



Maths

Measurement

Need a coherently planned sequence of lessons to complement this resource?

Lesson Breakdown

Below is our suggestion for the most coherent and progressive sequence to teach this area of Year 1 Maths. Click on the White Rose Maths scheme of learning although we have not aimed to mirror the exact order of the presentation, activity sheets and our resources (using a Memory Cards that we have created).

Understanding Length and Height (1): Height Comparison
 This lesson teaches children to compare the heights of familiar objects, in height such as tall, short, taller, shorter, tallest and shortest. The lesson also teaches or shorter than other objects as well as comparing objects with the presentation, activity sheets and our resources (using a Memory Cards that we have created).

NC Statement: Compare, describe and solve practical problems for lengths and heights.
Lesson Aim: To compare the heights of objects.

Measuring Length and Height (2): Measure Height (Using Non-Standard Units)
 This lesson teaches children to measure the height of objects using non-standard units. The lesson also teaches children to compare the heights of objects using non-standard units. The lesson also teaches children to compare the heights of objects using non-standard units. The lesson also teaches children to compare the heights of objects using non-standard units.

NC Statement: Measure and begin to record lengths and heights.
Lesson Aim: To measure height using non-standard units.

Understanding Length and Height (3): Length Comparison
 This lesson teaches children to compare the length of various objects. They are taught to compare the length of objects, such as longer and shorter. The lesson also teaches children to compare the length of objects, such as longer and shorter. The lesson also teaches children to compare the length of objects, such as longer and shorter.

NC Statement: Compare, describe and solve practical problems for lengths and heights.
Lesson Aim: To compare the length of objects.

Introduction

This unit will introduce children to the concept of measurement in different areas, such as length and height, capacity, weight, money and time. Children learn the vocabulary they will need to compare and describe measurements and develop their measuring skills through solving practical problems. The children explore both non-standard and standard units of measure and apply their skills of measuring and recording in a range of real-life contexts. They also learn to sequence events in chronological order, an language related to dates and begin to tell the time on an analogue clock.

Assessment Statements

By the end of this unit, children working towards the expected level will be able to:

- describe and compare lengths, heights, capacities, weights and times using simple vocabulary;
- measure lengths, heights, capacities, weights and using non-standard units;
- recognise some coins and notes;
- put two or three simple events in chronological order;
- recognise and use the names of the days of the week and know some months of the year;
- tell the time to the hour on an analogue clock and draw the hands;
- reason about measurements to solve simple practical problems.

Children working at the expected level will be able to:

- describe and compare lengths, heights, capacities, weights and times using mathematical vocabulary;
- measure lengths, heights, capacities, weights and times using a standard and non-standard unit;
- know the value of coins and notes;
- sequence four or more events in chronological order;
- order the days of the week and months of the year;
- tell the time to the hour and half past the hour on an analogue clock;
- draw the hands on an analogue clock to face the hour and half past the hour;
- understand fully numbered scales such as mass or money (to 100);
- reason about measurements to solve practical problems.

Measurement
 Maths Year 1 (1) Core and Progression Overview

The aim of this overview is to support teachers using First Maths to show the most coherent and progressive sequence to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within First Maths, whenever possible. Lesson packs have been matched to each of the annual steps on the White Rose Maths scheme of learning.

Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number: Place Value (within 10)		Number: Addition and Subtraction (within 10)			Geometry: Shape		Number: Place Value (within 20)		Consolidation			
Spring	Number: Addition and Subtraction (within 20)			Number: Place Value (within 50) (Multiples of 2, 5 and 10 to be included)			Measurement: Length and Height		Measurement: Weight and Volume			Consolidation	
Summer	Number: Multiplication and Division (Multiples of 2, 5 and 10 to be included)		Number: Fractions		Geometry: Capacity and Volume		Number: Place Value (within 100)		Measurement: Money		Time		Consolidation

Estimating Length and Height



Aim

- To measure or estimate length or height using a partially numbered ruler.

