4 Long and Short

0325CH04

Lali is selling things at her father's shop.
A farmer comes to buy rope.



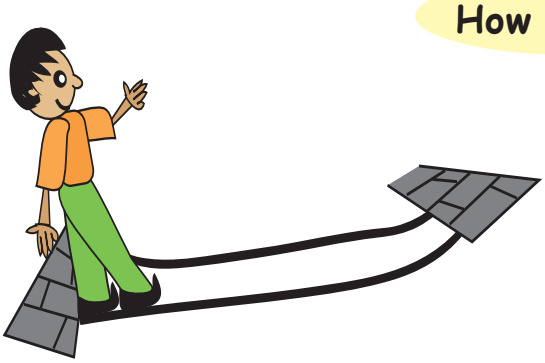
So, the farmer measures his arm with the rope and Lali gives him 7 times that much rope.

Measure your arm and your mother's arm. What is the difference?

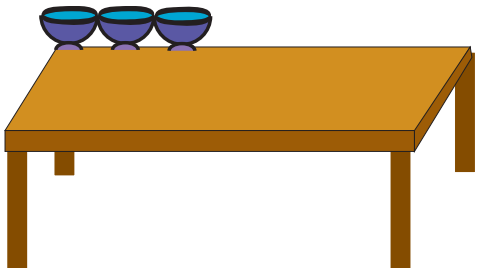
Children should be encouraged to look around and see how lengths of different things are measured in different ways using local or non-standard units. For example, rope, garlands or cloth may be sold by the cubit, handspan, fingers, etc. They also need to do activities of measuring lengths (and distances) with their own body parts.

How Many?

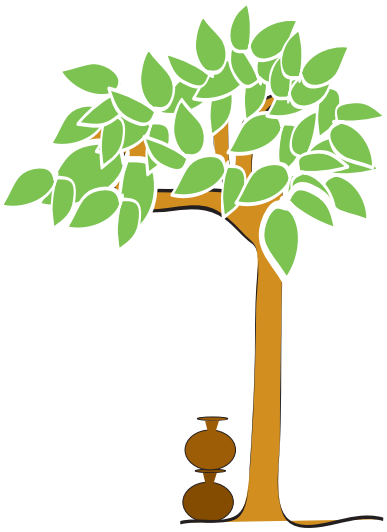




* In how many steps will Dorji cross the road?



* How many cups can be placed in a line on this table?

