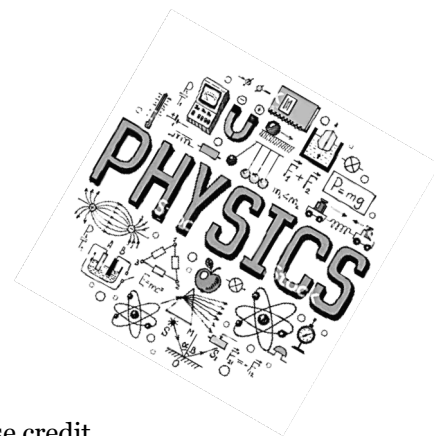


Physics 1-2

Redwood High School



WHAT IS IT?

- University of California and California State University "D" laboratory science course credit.
- Physics is *the* foundational science. (Rutherford once said "All science is either physics or stamp collecting.")
- Topics include: optics, light, waves, sound, electricity, motion, forces, energy, momentum, and relativity.

COURSE RIGOR

- Requires algebra, geometry and trigonometry skills; many physics students will take Precalculus, but some physics students are one year higher *or* lower math level.
- Most students spend about 45 minutes on homework, 3 times a week, and 30 minutes on a lab, 1 time per week.
- Quizzes are given every other week, and a unit exam once per grading period.

ACTIVITIES

- Fun demonstrations that explain interesting physical phenomena.
- Lots of examples of "how things work" and "how to explain" science phenomena.
- Weekly labs, but *no* lab reports. All lab work done in a pre-printed lab book. This minimizes "busy work".
- Three meaningful homework assignments per week, checked regularly, and due the following week. Most homework includes reading and about five questions to complete.
- A hands-on project each semester. Recent projects include a mousetrap race car competition, physics photography contest, and an electromagnetism research project.
- Learn how to wire actual household circuits, including outlets and switches!

SAMPLE LABS

- Mirrors, Lenses and Prisms (explore reflection and refraction of light)
- Slinkys (analyze and understand wave behavior)
- Resonance and Standing Waves (models acoustics of musical instruments)
- Diffraction and Interference (proves wave behavior of light)
- Series and Parallel Circuits (conceptual and quantitative analysis of electricity)
- Electricity Modules (learn to wire household circuits)
- ...and many more labs on Projectile Motion, Friction, Newton's Laws, Energy & Momentum Conservation

WHO TAKES PHYSICS?

- Essential for any student considering a college major in science, engineering, medicine, even math!
- Great course for students who want a challenging upper-level science course.
- Highly recommended for students eager to take a course that is attractive to college admissions offices, especially a course that shows ability to apply mathematics in science.

REQUIREMENTS

- Successful completion of Physics In The Universe 1-2 & Living Earth 1-2.
- Successful completion or concurrent enrollment in Advanced Algebra.

DO I HAVE TO TAKE CHEMISTRY (OR OTHER ELECTIVE) FIRST?

- No, although many physics students have already taken chemistry, the courses can be taken simultaneously.
- Many students double up and take physics and another science elective either junior year or senior year.

FOR MORE INFORMATION,
SEE MR. NASH IN ROOM 233

