Practical route session 4 · Explain and revise

Target: Explain and revise. Planning estimate: 60–75 min, or two blocks.

Print / prior evidence

Use the prerequisite bridge, model and representation, guided cooling case and independent task in Explain Why the Temperature Changed (student pages 1–5). Then use the bridge and initial/additional guided-practice evidence in Revise the Claim When Results Change (student pages 1, 5–6). Match activity headings and question numbers to the separate guides. Check preceding evidence or the named bridge before proceeding, and check the investigation setup before handling equipment.

Prerequisites: preceding collected evidence or the corresponding standalone kit bridge. The Cool-water investigation operational setup must be fully checked before handling.

Demonstration / learner work / collect

Explain net transfer, then retain a bounded claim when new comparable results remain consistent. Collect a scientific connection and a reason for revision.

Next decision / continuation

Pause after the explanation independent task if a continuation is needed. In Explain Why the Temperature Changed, use Connect evidence to the explanation, questions 1–2 for readings without explanation, then Fresh recheck · Connect a new record, question 1. For reversed direction, cold as a substance or stopped transfer, use Trace energy transfer, questions 1–2, then Fresh recheck · Trace a new case, question 1. In Revise the Claim When Results Change, use Initial claim and support, question 1, then Keep the evidence, change the claim, question 1 when contrary evidence is ignored; reserve Fresh recheck · Initial record and Fresh recheck · Additional record. Use Initial conditions and claim, question 1, then Compare conditions before revising, questions 1–2 when conditions are pooled or the newest record is automatically preferred; reserve Fresh recheck · Initial conditions and Fresh recheck · Changed surroundings. Reveal each additional record only after the initial response is retained. Guided revision practice is supported work, not independent evidence.

No equipment homework or mandatory student internet access. Use the complete Cool-water investigation fallback for learners who do not handle equipment or when equipment is unsuitable; record that the fallback does not show construction or testing.