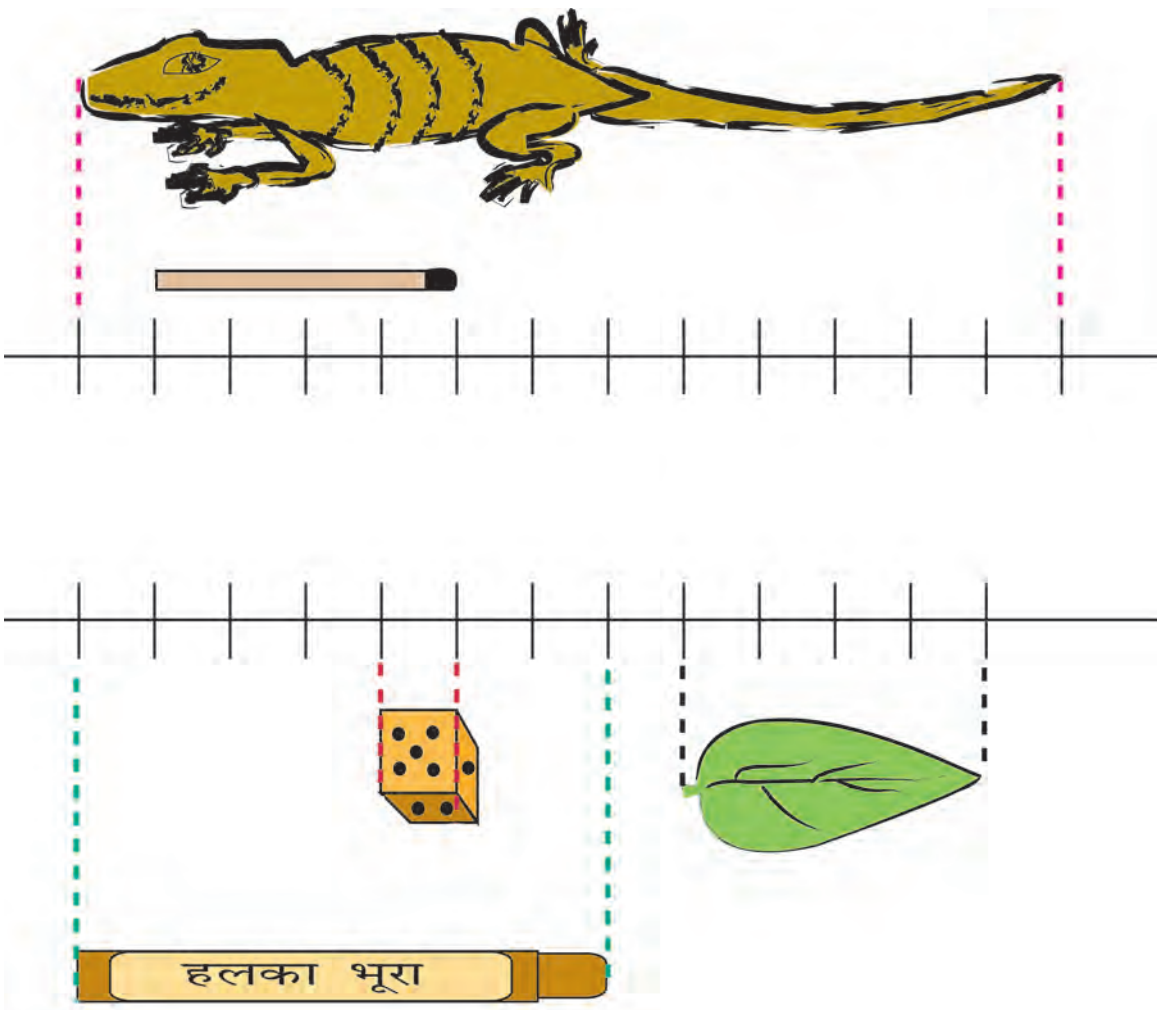


* How many pots can be placed to reach the tree branch?

* How many shirts can be hung on this wire?



How Much is a Centimetre (cm)?



The matchstick is 4 centimetres long.

The die is 1 centimetre from every side.

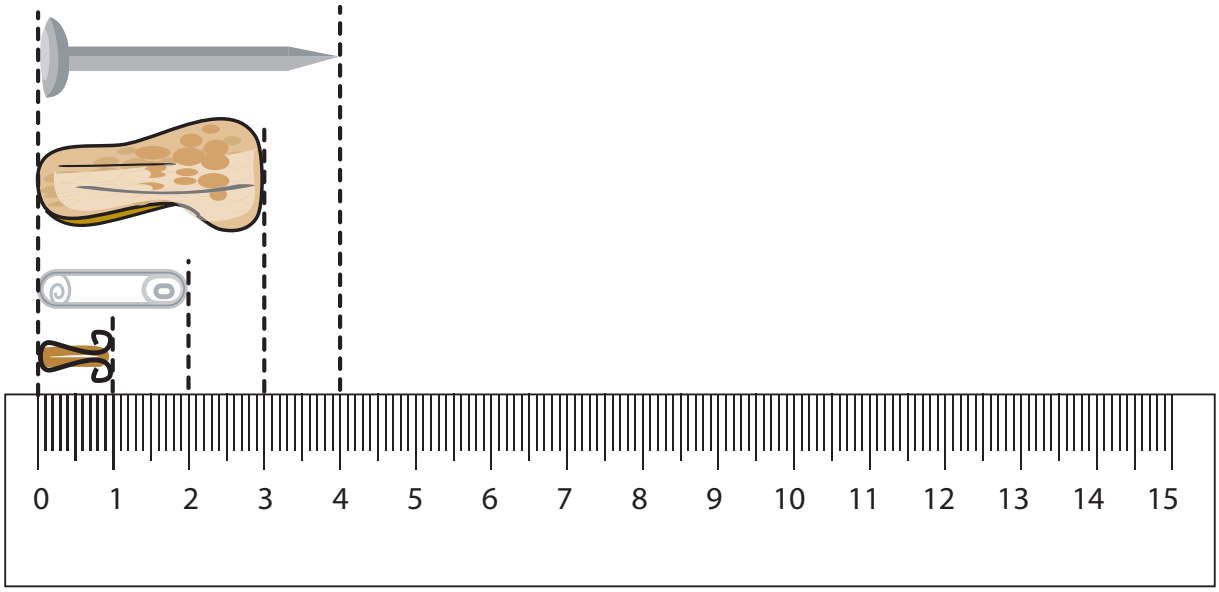
The lizard is 13 centimetres long.

