

# Metres, centimetres and millimetres

## Notes and guidance

In this small step, children compare and consider the appropriateness of different units of measurement.

Children need to understand that although, for example, metres are used to measure longer distances, it is still possible to measure these distances in centimetres or millimetres.

Encourage discussion about why it is important to choose the appropriate unit or measuring equipment before measuring an object or length.

Children make simple comparisons of lengths that do not require them to understand equivalent units of measurement, for example, comparing 3 m with 3 cm. By this stage, however, they should know how many centimetres are in 1 m and how many millimetres are in 1 cm.

## Things to look out for

- Children may focus on the number when comparing lengths, rather than considering the unit of measurement.
- Children may not have understood the relationship between millimetres, centimetres and metres.
- Children may need reminding of the meaning of the symbols  $<$ ,  $>$  and  $=$ .

## Key questions

- How many millimetres are there in a centimetre?
- How many centimetres are there in a metre?
- Which is longer, 1 m or 1 cm?
- Which is shorter, 1 cm or 1 mm?
- Which is longer, 3 m or 60 cm?
- Which is shorter, 4 cm or 20 mm?
- What unit would you use to measure the length of \_\_\_\_\_?

## Possible sentence stems

- \_\_\_\_\_ m is shorter/longer than \_\_\_\_\_ cm.
- \_\_\_\_\_ mm is shorter/longer than \_\_\_\_\_ cm.
- There are \_\_\_\_\_ mm in 1 cm.
- There are \_\_\_\_\_ cm in 1 m.

## 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

- Which unit would you use to measure each item?

Sort the items into the table.

length of a car		length of a pencil	
length of a fingernail		length of a garden	
length of a playground		height of a water bottle	
Metres	Centimetres	Millimetres	

Compare answers with a partner.

- Write the lengths in order.

Start with the shortest length.

10 m	10 mm	10 cm
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- Scott has 4 m of ribbon.

Aisha has 40 cm of ribbon.

Who has the longer piece of ribbon?

- Brett and Huan each draw a straight line.

Brett's line is 18 cm.

Huan's line is 30 mm.

Whose line is longer?

- Write  $<$ ,  $>$  or  $=$  to compare the lengths.

8 cm  10 mm

50 mm  2 m

14 m  98 cm

3 m and 87 cm  4 m

6 m and 20 cm  20 cm and 6 m

14 m and 5 cm  14 m and 5 mm

- Write the measurements in order.

Start with the longest measurement.

2 m	87 cm	3 cm	12 mm
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# Metres, centimetres and millimetres

## Reasoning and problem solving

Use the digit cards to complete the statement.



1 m and 34 cm <    cm < 2 m

Find all the possible answers.

135 cm, 142 cm, 143 cm, 145 cm, 152 cm, 153 cm, 154 cm



Is the statement always true, sometimes true or never true?

A length measured in metres will be longer than a length measured in centimetres.

Explain your answer.

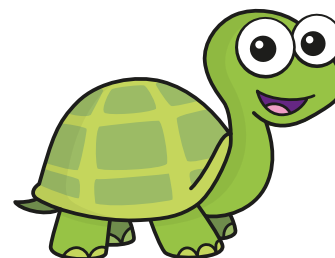
sometimes true



Tiny is putting lengths in order.



I have put the lengths in order from shortest to longest.



13 mm, 29 cm,  
1 m, 121 cm

1 m    13 mm    29 cm    121 cm

What mistake has Tiny made?

Put the lengths in the correct order.

