



ADVANCED PLACEMENT PHYSICS 1

INSTRUCTOR: MR. ETHAN FALLON | ETHAN_FALLON@CHINO.K12.CA.US

CONTACT INFORMATION

Instructor: Mr. Ethan Fallon

Room: D104

The best way to contact me is through district email:

ethan_fallon@chino.k12.ca.us.

Students, please use your district assigned email when contacting me. Be sure to include the reason for contacting me and your full name in the email subject line, for example:

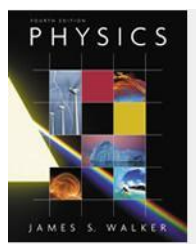
Exam II Makeup (Student Full Name).

I am committed to responding to all

student and parent emails within 24 hours on weekdays.

COURSE MATERIALS

Physics (4th Edition; AP Edition) by James Walker. 2009 (ISBN: 0131536311)



Google Classroom: Turn in all assignments online here.

Announcements and resources are shared here also. View assignment details and grades here using your

COURSE DESCRIPTION & OVERVIEW

Physics is a fascinating subject. Much of what you know will be confirmed and built upon. Much of what you know will be proven wrong. This course will stretch your brain... in a good way. By the time you're through with this course you will have discovered the truth behind a variety of common misconceptions.

This AP class is a college level course. We will be working out of a college level text. To prepare you for the AP Physics 1 Exam on Friday May 16, 2025, topics that will be presented in this year-long course include: Newtonian Mechanics: Kinematics, Dynamics, Gravitation, Energy, Momentum, Simple Harmonic Motion, Rotation, & Fluids.

Advanced Placement Physics 1 is the equivalent of the first course in an introductory college course sequence in algebra-based physics and is designed to prepare students for the AP Physics 1 Exam. Emphasis is on experiencing science as an exploratory process, the development of critical thinking skills, and integration of Physical knowledge and science practices through inquiry-based activities and laboratory investigations.

As outlined in the College Board AP Physics 1 Course and Exam Description, in this course students build their understanding of physical models as they explore and solve problems in these content areas:

- Kinematics
- Forces and Translational Dynamics
- Work, Energy, and Power
- Linear Momentum
- Torque and Rotational Dynamics
- Energy and Momentum of Rotating Systems
- Oscillations
- Fluids



AP Physics is a difficult course. Because of the amount of material we need to cover, this course will advance at a very fast pace. It may require 8 to 10 hours a week of time outside of class. Here are my expectations for an A student:

- You read the chapter
- As you read the chapter you try each example problem. You should be able to solve the problem on your own before going on to the next problem. You should do this for each part of the chapter we are covering.
- You should go through your lecture notes, recopying them if necessary, until you understand everything that was presented in lecture and can do the problems that were done in class on your own.

personal code that will be distributed individually. Access to Google Classroom requires a CVUSD-issued Google and/or Office 365 account.

Remind: receive some announcements via text by joining with your class code (given in class)

CHS AP Physics 1 page:
(<https://www.chino.k12.ca.us/Page/3290>) Download files here.
Resources like suggested links for study are available here also.

AP Classroom: The College Board offers videos, questions, structure, etc. We make regular use of this resource. Code will be given in class.

Recommended Student Supplies:
Pen and/or #2 Pencil
Paper
Calculator *
Graph Paper
Ruler (cm scale)
Highlighter
Chromebook (provided)

* Scientific calculators will be more than adequate for this class. That said, there are graphing calculators available for you to check out in the library if you wish to do so. Because both scientific and graphing calculators (without QWERTY – i.e., typewriter – keyboards) are permitted on the AP exam, I will permit the use of graphing calculators in class if you would like to use them.

- You should do all of the assigned homework problems.
- You should find ways to work with other students to discuss and work on the problems.
- When you are done with the homework, you should be able to answer any of the questions or do any of the problems assigned on your own, from the beginning.
- You should ask questions when you have them. You should be an engaged and active student.
- You should try to understand what you are doing in lab while you are doing it. Your answers to questions for lab should be well thought through.
- Your written work should be complete, easy to follow, and neat.

If you do all of the above, you should end up with a good to excellent grade in the class. If you spend less time, or do less work than the above, you should expect that your grade will be less than excellent.

Inquiry-based laboratory experiences will make up at least 25% of instructional time. Communication of laboratory results will occur through formal reports, group presentations, laboratory group discussions, and analyses of scientific investigations.

Course examinations are modeled after the AP Physics 1 Exam and are cumulative. These examinations occur at the end of each unit which is approximately each month on average depending on the unit. A simulated full-length AP Physics 1 exam will occur in the spring and will serve as the course final examination.

All students taking the course are expected to register and sit for the AP Physics 1 Exam. The AP Physics 1 Exam will assess both your ability to think like a scientist and your understanding of the course content. See the AP Physics 1 Exam At A Glance in the College Board's AP Physics 1 Exam: Algebra-Based Course and Exam Description for more detailed information regarding the AP Physics 1 Exam.