The leaf is _____ centimetres long.

The wax colour is _____ centimetres long.

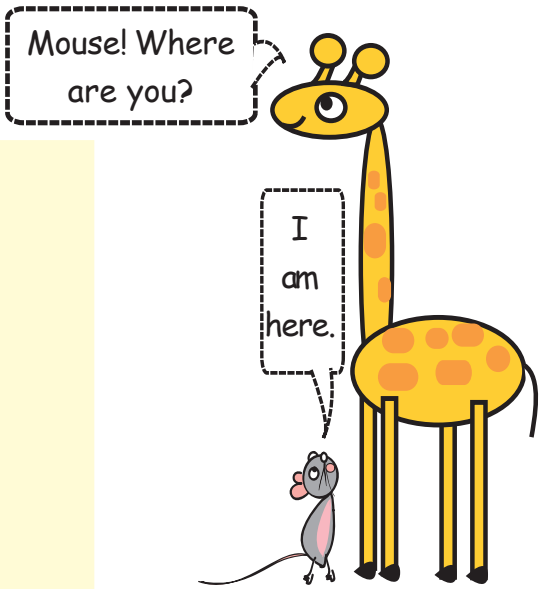
Now, look at a scale that you find in a geometry box. How many centimetres does it have? _____

The small scale that you mostly use in school is like this one.



Is it easier to start measuring from the 0 mark? Look at the things drawn near the scale and find out their lengths.

* What are the little lines on the scale used for?
* Look for things that are
  * About 10 centimetres long
  * Between 10 and 20 centimetres long
  * Less than 1 cm long.
* Draw some of them here.

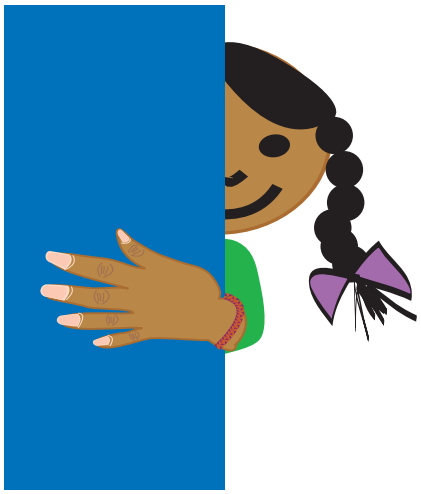


How Big is My Hand?

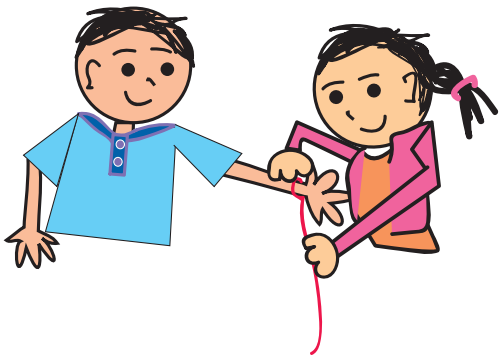
Measure the length of your thumb and your little finger. Use the scale on this page.

