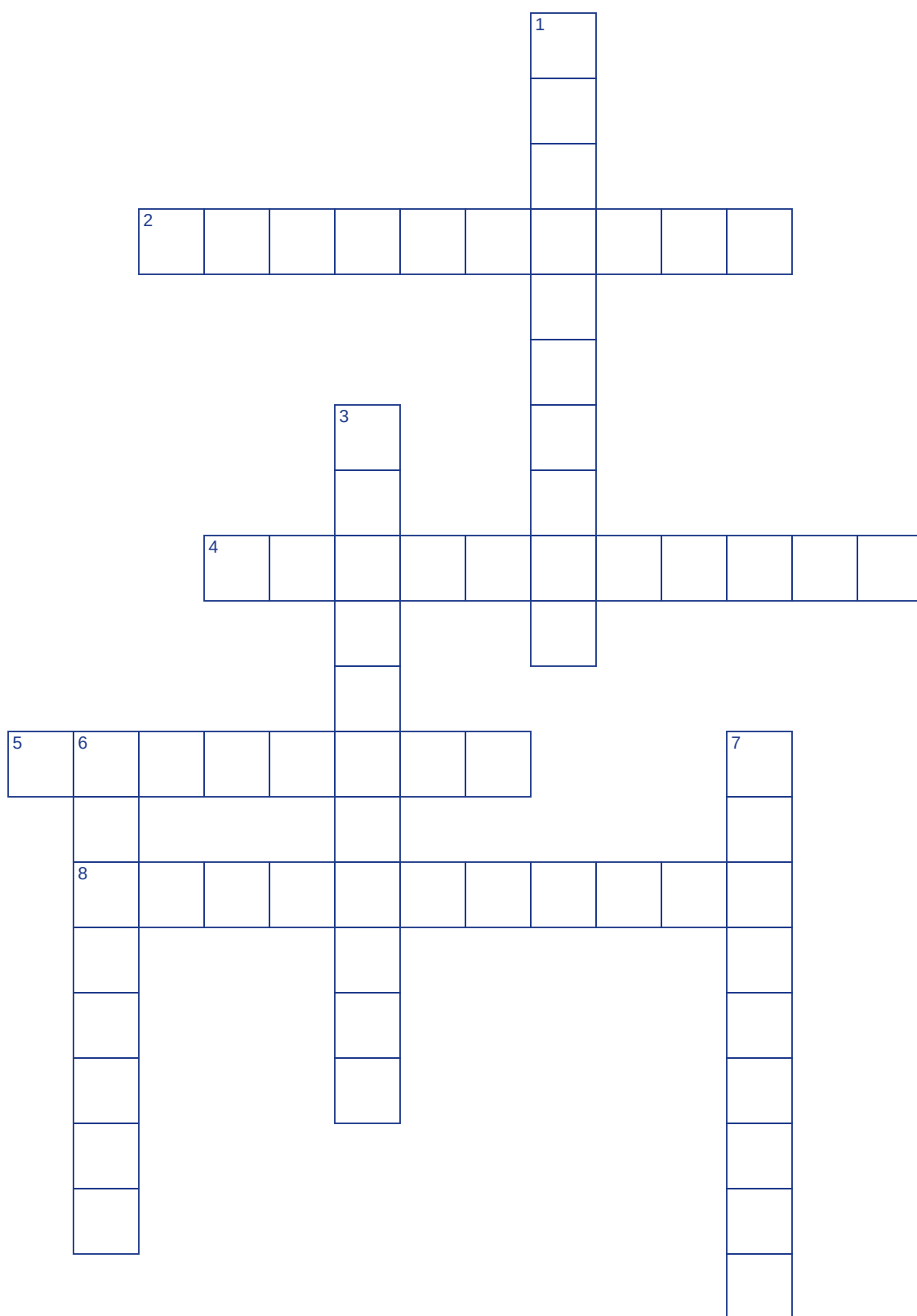
Enthalpy Changes and Calorimetry Crossword

Chemistry 30 students define enthalpy and molar enthalpy for chemical reactions ([Outcome](#), [Outcome](#)) and apply $Q = mc\Delta T$ to calculate heat transfer ([Outcome](#), [Outcome](#)). Calorimetry data allows students to determine the enthalpy change of a reaction ([Outcome](#)), whether that reaction is exothermic combustion of a fuel or a reaction occurring inside a calorimeter. Building and testing a calorimeter also raises questions of precision and experimental error in temperature measurement ([Resource](#), [Resource](#)), and data analysis skills support this work throughout the unit ([Outcome](#)). This puzzle reviews eight terms central to that content.

How to play

Read each clue and write your answer into the grid using the numbered squares as your guide. Across and down answers share letters where they intersect, so a correct answer in one direction can help you confirm or correct an answer in the other. All answers relate to enthalpy and calorimetry as studied in this unit. Work in pencil, since some clues may require you to revise an entry after checking a crossing word.

Puzzle grid



Clues

Across

2. Burning process that releases energy to surroundings ([Resource](#)) (10)
3. Insulated container used to measure heat changes ([Resource](#)) (11)
4. Process in which substances transform into new products ([Outcome](#)) (8)
5. Measure of the average kinetic energy of the particles in a substance ([Outcome](#)) (11)

Down

1. Reaction that releases heat to the surroundings ([Outcome](#)) (10)
2. Technique for measuring heat transfer in chemical reactions ([Outcome](#)) (11)
3. Heat content of a substance at constant pressure ([Outcome](#)) (8)
4. Degree of consistency or reproducibility among repeated measurements ([Resource](#)) (9)

Answer key

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