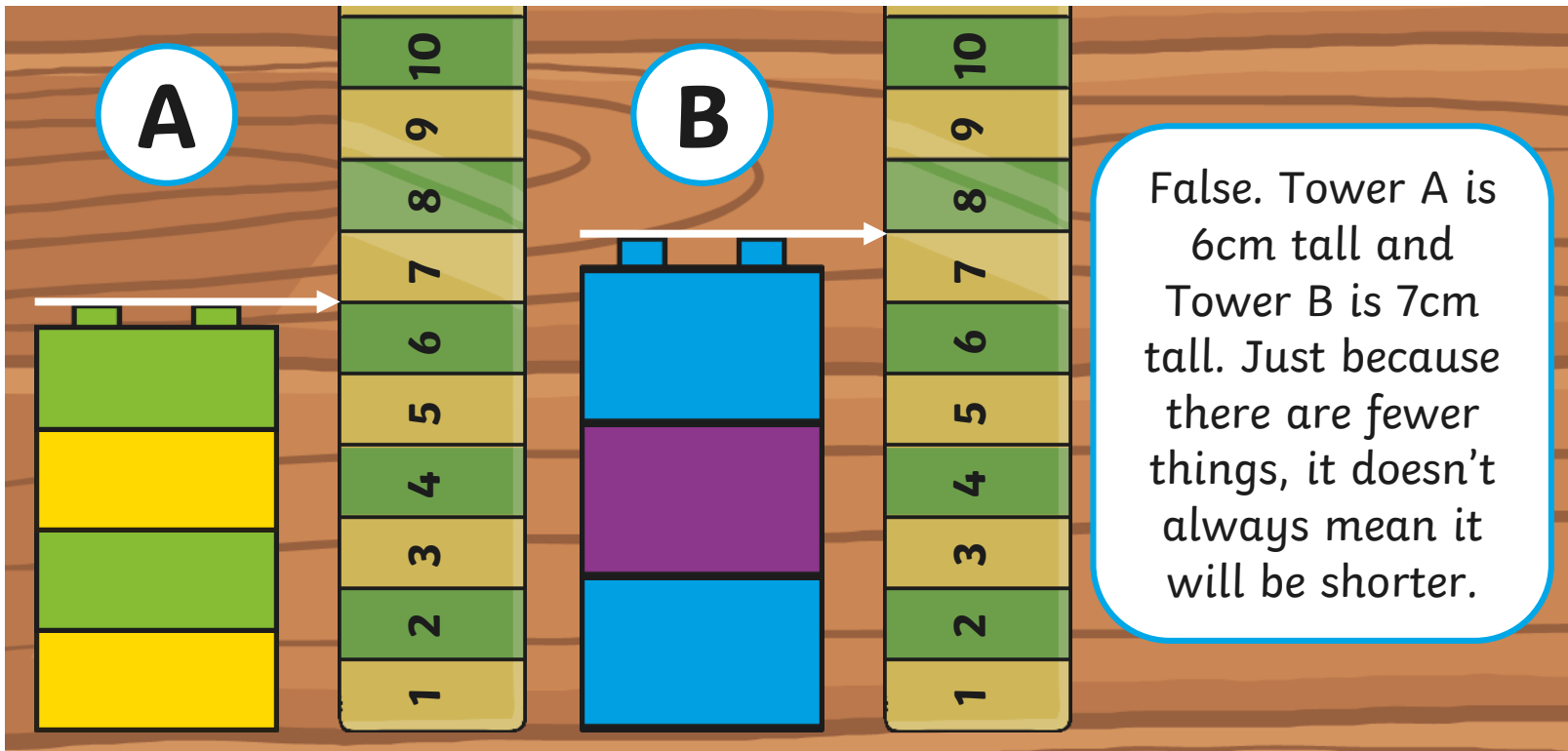
Success Criteria

- I can place numbers up to 20cm on a marked ruler.
- I can use my reasoning skills to estimate lengths on an unmarked ruler.

Remember It



Tower A is taller than Tower B because it has more blocks.
True or false?

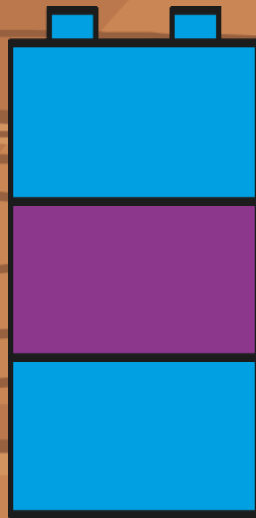


False. Tower A is 6cm tall and Tower B is 7cm tall. Just because there are fewer things, it doesn't always mean it will be shorter.

Remember It



Tower A is
6cm tall.



Tower B is
7cm tall.

Complete these sentences:

Tower A is shorter than
Tower B.

