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The Biology Problem Solving Guide for 2026

Most biology questions can be solved with the same few steps. This guide covers a five-step way to answer any biology question, how to tackle each kind of question, a genetics cross worked through, the mistakes that cost marks and how to check an answer from an AI solver.

Five steps for any biology question

1. **Find the topic.** Is it about cells, genes, ecosystems or a body system? Name the branch first.
2. **Find the command word.** "Describe" asks what happens. "Explain" asks why. "Compare" asks for likenesses and differences.
3. **List what you are given.** Underline the data, the organism and any numbers.
4. **Link it to a concept.** Name the process or rule that connects the facts, such as diffusion or natural selection.
5. **Answer, then check.** Write the answer in one sentence, then make sure it answers exactly what was asked.

How to tackle each kind of question

Question type	What to do
Multiple choice	Answer it in your head first, then cross out the options you can rule out and say why.
Short answer	One clear point for each mark, with the right key term.
Essay	An introduction, three or four main points with examples, and a short conclusion.
Diagram	Name each structure, say what it does and how it links to the parts next to it.
Lab data	Describe the trend with numbers from the data, then explain it with the biology.

A genetics cross, worked through

Question: In pea plants, tall (T) is dominant over short (t). What fraction of the offspring of a Tt x Tt cross will be short?

1. Each parent makes two kinds of gamete: T and t.
2. The four combinations are TT, Tt, tT and tt.
3. Only tt has no dominant T, so only tt is short.
4. **Answer:** 1 out of 4, so one quarter of the offspring will be short.

Mistakes that cost marks

Describing when asked to explain: say why, not only what. **Loose words:** "the cell eats it" instead of "the cell takes it in by endocytosis". **No numbers from the data:** quote the values when you describe a trend. **Mixing up terms:** gene and allele, mitosis and meiosis, are not the same.

How to check an AI answer

An AI solver is a fast way to see the steps, but it can make mistakes. Read the answer first, then follow each step and make sure it uses the data you gave. Check key facts against your textbook or class notes. If something does not match, ask your teacher, and ask the solver to explain that step again in simpler words.

Checklist before you hand it in

- ☐ I answered the command word
- ☐ I used numbers from the data
- ☐ My steps lead to the answer
- ☐ Units on every value
- ☐ I used the key terms
- ☐ Each mark has a point
- ☐ Spelling of scientific terms
- ☐ Checked against my notes

The one idea I need to remember from this topic

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