

CHAPTER: 8 MOTION**Experiential Content:**

To calculate speed and velocity using a remote car.

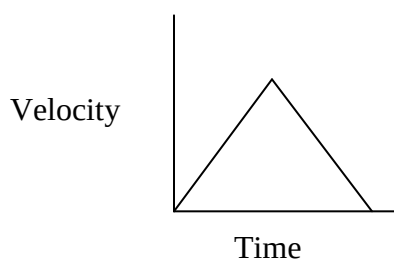
- A remote car is made to move. The initial point is noted as 'A' and the direction of the car is also changed while moving. Now the car is stopped. Mark the final position as 'B'.
- Measure the actual path length between A and B and also note the time taken by the car to move from A to B.
- Calculate speed. $\text{Speed} = \text{Distance} / \text{Time}$.
- Measure the shortest distance between A and B.
- Calculate velocity. $\text{Velocity} = \text{Displacement} / \text{Time}$.

Suggested Questions:

1. What is known as speed in a specified direction?
2. How is the displacement of the car measured?
3. Why is the magnitude of distance greater than the magnitude of displacement?
4. What is the SI unit of speed and velocity?
5. Can the car have zero displacement?

Curiosity Questions:

Explain the following graph with an example.

**Answer Guide:****Think About:**

- 1) What is meant by uniform acceleration?
- 2) Plot a velocity time graph for uniform acceleration.