

Chapter- 9

Measurement

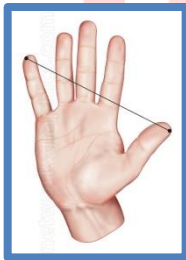
STUDY NOTES

LET'S LEARN

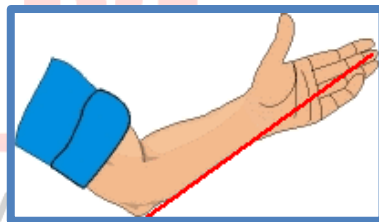
About measuring length, weight and capacity.

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

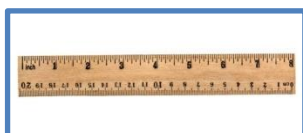


CUBIT



FOOTSPAN

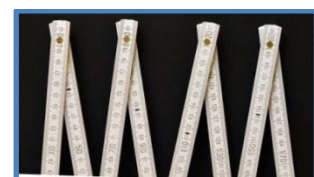
- We need standard units for measuring length.
- The standard unit of length is the metre.
- Short lengths are measured in centimetres. Longer lengths are measured in metres(m). Rulers, metre rods and measuring tapes are commonly used for measuring length.



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.



CLOCK



ALARM CLOCK

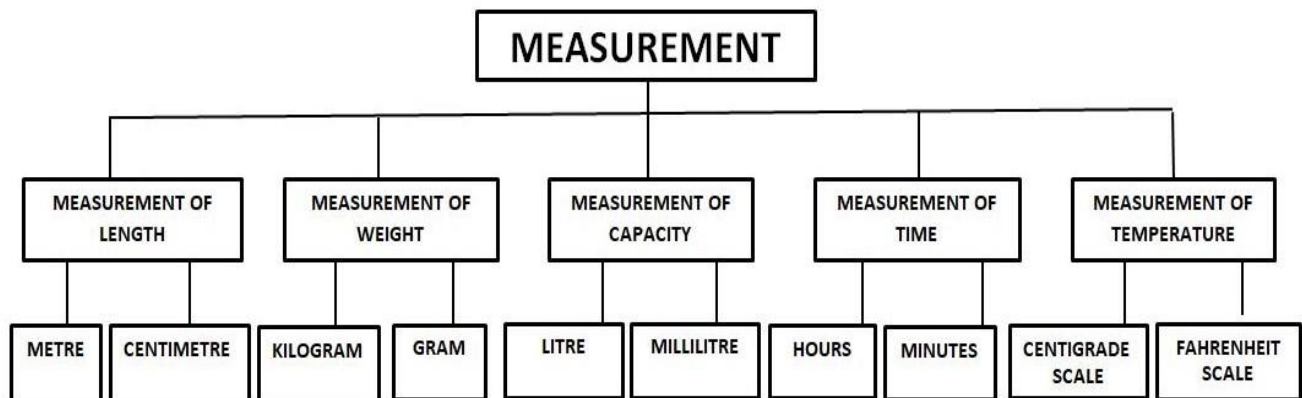
MEASUREMENT OF TEMPERATURE

- 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 MAP



Teacher'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?

Imrove 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.**

1. The weight of your science book is measured in _____.
a. grams b. litres c. celsius degrees d. seconds
2. To measure the weight of kerosene which of the following unit is used?
a. kilogram b. litres c. Celsius d. hour
3. A tailor uses _____ to measure the clothes.
a. measuring tape b. measuring cylinder c. clinical thermometre d. weighing machine
4. 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
5. 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**A. Tick (✓) the correct answer.**

1. Rulers, meter rods and measuring tapes are commonly used for measuring.
a. capacity b. weight c. length
2. The commonly used units for measuring weight are
a. gram and kilogram b. meter and centimeter c, milliliter and liter

3. Which one is wrong ?

- a. 60 seconds = 1 minute b. 60 minute = 1 hour c. 60 hours = 1 minute .

4. 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

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.

