

Planting a seed: what will it need?

Lesson at a glance

Hold up a dry bean or cress seed and ask what it needs to grow. Pupils agree three needs — water, light and warmth — then briefly label roots, stem and leaf on the IWB plant diagram. Each child plants one seed in a clear cup with cotton wool, adds a small splash of water, and labels the cup. They draw day-one seed and the three needs on the Investigation Journal page, then place cups on a bright windowsill tray.

Learning objectives

- Plant a seed carefully and record how it looks on day one
- Agree that a seed needs water, light and warmth to grow into a plant

Before the bell – prep

Day before: one clear cup per pupil, cotton wool, bean or cress seeds, name labels, small water jugs, class tray, newspaper for tables. Print Investigation Journal pages. Pick a bright windowsill and clear space for the tray.



Materials

Item	Qty	Per	Source	Low-cost substitute
clear plastic cup or small glass jar	1	pupil	supermarket	recycled clear yoghurt pot rinsed clean
bean seeds or cress seeds	1	pupil	supermarket	dried beans from a kitchen cupboard (not cooked)
cotton wool	1	pupil	supermarket	a spoon of peat-free compost or kitchen paper folded damp
small jug or bottle of water	1	group	classroom	shared class jug with a teaspoon for dosing
name labels or masking-tape strips	1	pupil	classroom	sticky notes stuck above the cup on a tray card
newspaper to cover tables	1	group	classroom	old magazines or a washable tablecloth
Investigation Journal page	1	pupil	classroom	plain paper for a day-one seed drawing and three needs pictures
class tray for finished cups	1	class	classroom	a shallow cardboard box lined with newspaper

Safety watch-point

No eating seeds or cotton wool. Wash hands after planting; wipe spills straight away.

Teaching moves

- **What will our seed need?:** Name talk partners first, then pose ‘What does a seed need to grow?’ Run a short think-pair-share, accept a few ideas, and guide the class to agree water, light and warmth. Write those three words on the board for later drawing.
- **Parts we will watch for:** Keep to about five minutes. On the IWB interactive, invite pupils to place only roots, stem and leaf. Ask which part takes in water and which holds the plant up. If a flower appears on the diagram, park it for later and return to the three labels.
- **Plant your seed:** Demonstrate one cup slowly, revealing one board step at a time: cotton bed, seed visible against the clear side, small splash (damp not swimming), name label, tray. Adults control water amounts at tables. Cress for speed; beans for bigger roots.
- **Draw your seed on day one:** Prompt close looking — colour, size, where the seed sits, damp cotton. This is day one for later comparison. Check that water, light and warmth appear as pictures, marks or words. Offer aloud starters only: ‘My seed looks...’ ‘My seed needs...’
- **Windowsill home:** Carry the tray to the windowsill. Name one real school spot (pots by the hall, hedge by the yard gate) and draw out that outdoor plants get rain, daylight and mild weather — the same three needs indoors.

What it should show

Every cup should hold one visible seed on damp (not flooded) cotton wool, labelled and on the windowsill tray. Journal pages show the day-one seed plus water, light and warmth as pictures or words. Over-watered cups look soggy; reseal the seed against the clear side if it has sunk out of view.

Misconceptions & interventions

- **‘The seed isn’t alive until it sprouts.’** — Hold up the dry seed and say clearly it is living now, but it needs water, light and warmth before we see the change. Point back to the three needs on the board.
- **Pupils drown the seed — ‘more water means it grows faster.’** — Re-model a small splash on a demo cup: damp cotton, not a puddle. Say the seed needs a drink, not a swim, and help tip out excess.



Lesson 7

Differentiation

Emerging	Developing	Proficient
• Adult holds the cup steady and guides the water splash; child places the seed and adds the name label. • Accept pictures or simple marks only for the three needs; offer the starters aloud: 'My seed looks...' 'My seed needs...'	• Prompt extra day-one detail: seed colour, size, and where it sits in the cotton wool.	• Early finishers help label the class tray or choose the windowsill row, and can say why that spot gives light and warmth.

Cross-curricular hook

Link to SESE Geography local places — name real school plants (yard hedge, hall pots) that get rain, light and warmth.

