

## Chapter- 9

# Measurement

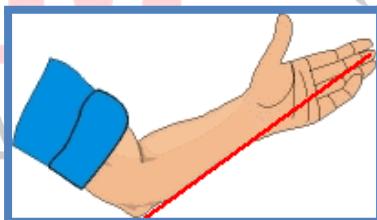
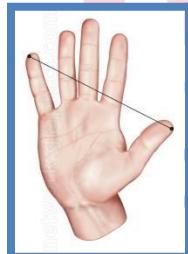
### STUDY NOTES

#### LET'S LEARN

About measuring length, weight and capacity.

#### MEASUREMENT OF LENGTH

- In the past people used to measure the length with their hands and feet.
- The units used for this called as the hand span, the cubit and the foot span which are also known as non- standard units.

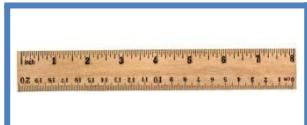


HANDSPAN

CUBIT

FOOTSPAN

- We need standard units for measuring length.
- The standard unit of length is the metre.
- Short lengths are measured in centimetres. Longer lengths are measured in metres(m). Rulers, metre rods and measuring tapes are commonly used for measuring length.



RULER

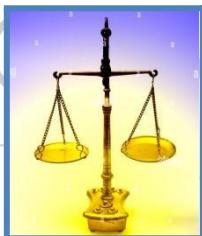


MEASURING TAPE

METRE ROD

### MEASUREMENT OF WEIGHT

- The vegetable vendors and sweet shops use the common balance as well as electronic balance for measuring the objects.
- The most commonly used units for measuring weights are grams and kilograms.
- Light objects are measured in grams and heavy objects are measured in kilograms.
- The common balance and weights and the electronic balance are the instruments mostly used for weighing.



COMMON BALANCE

COMMON BALANCE

ELECTRONIC BALANCE

### MEASUREMENT OF CAPACITY

- Capacity is the quantity of a liquid which a vessel can hold. The commonly used units for measuring capacities are millilitres and litres.

- Small amounts of liquids are measured in millilitres (ml) and the large amounts in litres (l).
- The instruments used for measuring the capacity are measuring cylinders and measuring cans.



MEASURING CANS



MEASURING CYLINDERS

## MEASUREMENT OF TIME

- The watch or clock helps to measure time in hours, minutes and seconds.
- **60 seconds** make 1 minute and **60 minutes** make 1 hour.



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CLOCK

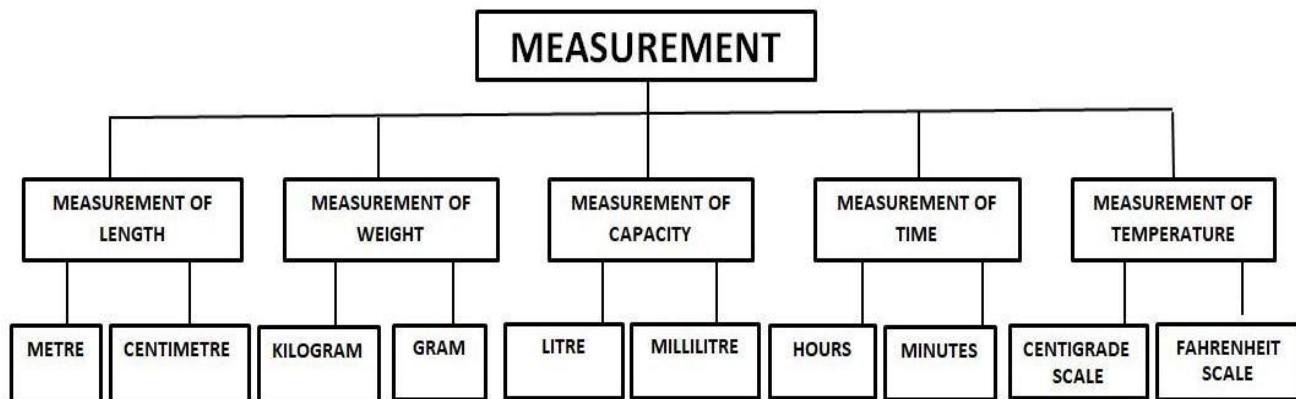
ALARM CLOCK

## MEASUREMENT OF TEMPERATURE

- The body temperature is measured by thermometer.
- The thermometer helps us to measure temperature.
- Temperature is measured either on the Centigrade scale or on Fahrenheit Scale. In India we use the Centigrade Scale.



DIGITAL THERMOMETER

MEMORY MAPTeacher's note

- Make a physical balance by using strings, a metre scale and paper plates to make a physical balance. Use 5-rupee coin to weigh different objects. How much is the weight of your pencil-box, a doll and your school diary?

Improve your G.K.

- A unit used to measure money is called a unit of account.

- Height can be defined as the distance between the lowest and highest points of a person or an object.
- SI is the system of measurement units in use by scientists all over the world.
- A unit of current is Ampere.

**Let's know more****I. Multiple choice questions.**

- The weight of your science book is measured in \_\_\_\_\_.  
a. grams      b. litres      c. celsius degrees      d. seconds
- To measure the weight of kerosene which of the following unit is used?  
a. kilogram      b. litres      c. Celsius      d. hour
- A tailor uses \_\_\_\_\_ to measure the clothes.  
a. measuring tape      b. measuring cylinder      c. clinical thermometer      d. weighing machine
- Reena wants to measure the length of a pen. What can be the possible unit of her measurement?  
a. kilometre      b. centimetre      c. hand span      d. kilogram
- Which of these statements tells us about the temperature?  
a. how cool the city is      b. how long a road is      c. how heavy a bag is      d. how small a pen is

**Let us answer***Changing your Tomorrow***A. Tick ( ✓ ) the correct answer.**

- Rulers, meter rods and measuring tapes are commonly used for measuring.  
a. capacity      b. weight      c. length
- The commonly used units for measuring weight are  
a. gram and kilogram      b. meter and centimeter      c, milliliter and liter
- Which one is wrong ?  
a. 60 seconds = 1 minute      b. 60 minute = 1 hour      c. 60 hours = 1 minute .
- A thermometer is used to measure.  
a. pressure      b. capacity      c. temperature

**B. Fill in the blanks.**

1. The standard unit of length is \_\_\_\_\_.
2. Light weights are measured in \_\_\_\_\_.
3. The symbol for litre is \_\_\_\_\_.
4. An electronic balance is used to measure \_\_\_\_\_.

**C. Answer these questions.**

1. Name three body parts that were used by people long ago to measure length.
2. Name the two instruments used to measure weight.
3. What is capacity ?
4. Which instruments are used for measuring capacity?
5. Name two scales used for measuring temperature.

**Answer key**

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I.1.a.grams  
2.b.litres  
3.a.measuring tape  
4.b.centimetre  
5.a. how cool the city is

A. 1-C 2-A 3-C 4-C

B..1. metre  
2. gram.  
3. l  
4. weight.

C. 1.Ans: Three body parts that were used by people long ago to measure length are hands for handspan, forearm for cubit and foot for footspan.

2. Ans: The two instruments used to measure weight are common balance and digital

balance.

3. Ans: The capacity means quantity of a liquid which a vessel can hold.
4. Ans: Measuring cans and measuring cylinders are used for measuring the capacity.
5. Ans: The name of two scales - Centigrade scale and Fahrenheit Scale.

