TEACHER RESOURCE BOOK · MATHS · 4TH CLASS

Lesson 53 MEASURES

Perimeter — the distance around a shape (add the sides)

CURRICULUM ALIGNMENT

SHA.SHP.3b represent shapes with drawings and models, and calculate dimensions of shapes.

MEA.MSR.3a compare, estimate and measure length, weight, capacity, area and volume using appropriate instruments and record and communicate appropriately.

INTERACTIVES Shape Measurer · 2d

LESSON ARC

Trace a finger right around the picture frame so pupils picture an ant walking the edge, then move to the IWB grid and add up sides one shape at a time — triangle first, then the trap L-shape where all six sides count. Pupils take turns clicking each side while the running total builds. They draw and add a four-sided shape in copybook, then measure real objects with a ruler at stations. Student Activity Book follows for solo practice.

TEACHING MOVES

1. **Getting Started.** Trace your finger slowly right around the picture frame (or IWB frame) and back to the start as you read the ant question. Take three hands-up, not call-outs — you're fishing for 'measure the edges and add them', the whole lesson in one line.
2. **Watch and Notice.** Do the triangle quickly, then slow right down for the L-shape — it's the trap. Run a finger around all six sides including the two short inside steps, counting aloud, so nobody loses an edge. Say the phrase verbatim: 'touch each side once and only once.'
3. **Try It Together.** Call pupils up one at a time to click each side while the class follows the running total aloud. Deliberately include a five- or six-sided shape. When a pupil skips or double-clicks an edge, freeze and ask the class: 'did the ant walk that edge already?'
4. **Draw and Add in Your Copy.** Walk the room while pupils draw a four-sided shape and label every side. The one thing to scan for: anyone adding only two or three sides instead of all four. Squared paper is on hand for pupils who want neater edges.
5. **Class Challenge.** Set objects at four or five stations and keep a brisk pass-on rhythm — the class confirms each reading aloud at the end. Circulate to catch ruler-zero alignment slips on the spot; the shape-tray triangle is the key check, since all three sides must be added, not just the obvious two.
6. **What Did We Notice?.** Pose: can two very different-looking shapes share a perimeter? Revoice a strong answer — 'the shape looks different but the sides still add to the same total' — and head off 'bigger shape always means bigger perimeter'.

COMMON MISCONCEPTIONS

⚠ On the L-shape a pupil counts only the four 'outside' sides and skips the two short inside steps, so 20 cm comes out as 16 cm.

Stop and run your finger right around all six sides aloud, counting each step. Ask 'did the ant have to walk that little edge too?' — the ant can't teleport across the corner, so every step counts.

⚠ Measuring real objects, a pupil starts the ruler at the 1 mark (or the metal end) instead of zero, so every reading is off by a centimetre.

Catch it as you circulate — line the ruler's zero against the start of an edge and have the pupil re-read. A consistent 'all my answers seem one cm too big' is the tell.

⚠ A pupil freezes when measuring the desktop because it runs past the end of the 30 cm ruler.

Show the end-over-end move: mark where the ruler ends, slide it on, and add the two readings. Remind them centimetres still work past 30 — the number just gets bigger.

DIFFERENTIATION

EMERGING

- On the IWB, stick to the triangle and the square at first — only move these pupils to the L-shape once the count-every-side idea is secure.
- At the stations, start them on the playing card and name card (small, four equal-ish edges) before the triangle, and have them write each side length down before adding.

DEVELOPING

- After their copybook four-sided shape, ask them to draw an L-shape or a five-sided shape and add all the sides — count first, then add.
- Give a missing-side puzzle: a rectangle with perimeter 22 cm and three sides shown — what's the fourth side?

PROFICIENT

- Narrate a harder Class Challenge variant from the front: 'find me two differently-shaped objects in the room with the same perimeter — measure both to prove it.'
- Pose: 'a square and a long thin rectangle both have a perimeter of 24 cm — sketch both and label the sides.' Pair with a copybook moment.

↗ **Cross-curricular:** Tie to Geography — measure the perimeter of a county or field shape traced from a map of your local area in centimetres.

ANSWER KEY

a) Perimeter = distance all the way around.

b) Add all four sides for a rectangle.

c) Area = number of unit squares covered (rows × columns).

Q1: 77 m

Q2: 106 m

Q3: 44 m

Q4: 36 cm

EXTENSION SHEET · STRETCH ANSWERS

S1: 76 m

S2: 84 m