



**To: All students of AP Physics B for the year 2010-2011**

**From: Mr. Horn;**

**Subject: AP Physics B Summer Assignment**

**Date: Monday, July 5, 2010**

Dear Student,

*AP Physics B* is an extremely intensive course with a large number of difficult topics. This makes a constantly busy schedule for the year. To cover the entire range of topics including laboratory work, you will need to complete assignments over the summer, Christmas and spring breaks. These assignments are absolutely necessary and *are required*. During the year you may also be asked to attend lab and help sessions after school from 3-5 PM and attend occasional Saturday sessions particularly as the exam approaches in May. These sessions may be required and take precedence over other activities. You will also take a full AP Exam for the second semester final on a Saturday in April. Again this is required.

To complete the summer assignment you will be issued a copy of *College Physics: A Strategic Approach*; Knight, Jones and Field—the text for next year. You will cover the first five chapters of the text which cover ***Linear Kinematics, Kinematics in 2 or more Dimensions, Forces and Newton's Laws in 1-3D***. These topics were covered in detail during the first year physics course, so should be an extension and review of material you have already learned.

The summer assignment consists of two distinct phases: (1) Problems from the book; and (2) two application projects. The problems from the book are chosen from the odd problems, and a key of answers is included for your use. The required book problems are listed below. The two application projects are also included. These are extensions of the ideas in the book. Please complete them in a professional report format.

**Summer Book Assignment**

Read Chapters 1-5

Complete the following Questions (Q) and Problems (P). Answers to odd problems are given in the back of the book from A-7 to A-12.

Chapter 1: P 1, 3, 9, 11, 17, 19, 23, 31, 33; pp 29-30

Chapter 2: Q 9, 11, 13; P 13, 15, 17, 19, 23, 25, 27, 29, 31, 33, 35; pp 61-66

Chapter 3: Q 7, 9, 13, 15, 19; P 9, 11, 13, 15, 17, 19, 21, 23, 27, 29, 31, 35, 37; pp 98 – 101

Chapter 4: Q 7, 13, 17, 18, 20, 27; P 7, 9, 11, 13, 17, 19, 21

The *book problems* and *projects* are **due** on the **first day back** to class in August. An **exam** over these chapters will be given on the **3<sup>rd</sup> day** of class.

You are also *required* to purchase a copy of either the *Princeton Review's* or *Barron's AP Physics B* review guide. You will find this very helpful in the course. You will also be assigned problems and questions from the guide at various times during the year. You will also need to have a TI84 or TI89 graphics calculator or the equivalent for the course.