

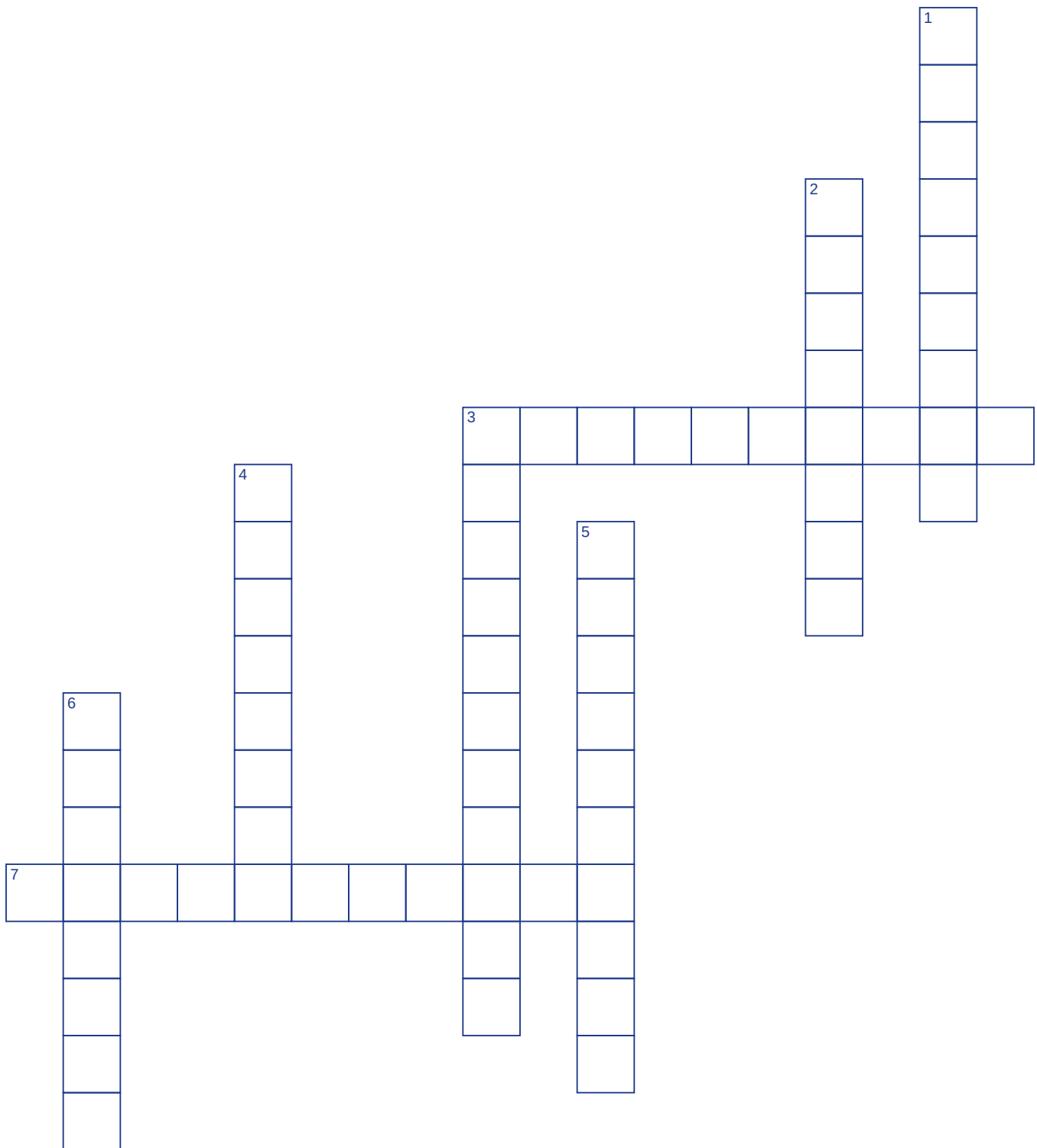
Enthalpy Changes and Calorimetry Crossword

Chemistry 30 students determine enthalpy changes in chemical reactions using calorimetry data ([Outcome](#)). This crossword reinforces key vocabulary and concepts: the measurement of heat transfer using the equation $Q = mc\Delta T$ ([Outcome](#)), the definition of enthalpy and molar enthalpy ([Outcome](#)), the use and interpretation of ΔH ([Outcome](#)), and the practical skills involved in conducting calorimetry experiments with precision ([Outcome](#), [Resource](#)). Students will encounter terms related to exothermic reactions, combustion analysis, and the apparatus and methods used to gather thermochemical data.

How to play

Complete the crossword by filling in the blanks with vocabulary terms from Unit A: Thermochemical Changes. Read each clue carefully and consider how the term relates to enthalpy, heat transfer, and experimental procedure. Clues are grouped by direction: Across and Down. Write one letter per square. Check your answers against the answer key once you have completed the puzzle.

Puzzle grid



Clues

Across

3. Rapid chemical reaction in which a substance burns in oxygen, releasing thermal energy (10)
4. Insulated container used to measure temperature changes during energy transfer (11)

Down

1. Degree of closeness of repeated measurements to each other, independent of accuracy (9)
2. Chemical process in which substances are transformed and energy is exchanged (8)
3. Experimental technique for measuring heat released or absorbed in a chemical reaction (11)
4. Movement of heat energy from one object or substance to another (8)
5. Chemical reaction that releases heat to the surroundings (10)
6. System of symbols used to represent enthalpy changes in equations (8)

Answer key

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

