



Course Name	Instructor	Instructor E-mail & Availability
Physics	Miss Arett	Email: cearett@aps.k12.co.us
Course Website	Class Meeting Times & Location:	Prerequisites
N/A	Period 1: Physics Period 2: Physics Period 5: Enrichment Period 6: Physics Period 7: Physics	None

### Course Description

This laboratory science course is designed to teach experimental methods by using the scientific method and measurements to be logged into a laboratory notebook.. Then, students will use this introduction to discover concepts in the themes of motion, forces, mechanical energy, thermal energy, wave energy and electromagnetic energy. Skills in this course would benefit the student as they continue into other high school science courses

### Standards

#### Forces and Interactions

- Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration. (CAS PS 1a, 1b)
- Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system. (CAS PS 1c)

#### Energy

- Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known. (CAS PS 6 a, b, c, d)
- Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative positions of particles (objects). (CAS PS 5 a,b,c,d)

#### Earth and Space Science

- Use mathematical or computational representations to predict the motion of orbiting objects in the solar system (CAS ESS 2a, 2b, 2c).
- Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection (CAS ESS 1a,1b, 1c)

### Learning Outcomes by Quarter

#### Quarter 1

Unit 1: Introduction to Science: experimental methods, scientific method, and measurements  
 Unit 2: Newton's laws of force and motion

#### Quarter 2

Unit 3: Energy and Forces  
 Unit 4: Electricity

#### Quarter 3

Unit 5: Forces and Particles  
 Unit 6: Forces and Gravity

#### Quarter 4

Unit 7: Thermal convection and space science

### Required Supplies

- spiral notebook
- pencil
- highlighters

### Grading

Students will be graded on a 4 point scale for all assignments

Point	Letter Grade	Explanation
3.0-4.0	A	In addition to the performance score of 3.0, the student demonstrates in depth inferences and applications that extend beyond what was taught.
2.5-2.99	B	There are no major errors or omissions regarding any of the information and/or processes (simple or complex) that were explicitly taught. This level is mastery
2.0-2.49	C	There are no major errors or omissions regarding the simpler details and processes, but there are major errors or omissions regarding the more complex ideas and processes.
1.0-1.99	D	With help, the student demonstrates a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.

Below 1.0 or No Evidence	F	Even with help, the student cannot demonstrate understanding of the simple details.
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### School Policies

#### REQUESTS FOR HOMEWORK

Students requiring homework assignments due to extended excused absences (three days or more) should initially contact the attendance office. The attendance office will notify teachers and collect assignments from individual teachers. Assignments should be ready for pick up 24 hours after a request has been made. Please call the attendance office to check homework status.

#### MAKE-UP WORK DURING ABSENCES

Any time a student misses a class for any reason whatsoever, that student will be expected to contact each teacher and complete the make-up work in order to achieve the learning objective. This includes field trips, school activities, suspensions, group sessions, truancies, and the like. Make-up work is required and students who have been absent from class must request make-up work from the teacher no later than the next class meeting. Teachers will determine a reasonable amount of time for make-up work when students are absent, using a two days for every one day absent guideline.

Teachers may provide an "alternative" learning experience for make-up work to any student who requests it upon returning to class. For example, a student may have been absent from a class at which the daily learning objective was achieved by means of a class discussion. At the teacher's sole discretion, students who were absent during that discussion might be assigned a two or three-page written essay due three or four days after the student's return to class as an 'alternative' learning experience for that objective.

Teachers will give academic credit to all make-up work that complies with the above guidelines. The only exception is that teachers have the choice whether or not to give academic credit to the make-up work from an unexcused absence. If the absence was unexcused, the teacher should provide feedback but is not required to give credit for the work.

#### TARDY POLICY

After three tardies teachers will conference with the student and contact home. After 5 tardies students can be referred to the Learning Center and additional consequences may be assigned.

#### PASSES

Students who leave the classroom or are excused from class must have a pass with correct validation by the teacher. School officials may send for a student using an authorized Administrative Pass. Students who are without official passes will be subject to disciplinary action. Passes will not be given in the first 10 minutes or last 10 minutes of class.

#### NON-ACADEMIC TECHNOLOGICAL DEVICES

Aurora Public Schools believes in providing environments that optimize learning and teaching and are safe, secure, and well maintained. As such, all personal electronic devices\* shall not be seen nor heard during the school day in academic areas of the building from 7:30 A.M. to 3:45 P.M. \*Cell phones, iPods, headphones, portable speakers, MP3s, tablets, cameras, etc. **Aurora Central High School is not responsible for lost, stolen or damaged electronic devices.** This includes electronic devices that are confiscated by staff. Aurora Central High School reserves the right to not investigate lost, stolen or damaged electronic devices.

### Classroom Policies

#### Classroom Expectations:

1. Be seated in your assigned seat when the bell rings with your materials out and ready to learn
2. Students need to bring a the appropriate materials to class everyday (pencil, spiral notebook, and highlighters)
3. No food or drinks besides water in the classroom for safety and distracting issues
4. When I count down from 5 students will bring their voices to a level 0 (silence)
5. Be respectful to the teachers and other students

6. Raise your hand to speak
7. No inappropriate language or horseplay in the classroom - follow all safety rules
8. Respect that we are a lab-based class with special rules for behavior during labs
9. Contribute questions and answers and thoughts about learning

**Grading Policy:**

- All work is due before class is over, if your work is complete turn it in
- Most work will be done in spiral notebooks that I will keep in class, but in emergency you can take the spiral notebook home just ask me
- Any homework or class work that you need to turn in will be turned into your periods turn in slot

Tests: Tests will be given frequently. The tests usually allow you to use your notes to answer the question. It is recommended that you write detailed notes that are easy to find.

Quiz/Test make-up: Arrangements should be made with the teacher to come in before or after school (or during enrichment travel time) to make up a quiz and/or test that is missed during normal class time. If you just simply cannot meet before or after school, make an arrangement to come during lunch. Please do not interrupt my class for makeup work.

RETAKE POLICY: Students are allowed to retake their quizzes or tests to improve their grade.

Original Work, Policy and Responsibility: Students are citizens of this classroom and this school community. A community helps its citizens be successful. Your success depends on your efforts, on your work. You are the master of your life, but you and I have still have a lot to learn. Make sure you are working on your learning and not copying other people's learning.

**Learning gives you mastery of your future. Do your work. Turn in your work. Ask for help.**

**Tear off and return THIS PAGE only and return to Miss Arett(teacher).**

I have carefully read the expectations of this course and agree to support the goals and initiatives of the course. I will show up, speak up, stand up and go further than I ever thought possible.

Student name: \_\_\_\_\_(print)

Grade \_\_\_\_\_ Period \_\_\_\_\_

Student Signature: \_\_\_\_\_

Parent/Guardian Name: \_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_

Parent/Guardian Phone Number: \_\_\_\_\_

Parent/Guardian Email: \_\_\_\_\_