Constant Velocity Particle (CVP) Unit Objectives

What you should know and be able to do by the end of the unit.

1. You should be able to determine the **average velocity** of an object in two ways:
   a. determining the **slope** of an **x** vs. **t** graph.
   b. using the equation $v = \frac{\Delta x}{\Delta t}$

2. You should be able to determine the **displacement** of an object in two ways:
   a. finding the area under a **v** vs. **t** graph.
   b. using the equation $\Delta x = vt$

3. Given an **x** vs. **t** graph, you should be able to:
   a. describe the motion of the object (starting position, velocity)
   b. draw the corresponding **v** vs. **t** graph
   c. draw a motion map for the object.
   d. determine the velocity of the object.
   e. write the mathematical model (equation) that describes the motion.

4. Given a **v** vs. **t** graph, you should be able to:
   a. describe the motion of the object (direction of motion, how fast)
   b. draw the corresponding **x** vs. **t** graph
   c. determine the displacement of the object (area under curve).
   d. draw a motion map for the object.
   e. write a mathematical model (equation) that describes the motion.

5. Given a **motion map**, you should be able to:
   a. describe the motion of the object (starting position, velocity)
   b. draw the corresponding **x** vs. **t** graph.
   c. draw the corresponding **v** vs. **t** graph .
   d. determine the displacement of the object.
   e. determine the average velocity of the object.
   f. write a mathematical model to describe the motion.

Additional Study Hints:

Look over all your worksheets, questions of the day, and quizzes.
Make an **x** vs. **t** graph and see if you can draw the **v** vs. **t** graph.
Form a study group and review together and quiz each other.