

CC15 Heat energy changes in chemical reactions



Personal learning checklist | 1 of 1

GCSE Edexcel Combined Science | Chemistry Paper 2

Name _____ Class _____ Date _____

Tick one box for each statement. Red: need help. Amber: partly confident.
Green: can do independently.

I can	Red	Amber	Green
Heat transfers and measurements			
Distinguish exothermic and endothermic changes using energy transfer, temperature evidence and examples.	☐	☐	☐
Describe an insulated temperature-change experiment with controlled reagents, consistent measurements and safe handling.	☐	☐	☐
Calculate signed temperature changes and explain heat-exchange and measurement limitations.	☐	☐	☐
Reaction profiles			
Draw and interpret exothermic and endothermic profiles with labelled energy, progress, activation energy and overall change.	☐	☐	☐
Explain why exothermic reactions still need activation energy and compare forward and reverse barriers.	☐	☐	☐
Explain catalyst effects on reaction profiles without changing reactant levels, product levels or overall energy change.	☐	☐	☐
Bonds and net energy			
Explain energy absorption in bond breaking and release in bond formation.	☐	☐	☐
Explain overall exothermic or endothermic change by comparing the two bond-energy totals.	☐	☐	☐
Calculations (Higher)			
Count bonds using balanced coefficients and calculate signed energy changes from supplied bond energies (Higher).	☐	☐	☐
Adjust energy changes to the requested reaction amount and explain limitations of average bond energies (Higher).	☐	☐	☐

My next revision priority _____