Tower B is taller than
Tower A.

taller

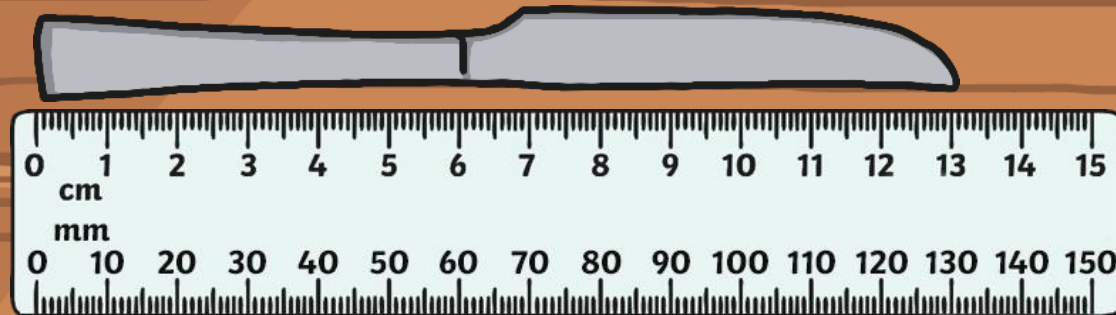
shorter

Remember It



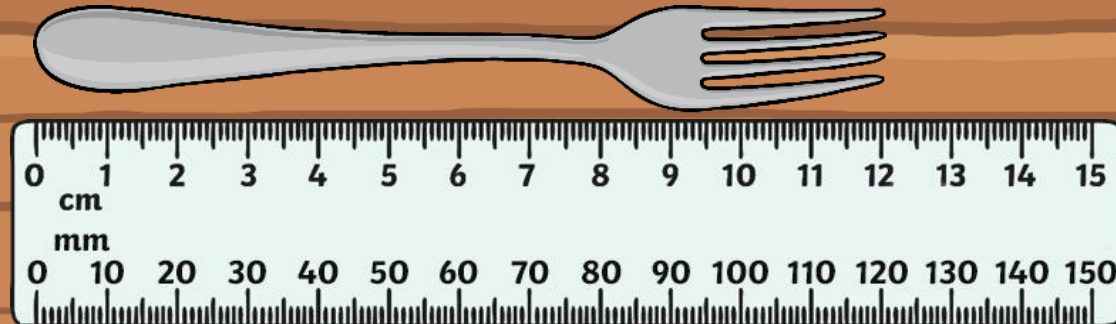
How long is
the knife?

13cm



How long is
the fork?

12cm



Remember It



The knife is 13cm long.



The fork is 12cm long.

longer

Complete these sentences:

shorter

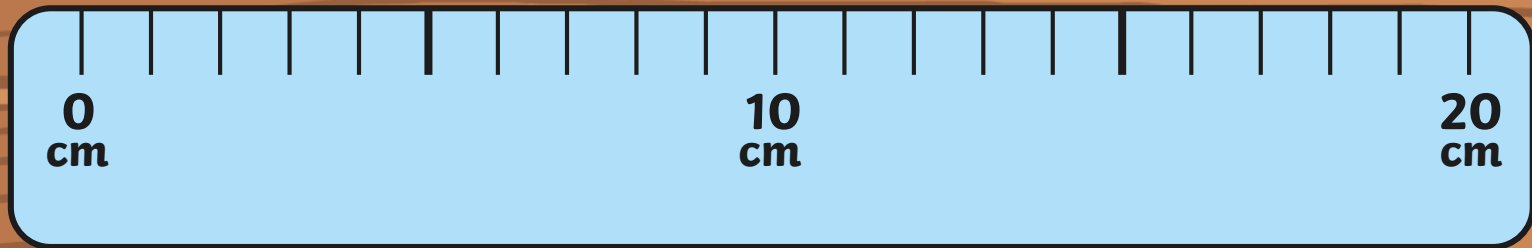
The knife is longer than the fork.

The fork is shorter than the knife.

Missing Measurements

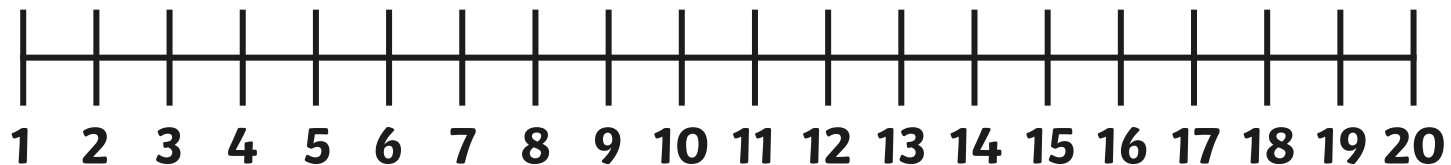


Look carefully at this ruler. What do you notice?



How could we use this ruler to measure an object?

