Writing a Scientific Explanation

Write a scientific explanation that connects an observed result to a relevant mechanism.

5 min preparation | Science, Maths and Humanities

Before the lesson

Choose a phenomenon and the mechanism needed to explain it.

Teach it in four steps

1. Write a scientific explanation that connects an observed result to a relevant mechanism.
2. Identify the mechanism that connects the cause to the result.
3. Build a cause → mechanism → consequence chain.
4. Write the explanation and reject a because ending that merely repeats the result.

Worked example: Writing a Scientific Explanation

A trolley accelerates forwards because the forward force exceeds the opposing force, producing a forward resultant force. “It accelerates because it goes faster” does not explain the cause.

Teacher prompt: “What connects the cause to the result?”

Check understanding

Change one condition or evidence item and ask whether the proposed mechanism still supports the explanation.

Fade the support

Remove the arrow chain and ask for the mechanism in the learner’s own wording.

Adapt it across subjects

Maths: explain why an operation preserves equality. Humanities: explain how a cause contributed to an outcome.

Adjust the language support

A1-A2 access: keep the subject goal; use visuals, a small word bank, pointing or drawing and partner rehearsal. Use a home language to establish meaning where helpful.

B1-B2 extension: ask for fuller explanations, precise subject vocabulary and qualifications. Reduce sentence openings when learners can organise the response independently.

These are starting points, not placement rules. Judge support from the learner’s response to this task; proficiency can differ across skills.