

Hangman: Enthalpy Changes and Calorimetry

This game reviews eight terms from Unit A of Chemistry 30, including calorimetry, the notation used for enthalpy, and the transfer of thermal energy between substances. Students apply $Q = mc\Delta T$ to transfer problems ([Outcome](#), [Outcome](#)), define enthalpy and molar enthalpy ([Outcome](#), [Outcome](#)), use ΔH to communicate energy changes ([Outcome](#)), and use calorimetry data to determine enthalpy changes in reactions ([Outcome](#)). These skills connect to calorimetry investigations such as measuring heat released during combustion ([Resource](#)) and testing a constructed calorimeter for precision ([Resource](#)).

How to play

Work through the puzzle grid one word at a time. Each puzzle gives a definition or context clue drawn from thermochemistry concepts in Chemistry 30. Guess one letter at a time. Correct letters fill in their position in the blank spaces; incorrect letters count against your allowed number of misses, shown by the remaining blanks on the hangman stand. A player or team is out on a word after the set number of incorrect guesses is reached, at which point the answer key is used to reveal the word before moving to the next puzzle.

For a classroom round, split into pairs or small groups. Each group works independently and records both correct guesses and misses. Assign one point per word solved with fewer than four incorrect letters, and a bonus point to the first group to correctly explain the chemistry term in their own words after solving it.

Formative checkpoint: after the round, ask each group to write one sentence using their solved terms correctly in a thermochemistry context (for example, connecting ΔH to exothermic or endothermic reaction). This checks whether students can move from vocabulary recall to conceptual application, in line with [Outcome](#) and [Outcome](#).

Support: allow groups struggling with spelling to see the first letter of each word before their second incorrect guess, and pair the activity with a review of $Q = mc\Delta T$ ([Outcome](#)) before starting.

Extension: have students who finish early write a calorimetry lab scenario (referencing [Resource](#)) that uses at least three of the solved words correctly, including a calculated ΔH value.

Puzzles

Round 1 (11 letters)

C _ _ _ _ _ _ _ _ _ _ _

Clue: Experimental technique for measuring heat transfer and energy changes in chemical reactions

Wrong guesses: _ _ _ _ _

Round 2 (7 letters)

T _ _ _ _ _ _

Clue: Related to heat or temperature changes in a system

Wrong guesses: _ _ _ _ _

Round 3 (8 letters)

N _ _ _ _ _ _ _

Clue: Symbolic system using 9D, Fò &W &W6VçB æB 6öÖĐunicate energy changes in chemical equations

Wrong guesses: ____ ____ ____ ____ ____ ____

Round 4 (8 letters)

E _ _ _ _ _ _ _

Clue: Heat content of a substance at constant pressure, used to measure energy change in chemical reactions

Wrong guesses: ____ ____ ____ ____ ____ ____

Answer key

- Round 1: **CALORIMETRY**
- Round 2: **THERMAL**
- Round 3: **NOTATION**
- Round 4: **ENTHALPY**