

engineering

Build a tall tower

Lesson at a glance

Teddy needs to see over a low wall, so pairs become builders of a tall tower that still stands when they let go. After a quick carpet model of a thin stack versus a wide-bottom base with a card floor, children try a steady base first, then build with blocks, cups and card and gently seat Teddy on top. Show-and-tell celebrates what helped each tower stand — especially a wide bottom — with photos saved for a later unit share.

Learning objectives

- Build a tower from blocks, cups and card that stands on its own
- Say one thing that helped the tower stand (for example a wide bottom)

Before the bell – prep

Before the bell, clear floor lanes and stage one starter set per pair (few large blocks or cups plus 1–2 card pieces) with full tubs closed beside each spot. Set a low wall, shelf or taped line and one light soft toy per pair. Mix blocks, about six paper cups and card offcuts ready to open for the main build.

**Materials**

Item	Qty	Per	Source	Low-cost substitute
low wall, shelf edge or taped line for the teddy problem (plus masking tape if using a line)	1	class	classroom	a row of books on their sides, or a chalk line on the floor
building blocks (mixed sizes in a tub)	1	group	classroom	clean food cartons, small boxes or wooden offcuts stacked as blocks
paper cups	6	group	classroom	cardboard tubes from kitchen rolls
card offcuts	4	group	classroom	flattened cereal-box rectangles
light soft toy (for testing the tower)	1	group	classroom	a pair of clean socks rolled into a soft bundle
clear floor or low table build space	1	group	classroom	one shared carpet area with marked spots for pairs
class device or camera to photograph towers before tidy	1	class	classroom	teacher's phone used only by the teacher

Safety watch-point

Build on the floor or a low table; keep fingers clear between stacking pieces; stand back when a tower tips; use only light soft toys; clear stray cups and card so nobody trips.



Teaching moves

- **Look at the problem:** Hold up one soft toy and point to the pre-set wall. Keep the full kit closed. Say Teddy wants to see over the wall and needs a tall tower that still stands when we let go. Name builders as people who make tall buildings stand strong.
- **Talk and share ideas:** On the carpet only, stack three small blocks so they wobble or fall, then rebuild with four bigger blocks, a card floor and a short stack that stands. Think aloud that a wide bottom helps. Partner talk: big or little pieces on the bottom? Take two or three answers and revoice as big bottom, strong feet or flat base.
- **Try a wide bottom:** Starter sets are already at pair spots — do not hand out more. Prompt largest pieces flat first, optional card as a floor, then a gentle press and a few pieces on top. After about four minutes, invite two pairs to show their base only.
- **Build your tower:** Open the full tubs. Run two short bursts (about 6 min then 5 min) with a 30-second freeze in the middle. Circulate asking where the wide bottom is and what is helping it stand. If card is ignored, give one 10-second flat-floor demo. Gentle Teddy test only on towers that stand alone.
- **Show and tell:** Invite about four pairs. Listeners give thumbs-up when they hear what helped a tower stand. Model: My tower stood because... Praise standing, fixing after a fall and clear noticing words — never rank by height. Photograph each standing tower or best base before tidy for the unit folder.

What it should show

Most pairs will get a free-standing tower once big pieces sit flat at the bottom, often with card as a floor between layers. Children should name one helper: wide bottom, big pieces low down, careful stacking or card floor. Towers that keep falling usually have a thin base or were pushed while stacking — pause, widen the bottom, and rebuild. Falling is useful data, not failure.

Misconceptions & interventions

- **Taller is always better, even if the tower falls when we let go.** — Gently name both goals together: tall and standing by itself. Point to a fallen thin stack and a shorter steady base and ask which one Teddy can really sit on.
- **Little blocks or cups should go at the bottom because we need the big ones higher up to make it tall.** — Return to the carpet model: thin column falls, wide big-piece base stands. Ask again what should go on the bottom so it does not fall.

**Differentiation**

Emerging	Developing	Proficient
• Stay with the starter set longer: wide base and card floor only, then add just a few pieces with the teacher at the table before opening the full tub. • Offer the sentence frame with gesture: It stands because... wide bottom (show wide hands).	• After a topple, prompt one fix only: make the bottom wider, then try the gentle Teddy test again.	• Build a second tower with an even wider bottom, or test seating Teddy lower if the top is tippy, and say which choice helped more.

Cross-curricular hook

Link to Aistear construction play and oral language: My tower stood because... with partner talk and show-and-tell.

