**AP Physics 1**

Instructor: Mr. McManiman

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Text: Giancoli, Physics: Principles with Applications

**Needed materials:**

1. Notebook: A notebook will be needed for recording notes as well as doing practice problems in class. If PowerPoints are used, they will be available online.
2. Calculator: A scientific calculator is highly recommended for this course, but a calculator with exponential capabilities will be okay.

**Course Description:**

This is the follow-up course to Honors Physics. It utilizes a college level textbook, revisiting many topics from Honors Physics, but covering them in more detail. Time permitting, topics from the AP Physics 2 test may also be covered towards the end of the year. Critical thinking and problem solving strategies will be developed throughout the course through open ended problems, application of content through lab assignments, and measurement of retention through homework, quizzes, and tests. The class will meet twice a week in person and will have an online component the other three days of the week

**Course Objectives:**

This physics course is designed to prepare the students to take the AP Physics 1 exam, and to act as a prep course for college level physics.

**Course Schedule:**

Unit 1: Kinematics  
Unit 2: Dynamics  
Unit 3: Circular Motion and Gravitation  
Unit 4: Energy  
Unit 5: Momentum  
Unit 6: Simple Harmonic Motion  
Unit 7: Torque and Rotational Motion  
Unit 8: Electric Charge and Electric Force  
Unit 9: DC Circuits  
Unit 10: Mechanical Waves and Sound  
Unit 11: Refraction of Light  
Unit 12: Mirrors and Lenses

**Grading:**

Grades will be calculated based off of the performance of the student on homework, lab assignments, projects, unit quizzes, and unit tests. There will be a unit quiz and unit test for each unit.

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| Assignment Type | Point Value (of individual assignments) |
| Homework | 5 |
| Project | 20-75 |
| Labs | 35-50 |
| Unit Quizzes | 25-45 |
| Unit Tests | 45-75 |

The final is worth 10% of the total grade for the year.

**Online Tests and Quizzes:**

Tests and quizzes given online will be timed. They will need to be completed in one sitting in the allotted amount of time shown in the test/quiz description on Schoology.

**Make-up Work/Late Work:**

This class follows the school policy for make-up work. You have 3 days per day absent to make up missed work due to an absence. During that time, the assignment will be put in as an “M” (weighted as a 0) in the grade book until it is collected. Once collected, it will be put in as a “C”. If the assignment is not completed in that time, it will be put in as a 0 in gradebook and will not be able to be made up.

All work will be accepted up to the end of the school day with no point penalties. Late work will be accepted up to 3 school days after the day it is due (so if an assignment is due on a Tuesday, you have until Friday to turn it in for half credit.

**Study/Work help:**

I will be available after school every day until 3:10 pm for extra help, pending unforeseen circumstances.