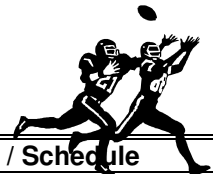


Unit 6 Plan: **Projectile Motion**  
 Physics 1 @ PalmHarborUniversityHigh



Day	Date	Topic	Assignments Due / Schedule
1		Horizontal Projectile Worksheet Read Section 6.1, pages 147-149 <b>CW #1:</b> Practice Problems 1-2 page 150	Finish Practice Problems
2		Interactive Physics: Horizontal Launch Lab	<b>HW #1:</b> Problems (p. 165) : 51, 52 Read Section 6.1, pages 150-152
3		Objects launched at an angle Notes <b>CW #2:</b> Problems 4, 5 page 152	<b>Finish</b> Classwork
4		Objects launched at an angle Notes/Review	<b>HW #2:</b> Problems (p. 165) : 53, 56,
5		<b>CW#3:</b> Review Problems Worksheet	Problems TBA
6		Projectile Motion Lab	<b>HW #3:</b> Mastering Concepts (p. 164): 33-35 Applying Concepts (p.164): 40-46
7		Review	
8		<b>Unit Test</b>	

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

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

- Understand the independence of vertical and horizontal velocities of a **projectile** by solving problems of projectiles launched horizontally.
- For a projectile, describe the changes in the **horizontal and vertical components** of its velocity when air resistance is negligible.
- Explain why a projectile moves equal distances horizontally in equal time intervals, when air resistance is negligible.
- Be able to sketch the **trajectory** of a projectile launched horizontally or at an angle.
- Be able to find the maximum height, time in the air and range of a projectile launched at an angle if initial velocity and angle are given.

**Return of the FAB 4...**

$$\mathbf{v_f = v_i + at} \qquad \mathbf{v_f^2 = v_i^2 + 2ad}$$

$$\mathbf{d = \bar{v}t}$$

$$\mathbf{\bar{v} = \frac{v_f + v_i}{2}}$$

$$\mathbf{d = \frac{v_f + v_i}{2} t}$$

$$\mathbf{d = v_i t + \frac{1}{2} at^2}$$