

living-things

What did our plants need?

Lesson at a glance

Open by placing the two class plants side by side and asking which looks healthy before any measuring. Revisit the project question and earlier predictions, naming evidence as today's key word. Groups measure both heights in centimetres, note colour and fullness on the watching log, then pool results into the data-recorder interactive bar chart. Close on the Investigation Journal with a labelled drawing and one evidence-based sentence about what plants need.

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

Bring both plant conditions and the watching logs to group tables (or one shared set at the front). One ruler per group; keep rulers off tables until after the noticing opener. Load the data-recorder interactive on the IWB with Condition and Height (cm) columns ready.

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 the cup when measuring — no pulling leaves or poking fragile shoots.

**Teaching moves**

- **Getting Started:** Place both plant conditions where every child can see them. Hold rulers back. Ask which plant looks greener, fuller or wilted — stay at noticing only. Remind the class that taller is not always healthier: dark-grown shoots can look long and spindly.
- **Remember our question:** Revisit the class question and invite a few children to read their earlier prediction from the watching log. Board only the word evidence with a short meaning; weave condition orally while pointing at each real set-up. If a child announces what plants need, hand it back: 'Let us see whether our plants show us that today.'
- **Observe and compare:** Model one careful measurement first: ruler straight from compost or cotton wool to the tallest tip, read centimetres aloud. Then groups measure both plants and write both condition names and heights on the watching log before leaving the table. 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 which bars are tallest or shortest, then whether height matches what eyes saw about colour and fullness. Record 0 cm if a plant did not grow — that is real evidence.
- **Record what we found:** Two jobs only on the Investigation Journal page: draw or label both plants with heights plus one non-height difference, then one short conclusion sentence. Say the starters aloud as you circulate: I observed...; The plant with... looked...; I think plants need... because... Check the sentence links to today's evidence, not a remembered book fact.
- **What do plants need?:** Revoice pupil ideas until the class offers 'plants need...' themselves. Write the agreed sentence on the board with the evidence that backs it. Draw out greener/fuller as signs of health, and that watching over time made the difference visible.

What it should show

Plants with light (or water) should look greener, fuller and stronger-stemmed. Dark-grown plants are often pale and leggy — they may be shorter or longer, but look weaker. Unwatered plants may be wilted, dry or barely grown. If a dark plant is taller, treat that as evidence of missing light, not proof dark is better. If both look similar, talk honestly: time may have been short or light may have leaked in.

Misconceptions & interventions

- **Taller means the plant grew better.** — Point at a pale, spindly shoot beside a shorter greener one. Ask which looks healthier using colour and fullness, not only the ruler number.
- **The weaker plant is bad or dead, so it does not count.** — Frame the weaker plant as useful evidence: the difference is what tells us what the plant needed. Unexpected results still count.
- **Plants only need soil to grow.** — Agree soil or cotton wool held the seed, then point back at the two conditions: today's evidence shows light and/or water made the real difference.

Differentiation

Emerging	Developing	Proficient
• Match picture words (green/pale, full/thin) before measuring; scribe a key word on the Journal page if needed. • Sight-only comparison is enough if a group is unsure with the ruler.	• Add one non-height note such as leaf count or stem colour beside the two heights on the watching log.	• Write a fuller because-sentence linking prediction, height and one observed difference; critique whether height alone would have misled the class.

Cross-curricular hook

Tie to Maths Measures and Data — heights in centimetres feed the class bar chart and a simple tallest/shortest read.