

Enthalpy and Calorimetry Maze

This maze reinforces the vocabulary and reasoning that Chemistry 30 students need to work with thermochemical data. Along the route, you will encounter key terms and quantities tied to defining enthalpy and molar enthalpy ([Outcome](#), [Outcome](#)), applying $Q = mc\Delta T$ to transfer problems ([Outcome](#), [Outcome](#)), using ΔH_{comb} to communicate energy changes ([Outcome](#)), and interpreting calorimetry data to determine enthalpy changes in chemical reactions ([Outcome](#)). These concepts are the same ones practised in calorimetry investigations such as measuring heat released during combustion ([Resource](#)) and building and testing a simple calorimeter ([Resource](#)), and they connect to the skills of collecting, organizing, and analyzing energy data ([Outcome](#), [Outcome](#)).

How to play

Start at the entrance of the maze and trace a single continuous path to the exit, moving only up, down, left, or right between open cells. You may not cut through walls or move diagonally.

As you trace your route, keep this word bank in mind. Each term names a concept you would need to define, calculate, or interpret in a calorimetry problem:

enthalpy, molar enthalpy, calorimetry, exothermic, endothermic, specific heat capacity, ΔH_{comb}

Before you start, write a one-sentence definition or example for each term on a separate sheet or in the margin. Once you have solved the maze, check whether the direction pattern of your solution path matches the one recorded in the answer key. If it does not match, look for a spot where you branched onto a dead end and retrace from there.

Work individually first, then compare your traced path and your eight definitions with a partner before checking the answer key.

The maze

START

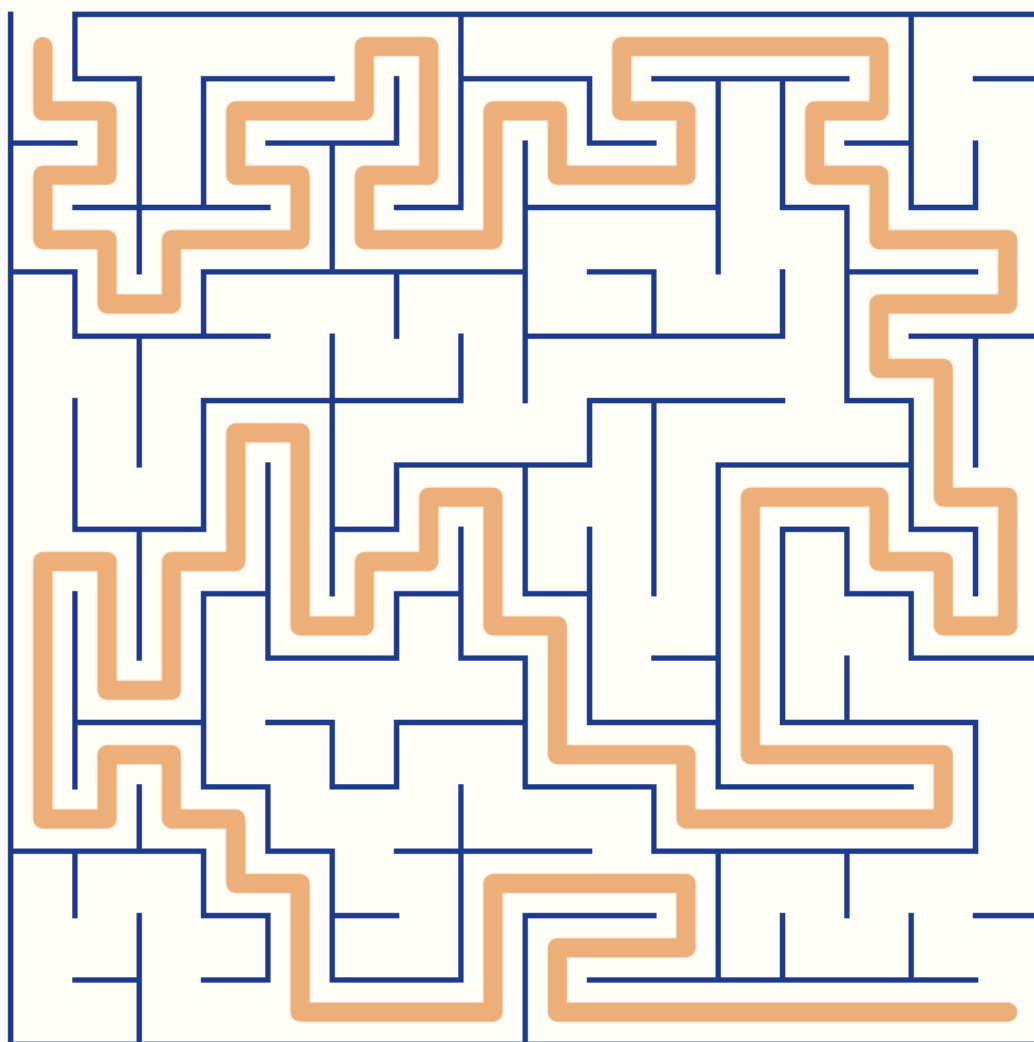
END

Maze

Answer key

Enthalpy and Calorimetry Maze (solution)

START



END

Maze solution

Path: down 1, right 1, down 1, left 1, down 1, right 1, down 1, right 1, up 1, right 2, up 1, left 1, up 1, right 2, up 1, right 1, down 2, left 1, down 1, right 2, up 2, right 1, down 1, right 2, up 1, left 1, up 1, right 4, down 1, left 1, down 1, right 1, down 1, right 2, down 1, left 2, down 1, right 1, down 2, right 1, down 2, left 1, up 1, left 1, up 1, left 2, down 4, right 3, down 1, left 4, up 1, left 2, up 2, left 1, up 2, left 1, down 1, left 1, down 1, left 1, up 3, left 1, down 2, left 1, down 2, left 1, up 2, left 1, down 4, right 1, up 1, right 1, down 1, right 1, down 1, right 1, down 2, right 3, up 2, right 3, down 1, left 2, down 1, right 7