

Capacity: estimate and measure in litres and millilitres

CURRICULUM ALIGNMENT

MEA.MSR.3a

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

MEA.MSR.3b

identify the relationship between equivalent units of measurement, and rename measures using equivalent units.

INTERACTIVES Unit Converter · display

WHAT THIS LESSON TEACHES

Capacity is how much a container holds when full. We measure in litres and millilitres.

→ A bottle holds 1 litre.

→ A spoon holds about 5 ml.

MODEL THIS ON THE BOARD

READING A JUG

- 1 Estimate first.
- 2 Pour the liquid into the jug.
- 3 Read the level at **500 ml**.

DISCUSSION STARTER

REFLECT When you estimated cups in a litre, were you close? What helped your estimate?

LESSON ARC

Open with a photo of a litre bottle, cup and teaspoon — three hands-up guesses on how many cups fill the bottle, no confirming. Move to the measurement interactive and read four jug levels aloud, landing the 1000 ml = 1 litre line. Pupils estimate-then-pour real containers at the water tray, reading each level, then record 1 l = 1000 ml and four containers in copybook. Class Challenge measures three more and adds two readings toward a litre.

TEACHING MOVES

1. **Getting Started.** Take exactly three hands-up guesses on the cup count — not open call-outs — and resist confirming. Push the comparison first: 'which of the three holds the most? Which the least?'
2. **Watch and Notice.** Read each jug level aloud as it appears — 'five hundred millilitres, half full', 'one litre, right to the top'. Point AT the water level, not down from the rim, and say 'read at eye level'. Land the big idea by pointing to the shared line: the litre mark and the 1000 ml mark are the same line.
3. **Try It Together.** At the water tray, write up a quick whole-class estimate before each pour so watchers stay engaged, then the named pupil pours and the class reads the level aloud. Revoice each reader's answer. Settle any disagreement by pointing to the mark the water actually sits on.
4. **Write it in your copy.** Walk the room glancing for two things: the estimate written BEFORE the reading, and ml (not l) used on the small amounts. This is whole-class copybook practice — glance, don't mark.
5. **Class Challenge.** Keep the pass-on rhythm brisk — egg cup, mug, flask circulate and the class confirms each reading aloud. For the challenge, prompt 'is that closer to 500 ml or to 1 litre?' as pupils add two readings toward the bottle. Consolidation, not re-teaching.

6. **What Did We Notice?.** Listen for ml chosen for small things (spoon, cup) and litres for big (bottle, bucket). Revoice a strong answer: 'small unit for small amounts, big unit for big amounts, and 1000 of the small make 1 of the big.'
7. **Reading the jug between the marks.** Drive the jug interactive from the front — the water sits on the 350 ml halfway line. Ask which two marks it's between, then which it's nearest. Flag this as a taster for next time; don't teach the full between-the-marks method here.

COMMON MISCONCEPTIONS

⚠ Pupils read the jug by looking down from the rim and call the level too low — 'it's about three hundred' when the water is on 400 ml.

Crouch to the jug's height with the class and point straight at the water line: 'read where the water sits, at eye level, not down from the top.' Re-read the same level from eye level so they hear the difference.

⚠ Pupils muddle the units and write a cup as '250 l' or the bottle as '1 ml' — the number is right but the unit is the wrong size.

Hold the litre bottle beside the cup and ask 'could this cup really hold a whole litre?' Anchor it: small amounts get ml, the big bottle gets litres. Have them fix the unit in copybook on the spot.

⚠ Pupils treat 500 ml and half a litre as different amounts, unsure they're the same.

Return to the interactive jug at the 500 ml line and point to it as both the halfway mark and half of the 1000 ml top. Say it as one thing: 'half full is 500 ml is half a litre.'

DIFFERENTIATION

EMERGING

- Give these pupils the smallest containers (cup, egg cup) so the reading lands clearly below 500 ml and the ml unit is obvious.
- Pre-write '1 litre = 1000 ml' at the top of the copybook page so they only record estimates and readings, not the conversion fact.

DEVELOPING

- After recording four containers, ask them to order their readings from smallest to largest before the Class Challenge.
- Give a missing-amount prompt: 'the jug shows 600 ml — how much more pours in to reach a litre?'

PROFICIENT

- Extend the Class Challenge live at the front: 'which THREE of your containers together come closest to a litre without going over — and how do you know?' Have them justify with their recorded readings.
- Pull them ahead into the Student Activity Book page while the class finishes the water tray round.

➤ **Cross-curricular:** Tie to SESE science — pupils check the ml or litre capacity printed on real kitchen packaging brought from home and compare it to their jug estimates.

ANSWER KEY

a) 250 ml

b) 500 ml

Q1: 0.25 l

Q2: 200 ml

Q3: 0.25 l

Q4: 1.5 l

Q5: 500 ml

Q6: 1 l

Spot: 1 litre = **1,000** ml, not 100 ml. So 2 litres = $2 \times 1,000 = 2,000$ ml.

EXTENSION SHEET · STRETCH ANSWERS

Investigation: How much do everyday things hold? — open-ended; scan pupils' working for valid solution paths rather than a single answer.