

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.

## Selective Breeding and Genetic Engineering

■ **Students often write:** *"Genetic engineering and selective breeding are the same thing."*

✓ **Correct answer:** Selective breeding chooses organisms with desired traits and breeds them over generations — working within natural variation. Genetic engineering directly inserts specific genes from any organism into another using restriction enzymes and ligase — can cross species barriers.

■ **Examiner insight:** Selective breeding = slow, within species, no gene cutting. Genetic engineering = fast, across species, uses enzymes.

■ **Students often write:** *"Restriction enzymes join DNA pieces together."*

✓ **Correct answer:** RESTRICTION enzymes CUT DNA at specific sequences. LIGASE joins (seals) DNA pieces together. Two separate enzymes, opposite functions.

■ **Examiner insight:** Restriction = cut. Ligase = join. Both names and functions are required in OCR genetic engineering questions.