Electricity exam practice: evidence and corrections

Teacher / technician

YEAR 10 / LESSON 38 / PHYSICS + SCIENCE (DOUBLE AWARD)

Staff preparation and answer guidance. Keep separate from student sheets. Record actual measurements separately from labelled practice examples.

Coverage and delivery

Shared Physics / Double Award: Review of circuit concepts; electrostatic extension is Physics only.

Allow about 60 minutes. Follow the student sequence and use the answers to check reasoning.

Requisition • class of 30, working in 15 pairs

Item	Per pair / setup	Class total
Booklets	1 per learner	30
Rulers	1 per learner	30

Immediate safety

Written practice only. Do not construct short circuits or connect ammeters across cells. No practical electrical equipment is needed.

Preparation and delivery

Read alongside the student method

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1. Use ten minutes for an initial independent attempt, followed by paired explanation and teacher-led correction.

2. Treat the answer notes as guidance for reasoning, not an official mark scheme. Keep the Physics-only extension optional for the separate course.

Close of lesson

- Retain corrections and return rulers.

Check before teaching

Check the cards, reference data and quantities against this requisition. Keep the staff answer guide separate until the checking stage. Supplied numerical practice datasets are labelled examples; they are not class measurements.

Answers and teaching notes

Expected explanations • do not give as experimental observations

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- Use the standard symbols in one loop with an open switch.
- The conducting path is broken.
- Charge is conserved; the lamp transfers energy.
- It measures current through the branch and has low resistance; across a cell it can create a short circuit.
- A broken lamp, depleted cell or loose connection; diagnose while disconnected.
- It supports like net charges on both objects; attraction can also occur with a neutral polarised object. Double Award alternative: inspect connections and component ratings with the supply disconnected.

References and provenance

Pearson Physics specification

Prepared 22 November 2026. Original wording, tables and questions. Sources inform the concepts and technique; the lesson scope and classroom quantities are explicitly described here. No laboratory trial or final school risk approval is claimed.