

## ***PHYSICS SYLLABUS 2017***

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Office Hours: Before School, 6<sup>th</sup> hour, After School

### **Course Description:**

This course is designed for students who desire a background in physics and want to develop critical thinking skills. In this course, a conceptual and analytical approach is taken in investigating and explaining the laws of the physical world. Students will study these laws through laboratory experiments, demonstrations, and problem solving.

### **Standards:**

The standards below are from the Next Generation Science Standards. For further information go to [www.nextgenscience.org](http://www.nextgenscience.org)

**HS-PS2** Motion and Stability: Forces and Interactions

**HS-PS3** Energy

**HS-PS4** Waves and Their Applications in Technologies for Information Transfer

**HS-ETS1** Engineering Design

### **Assessments:**

Students will have the opportunity to self-assess their progress in the course periodically and before each parent-teacher conference. In addition to this the student will be assessed in the following areas:

Tests and Quizzes: You will have a written test after each major unit covered, not necessarily after each chapter. I will announce several days in advance when the tests will be given. Tests and quizzes will have the most points throughout the semester. Quizzes may or may not be announced and will be worth less points than the tests.

Projects: Periodically you will have to complete long term projects. I will give you the rubric for each of these as they come up. These will be opportunities to apply what you have learned in the course.

Labs and Reports: A variety of labs will be done in this class, most will involve data collection and the answering of questions. We may do some formal lab reports. I will go over the report format with you before the first report is due. **You will work together on data collection for the labs in this class, but each person is expected to complete their own write up in their own words.**

Homework: Homework is a vital part of this class. Students who consistently complete the homework will do well in the course overall. Most quizzes and tests will be over things that are covered in the homework. Homework is an opportunity to practice and will not always be graded. **There will be weekly online homework.**

### **Content:**

Semester 1: Motion, Forces, Periodic Motion, Vectors, Projectiles, Momentum, and the Semester 1 Final

Semester 2: Energy, Waves, Sound, Light, Electricity, Reality of Physics, and the Semester 2 Final

### **Instructional Strategies:**

A wide range of instructional strategies will be used in the course including individual work, group work, online work and research, direct instruction, and projects. There will be opportunities to practice concepts both in and out of class. I expect students to fully participate in all aspects of their learning including practice with their concepts. Mastery cannot be attained by listening only.

### **Resources:**

Textbook: Glencoe Physics: Principles and Problems  
(CD Rom copies of the textbook are available at the textbook closet)  
Canvas Learning Management System

### **Academic/Behavioral Expectations:**

Students must be in class on time and bring to class their textbook, Glencoe Physics: Principles and Problems, a notebook, folder, calculator, pen/pencil, and your student planner.

***Tardies and Absences:*** You are considered tardy if you are not in the room by the time the bell stops ringing. If you are absent it is your responsibility to check with a friend, or the teacher for what work you have missed. See below under grading plan for time constraints on making up absent work.

***Classroom Rules:*** Above all always follow directions and safety rules. Respect each other and the school property. Group work and lab experiments are a large part of this course, thus giving you time to talk to other students. Therefore when your peers or I am speaking, I expect you to listen. Rules found in the student planner will be followed.

Please Remember:

- \*IDs are to be worn unless it is unsafe for lab experiments. In those cases you will be instructed to take them off and leave them at your desk.
- \*Water only in the classroom. Please keep food and beverages in poolside or the cafeteria.
- \*Please have electronic devices powered off and put away during direct instruction. Please make sure to keep your device with you during lab activities to prevent theft.

***Cheating:*** I will not tolerate cheating of any kind! If caught cheating it is an automatic zero on that assignment, lab, or test and if caught a second time consequences will be pursued through the AP office. If you are caught copying another person's work you both will receive a zero for the paper. Use your brain—it's not worth losing your integrity or my trust.

### **Grading Plan:**

The standard grade scale will be used. Grades will NOT be rounded. Thus a 93.00% is required for an A and so on. Please see the section on assessments for further details relating to the areas that may be graded.

***Absent Work:*** If you are absent it is your responsibility to get any work you missed. Absent work must be turned in by the scheduled exam for that chapter. If you miss a lab you may need to come in on your own time to complete the lab. If you miss a quiz it must be made up by the scheduled exam date. If you miss an exam it must be made up by the next scheduled exam. Failure to make up work before these deadlines will result in a zero for the assignment, lab, or test.

***Late Work:*** LATE WORK IS NOT ACCEPTED! Assignments are due at the beginning of class unless otherwise specified.

***Communication Plan:***

I enter grades into powerschool at least once per week. Mondays are usually good days to check what has been added from the previous week.

Announcements for class will be made verbally in class and be posted on canvas.

If the need arises I will contact parents for academic and or behavioral reasons. Parents are also free to contact me at the phone number or email address listed at the top of this syllabus.