

Make a little boat that floats

Lesson at a glance

Hold up a small toy beside the empty water tray and ask what could help it float across. Children share one foil-and-stick shape idea with a partner, then press hand-sized foil into a wide open boat with raised sides (sticks optional). In small groups they float boats at shallow trays, try one shape fix if it tips, and notice what stayed up. Close with a quick hold-up show-and-tell of the shapes that helped.

Learning objectives

- Make a small boat from foil and lolly sticks and float it in the water tray
- Try one fix if the boat tips and say that shape helps a boat float

Before the bell – prep

Night before or morning: fill one or two shallow trays a few centimetres deep; set towels beside them. Tear foil into hand-sized squares (about two per child). Put lolly sticks in a shared tub. Have one light plastic toy for the hook. A second basin or roasting tray makes rotations smoother.

Materials

Item	Qty	Per	Source	Low-cost substitute
aluminium foil squares (hand-sized, about 2 per child)	2	pupil	supermarket	clean used foil gently flattened (best match). Wax paper only if foil is unavailable: it may soften in water, so keep the talk on sides and a hollow middle rather than a perfect float
wooden lolly sticks	2	pupil	supermarket	short strips of stiff card or clean ice-lolly sticks saved from home
shallow water tray	2	class	classroom	large washing-up basins or deep roasting trays on towels (two if possible)
towels or cloths for spills	4	class	classroom	old tea towels or kitchen roll
small light plastic toy (optional passenger)	1	group	classroom	a bottle cap or small eraser as a pretend passenger

**Safety watch-point**

Sleeves up before the trays; max about four children per tray; wipe spills at once; adult empties trays; hands washed before lining up.

**Teaching moves**

- **Getting Started:** Hold the light toy beside the empty tray. Ask one question only: what could we make so our toy can float? Take two or three ideas, smile at every one, and do not hand out foil yet.
- **Talk and share ideas:** Quick-model a shallow open foil dish with sides pinched up — do not float it. Say you wonder if a wide open shape will sit better than a scrunched ball. Leave the model as a clue, keep talk to about three minutes, then move to making.
- **Make a little boat:** Run two short spells: about six minutes pressing a hollow middle with sides turned up, a one-minute hold-up of wide-open versus scrunched shapes, then about three minutes to steady the shape and optionally fold foil over one or two sticks. Hand a fresh square if foil tears; raised sides and a hollow middle are enough for success.
- **Float it and fix:** Sleeves up. Cap each tray at about four children. Half the class floats while the other half plans one shape fix at dry tables, then swap. Allow one fix only if it tips; name shape when a change helps. Keep passenger toys light and wipe spills straight away.
- **What helped it float?:** Gather at the tray or hold up one boat that floated and one that tipped. Draw out wide bottom, sides turned up, hollow middle. Revoice: a good shape helps a boat float. Oral noticing only — no drawing.
- **Show and tell:** Everyone holds their boat up together. Invite three or four children only to finish My boat... or I fixed... One kind clap each; keep shares short and leave tidy for the close.

**What it should show**

Most wide open foil boats with raised sides and a hollow middle will float; tight crumpled balls often tip or sink. An unexpected tip is useful — try one shape fix (wider base, higher sides, or move a stick). A good boat that sinks usually had a heavy passenger; swap to a light toy and re-try.

**Misconceptions & interventions**

- **Only a real shop-bought boat can float — foil we shape ourselves will just sink.** — Point to the class boats already afloat and say we are makers too. Name shape as the thing we can change, then try one wider or higher-sided fix.
- **Scrunching the foil into a tight ball makes a stronger boat.** — Hold the wide open model beside a crumpled ball and ask which will sit better. Revoice: a hollow middle and sides turned up keep water out.



Differentiation

Emerging	Developing	Proficient
• Pair at the teacher table and start from a partly pressed open foil dish so the child only pinches the sides higher. • Accept a wide open foil dish with no sticks as a complete first boat.	• After one successful float, prompt one shape fix only: open the base wider or pinch sides higher, then re-try. • While watching another group, ask do you think it will stay up and what could they change about the shape.	• Invite a short why after a fix: which part of the shape helped it stay up. • In show-and-tell, stretch to name one shape feature (wide bottom, high sides, hollow middle) that helped.

Cross-curricular hook

Link to Aistear water play and Irish river and sea travel — boat-builders shape boats so people travel safely.