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.

Food Chains and Energy

■ **Students often write:**	*"The arrow in a food chain means 'eats'."*
✓ **Correct answer:**	The arrow in a food chain shows the direction of ENERGY TRANSFER — it points from the organism being eaten TO the organism eating it. So grass → rabbit → fox means: grass is eaten by rabbit, rabbit is eaten by fox. Energy flows in the direction of the arrow.
■ **Examiner insight:**	Arrow direction = direction of energy flow = direction of "being eaten." Grass is at the arrow's tail — energy leaves grass and enters rabbit (arrow's head). Never say arrows mean "eats" — they show what energy flows into.

■ **Students often write:**	*"Only 10% of energy is transferred because organisms waste energy."*
✓ **Correct answer:**	The 10% figure is because energy is LOST at each trophic level through: (1) respiration — released as heat, (2) movement and other life processes, (3) undigested material in faeces/urine that is never absorbed.
■ **Examiner insight:**	Three causes, not just "waste." Examiners want all three. Heat from respiration is the biggest loss. "Waste" alone is too vague. State: respiration (heat), movement, and undigested material in faeces.

The Carbon Cycle

■ **Students often write:**	*"Respiration removes carbon dioxide from the atmosphere."*
✓ **Correct answer:**	PHOTOSYNTHESIS is the ONLY process that removes CO■ from the atmosphere. Respiration, decomposition and combustion ALL return CO■ to the atmosphere. Students frequently reverse this.
■ **Examiner insight:**	Only ONE process removes CO■: photosynthesis. Everything else adds it. This is one of the most commonly missed facts in ecology questions. If you remember nothing else from the carbon cycle, remember this.

■ **Students often write:**	*"Decomposers break down dead organisms so they disappear."*
✓ **Correct answer:**	Decomposers (bacteria and fungi) break down organic matter and RELEASE the mineral ions (e.g. nitrates, phosphates) back into the soil — making them available for plants to absorb again. Decomposition is essential for nutrient cycling, not just "getting rid of dead things."
■ **Examiner insight:**	Decomposition releases: CO■ (by respiration), heat AND mineral ions into the soil. Without decomposers, nutrients would be permanently locked in dead organisms and plants could not grow. Always mention mineral ion release.

Biodiversity and Human Impact

■ **Students often write:**	*"Deforestation mainly kills animals."*
✓ **Correct answer:**	The primary biological consequences of deforestation are: (1) habitat destruction → biodiversity loss, (2) reduced photosynthesis + burning → increased atmospheric CO■, (3) soil erosion (roots no longer bind soil), (4) disruption of the water cycle.
■ **Examiner insight:**	Examiners expect you to mention CO■ release AND habitat destruction — not just "animals die." Animal death is a consequence of habitat destruction. Name the mechanism, not just the outcome.

■ **Students often write:**	*"Eutrophication: algae produce oxygen which kills fish."*
✓ **Correct answer:**	Eutrophication kills fish through OXYGEN DEPLETION, not oxygen production. The chain: fertilisers → algal bloom → algae block light → aquatic plants die → bacteria decompose dead plants → bacteria USE UP dissolved oxygen → fish suffocate.
■ **Examiner insight:**	The algae themselves are not the direct problem. It is the BACTERIA DECOMPOSING DEAD PLANTS that consume the oxygen. Students often stop at "algae block light" — continue the chain to oxygen depletion for full marks.