

Set up our plant investigation

Lesson at a glance

Open with a healthy green plant beside a pale, leggy one and ask what plants need. Pupils name roots, stem and leaves on the IWB interactive, then the class votes for one shared comparison—light versus dark, or water versus no water. Groups plant two matching cups the same way, label only the chosen difference, and place them. On the Investigation Journal page they draw day-one pots and say a prediction with because, then build a simple watch-list for the weeks ahead.

Learning objectives

- Ask a simple question about what plants need and set up two matching pots to compare light or water
- Predict what will happen to the plants and say why, then start a watching log

Before the bell – prep

Print one Investigation Journal page per pupil. Ready one healthy and one pale plant (or clear photos). Per pair/three: two clear cups, bean or cress seeds, damp compost or cotton wool, labels, newspaper mats, shared water jug. If light is chosen, clear press or lidded dark-box space for every dark pot before the bell.

Materials

Item	Qty	Per	Source	Low-cost substitute
healthy potted plant for comparison hook	1	class	classroom	clear photos of a healthy plant and a pale leggy plant on the IWB
pale leggy potted plant for comparison hook	1	class	classroom	clear photos on the IWB
clear plastic cups	2	group	supermarket	clean empty yoghurt pots
bean or cress seeds	about 6 bean seeds or 2 small pinches of cress (enough for 2 cups)	group	school kit	dried beans from the supermarket (check they will sprout) or kitchen cress seeds
damp compost or cotton wool	2 small scoops of compost or 2 pads of cotton wool	group	supermarket	damp kitchen paper for cress
jug of water	1	group	classroom	shared class jugs
plant labels or masking-tape labels	2	group	classroom	paper strips taped to cups
dark box or access to a dark press cupboard with space for every dark pot	1	class	classroom	extra lidded cardboard boxes with no light gaps if the press is small
shallow tray to hold pots	1	group	classroom	lid of a photocopy-paper box
newspaper or wipeable mat to protect desks	1	group	classroom	old magazines
Investigation Journal page	1	pupil	classroom	plain A4 paper if a reprint is needed mid-lesson

Safety watch-point

Cover desks; wash hands after compost; do not eat seeds; wipe spills; keep water away from electrics and the IWB.

Teaching moves

- **Name the plant parts:** Drive the label interactive on the IWB. Pupils call out; you drag roots, stem, leaf, flower and petal. Link only roots, stem and leaves to what they will watch on seedlings. Mention once that flower and petal belong on a grown plant, then move on.
- **Our question and predictions:** Keep this brisk: class votes light or water, write the two care ways on the board in child words, agree one shared question, then take two spoken predictions with because. Model: I predict the dark pot will grow pale and long because leaves need light. Stop extra talk once you have those and go to planting.
- **Plant our two pots:** Demo one full set-up in 2–3 minutes thinking aloud same seeds, same cup, same damp start—only the chosen care differs. Groups of two or three make two matching pots, one label word each plus group name. Light pots to the windowsill; dark pots straight into the press or sealed box. Water comparison: same light place, watering differs from day one.
- **Day one on our journal page:** Hand out pages already printed. First they draw both pots as they look today; drawing alone is complete work. Then optional short prediction with because—spoken, symbols or scribed all count. Date the page so it is ready for weekly adds.
- **What will we look for?:** Build a four-line watch-list on the board with the class: tiny shoot; first green leaves; taller stem and more leaves; green and strong, not pale. Stress one day is not enough—growers watch over days and weeks.

What it should show

Today: little or no visible growth—day one is the starting picture only. Over coming weeks, expect the well-cared pot (light and watered) to look greener and stronger; the dark pot often grows pale and long, the dry pot wilts or stalls. A dark box that still looks green early usually has light leaking in—check the lid or cloth seal.

Misconceptions & interventions

- **Some children think plants only need soil, or that a plant in the dark dies straight away.** — Point back at the two hook plants and the board pair: we are setting a gentle comparison and watching over days, not waiting for instant death. Revoice that pale and long is useful evidence, not failure.
- **Pupils put both label words on one cup, or change seed number or dampness between the two pots.** — Hold up your demo pair: one word per cup, same seeds and same starting damp. Only the chosen care—light or water—is allowed to differ.

**Differentiation**

Emerging	Developing	Proficient
• Allow day-one drawings plus a dictated prediction sentence—treat as normal, not extra. • Quieter pupils whisper I think the ... pot will ... because ... to a partner before sharing.	• Use the board stem I think the ... pot will ... because ... and add one more spoken prediction after planting.	• Note one thing that must stay the same about the two pots (same seeds, same cup type) so the comparison stays clear, without fair-test jargon.

Cross-curricular hook

Link to English oral language: every prediction needs a because, practised as a short spoken sentence before any writing.

