

materials

Mixing materials

Lesson at a glance

Open with a baker tipping flour and water into a bowl and wonder what happens when they go in together. Model one live mix at the flour-and-water tray, thinking aloud as the spoon tips. In three short station rotations, groups scoop damp sand, flour or cornflour with water, stir, and judge whether each mix runs off the spoon or stays in a lump. Carpet share samples from each tray, then a display-only make-sense talk: mixing can make something that feels new.

Learning objectives

- Mix two everyday materials at a station and describe the result
- Say whether a mix pours or holds its shape
- Notice that mixing can make something that feels new

Before the bell – prep

Check the class list for wheat allergies and plan a cornflour-only path. Pre-dampen flour and cornflour so powder scoops, not dusts. Set three wipe-clean trays with reserve pots of unmixed damp sand, flour and cornflour for fresh scoops each rotation; spoons, cups, towel and water jug ready.



**Materials**

Item	Qty	Per	Source	Low-cost substitute
shallow mixing trays	3	class	classroom	clean cat-litter trays or deep baking trays
play sand	1	class	school kit	clean builder's sand rinsed and dried, or dry rice for a no-sand room
plain flour	1	class	supermarket	extra cornflour station only if wheat cannot be used
cornflour	1	class	supermarket	extra flour-and-water paste if cornflour is unavailable
small reserve pots for unmixed damp powder	3	class	classroom	clean yoghurt pots or takeaway tubs
jug of clean water	1	class	classroom	bottles of tap water
spoons	9	class	classroom	lolly sticks or clean yoghurt-pot scoops
small cups	6	class	classroom	clean yoghurt pots
towels or cloths	3	class	classroom	kitchen roll

Safety watch-point

Check wheat allergies before the flour tray. Mixes stay off faces; no tasting. Wipe spills at once; sleeves up; wash hands with soap after tidy.



Teaching moves

- **Getting Started:** Hold up an empty mixing bowl or show the baker picture. Ask what the baker is putting in — take two or three quick answers only. Do not name the stations or hand out materials yet.
- **What happens when we mix?:** Board the word mixing. At the flour-and-water tray, think aloud: stir slowly, tip the spoon, and contrast run-off-the-spoon with stay-in-a-lump. Name holds its shape only after children have seen the tip. Stress both starting materials are still in the paste.
- **Mix at the stations:** Send three groups to the three trays. Two clean visits of about three minutes each are enough; chime a clear swap. Only two or three children stir at once — watchers still judge every tip. Give each group a fresh scoop from the reserve pot plus a little water. Stay closest to the cornflour tray. Prompt: Does it run off the spoon, or stay in a lump?
- **What did we notice?:** Bring the class to the carpet with one spoonful sample from each tray at the front. Go station by station; two children per mix say one noticing. Offer stems: It looks... It feels... It pours. It stays in a lump. If a child only says yucky or nice, push once: Does it run off or sit there?
- **Make-sense talk:** Show the baker picture again. Revoice talk toward mixing two materials can make something that feels new. Celebrate any cornflour surprise that poured and held shape at different times. Hands up and talk only — no writing.



What it should show

Sandy water usually pours; flour paste often stays as a sticky lump; cornflour mix can feel hard when squeezed and runny when left alone — both labels can be right. Affirm any careful pour-or-lump choice. A mix that stays bone-dry means too little water was added; offer a splash and re-stir rather than treating it as a finished result.



Misconceptions & interventions

- **Mixing means the materials disappear — the flour is gone once it meets the water.** — Point at the paste and name both starters still there: flour and water made this together. Hold a pinch of dry powder beside the mix so children can see what changed and what is still present.
- **A mix can only be one thing — if cornflour runs, it cannot also hold a shape.** — Invite a squeeze then a still tip at the cornflour tray. Celebrate both noticings: hard in the hand, runny when left alone. Both labels can be right for that mix.



**Differentiation**

Emerging	Developing	Proficient
• Pair at the teacher-near tray; adult holds the spoon for the tip while the child chooses run-off or stay-in-a-lump with a pointing choice. • Offer the two friendly phrases as a spoken either/or rather than open description.	• After one tip, ask one more feel word: sticky, gritty, smooth, cold. • On the second station visit, invite a second tip after one more splash of water and notice any change.	• Ask which starting powder made the biggest change from dry to mixed, and why they think so. • Invite them to tell the watchers when cornflour earns both labels and what their hands did differently each time.

Cross-curricular hook

Link to Aistear/home cook talk — who mixes flour and water when baking bread or cakes at home.