

Measure in centimetres and millimetres

Notes and guidance

In this small step, children combine learning from the previous steps to measure objects in centimetres and millimetres. Measurements should be recorded in the form “4 cm and 3 mm”, and encourage children to record their measurements as centimetres and millimetres, not the other way around. If possible, show children a ruler that has a centimetre scale on the top and a millimetre scale on the bottom to allow them to see the relationship between centimetres and millimetres.

If children are finding it difficult to measure using millimetre intervals, support them to identify the 5 mm interval on their ruler and count forwards or backwards. After sufficient practice, children’s measurements should be accurate to within 2 mm.

As well as measuring lengths, children also practise drawing lengths accurately.

Things to look out for

- Children may inaccurately measure the millimetre part of a length, due to the intervals on the ruler being very close together.
- Children may record a length as, for example, 5 cm and 0 mm, rather than just 5 cm.

Key questions

- Which is greater in length, 1 mm or 1 cm?
- What are the main things to remember in order to measure accurately using a ruler?
- Is the _____ an exact number of centimetres long?
- How many millimetres past the last centimetre interval does the _____ reach?
- How do you write a length that is not an exact number of centimetres?
- How does the 5 mm interval help you to measure the length?

Possible sentence stems

- _____ cm _____ mm = _____ cm and _____ mm
- The _____ is _____ cm and _____ mm long.

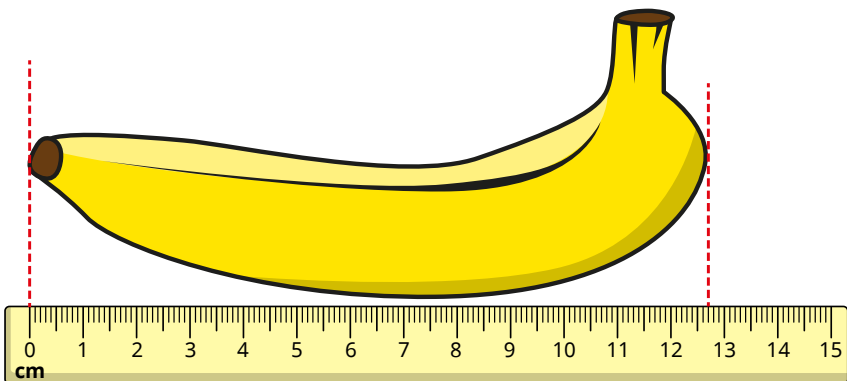
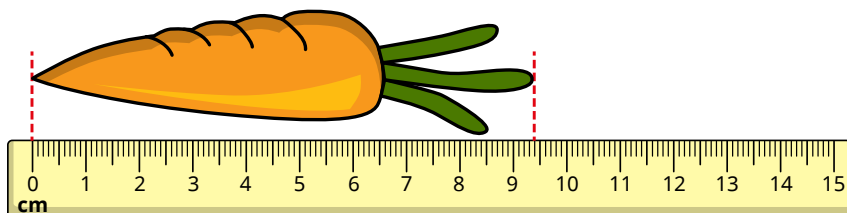
National Curriculum links

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

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Key learning

- What is the length of each object in centimetres and millimetres?



- Measure the lines.

Give your answers in centimetres and millimetres.



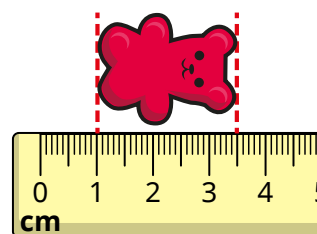
- Measure the length of some items in the classroom. Record the lengths in centimetres and millimetres. Compare answers with a partner. Are your answers exactly the same?

- Use a ruler to draw lines that measure:

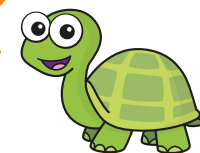
- between 4 cm and 5 cm
- between 65 mm and 80 mm
- between 10 mm and 2 cm
- between 3 cm 4 mm and 3 cm 9 mm

Ask a partner to measure and label each line.

- Tiny measures the sweet.



The sweet is 3 cm and 5 mm long.



Do you agree with Tiny?
Explain your answer.

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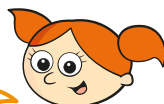
Reasoning and problem solving

Dexter, Alex and Tommy are comparing the lengths of their pencils.



Dexter

My pencil is 15 cm.



Alex

My pencil is half the length of Dexter's pencil.



Tommy

My pencil is shorter than Dexter's pencil but longer than Alex's pencil.

What could be the length of Tommy's pencil?

Compare answers with a partner.

between 7 cm and 5 mm and 14 cm and 9 mm

Four children measure the height of a carton of juice.



Teddy

It is 85 mm.



Sam

It is 8 cm and 5 mm.



Annie

It is 7 cm and 15 mm.



Ron

It is 5 mm and 8 cm.

What is the same about their measurements?

What is different?

Talk about your answer with a partner.

All the children have given the same measurement, but they have expressed it differently.