

Measure in kilometres and metres

Notes and guidance

In previous years, children measured lengths using metres (m) and centimetres (cm). In this small step, children are introduced to kilometres and the abbreviation “km”.

Children should understand that kilometres are greater than metres and are used to measure greater distances. The focus of this step is to partition measurements into the number of kilometres and metres and make links with addition. Bar models and part-whole models can be used to explore this relationship and to support children with their understanding. The fact that $1 \text{ km} = 1,000 \text{ m}$ can be discussed, but conversions are not explicitly covered until the next step.

It is useful to make connections with real-life contexts, so that children are aware when different types of units are used.

Things to look out for

- Children may ignore the unit of measurement and just compare the numbers involved. For example, they might think that 2 km and 60 m is less than 1 km and 700 m, because 260 is less than 1,700
- Children may think that $1 \text{ km} = 100 \text{ m}$, based on the relationship between metres and centimetres.

Key questions

- What unit of measurement would you use to measure the length of a _____? Why?
- What unit of measurement would you use to measure _____? Why?
- Which is the greater length, 1 km or 1 m?
- Which is greater, _____ km and _____ m or _____ km and _____ m? How do you know?
- Which is greater, _____ km or _____ m? How do you know?
- How many kilometres and metres are there in _____ km _____ m?

Possible sentence stems

- _____ km _____ m = _____ km + _____ m
- _____ km and _____ m is greater than _____ km and _____ m.
- _____ km and _____ m is less than _____ km and _____ m.
- There are _____ m in 1 km.

National Curriculum links

- Convert between different units of measure [for example, kilometre to metre; hour to minute]

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Key learning

- Sort the cards into the table to show the appropriate unit of measurement.

height of a door frame	length of a room
how far a plane travels	length of a garden
distance from one city to another	length of a table
distance from the bottom to the top of a mountain	
Measured in kilometres	Measured in metres

- Use abbreviations to complete the sentences.

The distance from Rosie's house to school is six kilometres and five hundred metres.

The distance from Rosie's house to school is 6 _____ 500 _____

Jack cycled a total of 8 kilometres and 150 metres to school.

Jack cycled a total of _____ km _____ to school.

- Complete the models.

3 km 300 m		1 km 280 m	
km	300 m	m	1 km

- Which is the greater length, 30 m or 3 km? How do you know?
- Write $<$, $>$ or $=$ to complete the statements.

4 km and 300 m 3 km

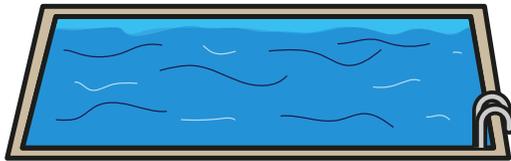
9 km and 600 m 9 km + 60 m

5 km and 500 m 2 km + 3 km + 500 m

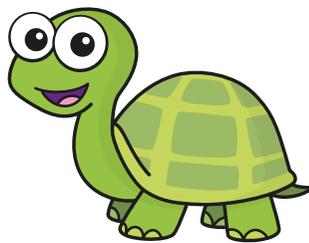
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Reasoning and problem solving

Tiny is measuring the length of a swimming pool.



I am going to measure the length in kilometres.



Do you think Tiny has chosen the best unit to measure the length of the pool?

Explain your answer.



No

Teddy walks to his friend's house.



- He walks a whole number of kilometres.
- He walks an odd number of kilometres.
- He walks further than 2 km, but less than 17 km.
- The distance is a multiple of 3

Use the clues to find three possible distances that Teddy walks.

3 km, 9 km
or 15 km

One day, Dora cycles 8 km 200 m.



The next day she cycles 300 m further.

How far does Dora cycle altogether over the two days?

How did you work it out?



16 km 700 m