

Everyone got a different answer: why we need the metre

CURRICULUM ALIGNMENT

MEA.MSR.2

compare, approximate and measure length, weight, capacity and area using appropriate instruments and record using appropriate units of measurement.

INTERACTIVES

Drag Sort · challenge, display, explore

WHAT THIS LESSON TEACHES

A metre is a standard unit of length. Every metre stick is exactly the same length, so when we measure with metres everyone gets the same answer.

- The classroom door is taller than one metre.
- A pencil is much shorter than one metre.

MODEL THIS ON THE BOARD

WHY HAND-SPANS DISAGREE

- 1 Two children measure the same board in hand-spans.
- 2 One child counts about 6 hand-spans.
- 3 The other child counts about 9 hand-spans.
- 4 Hands are different sizes, so the counts disagree.
- 5 A metre stick is always the same length, so both would get the same metre answer.

LESSON ARC

Open by measuring the board in your hand-spans, then invite a pupil with smaller hands to measure the same board—about 6 versus about 9. Pause on the clash before naming anything. Hold up the metre stick and sort objects on the drag-sort interactive as longer, shorter or about a metre. Pupils write one longer and one shorter example in their copybook. Class Challenge runs three brisk sort rounds at the board. Close by asking why the metre finally gives everyone the same answer.

TEACHING MOVES

1. **Getting Started.** Measure the board in your own hand-spans first (about 6). Pick a pupil with clearly smaller hands for the same board (about 9). Hands up: who thought we'd match? Don't name the metre yet—ask what is going on.
2. **Watch and Notice.** Hold up the metre stick and say every metre stick in every school is exactly this long. Before each card drops, ask the class to predict longer, shorter or about a metre. Linger on windowsill height—hold the stick from the floor so they judge against the stick, not from memory.
3. **Try It Together.** One pupil drags; the class votes with hands before each card drops. Rotate four pupils. Call lunchbox, PE bench, glue stick, skipping rope, copybook, windowsill height. Listen for 'I'd check with the stick' rather than size-guessing alone.
4. **Write longer and shorter in your copy.** Two lines only: one thing longer than a metre, one shorter. Walk and glance—door, board, cupboard versus pencil, rubber, crayon. Offer the sentence starters only if a pupil freezes.

5. **Class Challenge.** Three short rounds only: pencil/door/bus; desk length/crayon/hall; windowsill height/paperclip/yard wall. Check each answer before moving on. Watch the windowsill sort—revoice 'about a metre means nearly the same as the stick, not exactly on a mark'.
6. **What Did We Notice?.** Ask why the metre gives everyone the same answer. Revoice a strong reply: so when we all use the same stick, we stop arguing about the count. Head off 'because metres are bigger'—sameness is the point, not size.

COMMON MISCONCEPTIONS

⚠ Pupils say one of us counted wrong—they treat the hand-span clash as a counting error, not a unit-size problem.

Have both of you re-measure the board slowly side by side. Same board, same careful count, still two answers. Point at the two hands: the unit changed, not the counting.

⚠ Pupils dump every object into longer or shorter and leave the About a metre bucket empty.

Hold the metre stick from the floor up to the windowsill. 'Nearly the same as the stick counts as about a metre—it does not have to land on an exact mark.'

⚠ Pupils explain the metre works 'because metres are bigger than hands'.

Revoice: size is not why we agree—sameness is. A giant hand-span still disagrees with a small one; every metre stick matches.

DIFFERENTIATION

EMERGING

- Stay with clear extremes first—pencil versus door—before introducing About a metre.
- Keep the sentence starters on the board: The ____ is longer than a metre. A ____ is shorter than a metre.

DEVELOPING

- After the copybook lines, ask: name something in the room that might be about a metre—how would you check?
- On the next Class Challenge card, ask the pupil at the board to give the reason before the class votes.

PROFICIENT

- Pose: the PE bench is longer than a metre—roughly how many metre sticks would cover it end to end? Estimate, then check with the stick if time allows.
- Ask them to explain in one sentence why two pupils measuring the hall in footsteps would still disagree even if both counted carefully.

✂ **Cross-curricular:** Tie to PE—chalk a metre on the yard and sort playground kit as longer, shorter or about a metre.

ANSWER KEY

Q1: shorter than 1 metre

Q2: longer than 1 metre

Q3: shorter than 1 metre

Q4: Yes

Q5: chair: shorter; chalk: shorter; window sill: about

Q6: Hand-spans differ in size; every metre stick is the same length.

a) Always : The metre is a fixed standard unit so all metre sticks match.

b) Never : Hands come in different sizes so hand-span counts disagree.

c) Always : Classroom pencils are much shorter than a metre stick.

d) Never : A rubber is far shorter than a metre stick.

EXTENSION SHEET · STRETCH ANSWERS

S1: metres

S2: centimetres

S3: centimetres

S4: centimetres