Analysing potometer evidence

Teacher / technician

YEAR 10 / LESSON 46 / BIOLOGY ONLY

Staff preparation and answer guidance. Keep separate from student sheets. Original learning tasks; no supplied numerical example represents class measurements.

Coverage and delivery

Biology only: 2.58B. Transpiration investigation analysis.

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 / graph paper	1 of each per learner	30 of each
Calculators / rulers	1 of each per pair	15 of each

Immediate safety

Paper, modelling and written reasoning only. No chemicals or biological samples are handled.

Preparation and delivery

Read alongside the student method

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1. Provide 30 booklets, 30 sheets of graph paper and 15 calculators/rulers. Use either the supplied practice data or clearly identified class results from Lesson 42.

2. If volume is calculated, provide the measured internal capillary radius; otherwise calculate displacement per unit time only. Keep the answer guide separate until learners have attempted the questions.

Close of lesson

• Return models and keep the corrected work.

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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- 0.0583 mm s^{-1}.
- 0.1083 mm s^{-1}.
- A bar chart with repeat variation.
- No; they are repeated readings of one specimen.
- Drift or altered conditions.
- Not necessarily; growth, storage and leaks affect the inference.

References and provenance

Pearson Biology 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.