Which is longer? Thumb or little finger?

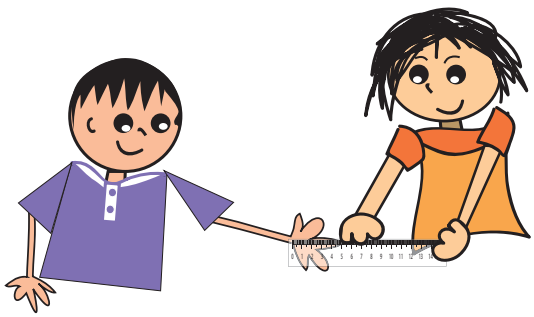
Bring a measuring-tape to your class.



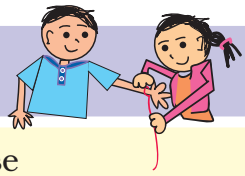
Guess the length of different parts of your body and check if your guess is correct. You can use a scale, string, measuring-tape etc.







Think – How will you know the number of centimetres if you measure with a rope, shoe-string, thread etc.?



	My measurement	My friend's measurement
Nose	_____ centimetres	_____ centimetres
Around the wrist	_____ centimetres	_____ centimetres
Around the head	_____ centimetres	_____ centimetres
Ear	_____ centimetres	_____ centimetres
Hand (tip of middle finger to wrist)	_____ centimetres	_____ centimetres

Compare your measurement with your friends'.

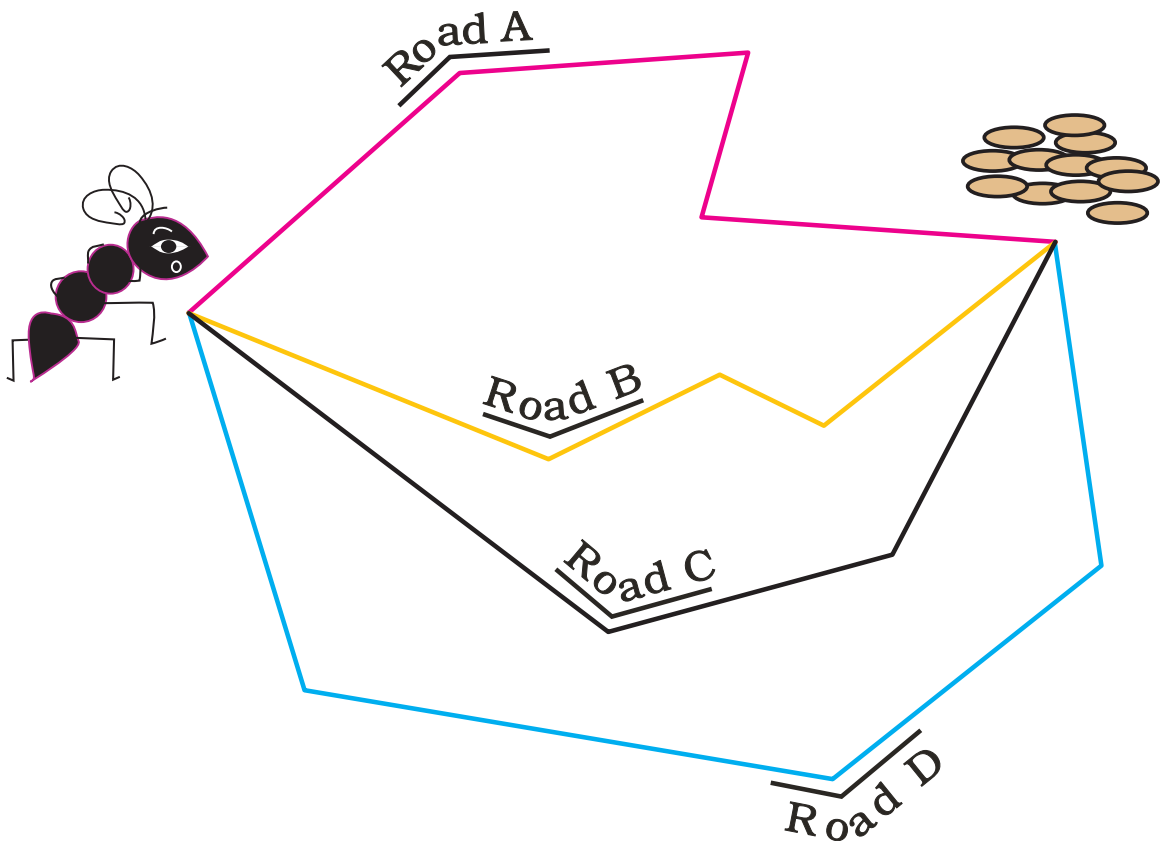
- Who has the biggest head and who has the smallest head? _____, _____
- Who has the longest hand (from middle finger to wrist)? _____
- Which is longer? Your ear or your nose? _____
- Is any of your nails more than 1 centimetre long? _____





