

Unit 2 Plan: **Representing Motion**
 Physics1 @ PalmHarborUniversityHigh



Day	Date	Topic	Assignments Due / Schedule
1		Intro to Motion Motion diagrams; particle models CW#1: RB 2.1 Section Review (p.33) RB 2.2 Section Review (p.37)	Read Sections BB 2.1, 2.2, 2.3
2		Position-Time Graphs CW#2: RB (9-18, pp 39-41)	Read Section 2.7
3		Position-Time Graphs, continued CW#3: Motion Detector	HW#2: TBA
4		Ch 2.4 Notes CW#3: RB (25-28, p 45)	
5		Review Problems	HW#3: TBA
6		Review	
7		Unit 2 Test	

Note: Homework is due on the day following the assignment, unless otherwise noted.

Objectives / Essential Learnings: (key terms in **bold**)

1. Define **coordinate system**. Explain the idea that motion is relative (**frame of reference**).
2. Draw **motion diagrams** and **particle models** to represent moving objects.
3. Explain the difference between a **scalar** quantity and a **vector** quantity.
4. Be able to add and subtract colinear vectors.
5. Distinguish between **position** and **distance**.
6. Distinguish between **displacement** and **distance**.
7. Interpret and plot **position-time graphs**.
8. Distinguish between **speed** and **velocity**.
9. Distinguish between **instantaneous velocity** and **average velocity**.
10. Demonstrate the ability to calculate **average velocity** and to solve an equation involving v , d , and t .
11. Be able to determine the **slope** of a curve on a position-time graph and calculate the velocity.

$$\Delta t = t_f - t_i \quad (\text{time interval}) \qquad \bar{v} = \frac{\Delta d}{\Delta t} \quad (\text{average velocity})$$

$$\Delta d = d_f - d_i \quad (\text{displacement}) \qquad \bar{d} = \bar{v}t + d_i$$