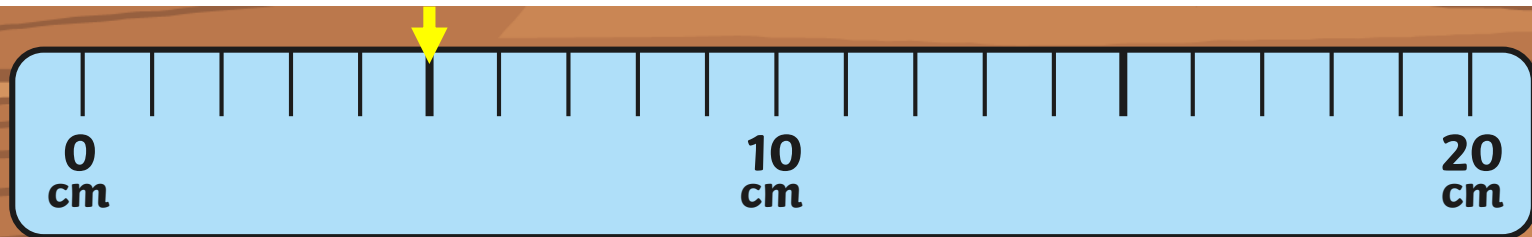
Think about the 0 to 20 number line to help you.



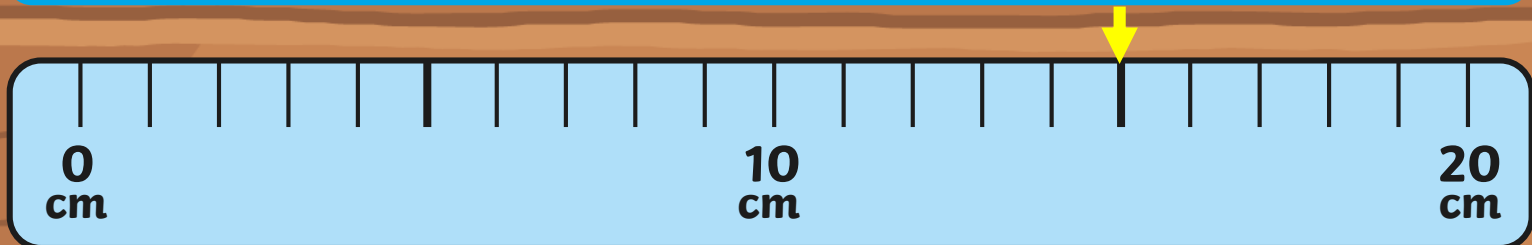
Missing Measurements



What measurement is each arrow pointing at?
How do you know?



The arrow is pointing at 5cm because it is halfway between 0cm and 10cm.

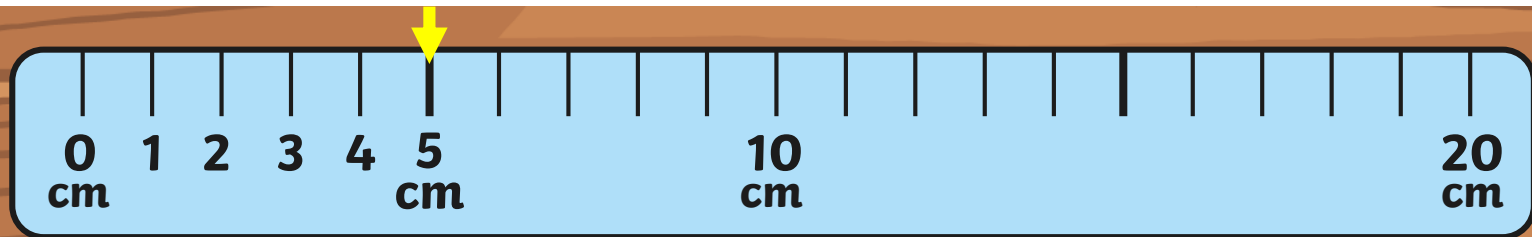


The arrow is pointing at 15cm because it is halfway between 10cm and 20cm.

Missing Measurements

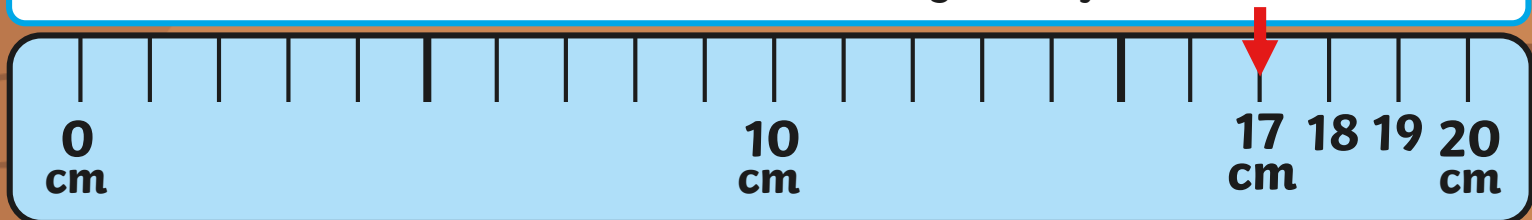


You can check by counting along from the numbers you do know.
For this one, we can start counting on from 0cm.