Gibli and the Grains

Ant Gibli has to reach the grains. She is looking for the shortest road. Can you tell her which is the shortest?



Can you draw a road shorter than these? What is the length of that road? _____

It is more important for children to be able to get an estimate of a metre as related to known things, such as, their own heights, rather than do tedious exercises of converting metres to centimetres, etc. Children at this stage may not be able to perceive of bigger units such as a kilometre. They must be encouraged to speak of a kilometre in the context of a story or narrative. The Map of Agra is an exercise with a narrative involving children, with familiar images (icons) to help the initial understanding of mapping in 2 dimensions.

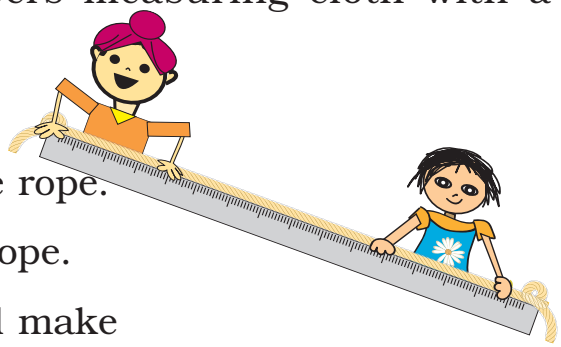
How Long is a Metre?

A metre is equal to 100 centimetres



Let Us Make a Metre-rope

You must have seen shopkeepers measuring cloth with a metre rod.



- Use a metre rod and a rope.
- Make a knot at one end of the rope.
- Keep the metre rod with the rope.
- Mark 1 metre on the rope and make a knot there.
- Now the length between the two knots is 1 metre. This is your metre-rope.

If you don't get a metre rod use a measuring-tape and mark 100 centimetres on the rope. 100 centimetres are equal to a metre, so you get the metre-rope.

Guess and Check



Activity 1

- Find some things that look 1 metre long.
- Use your metre-rope to find which of these things are more or less than 1 metre.

Name of the thing	*More than 1 metre*	*Less than 1 metre*
Length of table	–	–
Width of table	–	–
Width of door	–	–
Length of door	–	–
	–	–
	–	–
	–	–

Activity 2

Some Class III children have marked a 1 metre height on the wall of their class.

You can also mark 1 metre on your class wall.



Now make a chart of the heights of your friends.

To measure the centimetres, you can use your small scale.

Name	*Taller/Shorter/Equal to 1 metre*	*How many centimetres more or less than a metre*
Shambhu	Taller	4 centimetres
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____



Centimetres or Metres?

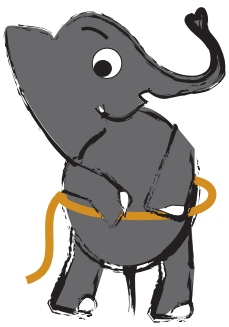
Which of these will be in centimetres and which will be in metres?

