

The centimetre: a small unit for small things

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 Measurement Rulers · challenge, display, explore

WHAT THIS LESSON TEACHES

The centimetre is a small unit of length for measuring little things. Put the 0 at one end of the object and read the mark at the other end on your ruler.

→ A button might be about 3 cm across.

→ A crayon might be about 7 cm long.

MODEL THIS ON THE BOARD

MEASURING A GARDEN TWIG

- 1 Place the **0** mark exactly at one tip of the twig.
- 2 Find the mark where the other tip sits on the ruler.
- 3 The far tip meets **8**, so the twig is 8 cm long.

LESSON ARC

Open with the ladybird beside a metre stick and every pupil holding up a ruler — centimetres are the small unit on it. Model zero-at-the-start then read-the-end three times on the measurement-rulers interactive (button 3 cm, crayon 7 cm, straw 10 cm). One pupil measures a rubber at the board while the class coaches the two steps. Copybook: two desk objects in whole cm plus one careful ruler line. Class Challenge runs crayon → lolly stick → pencil with Check after each agree.

TEACHING MOVES

1. **Getting Started.** Flash the ladybird beside the metre stick for a few seconds, take three hands-up answers, and prompt with 'too big' or 'we need something smaller' if the room stalls. Before you leave the hook, every pupil holds their ruler in the air.
2. **Watch and Notice.** Run button 3 cm, crayon 7 cm, straw 10 cm on the measurement-rulers interactive. Point to 0 first every time, pause before naming the length so the class calls it, and only label the two steps after the third example. On the straw, ask why a metre stick would be the wrong tool.
3. **Try It Together.** One pupil at the board on the rubber; before they read, ask the class 'where must zero sit?' Watch for starts at the decorative edge instead of the 0 mark. Rotate three or four pupils on the same rubber — whole centimetres only — and let the class agree or correct out loud.
4. **Measure and draw in your copy.** Pupils measure two real desk objects (rubber, crayon, paper clip, pencil stub) with their own rulers and write whole-cm lengths. Walk the rows glancing for zero at the start and rulers held still. Finish with one careful straight line — no need to measure the line.
5. **Class Challenge.** Brisk board turns in order: crayon 5 cm → lolly stick 8 cm → pencil 12 cm. Before each Check ask 'is zero at the start?' If a reading is one mark out, send the pupil back to the 0 rather than naming the number for them.

6. What Did We Notice?. Ask when a centimetre is right and when a metre is better. Listen for small things (button, crayon, ladybird) versus big things (door, playground, corridor). Re-voice: 'we match the unit to the size of the thing,' and nudge list-only answers with 'why that unit?'

COMMON MISCONCEPTIONS

⚠ Pupils line the object up with the decorative end or the 1 mark instead of the 0, so every reading is short by a centimetre.

Freeze the board turn and ask 'where must zero sit?' Point to the 0 on the measurement-rulers interactive, reseal the object, and only then re-read the far end.

⚠ Pupils put 0 correctly but read the number under the middle of the object, or guess from a nearby mark when the end sits between whole centimetres.

Trace a finger from the 0 along the ruler to the far tip only. Keep answers to whole centimetres in this lesson — if the end is between marks, choose the nearer whole mark together.

⚠ Pupils reach for a metre stick (or say 'about a metre') for a button, crayon, or rubber because that unit already feels familiar.

Hold the ladybird image beside the metre stick again. 'Wrong size of unit for a tiny thing — match the unit to the object.'

DIFFERENTIATION

EMERGING

- Stay with one clear desk object and stand with the pupil while they seat the 0 before they read the end.
- Accept a pointing-to-the-mark answer first; help them write the whole-cm number after the class has agreed.

DEVELOPING

- After two desk lengths, ask them to say the two steps out loud before the ruler line: 'zero at the start, read the end.'
- On a Class Challenge turn, if the reading is one mark out, have them reseal the 0 themselves before Check.

PROFICIENT

- After a correct board reading, ask 'would a metre stick help here — why or why not?' before Check.
- In the copybook, add a third desk object and write why centimetres fit it better than metres.

✂ **Cross-curricular:** Science link — measure a classroom leaf or seed to the nearest whole centimetre and record the length beside a quick sketch.

ANSWER KEY

a) 3 cm

b) 9 cm

c) 12 cm

Q1: 4 cm

Q2: 6 cm

Q3: 9 cm

Q4: the caterpillar

Q5: 9 cm

a) **Always** : The centimetre is the small unit made for little objects.

b) **Always** : Zero at the start and reading the far end is the rule every time.

c) **Never** : A button is tiny so a centimetre ruler is the right tool.

d) **Sometimes** : They might match, but most leaves on a tree are different lengths.

EXTENSION SHEET · STRETCH ANSWERS

S1: metres

S2: centimetres

S3: centimetres

S4: centimetres