

IGCSE Chemistry (9-1) Specification 3(b)

(b) Rates of reaction

Students should:

- 3.9** describe experiments to investigate the effects of changes in surface area of a solid, concentration of a solution, temperature and the use of a catalyst on the rate of a reaction
- 3.10** describe the effects of changes in surface area of a solid, concentration of a solution, pressure of a gas, temperature and the use of a catalyst on the rate of a reaction
- 3.11** explain the effects of changes in surface area of a solid, concentration of a solution, pressure of a gas and temperature on the rate of a reaction in terms of particle collision theory
- 3.12** know that a catalyst is a substance that increases the rate of a reaction, but is chemically unchanged at the end of the reaction
- 3.13** know that a catalyst works by providing an alternative pathway with lower activation energy
- 3.14C** draw and explain reaction profile diagrams showing ΔH and activation energy
- 3.15 practical:** investigate the effect of changing the surface area of marble chips and of changing the concentration of hydrochloric acid on the rate of reaction between marble chips and dilute hydrochloric acid
- 3.16 practical:** investigate the effect of different solids on the catalytic decomposition of hydrogen peroxide solution