

**Section 2 :**  
**The 8th Grade Physical Sciences**  
**Content Area Standards**

**Motion**

1. The velocity of an object is the rate of change of its position. As a basis for understanding this concept:

a. *Students know* position is defined in relation to some choice of a standard reference point and a set of reference directions.

b. *Students know* that average speed is the total distance traveled divided by the total time elapsed and that the speed of an object along the path traveled can vary.

c. *Students know* how to solve problems involving distance, time, and average speed.

d. *Students know* the velocity of an object must be described by specifying both the direction and the speed of the object.

e. *Students know* changes in velocity may be due to changes in speed, direction, or both.

f. *Students know* how to interpret graphs of position versus time and graphs of speed versus time for motion in a single direction.