It is pointing at 5cm.

For this one, we can start counting back from 20cm.

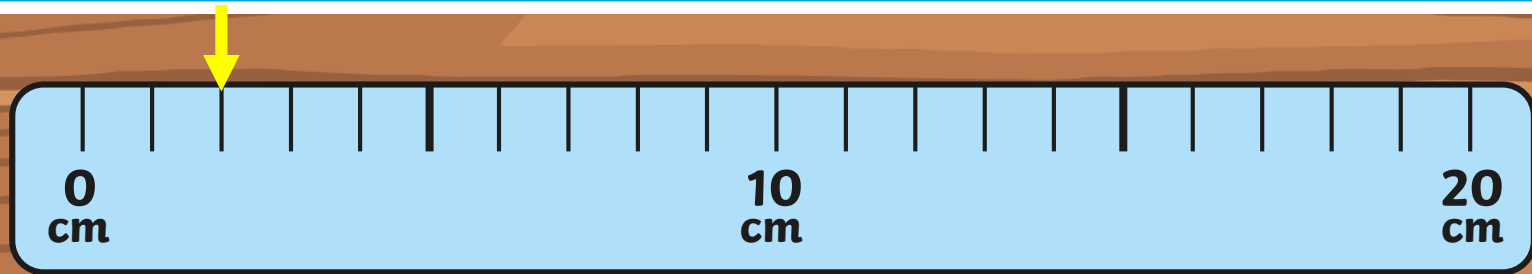


It is pointing at 17cm.

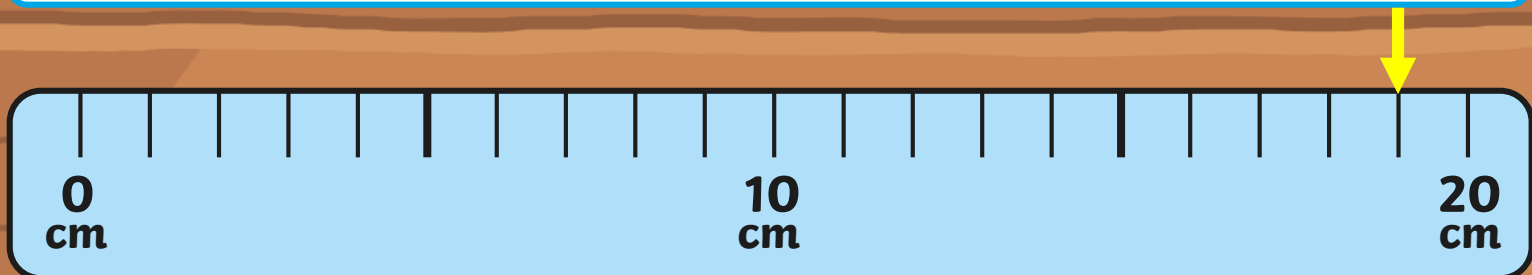
Missing Measurements



What number is each arrow pointing at?
How do you know?



The arrow is pointing at 2cm because it is 2 more than 0cm.

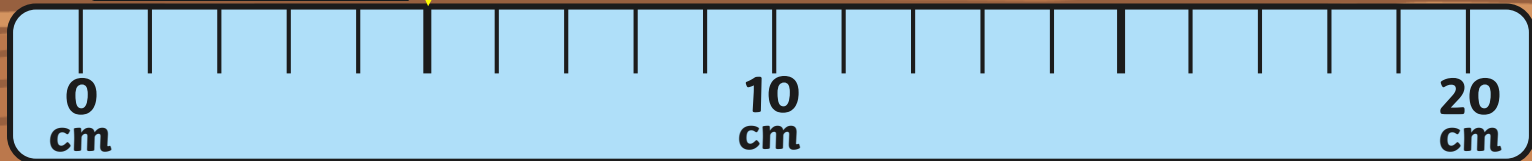


The arrow is pointing at 19cm because it is 1 less than 20cm.

