

These are the errors that appear year after year in examiner reports. Knowing *what not to write* is just as important as knowing what to write. ★ marks Higher Tier only. Every mistake here has cost students marks in real exams.

Cell Structure and Enzymes

■ **Students often write:** *"The lock and key model says the active site changes shape to fit the substrate."*

✓ **Correct answer:** The INDUCED FIT model says the active site changes shape. The LOCK AND KEY model assumes the active site is rigid and the substrate fits exactly without any change. Edexcel specifically tests which model is which.

■ **Examiner insight:** Lock and key = rigid, perfect fit. Induced fit = flexible, active site moulds around substrate. Edexcel Topic 1 requires knowing BOTH models.

■ **Students often write:** *"Osmosis moves solutes from concentrated to dilute solutions."*

✓ **Correct answer:** Osmosis only moves WATER — and it moves from the dilute solution (high water potential) to the concentrated solution (low water potential). Solute particles are too large to pass through the partially permeable membrane.

■ **Examiner insight:** Osmosis = water ONLY. Direction = high water potential to low (dilute to concentrated). Never say solutes move in osmosis.