

materials

Materials and sustainability

Lesson at a glance

Hold up a clean plastic bottle beside a crisp packet and take quick guesses on which bin each belongs in. Teach the three-bin criteria, then drive the sorting-tree interactive so the class answers yes/no together. Groups glove up and sort a prepared sample bag into recycling, compost and general-waste trays, tallying as they go. On the Investigation Journal they record counts, one tricky item, and one practical reduce or reuse action before a short class vote.

Learning objectives

- Sort a sample of classroom waste into recycling, compost, or general waste using clear criteria
- Design one practical reduce or reuse action for the class or school and explain why it helps

Before the bell – prep

Day before: bag one clean, dry sample set per group (bottle/yoghurt pot, card or newspaper, tin or can, sealed fruit scrap, crisp packet, dirty tissue, thin plastic bag, plus one extra recyclable). Label three trays R/C/G. Print the Investigation Journal page and set gloves. Picture cards work if real packaging is short.

**Materials**

Item	Qty	Per	Source	Low-cost substitute
disposable gloves (or washable classroom gloves)	1	pupil	supermarket	shared pairs of washable rubber gloves wiped between groups, or adult-handled sorting with pupils pointing
clean dry empty classroom waste samples (minimum 8 per group: bottle or pot, card or paper, tin or can, sealed fruit scrap, crisp packet, dirty tissue, thin plastic bag, plus one extra recyclable)	1	group	classroom	printed picture cards of the same waste items with clean/dirty or food captions so the three questions still apply
sorting trays or shallow boxes with header labels (recycling, compost, general waste)	3	group	provided printable	three sheets of newspaper on the desk as labelled zones
bin header labels (Recycling, Compost, General waste)	1	group	provided printable	handwritten sticky notes with the same three words
group tally strip or sticky note (three boxes: recycling, compost, general waste)	1	group	classroom	three tally marks on the tray labels themselves
clean empty plastic bottle and clean empty crisp packet for the hook	1	class	classroom	two clear photos on the IWB
Investigation Journal page	1	pupil	provided printable	plain paper with the same three recording prompts written on the board (bin counts; tricky item with why; one reduce or reuse idea)
hand soap and access to a sink or hand gel	1	class	classroom	hand gel only if sink access is limited

Safety watch-point

Prepared clean samples only — never real bins. Gloves on; no tasting or close smelling of scraps. Wash hands after sorting before the plenary.

Teaching moves

- **Getting Started:** Hold up one clean empty plastic bottle and one crisp packet (or show them on the IWB). Take three or four hands-up guesses and reasons only — do not settle the answer yet. Point out the puzzle: both look like plastic, but they may not share a bin.
- **How do we sort waste?:** Teach only the three bins now — recycling, compost, general waste — using the short board table. Model the decision path aloud on a clean yoghurt pot, then contrast a thin plastic bag and a greasy crisp packet so pupils hear clean-and-dry plus accepted type.
- **Sort waste on the board:** Drive the sorting-tree interactive, letting the class explore it rather than testing them. For four or five items, take class yes/no on food/plant, clean dry material, and accepted type, then check the bin. Narrate the branching rule as you go so the whole class follows the same path; name local-scheme differences only if needed and stick to one rule today.
- **Audit and sort classroom waste:** Remind: prepared samples only, gloves on, no tasting or close smelling, hands washed after. Groups tip out, count total items, then place one at a time using the three questions while one pupil marks the R/C/G tally strip. Hold disputed items for a 30-second class check; early finishers prep one sentence on a hard item.
- **Record the audit:** Phase 1 first: journal counts for each bin plus one tricky item with a short why — no new language until those notes are down. Phase 2: give one-line meanings of reduce and reuse, then pupils write one practical class or school action tied to the waste they just sorted. Push evidence phrases such as greasy plastic, not just rubbish.
- **Share one reduce or reuse action:** One minute for groups to agree wording from their journal draft. Hear every group if five or fewer; if more, hear three or four live and have the rest hold up journal pages, then list distinct options. Run one hands-up vote for a single class action, or shortlist two to take forward — keep it to the vote itself rather than posters or long peer feedback.
- **What did we learn?:** Pack-away and hand hygiene first and non-negotiable: gloves off, hands washed, samples bagged to the real bins, trays stacked. Then take two or three voices only on one sorting rule or action they will remember; name the voted or shortlisted class action before you close.

What it should show

Expect clean bottle/pot, card/newspaper, tin/can and glass jar in recycling; banana peel or apple core in compost; crisp packet, dirty tissue and thin plastic bag in general waste. Tallies should match tray counts. A thin bag or greasy packet in recycling usually means pupils treated all plastic as the same — revoice clean-and-dry plus accepted type and re-sort that item.



Misconceptions & interventions

- **All plastic goes in recycling — a bottle, a crisp packet and a thin bag are the same.** — Hold the three items side by side and walk the third question: is it a type our scheme accepts? Bottle yes; greasy film and thin bag no, so general waste.
- **If it looks clean enough, greasy or food-soiled packaging can still go in recycling.** — Point to the crisp packet or a greasy card scrap and ask whether it could spoil a whole load. Stress clean and dry; food-soiled items that are not compost go to general waste.
- **Sorting more carefully is enough — reduce and reuse are just other words for recycling.** — Tie actions to the audit: a refillable bottle means fewer bottles made; a jam jar pencil pot uses an item again. Recycling is the last step after using less and using again.



Differentiation

Emerging	Developing	Proficient
• Offer board sentence starters for the journal: We sorted ___ items. Most went in ___. One tricky item was ___ because ___. • Pair at the teacher table and sort aloud with the three tray headers visible; use picture cards if handling real scraps is hard.	• Ask them to justify one disputed item to the class using the three questions, not packaging colour alone. • Prompt: would your sort still work if this item was wet or food-soiled, and what does that tell you about looking after recycling?	• Challenge them to explain why a thin bag or greasy film is not recycling even though it is plastic, linking to spoiling a load. • Stretch the action design: name who does it, when this term, and how you would check less waste was made.



Cross-curricular hook

Link to Maths data — pupils tally R/C/G counts and compare which bin held most items in their sample.