

materials

Weathering: what does Irish weather do?

Lesson at a glance

Open with a photo of faded playground lines or peeling fence paint and ask what Irish weather does to outdoor materials. Pupils predict which of paper, fabric, foil and chalk will change most, then compare matched Outside/Inside sample pairs with a magnifier and jot one word each. Groups score chalk, paper and fabric 1–2–3; a class vote covers foil. Scores go into the data-recorder interactive so bars show which material changed most, then short Investigation Journal notes and a display-only wrap-up.

Learning objectives

- Observe how Irish weather has changed materials left outdoors by comparing them with matching sheltered samples
- Compare weathered samples with sheltered ones and record the changes

Before the bell – prep

Book only if matched pairs are ready: leave paper, fabric foil and chalk outdoors 1–2 weeks ahead; keep identical twins labelled Inside in a dry cupboard. Stage one labelled tray per group plus one magnifier per pair. Fallback: IWB photo pairs plus one live pair made that week.

**Materials**

Item	Qty	Per	Source	Low-cost substitute
weathered sample set (paper, fabric scrap, kitchen foil, stick of chalk; optional leaf) left outdoors in advance	1	group	classroom	one shared class set of weathered samples passed from group to group; or photo pairs on the IWB with one live pair if outdoor sets are not ready
matching sheltered sample set (same paper, fabric, foil, chalk; optional leaf kept indoors)	1	group	classroom	one shared class set of sheltered twins; or new/unused matching materials shown beside weathered photos in the emergency fallback
magnifier	1	pair	school kit	one magnifier per group, or careful looking without a magnifier
sorting tray or shallow box for sample pairs	1	group	classroom	a clean lid or sheet of scrap card on the table
optional disposable gloves	1	pupil	supermarket	skip gloves and wash hands thoroughly instead
Investigation Journal page	1	pupil	classroom	plain paper with headings for sample and how it changed

Safety watch-point

Outdoor samples can be damp or dusty — wipe tables after use and make sure every pupil washes hands before leaving the room.



Teaching moves

- **Getting Started:** Show one clear example only — faded playground lines or peeling outdoor paint on the IWB. Take three or four quick ideas and revoice plain noticing (pale, cracked, soft). Do not open the sample trays yet.
- **What is weathering?:** Name weathering on the board as rain, sun and wind slowly changing outdoor materials. Hold the word sheltered until the trays appear. If someone says the outdoor sample is just dirty, ask whether it still looks or feels different after a gentle brush.
- **What do we think happened?:** Pose the investigation question, then run a quick think-pair-share on which of paper, fabric, foil and chalk will change most. Jot three prediction words on the board if useful. Do not reveal the real samples yet.
- **Compare the samples:** Model one full pair at the front with the magnifier (wonder → predict → observe side by side → think). Then groups work pair by pair: look, say one difference, jot one word or tiny sketch, next pair. Push precise talk — faded, softer, torn — and keep trays out until every pupil has four light jots.
- **What does the weather do?:** Model scoring chalk as 1, 2 or 3 with one plain reason. Groups score chalk, paper and fabric only; settle class scores from shares, then take a quick whole-class vote on foil so all four rows are ready for the chart.
- **Chart our findings:** Drive the data-recorder yourself on the IWB. Pupils call out or show fingers for the four agreed scores; type only those. Ask which bar is tallest or shortest and whether the chart matches the earlier predictions.
- **Record and wrap up:** Keep trays out while pupils finish one short change phrase per sample, then call pencils down. Run a 2–3 minute display-only answer to the investigation question and where else weathering shows around school. Wipe tables and send everyone to wash hands before leaving.



What it should show

After real Irish weather, chalk is usually most changed (smaller, powdery or partly dissolved — often a 3); paper wrinkled, faded or torn; fabric duller or stiffer; foil only duller or more creased (often a 1 or 2). If both sets look almost the same, say so and ask what weather the samples actually had — unexpected results are still data.



Misconceptions & interventions

- **It's just dirty, so it looks different.** — Gently brush surface dirt off one outdoor sample and ask whether it still looks or feels different from the sheltered twin — weathering is the material itself changing, not only dirt sitting on top.
- **Foil never changes because it is metal.** — Hold the outdoor and indoor foil side by side under the magnifier and look for dullness or extra creases — metal can still weather without disappearing.
- **Every material should change the same amount.** — Point at the class chart bars and the four pairs still on the tray: different materials weather differently, which is why we compared several side by side.



**Differentiation**

Emerging	Developing	Proficient
• Pair at the teacher table and use spoken stems for each jot: The outdoor one is... The indoor one is... • Limit the light capture to one word from the board word bank per pair rather than a sketch.	• After scoring, ask why that material changed more or less than another using one weather word (rain, sun or wind).	• Challenge them to say whether a tall bar means the test was unfair or the material weathers easily, using tray evidence. • Invite one STEM-eyes idea: where else around the school the same material might show weathering.

Cross-curricular hook

Tie to Maths Data — read the tallest and shortest bars on the class chart and link scores to how different each sample looked.