



LITTERA PUBLIC SCHOOL

CLASS VI

CHAPTER 10

SCIENCE

MEASUREMENT OF DISTANCE AND MOTION

Transport

- It is a mechanism in which a thing is carried from one place to another.

History of Transport

- In the earlier times, land transport was done using animals or human backs, while, water transport was done on hollow wooden logs or simple wooden boats.
- After the invention of wheel, bullock carts, camel carts were developed.
- Transport then evolved in the 19th and 20th century to bus,



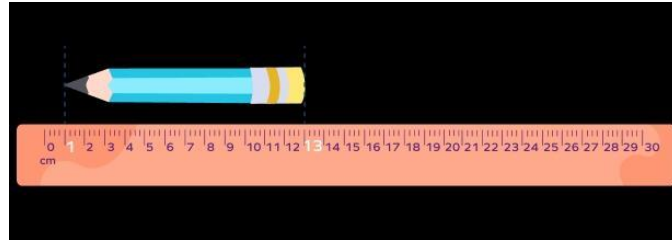
trains, cars, and airplane, jets, steam and motor boats, etc.

Distance

- It is length of the space between two points or between two places is called distance.
- Example: If the two points are close by, the distance between them will be small otherwise if the two points are far off, then the distance between them will be large.

Length

- Length tells us how long an object is.
- Measurement is comparison of an unknown quantity with a known quantity. The known quantity is called **Unit**.
- Measurement consists of two parts, a number (quantity) and a unit.

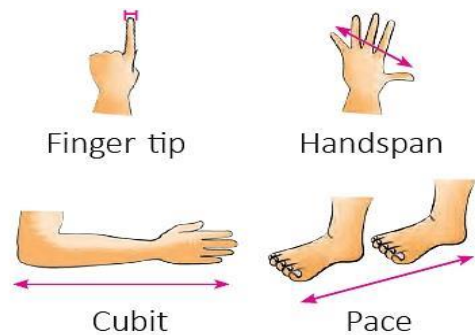


Standard Units of Measurements

- Scientists all over the world have accepted a set of standard units for measurements. This system of units is called International System of Units (SI units).

Need for standard units of measurement

- Units like foot, hand span, cubit, footstep etc., vary. They depend upon the size of an individual, hence such units cause confusion in measurements.
- Example: length-meter, time-second, mass kilogram.

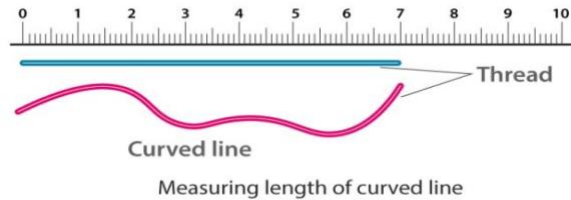


Rules for writing symbols of units

- Units are usually written in small letters
- It is not given in plural form
- It is not followed by a full stop unless it is at the end of the sentence.

Measuring Length of a Curved line

- Instead of straight scale, measuring tape or thread can be used for the measurement of curved line or surface.



Motion

- Any change in position with time can be termed as motion.
- A motion can be termed as slow or fast based on the distance it covers in a specific amount of time.
- The objects which are not moving are said to be at rest.

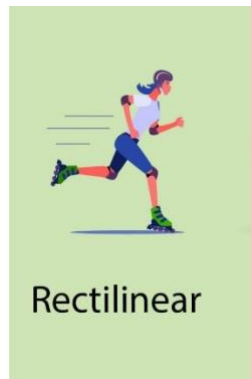
Classification of motion on the basis of the path they follow

1. Translatory motion: if a body moves as a whole such as every part of the body moves through the same distance, the body is said to be in translatory motion.

Example – moving a car or a train.

Types of translatory motion:

- Rectilinear Motion:** Motion where objects move along a straight line. Examples: sprinters in race, falling stones etc.



- (ii) **Circular Motion or Curvilinear motion:** Motion where objects move along a circular path. Examples: rotation of earth, movement of tip of hand of a clock.



- (iii) **Random motion:** motion of a body which keeps on changing its direction in a disorderly manner is called random motion. Example – motion of ball in a cricket or football match.

2. **Periodic Motion:** Motion where the object repeats its motion after a fixed interval of time. Examples: motion of swing, pendulum etc.



3. **Rotatory Motion:** A type of circular motion where an object spins on its own axis, it is called rotatory motion. Example: rolling ball, spinning top, motion of fan etc.



4. **Rolling motion** : the motion in which body undergoes both translatory as well as rotatory motion is called rolling motion. Example – movement of drill, motion of bicycle wheel.