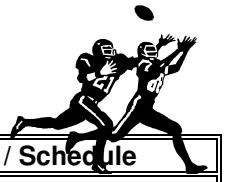
Unit 6 Plan: ***Projectile Motion***
Physics 1 Honors @ PalmHarborUniversityHigh



Day	Date	Topic	Assignments Due / Schedule
1		Horizontal Projectile Worksheet Read Section 6.1, pages 147-149 **CW #1**: Practice Problems 1-3 page 150	Finish Practice Problems
2		Interactive Physics: Horizontal Launch Lab	**HW #1**: Problems (p. 165) : 51, 52 Read Section 6.1, pages 150-152
3		Objects launched at an angle Notes **CW #2**: Problems 4, 5 page 152	**Finish** Classwork
4		Objects launched at an angle Notes/Review	**HW #2**: Problems (p. 165) : 53, 56, # 57 (Bonus)
5		**CW#3**: Review Problems Worksheet	Problems TBA
6		Projectile Motion Lab	**HW #3**: Mastering Concepts (p. 164): 33-35 Applying Concepts (p.164): 40-46
7		Review	
8		**Unit Test**	

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

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

1. Understand the independence of vertical and horizontal velocities of a ***projectile*** by solving problems of projectiles launched horizontally.
2. For a projectile, describe the changes in the ***horizontal and vertical components*** of its velocity when air resistance is negligible.
3. Explain why a projectile moves equal distances horizontally in equal time intervals, when air resistance is negligible.
4. Be able to sketch the ***trajectory*** of a projectile launched horizontally or at an angle.
5. 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…

$$v_f = v_i + at \qquad v_f^2 = v_i^2 + 2ad$$

$$d = \bar{v}t \qquad \bar{v} = \frac{v_f + v_i}{2} \qquad d = \frac{v_f + v_i}{2}t \qquad d = v_i t + \frac{1}{2}at^2$$