AP Physics 1
Summer Assignment

Welcome to AP Physics 1! Before you embark on the AP Physics 1 journey, there a few things you should know. Please READ this entire page. It is essential that you prepare for a fast-paced, challenging course. The curriculum for this course is dictated and approved by the College Board. In addition to learning physics, you will ultimately be preparing to take the AP Physics test in May 2019. As you begin the course please be mindful of the following:

- Attendance on a daily basis is essential. There may be days where an entire chapter's worth of information is discussed. Any time you miss class, you will be missing a large amount of information.
- Summer work is important! All summer work is due as outlined in this packet. There will be **no exceptions** and **no late work will be accepted** for credit. Start this work early and keep up with it throughout the summer. Your summer work is your first chance to make a good impression. Start strong so that you can end strong.
- Show your work! Answers submitted without work will not be given credit.
- ASK QUESTIONS. It is unrealistic to think that everyone will fully understand every concept the first time. The worst thing you can do is not ask questions.
- DO YOUR WORK! Watching an instructor complete solutions on the board, listening to lecture, and participating in lab will help you learn. However, you will only truly understand the material engage yourself. Having said that, there will be times when will do the same problem 20 times and still get the answer wrong. This is normal in physics. Think of it like practicing a sport or an instrument, each time you practice you get a little better. So, DON'T GIVE UP!
- Manage your time effectively. Do not wait until the last minute. Your lack of planning and preparation will be evident.
- Submit assignments ON TIME. This course is being taught as a college-level course. Assignments will not be accepted for credit after the due date.
- Remember that many schools across the nation are in session in August. Students enrolled in AP courses in other schools have already completed a few chapters by the time we begin school in September. Our test date will not change and we will be working at a fast pace to keep up.
- READ the textbook. When you finish with a section, read it again. A few days later, read it again. Have I mentioned that you should READ the textbook as assigned?
- Use the study guides, quizzes, etc. provided in the Mastering Physics program and other tools as suggested by the instructor.

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1. All written work should be prepared in a Google Doc. You will be submitting this work via Google Classroom. Problems can be completed in a notebook.
2. If you cannot find an answer in the textbook, you should consult multiple sources. Please use the internet or other online textbooks as needed.
3. Join your AP Physics 1 Google Classroom by July 1, 2018
    a. **Class Code is 336xnu**
    b. Check the classroom once each week for announcements please.
4. An EXCELLENT resource is www.physicsclassroom.com Nearly all topics covered in this course are here in an easy to understand format. Become familiar with this site.
5. Read Chapter 1 of the Giancoli text.
    a. Define the following terms*: estimated uncertainty, percent uncertainty, significant figures, base quantity, derived quantity, conversion factor, dimensional analysis*
6. Answer all of the MisConceptual Questions on pg. 17 of the text. In addition to choosing an answer from the multiple choice list, you should explain your reasoning.
    a. Complete problems # 5, 9, 11, 18, 21, 24, 34, 48, 54
7. Read Chapter 3, Sections 1-4 of the Giancoli text.
    a. Define the following terms: *vector, scalar, resultant displacement, resultant, tip-to-tail method, parallelogram method, components, resolving vectors, vector addition, vector subtraction*
    b. Answer Questions # 1-10. Explain your reasoning.
    c. Answer the MisConceptual Questions # 1-3. Explain your reasoning.
    d. Complete problems # 1-16. Show your work.

I am expecting that you will have some difficulties as you begin to tackle these problems. "I didn't get it the first time so I didn't try again" is NOT an excuse. If you are struggling with a problem, you should (at the very least)

- List variables
- Draw a diagram
- TRY IT! I would much rather you have a wrong answer than no answer at all.

It is essential that you have excellent math skills in order to be successful in this course. As soon as we finish with the math review, we will move into chapter 2 *Kinematics in One Dimension.*

If you have questions, email me at lhaug@krhs.net. I check my email periodically throughout the summer. Good luck. You will need the skills developed throughout this assignment in order to earn success in this class.