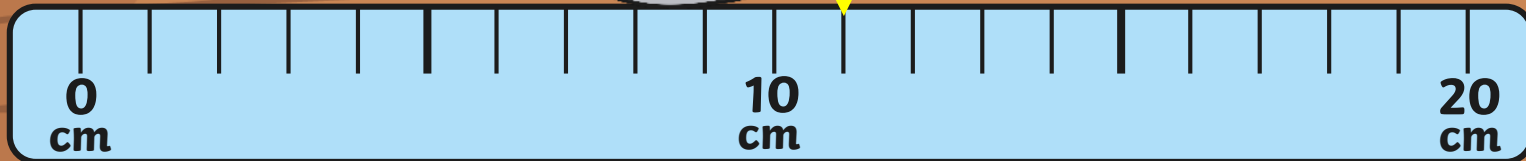
Missing Measurements



How long are these objects? Explain how you know.



The battery is 5cm long because it is halfway between 0cm and 10cm.

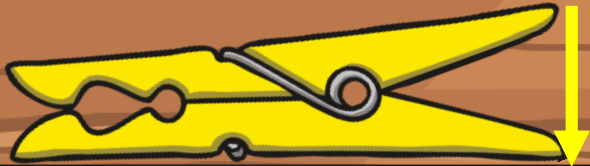


The spoon is 11cm long because it is 1cm more than 10cm.

Missing Measurements



How long are these objects? Explain how you know.



0
cm

10
cm

20
cm

The peg is 8cm long because it is 2cm less than 10cm.



0
cm

10
cm

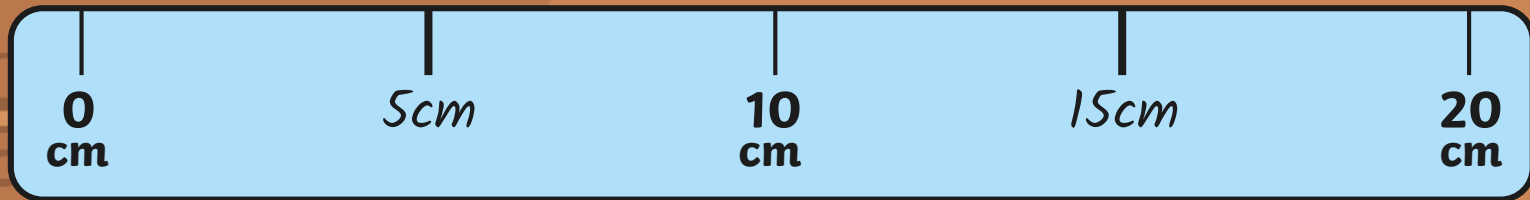
20
cm

The pen is 16cm long because it is 1cm more than 15cm.

Missing Measurements



This ruler is 20cm long.



How could we use this ruler to estimate length?

What other numbers could we mark on to help us?

We could add 15cm, halfway between 10cm and 20cm.

This will help us to estimate other numbers between these markings.

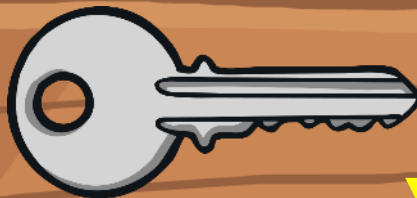
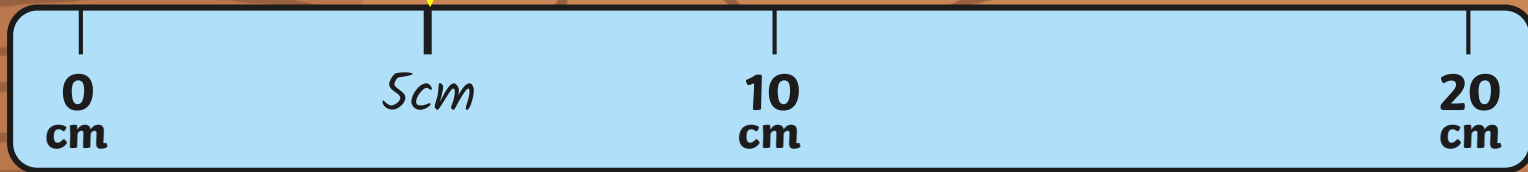
Estimating Length and Height



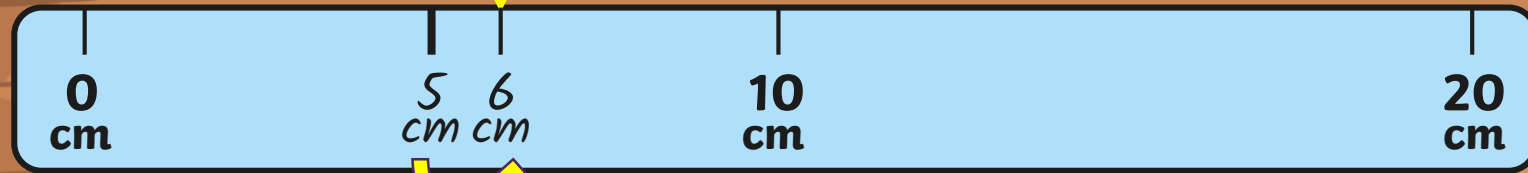
Remember – estimating is making a reasonable guess.



