**CHAPTER 8: STUDY GUIDE**

**AVERAGE VELOCITY IS THE RATE OF CHANGE IN POSITION**

**VOCAB: Be able to define the following terms. Make VOCAB cards if you need to.**

* average velocity
* best-fit line
* displacement
* distance
* position
* position-time graph
* magnitude
* scalars
* speed
* slope
* time
* time interval
* uniform motion
* vectors
* velocity

**8.1 The Language of Motion Questions**

1. Differentiate scalar from vector quantities.
2. Compare and contrast displacement, distance and position.
3. What are the SI units for distance and time.
4. Describe the displacement, during equal time intervals, of an object moving with uniform motion.
5. What kind of line is used to represent uniform motion on a position-time graph?
6. Explain what positive, negative and zero slope represent on a position-time graph.
7. Complete the Checking Concepts and Understanding Key Ideas on p. 361
8. Complete Quiz 8.1 at <http://www.bcscience.com/bc10/>

**8.2 Average Velocity Questions**

1. Differentiate speed and velocity.
2. What are the SI units for velocity?
3. Be able to calculate the slope of a position-time graph.
4. What concept does the slope of a position-time graph represent?
5. Explain what positive, negative and zero slope represent in terms of average velocity.
6. Be able to convert between km/h and m/s.
7. Be able to calculate average velocity using the formula vav = Δd/Δt
8. Make sure you have completed the Practice Problems on p. 369 and p. 370.
9. Complete the Checking Concepts and Understanding Key Ideas on p. 375
10. Complete Quiz 8.2 at <http://www.bcscience.com/bc10/>