

What did our plants need?

Lesson at a glance

Open by placing the two class plant conditions side by side and asking which looks healthier before anyone measures. Revisit the project question and the word evidence, then groups measure both heights in centimetres, note colour and fullness, and jot results on the watching log. Pool every group's heights into the data-recorder interactive bar chart. Pupils draw both plants and write one short needs sentence in the Investigation Journal, then the class agrees what plants seem to need from their own evidence.

Learning objectives

- Observe and record differences between plants grown in two conditions, using the watching log and today's measurements
- Conclude what plants seem to need to grow well, using evidence from the watching log

Before the bell – prep

Have both plant conditions and each group's watching log ready at tables (or one shared set at the front). One ruler per group. Open the data-recorder interactive on the IWB before the lesson. Keep a spare strip of paper per group if logs are scarce.

Materials

Item	Qty	Per	Source	Low-cost substitute
plants in clear cups from earlier in this project (both conditions)	2	group	classroom	one shared class set of both conditions on the front table
watching logs from earlier in this project	1	pupil	classroom	one group watching log shared between two pupils
30 cm clear ruler	1	group	classroom	a strip of centimetre squared paper used as a height strip
Investigation Journal page	1	pupil	provided printable	plain paper with teacher-drawn heading spaces for observations and conclusion

**Safety watch-point**

Wash hands after handling plants and compost; do not taste seeds or soil. Support cups when measuring — no pulling leaves or poking fragile shoots.

Teaching moves

- **Getting Started:** Set both conditions where every child can see them. Ask which looks greener, fuller or weaker before handing out rulers. Flag that taller is not always healthier — a pale spindly shoot can still look unwell.
- **Remember our question:** Board only the word evidence with a short child meaning. Point at the real cups while saying condition aloud. Invite a few children to read their earlier prediction from the watching log; stress predictions are never wrong.
- **Observe and compare:** Model one straight-ruler measurement from compost surface to tallest tip, say the centimetres aloud, then send groups to work. Before anyone leaves the table, both condition names and both heights must be on the watching log. Circulate asking what else they notice besides height — colour, leaves, stems.
- **Pool our heights:** Drive the data-recorder interactive briskly: one runner per group reads both heights from the watching log while you type two rows. Show the bar chart and ask whether height matches what eyes saw about colour and fullness. Record 0 cm if a plant did not grow.
- **Record what we found:** Keep the Investigation Journal to two jobs only: draw or label both plants with heights plus one non-height difference, then one short needs sentence. Offer starters aloud — I observed... / I think plants need... because... — and check conclusions use today's evidence.
- **What do plants need?:** Revoice pupil ideas toward a shared conclusion grounded in the chart and watching logs, then link to the school garden or a home windowsill. Name plant needs here as the class conclusion, not a fact taught at the start.

What it should show

Plants with light (or water) should look greener, fuller and stronger. Dark-grown plants are often pale and leggy — they may be shorter or longer, but look weaker. No-water plants may be wilted, dry or barely grown. If the dark plant is taller, treat that as evidence of missing light, not proof dark is better. If both look similar, say so honestly — time may have been short or light leaked in.

Misconceptions & interventions

- **Taller means the plant grew better.** — Hold up a pale leggy shoot beside a greener fuller one and ask which looks healthier. Point back to colour, stem thickness and leaves, not only the height bars.
- **The weaker plant is bad or dead, so it does not count.** — Frame the weaker plant as useful evidence: the difference tells us what the plant needed. Unexpected results still go on the watching log and the chart.
- **Plants only need soil to grow.** — Point at both cups: soil or cotton wool held the seed in both conditions. Ask what actually differed — light or water — and let that drive the class conclusion.

Differentiation

Emerging	Developing	Proficient
• Match picture words (green/pale, full/thin) before measuring; scribe a key word on the Investigation Journal if writing is a barrier. • Sight-only compare is enough if a group is unsure about touching the shoots.	• Write both heights and one colour or leaf note on the watching log, then use a sentence starter for the needs conclusion.	• Add leaf count or stem colour beside height, and check whether the bar chart matches what eyes saw about fullness.

Cross-curricular hook

Tie to Maths Measures and Data — heights in centimetres feed the class bar chart pupils then read together.