

# Wide feet stand up

## Lesson at a glance

Open by rocking one cup on your palm and taking quick guesses about what helps things stay up. Show wide feet versus thin feet with a body demo, then pairs build two freestanding towers the same height from cups or blocks — three-piece spread base versus one-piece base — on a shared tray. One gentle finger nudge to the tray reveals which stands steady. Close on the carpet naming wide feet on a real classroom stand.

## Learning objectives

- Build two towers the same height with wide feet and thin feet
- Notice which tower stays up better when the tray is nudged
- Say that wide feet help a tower stand

## Before the bell – prep

Night before, bag about 12 cups or blocks plus one flat tray per pair. Build one worked model (wide triangle base and matching-height thin tower) to leave standing at the front all lesson. Clear floor space so trays can be nudged safely.

## Materials

| Item                                                                                                             | Qty | Per   | Source    | Low-cost substitute                                             |
|------------------------------------------------------------------------------------------------------------------|-----|-------|-----------|-----------------------------------------------------------------|
| plastic cups or wooden blocks (about 12 per pair: enough for a 3-piece wide base plus two short matching towers) | 12  | group | classroom | clean stackable yoghurt pots or paper cups from the supermarket |
| flat tray or shallow box (build surface for the gentle nudge test)                                               | 1   | group | classroom | a sturdy cardboard lid or a large hardback book used as a base  |

## Safety watch-point

Build below shoulder height. Nudge the tray, not the tower. Stand back and clear feet as towers fall; mind fingers between cups.

**Teaching moves**

- **Getting Started:** Rock one cup or block gently on your palm. Ask what might help it stay up and take a few kind guesses only — do not show the tray or hand out kits yet. Name builders and engineers as people who stop towers falling.
- **Wide feet and thin feet:** Plant both feet wide and rock, then tiptoe on one foot and wobble. Say wide feet mean a big spread-out bottom and thin feet a small one. Flash the empty tray once so children picture the later wobble surface. Keep both towers the same height as the big idea — feet, not height.
- **Build two towers:** Model the full build at the front: three cups in a triangle then stack; one cup then the same number on top; check tops with a level hand or book. Leave your model up. Give pairs about 7 minutes; circulate asking ‘Show me the wide feet. Same height?’ No glue or tape.
- **Gentle nudge:** Demo one soft one-finger tray push on your model without saying which fell. Pairs do one gentle nudge each. Partner-notice first, then whole-class share; revoice into ‘wide feet help a tower stand steady.’ If both fall, the nudge was too hard — model softer.
- **Wide feet all around us:** Point to one freestanding object in the room (easel, coat stand). Model stems: ‘Wide feet help because they spread out / do not tip.’ Pairs finish the stem. Stay oral — no drawing sheet.

**What it should show**

Almost every thin-feet tower falls first; the wide-feet tower stays up or lasts longer. If both fall, the nudge was too hard — remodel a softer finger push. If neither falls, the thin base is not thin enough; help them use a single cup or block at the bottom.

**Misconceptions & interventions**

- **Taller things always fall first — so the taller tower will tip no matter the feet.** — Point to both tops and check they match height with a level hand. Say today’s only difference is the feet; height stays the same on purpose.
- **We need tape or glue to make a proper tower.** — Hold up the freestanding model: ‘No sticky stuff — builders want the feet to do the work so the nudge test is fair.’

**Differentiation**

| Emerging                                                                                                                                                                      | Developing                                                                                                                                                                     | Proficient                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Let pairs stop at about three cups high and keep checking against your front model for wide bottom versus one-cup bottom.</li> </ul> | <ul style="list-style-type: none"> <li>• After the first nudge, ask ‘Why did that one stay up?’ and have them point to the spread-out feet before the carpet share.</li> </ul> | <ul style="list-style-type: none"> <li>• If they finish early, add one layer only to the wide-feet tower and try one more gentle nudge — still matching the idea that wide feet help it stand.</li> </ul> |

**Cross-curricular hook**

Link to PE balance — wide feet make a steady stance, same idea as the tower's wide base.

