

materials

Weathering: what does Irish weather do?

Lesson at a glance

Open on a worn playground marking or peeling fence paint and name weathering. Pupils predict which of paper, fabric, foil and chalk will change most outdoors, then compare matched Outside/Inside trays with a magnifier, jotting one word per pair. Groups score chalk, paper and fabric 1–2–3; class scores go into the data-recorder chart. Finish with short Investigation Journal notes and a display-only talk on what Irish weather does to materials.

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 samples are ready: 1–2 weeks ahead, leave matched pairs (paper, fabric, foil, chalk) outdoors and keep identical twins in a dry cupboard; label Outside/Inside. One tray per group plus one magnifier per pair. Fallback: IWB photo pairs of Irish weathered vs new materials, plus one live pair if possible.

**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	provided printable	plain paper with headings for sample and how it changed

Safety watch-point

Outdoor samples can be damp or dusty. Wipe tables after tray work and ensure everyone washes hands before leaving the room.

Teaching moves

- **Getting Started:** Keep this short. Show one photo or one weathered object only — do not lay out the trays yet or pupils will handle instead of listen. Take three or four quick ideas and revoice everyday noticing: colour gone pale, cracked, soft.
- **What is weathering?:** Write weathering on the board only. Hold sheltered until the trays appear. If someone says outdoor samples just look dirty, ask: if we gently brush the dirt off, does it still look or feel different?
- **What do we think happened?:** Pose the investigation question, then think-pair-share on paper, fabric, foil and chalk. Predictions are never wrong. Optionally jot three prediction words on the board to check later — do not reveal real sample results yet.
- **Compare the samples:** Trays staged before pupils sit. Model one full pair at the front (wonder-predict-observe-think), naming the indoor twin as sheltered. Reveal board jobs one line at a time. Circulate for precise talk — faded, cracked, softer, smaller — and make sure every pupil jots one word or tiny sketch per sample before trays leave.
- **What does the weather do?:** Model scoring one clear pair (often chalk): 1 almost the same, 2 a bit different, 3 very different, with a reason. Groups score chalk, paper and fabric only; collect class scores, then a quick whole-class vote on foil. Model: I observed... so I think rain weathered the chalk.
- **Chart our findings:** Drive the data-recorder yourself on the IWB. Pupils call out or show fingers for the four agreed class scores; you type them, then Show chart. Ask which bar is tallest/shortest and whether it matches predictions — evidence-first, not a race to be right.
- **Record and wrap up:** Leave trays out for about four minutes of short notes — one change phrase per sample, then pencils down. Run the make-sense talk so the class answers the investigation question together. Wipe tables if needed; everyone washes hands before leaving.

What it should show

After real Irish weather, chalk is often smaller, powdery or partly dissolved (high score); paper wrinkled, faded or torn; fabric duller or stiffer; foil only duller or more creased (lower score). Exact results depend on time outside. If both sets look almost the same, say so honestly and ask what weather the samples actually had — unexpected results are still data.

Misconceptions & interventions

- **It's just dirty, so it looks different.** — Ask whether gently brushing dirt off still leaves a change in colour, softness or shape. Weathering is the material itself changing, not surface muck.
- **Foil never changes because it's metal.** — Hold the Outside and Inside foil side by side under the magnifier. Point out dulling or extra creases — change can be small without the material disappearing.
- **All outdoor materials change the same way.** — Point at the class chart bars. Different heights show chalk, paper, fabric and foil did not weather equally — that is why we compared several.

**Differentiation**

Emerging	Developing	Proficient
• Pair at the teacher table for one modelled pair; accept a single word or tiny sketch per sample from the step-4 jot stems. • Offer spoken stems for journal notes: The outdoor chalk was... The indoor chalk was...	• Push one precise change word beyond yuck (faded, softer, powdery) and a clear 1-2-3 score with a reason for chalk, paper and fabric.	• Challenge another group's score with evidence, or suggest what to try next time if pairs looked almost the same (longer outside, wetter spot). • Link to peeling paint, faded signs or worn markings they can spot around the school.

Cross-curricular hook

Tie to Maths Data — class 1-2-3 scores become bars; read which material changed most and least.