

IB Physics
2024-2025

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Room 54

Course Description:

This is Year 1 of IB Physics. To be in this class you must be a junior or senior and have taken Algebra 2 or currently be enrolled. This year will focus on kinematics, waves, and electric and magnetic fields. Physics is heavily based in math. You can think of it as applying algebra to the real world. Besides learning content, we will be focusing a lot on lab skills and data analysis. In Year 2 Physics, you will be required to complete a full lab investigation (Internal Assessment) and may take the IB Physics Exam to earn college credit.

Taken from the IB Physics Syllabus:

"Physics is a tortured assembly of contrary qualities: of scepticism and rationality, of freedom and revolution, of passion and aesthetics, and of soaring imagination and trained common sense."

Leon M Lederman (Nobel Prize for Physics, 1988)

Physics is the most fundamental of the experimental sciences, as it seeks to explain the universe itself from the very smallest particles—currently accepted as quarks, which may be truly fundamental—to the vast distances between galaxies.

What You're Going to Need:

- **Binder** (This will be an integral part of the class. It will be organized in a very specific way)
- **Charged Chromebook/Laptop**
It is required to bring a charged chromebook or laptop to school everyday to work on digital assignments or research. Phones will not be allowed for this
- **Writing utensils** (pens & pencils)

Cell Phone

Our classroom follows the Big Sky High School cell phone policy. Cell phones must be put in classroom caddy and remain there all class unless specifically indicated by me. If you do not comply with this policy, admin will become involved and consequences will be an out of school suspension or SRO referral.

Grading Policy

In this class we will be using Standards Based Grading. All grades will be based on student's understanding of given learning targets on a 1-4 scale.

This is a **weighted class**. 20% of your grade will be based on **formative** assessments (everyday work, labs, quizzes). 80% of your grade will be based on **summative** assessments (tests, larger projects, cumulative binder checks).

Grading scale

A = 4 (85%+) Advanced: Full comprehension with enriching details
B = 3 (70%) Proficient: Mastery of target, without advanced details
C = 2 (50%) Basic: General understanding of main ideas
D = 1 (35%) Novice: Shows little understanding of target

Year 1 Unit Overview

- A.1 – Kinematics
- A.2 – Forces and momentum
- A.3 – Work, energy, and power
- D.1 - Gravitational Fields
- C.1 - Simple Harmonic Motion
- C.2 - Wave Model
- C.3 - Wave Phenomena
- C.4 - Standing Waves and resonance
- C.5 - Doppler Effect
- D.2 - Electric and magnetic fields
- D.3 - Motion in electromagnetic fields

- **Late work:** all work is expected to be turned in on time. If you miss turning in an assignment, it will be marked as a zero in the gradebook until it is turned in. All late work must be turned in by the last Thursday of each month. No late work will be accepted after this and the grade will remain a zero. You will not be docked points for late work.
- **Absent work:** when you are absent it is your responsibility to find out what you missed and get caught up. The best way to do this is to check google classroom where the agendas and materials are posted. Email me any follow up questions. Paper copies of all work will be available in the hanging folders at the front of the classroom.
- **Revisions/Lab makeups:** All formative assessments can be revised before a summative assessment.
 - If you need additional help or reteaching of material in order to revise or makeup work, please schedule a time to conference with me during zero period or advisory.
 - Summative assessment learning targets can be reassessed for up to a 3. In order to reassess, you must have all formative assessments turned in and corrected. You need to communicate with me about reassessing and schedule a time to reassess. You will need to bring all your formative assessments, notes, etc. with you.

Classroom Rules

1. **Be Responsible:**
 - a. Safety: first & always
 - b. Be on time, have your materials, be in your seat doing warm-up work when the bell rings.
 - c. Cell phones must be silenced & put away unless indicated otherwise.
2. **Be Respectful:**
 - a. Use appropriate language & respect others always (physically, verbally, & on all levels).
3. **Be Resilient:**
 - a. Maintain a positive attitude!

Academic Honesty: All work in this class is expected to be your own. Copying off another student is not working together. Working collaboratively looks like helping one another but **NOT** word for word copying. If you need help getting information you missed, please check in with me first. If you are caught copying another student's work, you will be asked to start the assignment over and/or take a zero for the assignment.

Consequences

1. Verbal warning
2. After class conference and potential email/call to parents
3. Office discipline referral and call home to parents

Google Classroom

I will post all classroom assignments as materials on classroom for absent students. I will also use google classroom to communicate with you, to post links to websites, and have a place to turn in digital assignments. I will give you the code during the first week of school.

- **Citizenship:** Throughout the year you will be assessed on a citizenship rubric developed by the science department. The goal of this is to build skills and promote positive behaviors like being on time and prepared for class. This assessment will be recorded in the gradebook as a formative assessment.
- **Communication:** The best way to communicate with me is via email. For a immediate response, please do not comment on assignments in google classroom as I may not see those in a timely manner.