Summit Public Schools

Physics Honors 9 - Teachers: Ms. Viswanath & Ms. Wolkiser
Period 1 - Classroom 314

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Curriculum

Course Description
Physics is an attempt to understand the fundamental nature of the universe and how it works. The aim of the Honors Physics 9 course is to pursue the learning of physics concepts from an experiential and conceptual approach and to reinforce those concepts with mathematical calculations. The course includes an exciting mix of theory, hands on experiments and real life applications. The concepts and topics studied will include mechanics, waves, electricity and magnetism, atomic physics and other topics included in your typical high school physics class.

Laboratory investigations are emphasized. Students will also independently conduct research. Student research skills and laboratory skills are required at a high level. These skills include, but are not limited to, the observation, organization, and analysis of experimental data, formulation of predictions, testing of hypothesis and drawing of reasonable conclusions. Students should expect daily homework that extends and applies their classroom experience.

Course Goals
The curriculum is designed to help our students be successful and engaged citizens in our ever-changing world. Our goal is to inspire students to make sense, to question, and to think critically about the application of sciences and mathematics to our experiences in nature. We hope students develop insight to see physics as connected to several topics in the world around us.

Course Schedule

Chapter 1 & 2: The Science of Physics & Motion in One Dimension
Chapter 3: Two Dimensional Motion, Vectors, & Projectiles
Chapter 4: Newtonian Dynamics (Forces & The Laws of Motion)
Chapter 5: Work & Energy
Chapter 6: Momentum & Collisions
Chapter 7: Rotational Motion & The Law of Gravity
Midterm Exam
Chapter 23 & 25: Atomic Physics
Chapter 17 & 18: Electrostatics
Chapter 19 & 20: Electric Circuits
Chapter 21 & 22: Magnetism & Electromagnetism
Chapter 12 & 13: Waves & Sound
Chapter 14 & 15: Light & Optics
Final Exam

Supporting Text Book
Holt Physics by Serway & Faughn, Copyright 2002

Students will receive a hard copy of the textbook in class, and are expected to maintain it in good condition.

Communication

Classroom Communication

- Google Classroom is the primary resource and tool for both effective communication and collaboration between the teacher and all students.
- **All class work activity including lessons, homework assignments, quiz and test announcements will be communicated on Google Classroom**.
- The teacher website contains information about the courses and the curriculum. It will provide a link to our Google Classroom for homework assignments, quizzes and tests.

Family Communication

- Student Learning requires interaction between students, students and faculty, students and families, faculty and families, and between faculty members. As the need may arise, I will communicate with families, and also request that families reach out to me **via email** for any concerns or challenges during the year.

Resources/ Help (My office is located in Room 115)

Resources are crucial to helping ensure that we can support our students in meeting varied curriculum goals. Students may seek help from the Science Center and extra help during my office hours.

Please ask for any extra help needed.

E-mail is the best way to reach me if you would like to make an appointment ahead of time!

Student Classroom Procedures/ Routines

Classroom Materials
Students must be prepared for both a challenging and rewarding experience in class. Please have required materials in every class:

- 3 ring binder
- Pencils/ Pens / Color Pencils/ Ruler
- Scientific Calculator (While a TI-30 meets the needs of the class, you may purchase a TI-84+ graphing calculator that can be used over the course of years for both mathematics and sciences)
- Lab Composition Notebook
- Chromebook

You are responsible for keeping a neat, organized binder that will include class notes, handouts, worksheets, and homework. During the year, I recommend students make index cards to note down key concepts we cover in each unit that are very helpful to review from time to time, as well as for the midterms and the final exams.

A separate document with online expectations will be posted on Google Classroom.

Homework, Assessments, & Grading Policy

Tests & Quizzes: 60%

Labs: 30%

Homework Assignments: 10%

Each unit will have one or two quizzes and a unit summative test. This class will also have graded pop quizzes.
No retakes on quizzes/ tests.

A student absent on the day of a quiz or a test must take the test the next day. Consecutive multiple absences that may affect a student test will be discussed on an individual basis. A make-up test cannot be taken during regular class instruction time. The test must be made up during study hall or lunch.

Homework

Homework is due at the beginning bell of the class. **Homework assignments will be posted on our Google Classroom.** Homework will be checked for effort, completeness, and understanding.

Late assignments will not be accepted. Late assignments are accepted only in case of absence from previous class, illness or family emergency. In case of absence from class, it is the student's responsibility to check with peer students and Google Classroom for work, and ask for any help/assistance needed.

Homework is your time to practice skills. **Please check your answers after completing homework, so you can know instantly whether or not you understand a concept.** This allows you to reflect on your answers, catch any "silly" mistakes, and come up with questions that you can ask me.

Lab Safety/ Lab Reports

Safety Sheet MUST be read and signed by student and parents.

Any student without a signed safety sheet will not be permitted to participate in labs and will lose credit accordingly.

Students unable to act appropriately and safely in the lab/classroom will be removed and will lose credit accordingly.

Lab Reports will always be due one week after the lab is completed. 10% lab grade will be deducted for each day late.

Environment

An open, inclusive, and supportive classroom, with a professional environment is critical to success in a classroom. Our goal is to establish a positive and productive classroom climate that supports interactive learning. To this end, we must all partner with each other to take ownership and responsibility in creating a positive learning culture by following classroom expectations. This class will have assigned seating that will be rotated for each marking period. Additionally, please read our school policies in the handbook and the code of conduct carefully.

Students cell phones must be kept away from their desks during class time.

Students may not eat or drink during class time. Students will need to step away into the hallway to drink water.

Students will not be allowed to use the bathroom during instruction time.

Expectations: The New Three R's of Education

Respect
We must treat each other with respect and dignity. Respect yourself, your family, your peers, and your teachers.
"I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel" – Maya Angelou

Responsibility
Everyone must take ownership and responsibility for his or her actions, including accepting consequences for decisions they make. Let us look at mistakes as opportunities to learn.

Resilience
We must explore and use all available resources and tools, both in and outside the classroom, to become independent learners, and problem solve situations, and face any adversarial conditions.

Dear students,

This has been an unusual summer, and an unusual start for our school year. I look forward to know each of you individually, involve and engage each of you in learning, and hope to have a good year together!

Best wishes!

Ms. Viswanath
September 1, 2020