Topics

To give you a feel for the types of things we will come across in our studies:

- You will learn how to describe and predict motion of objects and how to cause those motions. Because this includes just about any sport you can think of, *this class will make you a better athlete.*
- You will find out why your coaches tell you it's better to "follow through" when you hit a ball.
- You will discover how a cat can always land on its feet no matter in which orientation it is dropped
- You will learn about how tops, gyroscopes, and bicycle wheels become stable when spinning but they fall over quickly if not spinning

A few actual questions you may answer from the text:

- What is the minimum height necessary to create a supersonic waterfall?
- Calculate how many reps you need to do in lifting a given weight a given distance to burn off the calories gained by eating half a candy bar.

- Calculate how tall a straw can possibly be on Earth if it is to be effective (yes, there's a maximum height before it stops working)

COURSE POLICIES

Classroom Behavior & Expectations

1. **Mutual Respect:** I strive to treat all students with the high degree of respect you all deserve. I ask that you extend that respect to all of your classmates and return the courtesy to the instructor as well. Among other things, be careful not to interrupt others. Success depends on working together and on being able to express and discuss your ideas in a safe and nurturing environment. Take care of each other!
2. **Safety:** To avoid injury, we must maintain a safe classroom and lab environment. We will *observe all lab safety rules*, walk instead of running, be careful with lab equipment, and always maintain presence of mind when in the lab. Please ask the professor before attempting something you are unsure about in any way.
3. **Interruptions:** Positive behavior is expected. *Be considerate. Avoid distractions and disturbances* to be sure we give everyone the chance to learn. These include walking around, sharpening pencils during lecture, and grooming in class. *The room must be quiet enough to hear my voice.* Listen to explanations so they don't have to be repeated. If in doubt, raise your hand.
 - a. Rule of Thumb: If it distracts the instructor or other students, don't do it.
4. **Clean Up:** We share workstations with other classes. Therefore, we will need to keep them clean, just as we depend on the other classes to keep our workstations clean for us. *Be sure that everything is put away where it goes* at the end of each lab. Be gracious enough to *put any garbage into the garbage can*. Be careful not to leave spilled or damaged materials out. Let the professor know right away if that is the case.
5. **Academic Privacy:** As a student, your grades are confidential. You are entitled to keep your grades to yourself if you do not feel comfortable letting others know. If you are asked about your grades, you may feel like you have to tell people. Please refrain from asking others about their grades to extend your classmates that courtesy.

Note: School policies will be enforced. Please: no gum chewing in class and no cell phones unless used for class activities.

Participation: In any class, it is very important that you keep focused. Therefore, your success depends on active participation in class. This includes but is not limited to: attentiveness, asking questions, sharing ideas with partners in groups, cooperating in lab activities, and note-taking. Sleeping, disruptions, or other activities that detract from your ability to learn the subject will adversely affect your performance. Remember, active participation helps you in the long run.

Group Work: You will be working in labs and groups in this class. Working well in groups is one of the keys to success in this class. For your group to get all the correct answers, every group member must share their ideas. Therefore you must respect each other's input and be able to discuss ideas and the validity of those ideas. You must never criticize or make fun of the shared ideas because even weird or incorrect ideas can lead to the truth. You can't take out your bad days on your group members. Cooperation and teamwork are very important.

Academic Integrity

Integrity is of the utmost importance, personally and intellectually. Honesty is the foundation of all intellectual pursuits. At the very least, what is graded must represent the work done by the student and indicate the level of that student's achievement. Cheating and plagiarism undermine these goals. Cheating is a voluntary act for which there may be reasons, but for which there is no acceptable excuse. "Cheating" includes, but is not limited to:

- Receiving or knowingly supplying unauthorized information
- Changing an answer after work has been graded and presenting it as improperly graded
- Using unauthorized materials or sources
- Plagiarism – copying someone else's work or letting them copy off you. This includes homework, labs, quizzes, and exams.

Working together on homework means discussing the ideas and questions together, but that **what you turn in must represent your own understanding, expressed in your own words**. The ultimate decision as to whether or not something has been copied lies with the instructor. If you are caught cheating, you will receive a "zero" on the item. There will be zero tolerance on this policy.

Late/Make-up Work

There is a maximum of a one-week time limit on make-up work. When you return from an excused absence it is your responsibility to ask about the missed assignments. Please do not take up class time. See me before school, after school, or at lunch if you have questions about back work. You may also find out from one of your classmates.

It will be very difficult to catch up if you fall behind in this class. Therefore, late homework will be accepted only up to one day after the given due date for half credit.

