

Tenths in money and measure (half a metre, half a litre)

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.

NUM.FRC.3a

compare and express in equivalent terms; and order fractions.

INTERACTIVES Measurement Rulers · challenge, display

WHAT THIS LESSON TEACHES

When one whole is split into ten equal parts each part is one tenth written 0.1. A metre split into ten tenths gives 0.1 m (10 cm) per part.

→ One tenth of a metre stick is 10 cm.

→ Half a metre equals five tenths equals 0.5 m equals 50 cm.

MODEL THIS ON THE BOARD

READING TENTHS ON A METRE STICK

- ① Start at zero and count the equal marks along the stick.
- ② Each mark shows one tenth so five marks show five tenths or 0.5 m.
- ③ This is the same as half a metre or 50 cm.

DISCUSSION STARTER

REFLECT

Where else in real life have you met half a metre or half a litre?

LESSON ARC

Hold up a real metre stick and a one-litre jug at Getting Started, pointing along the ten equal marks on each. In Watch and Notice the metre stick splits into ten tenths on the IWB — land the fifth 10 cm mark as 'half a metre = five tenths = 0.5 m = 50 cm'. Groups of four then measure and read aloud in Try It Together. The Student Activity Book desk practice follows at the end.

TEACHING MOVES

1. **Getting Started.** Point once along the ten equal marks on the real metre stick and the jug so every pupil sees the ten-part split before you ask anything. Take three hands-up answers only — steer them toward the word 'half' and hint that a half is also a number of tenths.
2. **Watch and Notice.** At the fifth 10 cm mark, say all three names for the one spot aloud — 'five tenths, 0.5 m, 50 cm' — so pupils hear them at the same place. Before pointing to eight tenths, make the class predict 80 cm; that pay-off shows the pattern holds. Do not move on until the class can chant 'half a metre is five tenths is 50 cm'.
3. **Try It Together.** Circulate as each group reads aloud in the fixed order (half a metre, one tenth, half a litre, three tenths) — no marking, just catch slips. Watch for pupils landing on a middle-ish spot rather than the true five-tenths mark, and for anyone reading 0.1 m as 1 cm instead of 10 cm.

4. **Write the Amounts in Your Copy.** Glance along the two copybook lines as pupils write them and read each aloud to themselves. The two errors to catch on the spot are 5 cm for 50 cm, and 50 ml for 500 ml.
5. **Class Challenge.** Keep the turn rhythm brisk — one pupil moves the cursor and presses Check while the rest predict the centimetres first. Hold back until each answer is in; the final jug reading is the pay-off, so let it land as the moment the metre-stick pattern jumps to a new unit.
6. **What Did We Notice?.** Listen for 'halfway is five of the ten equal parts' — that's the reasoning, not just '50 cm'. Revoice a strong answer: 'so any whole split into ten, its half is always five tenths — a metre, a litre, or anything else.'

COMMON MISCONCEPTIONS

⚠ Pupils read one tenth of a metre as '1 cm' — they hear 'point one' and reach for the smallest number they can see.

Go back to the metre stick and count the ten equal marks aloud with the class: 10, 20, 30. Each tenth is a full 10 cm gap, not a single centimetre. Have the pupil point to where 1 cm actually sits and see how tiny it is against a tenth.

⚠ Pupils write half a litre as 50 ml (or half a metre as 5 cm) — they copy the digit 5 from 'five tenths' straight into the unit and drop the zeros.

Rebuild it on the jug: five tenths of 1000 ml. Count the fifth mark up and ask 'half of 1000 — is that 50 or 500?' Say '500 ml is half of 1000 ml' as they correct the copybook line.

⚠ When finding half, pupils point to a rough middle-ish spot rather than the exact fifth mark.

Have them count the tenths from zero out loud until they reach five; the half is the fifth mark, not 'about the middle'. Reinforce that five tenths is a fixed spot, not an estimate.

DIFFERENTIATION

EMERGING

- Pre-mark a copybook edge into ten equal parts with the pupil before Try It Together so they read tenths off a scale they helped build, not one they have to invent.
- Stay on the metre stick only for this pupil — hold the jug reading back until they can say 'half a metre is five tenths is 50 cm' unprompted.

DEVELOPING

- After the copybook lines, ask: seven tenths of a metre is 70 cm — how many more centimetres to reach half a metre? (Watch: they should notice seven tenths is already past half.)
- Give a jug-and-stick pair: 0.3 m and 300 ml — same digit, different units. Ask what stays the same in the reading and what changes.

PROFICIENT

- Pose at the board during Class Challenge: 'A jug shows 0.5 l and a metre stick shows 0.5 m — the same decimal but different real amounts. Explain to the class why 0.5 means half either way.'
- Pull them ahead into the Student Activity Book desk page and ask them to invent a fourth way to name half a metre that isn't in the lesson.

✓ **Cross-curricular:** Tie to the science measures work — pupils pour water to the half-litre mark on the jug and record it as 0.5 l and 500 ml.

ANSWER KEY

Scaffold: visual check on the page

Q1: 2 tenths = 20 cm

Q2: 5 tenths = 50 cm

Q3: 5 tenths = 500 ml

a) Always : Five tenths make exactly one half.

b) Always : Each tenth of a metre is 10 cm, so seven tenths are 70 cm.

c) Never : 0.4 l is four tenths, and half a litre is five tenths, so 0.4 l is less.

d) Never : Each tenth of a metre is 10 cm, so three tenths is 30 cm, not 3 cm.

EXTENSION SHEET · STRETCH ANSWERS

Investigation: Tents all around us — open-ended; scan pupils' working for valid solution paths rather than a single answer.