- Width of a computer screen
- Length of a Pagdi worn by Sikhs
- Height of a 1-year old child
- Length of a banana
- Waist of an elephant
- Height of a sugarcane
- Depth of a well
- Height of your mother
- Distance from classroom to school gate
- Length of your father's arm.







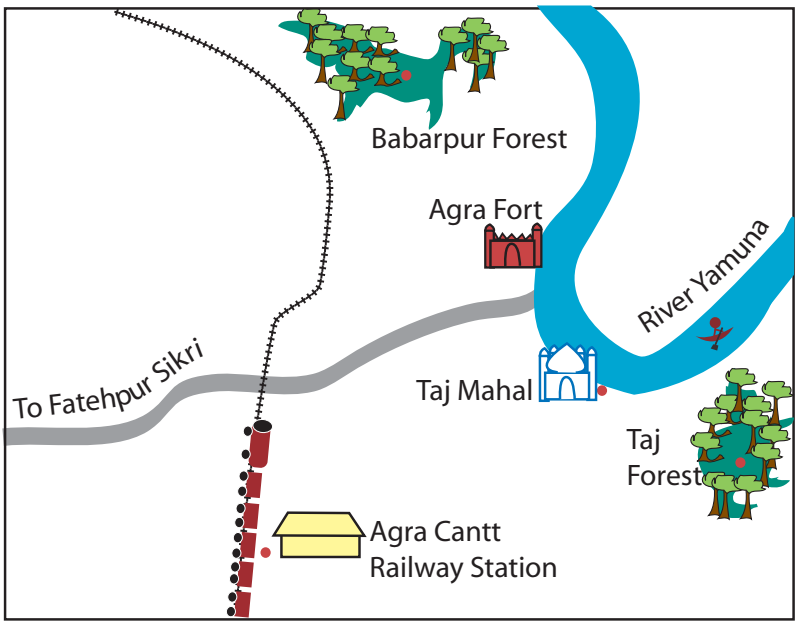




Trip to Agra

Marie and Baichung are going with their family to Agra. They get down at Agra Cantt. Railway Station and take a rickshaw to Taj Mahal. After 3 hours, they start for Agra Fort, again in a rickshaw. In the afternoon they take a bus to go to Fatehpur Sikri.

MAP OF AGRA



Now look at the distances between these places (for kilometres we write km).

- Agra Cantt. Railway Station to Taj Mahal – 5 km
- Taj Mahal to Agra Fort – 2 km
- Agra Fort to Fatehpur Sikri – 40 km

Now find from the map

- Which is farther from Agra Cantt. Railway Station — Taj Mahal or Fatehpur Sikri?

shows the railway line.

Which of these is nearer to the railway line:

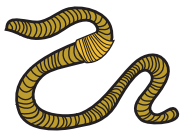
- Babarpur forest or Taj forest?
- Agra Fort or Taj Mahal?

Which is closer to the river Yamuna:

- Taj Mahal or the Railway Station?

Match the Correct Length

Draw lines to match each picture with how long it can be.



Length of an earthworm



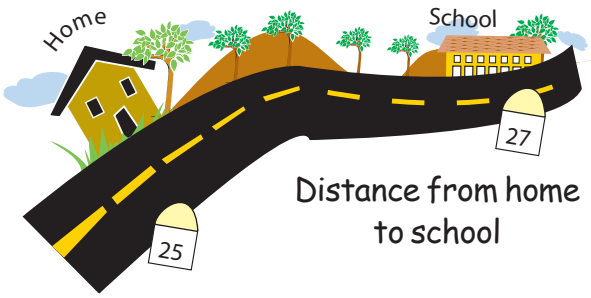
Height of a child



Width of a finger nail



Length of a Sari



Distance from home to school

2 kilometres

5 metres

10 centimetres

1 centimetre

1 metre

The Long Tail Competition

The animals in this picture had a competition. The animal who had the longest tail won a prize. Now who do you think won the first prize and who won the second....? Just guess the length of the longest tail.

