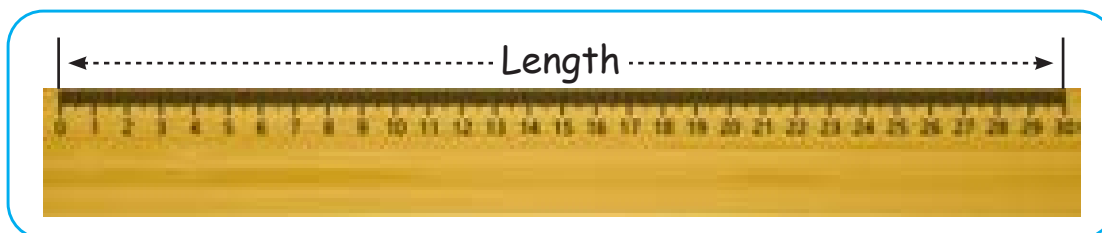# MEASUREMENTS

LENGTH

Length

Recall

We measure the length of the objects using non-standard units such as

1 cm
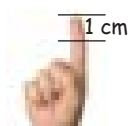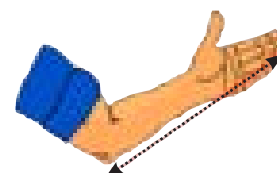
Finger width

A hand span
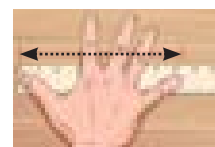
A pace

A foot span

A cubit

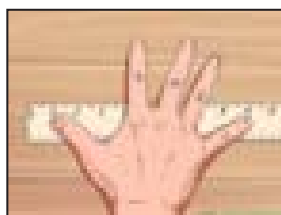## 4.1 Need for standard Measurement.

Activity 1 Tabulate the length of your class table measured by five of your friends with non-standard units.

Sl. No	Students name	Finger width	Hand span	Cubit
1	friend 1	25	15	7
2	friend 2			
3	friend 3			
4	friend 4			
5	friend 5			

Activity 2 Measure the length of ribbon by your hand span.

friend 1 -   _____ hand span
friend 2 -   _____ hand span
friend 3 -   _____ hand span
friend 4 -   _____ hand span

Measurements measured using non standard units change from person to person.

Activity 3 Students are divided into two groups. One group should measure the length of the class room in non standard units and the other group in standard units.
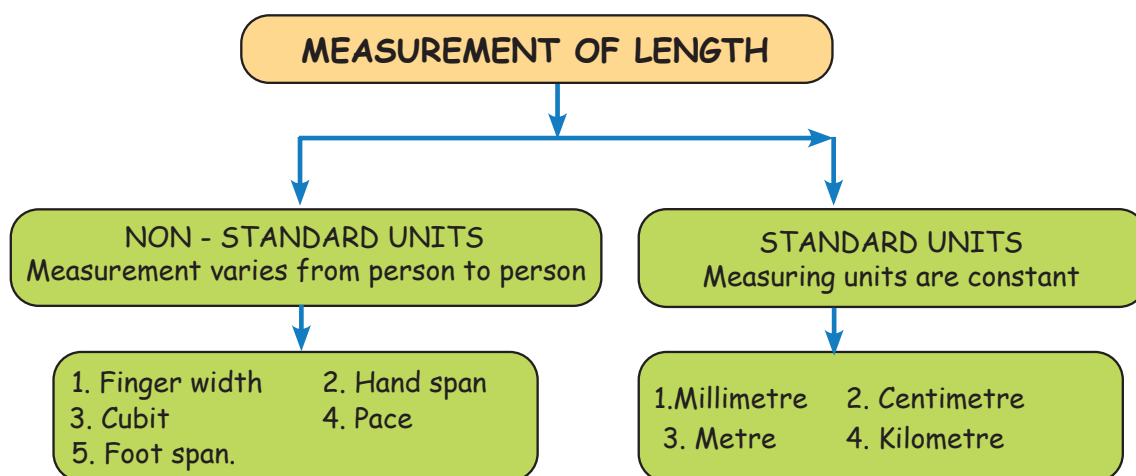
Measure length of objects using simple tools.

Activity 4 Group of five students measure the length of the black board by given objects.

Pencil, Eraser, Measurement Scale & Notebook.

| Sl. No	Students name	Length of the black board			
		Pencils	Erasers	Scales	Notebooks
1	Kala	10	35	7	14
2					
3					
4					
5					

Children used their finger width, hand span and cubit to measure the table. But they got different answers why?
Did you note that all the measurements made by Kala and her friends are same?

MEASUREMENT OF LENGTH

NON - STANDARD UNITS
Measurement varies from person to person

1. Finger width   2. Hand span
3. Cubit   4. Pace
5. Foot span.

STANDARD UNITS
Measuring units are constant

1. Millimetre   2. Centimetre
3. Metre   4. Kilometre

4.2 Millimetre and Centimetre.

Introduction

This is a centimetre scale/ruler. 1 denotes 1 centimetre, 2 denotes 2 centimetre and so on. The length between 0 and 1 has 10 parts denoted by small lines. Measurement of each part by small lines is millimetre.
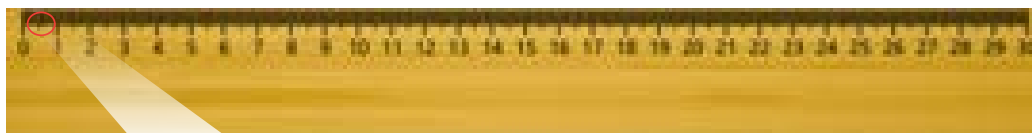
From the picture,

1 centimetre equal to 10 parts.