I estimate the toy car is 5cm long because it is about halfway between 0cm and 10cm.



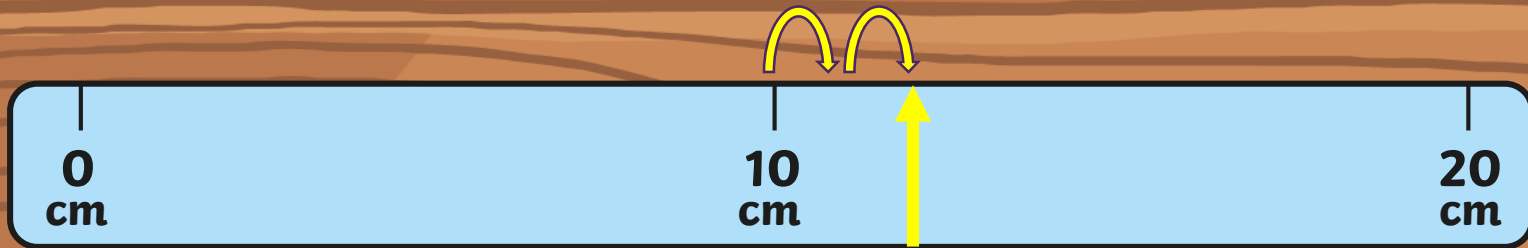
Also, if I show 5cm on the ruler, it is about 1cm more than that.



Estimating Length and Height



If I was measuring something that is 12cm long, where might you estimate it to be on the ruler?

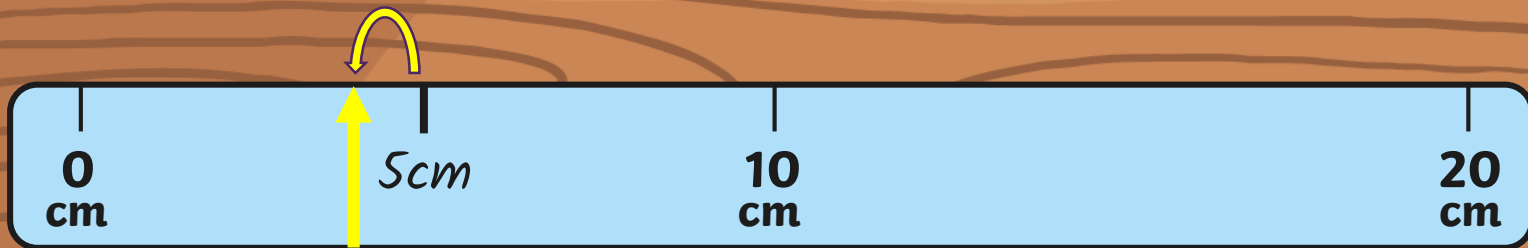


12cm would be about here because 12cm would be 2 small jumps along from 10cm.

Estimating Length and Height



If I was measuring something that is 4cm long, where might you estimate it to be on the ruler?



Also, if I show 5cm on the ruler, it is about 1cm less than that.

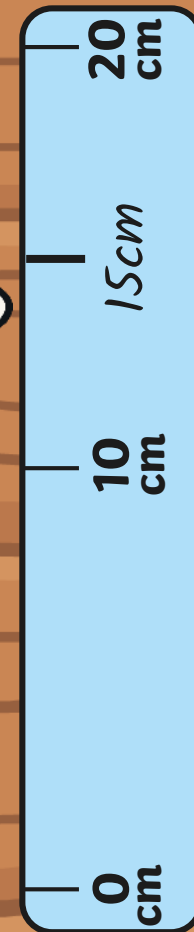
Estimating Length and Height



Estimate the height of the cup.



I estimate the cup is 15cm tall because it is halfway between 10cm and 20cm.



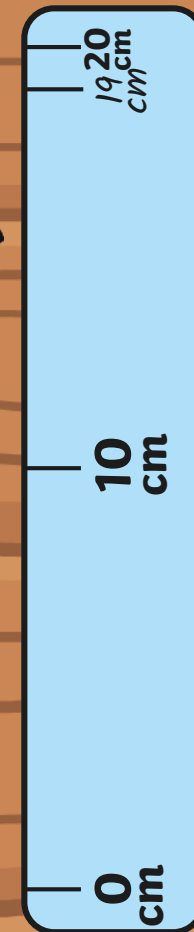
Estimating Length and Height



Estimate the height of the jar.



