



CC14 Rates of reaction

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
Measuring rates			
Select suitable gas-volume, mass-loss or colour-change measurements and calculate average rates with units.	☐	☐	☐
Interpret rate graphs using gradients, tangents, changing steepness and plateaus.	☐	☐	☐
Collision theory			
Explain successful collisions using activation energy and why reactions often slow as reactants are consumed.	☐	☐	☐
Explain concentration and gas-pressure effects using particle numbers and collision frequency.	☐	☐	☐
Explain surface-area and temperature effects using exposed particles, collision frequency and collision energy.	☐	☐	☐
Distinguish reaction speed from final product amount, including limiting-reactant effects.	☐	☐	☐
Core practicals			
Plan marble-chip gas measurements with controlled conditions, sound connections, consistent timing and appropriate safety.	☐	☐	☐
Explain mass-loss measurements, including escaping gas and the role of loose cotton wool.	☐	☐	☐
Plan the disappearing-cross investigation, controlling depth, concentration, temperature and endpoint judgement.	☐	☐	☐
Use reciprocal time to compare cross-disappearance rates and distinguish the endpoint from reaction completion.	☐	☐	☐
Catalysts			
Explain catalysts using a lower-activation-energy pathway and regeneration without changing the final complete-reaction yield.	☐	☐	☐
Describe industrial catalyst benefits and enzymes in alcoholic fermentation, including suitable conditions.	☐	☐	☐

My next revision priority _____