

Planting a seed: what will it need?

Lesson at a glance

Hold up one dry bean or cress seed and ask what it needs before it can grow. Name water, light and warmth, then ask what would happen if one were forgotten. On the IWB, drag the three labels — roots, stem, leaf — onto a young-plant picture. Each pupil loosens cotton wool in a clear cup, tucks a seed against the wall, adds a small splash of water and labels the cup. They draw the cup on day one in the Investigation Journal, then the class tray goes to a bright windowsill.

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: print one Investigation Journal page per pupil; set out clear cups, cotton wool, bean or cress seeds, small water jugs, name labels and newspaper table covers. Clear a bright windowsill and leave a class tray ready for finished cups.

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 when planting is finished and wipe spills straight away.

Teaching moves

- **Getting Started:** Hold one dry seed so the whole class can see it. Ask one curiosity question only — what does it need before it can grow? Collect two or three ideas quickly and do not correct wrong guesses yet.
- **What if we forgot one?:** Name the three needs — water, light, warmth — then take a quick hands-up on which matters most. Push the real thinking: what would happen if we forgot one? Ask what we would see and whether it would happen straight away or slowly. Keep the tone caring, not grim.
- **Parts we will watch for:** On the IWB interactive, invite children to call out or drag the three labels — roots, stem, 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 parts. Say clearly the seed is already living.
- **Plant your seed:** Demonstrate one cup slowly at the front, pointing to each board step: loosen cotton wool, press the seed against the clear wall, add a small splash of water (damp, not swimming), stick the name label, place on the class tray. Then pupils plant at tables while adults watch water amounts.
- **Draw your seed on day one:** Prompt close looking — seed colour, size, where it sits, damp cotton wool — and remind them this is day one. Accept pictures or simple marks for water, light and warmth. Offer spoken starters only: My seed looks... My seed needs...
- **Windowsill home:** Carry the tray to the windowsill. Name one real school spot children know — pots by the hall, hedge by the yard gate, school garden — and draw out that outdoor plants get rain, daylight and mild Irish weather, the same three needs as our cups.

What it should show

Each cup holds one visible seed on damp (not flooded) cotton wool, labelled and on the windowsill tray. Journal pages show the cup as it looks today plus marks or pictures for water, light and warmth. A seed buried deep in the middle of the wool is hard to watch later — gently rest it against the clear wall if you catch it in time.

Misconceptions & interventions

- **Some children think a seed is not alive until it sprouts.** — Hold up the dry seed and say clearly it is already a living package waiting for water, light and warmth — we just cannot see the change yet.
- **Pupils may pour until the cotton wool is swimming, thinking more water helps more.** — Model one small splash at the front and say damp, not swimming. Have an adult check jugs at tables before second pours.



Lesson 7

Differentiation

Emerging	Developing	Proficient
• Adult holds the cup steady while the child places the seed and adds water; offer spoken sentence starters for the day-one drawing.	• Ask them to point to where roots will grow first and say why the seed sits against the clear wall.	• Early finishers help label the class tray or choose the windowsill row, and say which of the three needs the windowsill supplies.

Cross-curricular hook

Link to local Geography — name school-ground plants (hedge, pitch grass, garden pots) that get the same water, light and warmth outdoors.