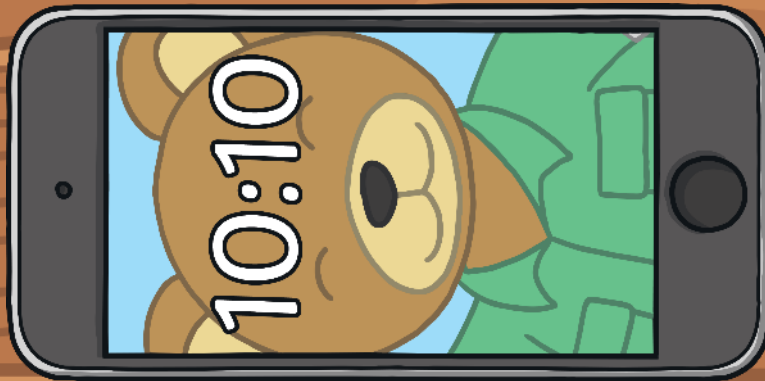
I think the jar is 19cm tall because it measures just less than 20cm on the ruler.



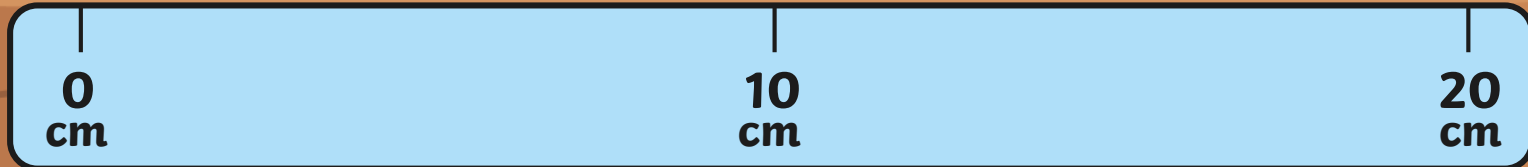
Estimating Length and Height



Do you agree? Explain why.



I estimate the phone is 13cm long.



The phone is just more than 10cm so I would estimate it is about 11cm long.

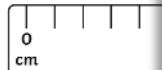
More Measuring



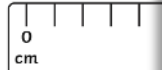
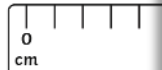
More Measuring

To measure

These rulers are not



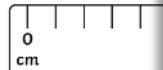
Measure these objects



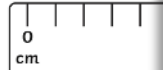
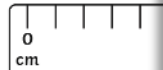
More

To measure

These rulers are not

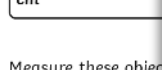


Measure these objects



To measure

These rulers are not



Measure these objects

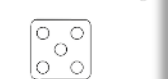


Estimate the measurement



Why did you choose

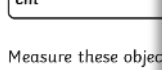
Estimate the length



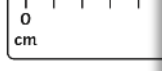


To measure

These rulers are not



Measure these objects

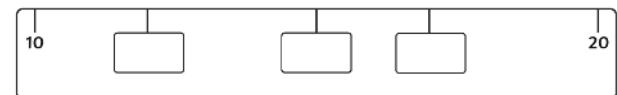




Estimate the measurements on the ruler.



Why did you choose those measurements?



Why did you choose those measurements?

Write on the ruler to show all the cm intervals between 0 and 10cm. **Hint:** mark 5cm first.



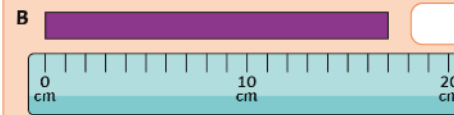
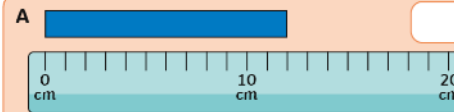
Diving into Mastery

Dive in by completing your own activity!

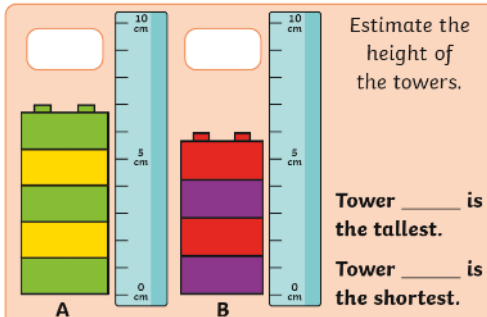


Measuring and Estimating Length and Height

Measure the ribbons.



Ribbon _____ is the longest.



Aim



- To measure or estimate length or height using a partially numbered ruler.

Success Criteria

- I can place numbers up to 20cm on a marked ruler.
- I can use my reasoning skills to estimate lengths on an unmarked ruler.