So 10 millimetre = 1 centimetre.

Short form

Millimetre   -   mm
Centimetre   -   cm
Metre   -   m
Kilometre   -   km

Can you tell me how many millimetres are there between 0 and 1?

Now, can you tell me how many millimetres are there between 1 and 2? 1 and 3?

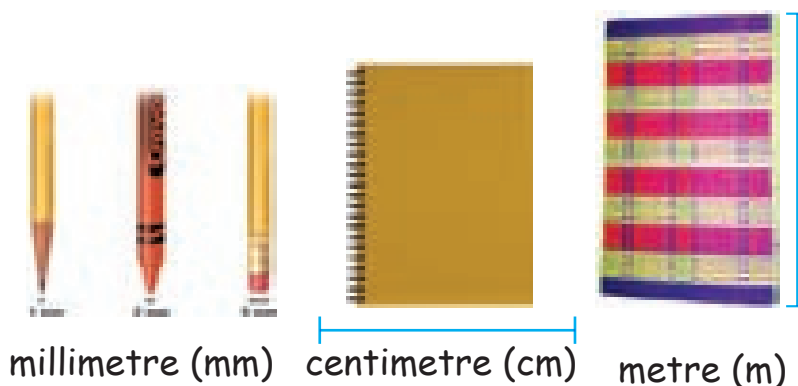Now, can you tell me how many millimetres are there in 1 centimetre?

Teacher's note: Teacher can help the children to find length of the objects by using non standard units.

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Let us know

100 centimetre = 1 metre
1000 metre = 1 Kilometre

Millimetre is the smaller unit of length.
Kilometre is the bigger unit of length.

Example:

millimetre (mm)   centimetre (cm)   metre (m)

Activity 5

Measure the length of ribbon by tape roll.

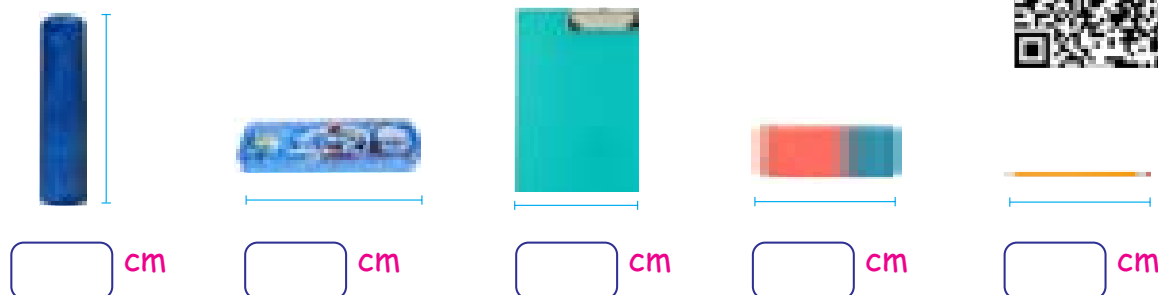Raj ⬭ cm   Anu ⬭ cm   Ram ⬭ cm   Kavi ⬭ cm

Measurements measured using standard units do not change from person to person.

Practice

Measure the length of following things by centimetre scale and write it in the table below.

⬭ cm   ⬭ cm   ⬭ cm   ⬭ cm   ⬭ cm

Teacher's note: Teacher can guide the children to measure the things properly.

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4.3 **Measurement of length using ruler.**

Objects				
Length in centimetre	30 cm	☐ cm	☐ cm	☐ cm

4.4 **Centimetre and metre.**

Try this

a. Write metre or centimetre in the blank space.

   i. My pencil is 6 _____ long.   ii. My hairpin is _____ long.

   iii. This tree is 3 _____ high.   iv. Height of coconut tree is 15_____.

b. Meena has a ribbon of 50 cm and Reena has a ribbon of 110 cm.

   Whose ribbon is the longer? ☐

Activity 6

Measure the length of following things in your class room using metre tape and fill in the boxes.

☐ metre   ☐ metre   ☐ metre   ☐ metre

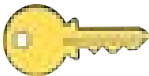**Understand the order of magnitude between centimetre, metre and kilometre as units.**

Try This

Put '<' and '>' in the boxes.

a. Centimetre ☐ Metre

b. Metre ☐ Kilometre

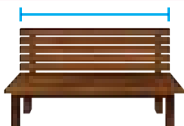c. Kilometre ☐ Centimetre

Practice — Match the following.

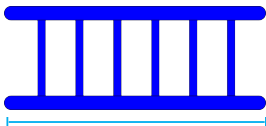|		2 km
Kilometre	Centimetre	Metre

4.5 Comparison of estimation with actual measurement

Activity 7 — Estimate the length of the following objects and verify with actual length.

Sl. No	Name of the object	Estimated length	Actual length
1			
2			
4			
6			
7.			
8.			

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1. Circle the odd one.

1. mm   2. cm   3. m   4. Cubit

2. Fill in the blanks.

1 metre = __100__ cms   2 metre = _____ cms

3 metre = _____ cms   4 metre = _____ cms

3. Match the following.

10 milimetres	1 kilometre
100 centimetres	1 centimetre
1000 metres	1 metre

4. Write non standard Units.

1. Finger span   2. _____

3. _____   4. _____

5. _____

5. Write standard Unit.

1. millimetre   2. _____

3. _____   4. _____

6. Write in short form.

millimetre : _____   centimetre : _____

metre   : _____   kilometre   : _____

7. Write the given units in order.

(mm)   (metre)   (cm)   (km)

Ascending order _____, _____, _____, _____

Descending order _____, _____, _____, _____