Practical route session 6 · Assemble and run first comparison

Target: Assemble and run first comparison. Planning estimate: 65–80 min plus teacher preparation.

Print / prior evidence

Cool-water investigation: Prepare and Run the First Comparison. Use Design Brief questions 1–2, Assemble and Label question 1, Instruments and Trial Order questions 1–2, Instrument-check Record question 1, the setup and reading-log questions on each of three First Comparison trial sheets, and Compare the First Trials questions 1–3. Full student pages 1–9 and 13; supplied first-comparison record on page 15 for the fallback route. Teacher setup pages 1–6 and keys on pages 8–12.

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

The teacher checks container, lid, probe, water and setup readiness; model recording with the fictional completed record, not invented student results. Learners assemble a prototype, run three fresh paired trials at 0/5/10 min, and retain starts, conditions and departures.

Next decision / continuation

Collect three complete records from the first phase and the construction version. If the period is 45 min, stop after trial 1, then drain, clean and store dry labeled sleeves; continue fresh trials 2 and 3 in the next block before redesign. Never make up readings.

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.