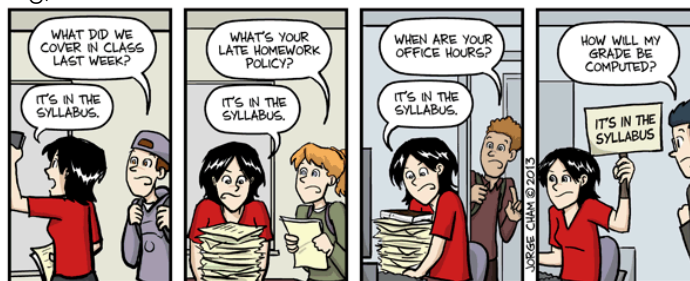
EVALUATION OF STUDENT ACHIEVEMENT

Your course grade will be (tentatively) based on the following, rounded to the nearest whole number:

1.	Assessments.....	75%
	a. Tests&Quizzes	35%
	b. Final	20%
	c. Labs	20%
2.	Participation.....	5%
3.	Homework.....	20%

Total

100%



IT'S IN THE SYLLABUS

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Final Grade will be based on this breakdown: **A** = 100%-90%; **B** = 89%-80%; **C** = 79%-70%; **D** = 69%-60%; **F** = 59% or below.

Paraphrased Testimonials:

- I'm glad I took AP Physics: I got the highest grade in my first Physics class in college!
- Physics class literally saved my life: I just barely avoided an accident with a freight truck that suddenly stopped on the freeway by "pumping" my brakes the way we discussed in the friction lesson and so I've survived to problem-solve another day!
- My son likes Physics class. After his car accident, he told us he was *glad* that his car was smashed in because it increased the time of the collision so the forces would be smaller...
- Physics class changed my life. I'll never see another superhero movie in the same way!
- What's happening to me?! I went paintballing and all I could think of was *Physics*!!

End-of-Year Anonymous Comments:

- AP Physics taught me a better work ethic. [so taking the class makes you a better student!]
- "It was super-enlightening and fun"
- "I really liked this course because it gives a unique experience of struggling through so much, with the result of actually learning something that can be related to real life. ☺"
- "The course is definitely the most interesting I have ever taken and you cover the material extremely well, especially given the time constraints."
- "I liked it. I learned so much this year. Thanks, Mr. Fallon! ☺"
- "Truly an amazing experience... The class itself couldn't be better."
- "I want to take it again! :D!"



ACKNOWLEDGMENT OF COURSE POLICIES

Signing of this page serves as an acknowledgment that both student and parent/guardian have read and understand the course expectations as outlined above. In addition, signature of this page indicates familiarization with the Biomedical Science and Technology Academy policies found in the school handbook.

Student Name (Print) & Date

Student Signature

Parent/Guardian Name (Print) & Date

Parent/Guardian Signature

	In Lab	During Assessments (tests, quizzes, etc)	During Lecture or Class Presentations	Arrival
Be Safe	<ul style="list-style-type: none"> *Observe all safety rules *Wear Safety Goggles at all times *Maintain Presence of Mind 	<ul style="list-style-type: none"> * Raise hand for questions * Stay in seat until teacher grants permission to get up (pencil sharpening, restroom, etc) 	<ul style="list-style-type: none"> * Remain seated during presentations 	<ul style="list-style-type: none"> * Walk instead of running * Keep yourself organized * Use materials in the way they are intended for use
Be Responsible	<ul style="list-style-type: none"> *Ask questions before attempting anything you are unsure about *Let instructor know right away if spilled or damaged materials are observed, especially hazardous materials 	<ul style="list-style-type: none"> * Be prepared with necessary materials out when the test begins * Keep your mind and eyes on your own responses 	<ul style="list-style-type: none"> * Have required materials ready (paper and pencil for notes, etc) * Follow directions 	<ul style="list-style-type: none"> * Be prepared to work (with necessary materials) when class starts * Turn in assignments at the beginning of class
Be Respectful	<ul style="list-style-type: none"> *Put away all lab materials when finished so that they are ready for the next period *Be aware of equipment that must be shared and share accordingly 	<ul style="list-style-type: none"> * Maintain silence during exam while others are answering questions 	<ul style="list-style-type: none"> * Only one person talks at a time * Raise hand to speak * Maintain attentive posture 	<ul style="list-style-type: none"> * Speak quietly enough that teacher's voice may be heard * Begin to listen silently when class begins
Be Resilient	<ul style="list-style-type: none"> * Be prepared to re-measure entire sections of data if measurements are faulty *Manage lab time carefully * Advocate for yourself if a lab is missed 	<ul style="list-style-type: none"> * Attempt all questions without leaving blanks * Always do your best, whatever it may be that day 	<ul style="list-style-type: none"> * Remain attentive * Note questions when confused so that you remember to ask them afterwards 	<ul style="list-style-type: none"> * Be aware of surroundings * Wait patiently for class activities to begin