Phone: (818) 952-4205 ext. 7311 e-mail: traeger@lcusd.net (Put student name in Subject Line.)

Class Web Site: http://home.lcusd.net/lchs/ttraeger/ or Google: "Traeger 311"

Course Description

Physics is a laboratory course designed to meet and exceed the California State Science Content Standards for Grades 9-12. These standards can be accessed at the following Website: http://www.cde.ca.gov/BE/ST/SS/documents/sciencestnd.pdf It will also be taught in such a way as to satisfy the Common Core http://www.corestandards.org/ and Next Generation Science Standards http://www.nextgenscience.org/ that are being implemented in California. This course is approved for the UC section %L+lab science credit. It is within the realm of physics that we attempt to find and explain patterns for natural phenomena around us. All of us have studied physics informally since the day we were born. It is in this course that we will address physics, both conceptually and mathematically, on a more formal level. We will do this through the use of labs, demonstrations, computer simulations, and problem solving. The branches of physics that this course will address are mechanics, waves/sound, heat, electricity, magnetism, light, and optics. Since this course is intended to be lab-intensive, we will use tools such as mathematics, computers, computer-based probes, and simulations. The course will also require some fieldwork around the school campus and possibly in the Arroyo Seco. Walks of up to two miles can be expected. Alternate assignments will be given for those that cannot participate in field trips for medical reasons. Medical reasons and/or doctors waivers should be clearly stated on the field trip permission form.

Supplies and Books

Students are expected to bring the following materials to class **every** day:

- The course textbook: Hewitt, Paul G., 2002. *Conceptual Physics, Eighth Edition*, Prentice Hall, Needham, MA. ISBN 0-13-054254-7
- Online Textbook: The Physics Classroom, http://www.physicsclassroom.com/
- A 3-ring notebook stocked with college-ruled paper (8 ½+x 11+) and quadrille graph paper (4 squares per inch, 8 ½+x 11+). Bound notebooks are acceptable for taking notes, but 3-ring notebooks are recommended for organizing and storing work. You may combine this notebook with other classes.
- Pencils, pens, and a metric ruler (Colored pencils are recommended)
- Scientific Calculator (scientific functions such as logarithms, sine, cosine, and tangent are necessary)

Class Website and Remind ® Text Messaging/E-mail Blast Service

There is a website for this class. The address is http://home.lcusd.net/lchs/ttraeger/. The web site is a source for class announcements, PowerPoint notes, classwork/homework assignments, and links to other web sites of interest to the class. Please use the Website often. It exists to ensure your success in this class. I will also be using the Remind ® text messaging service to send homework reminders and announcements throughout the year. You can sign up for this text message or email service by visiting https://www.remind.com/join/lchs311phy or by texting the message % lchs311phy+to 81010. Standard text message rates apply if you sign up for the text message option, so sign up for the email option if you dont have an unlimited text plan or dont want the texts counting toward your text plan allowance. Your phone number will never be known to me or to anyone else. The Remind ® service keeps it private. Remind ® text blasts from me are one way only. E-mail me at ttraeger@lcusd.net if you have questions. Parents are welcome and are encouraged to sign up for the Remind ® service too! Everyone will be removed from the Remind ® service at the conclusion of the school year.

Behavior

Just as the Constitution has a Bill of Rights for all Americans, this class has a Bill of Rights for both students and the teacher. Two very important rights will form the foundation of how we conduct ourselves in this class. They are:

Students have a right to learn!

The teacher has a right to teach!

In the spirit of these two rights, we can work to develop some rules to abide by. These rules can better be described as characteristics that we want to see. The following characteristics are ones that I think will make the classroom a great place to be. What do *you* think?

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Characteristics of a Good Student

- Treats other students and the teacher with respect-this means NO put-downs!
- Does not disrupt the class by coming to class tardy, lingering around class after the bell has rung, shouting out in class, talking to other students, and passing notes
- Is true to her/himself and others (does not cheat on exams, plagiarize materials, or lie.)
- Does her/his very best
- Turns original assignments in complete and on time
- Keeps her/his work area and classroom clean and safe. Treats lab equipment with respect.
- Refrains from eating and chewing gum in class.
 Drinking water is okay.
- Gives attention to the teacher, does not text message in class, refrains from sleeping in class, does work pertinent to the class, and raises his/her hand when there is a question to be raised, an answer to be given, or a request to leave the seat

Characteristics of a Good Teacher

- Treats students with respect
- Starts lessons on time and gives attention to each students needs
- Is true to her/himself and others
- Does her/his very best
- Is prompt in grading, recording, and returning student work
- Ensures that classroom is kept clean and safe.
 Makes sure lab equipment is safe and working.
- Refrains from eating and chewing gum in class.
 Drinking water is okay.
- Gives equal attention and respect to all students

As you may have noticed, the characteristics of a good student are almost the same as the characteristics of a good teacher. Is this just a coincidence? What do you think?

The following will show the progression of consequences for indecent behavior. The teacher reserves the right to use any or all of these to ensure that students have the right to learn and the teacher has the right to teach.

- verbal warnings
- %time outs+away from class
- lowered citizenship grade
- parent/student/teacher conferences
- referral to the assistant-principal

- reassignment of seating location
- student/teacher conferences
- E-mails/calls home to parents/legal guardians.
- detention assignment
- suspension and/or expulsion

Please note that the last two consequences are out of my hands. These consequences are more severe and are at the discretion of the assistant-principal. A final word on behavior: You have the ability to enforce the teacher rules just as I have the ability to enforce the student rules. If you see that I am not meeting the expectations, let me know. I will be sure to correct myself!

Grading: Citizenship

- You must obtain a cumulative citizenship average of 2.5 in order to be able to walk in graduation.
- A good citizenship grade can be attained by adhering to all of the characteristics of a good student. The attendance portion will be assessed as follows.

	Outstanding (O)	Satisfactory (S)	Needs Improvement (N)	Unsatisfactory (U)
# of unexcused tardies	0-1	2	3	4 or more
in one quarter				
# of unexcused	0	0	0	1 or more
absences (truancies) in				
one quarter				

Grading: Academic

Academic letter grades that will appear on your transcript are cumulative for each semester. The following categorizes each type of assignment and explains the details of each assignment:

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Tests, Quizzes, and Projects (50% Weighting) Tests/quizzes will be given when a significant amount of related material has been covered. This will generally be at the end of a chapter or combined unit and will occur about once every two weeks. Tests/quizzes will usually be announced ahead of time, but may be unannounced as well. Students that miss an in-class test due to an excused absence will be allowed to take the test upon their return to class. Per school rules, students will have number of days absent plus 1 day to get the test made up. A different test may be given. Tests/quizzes will be worth anywhere from 10 to 55 points, depending on the amount of material covered. Students will be allowed to do test corrections when the in-class test is returned and gone over. The student will be responsible for doing these corrections on a separate sheet of paper. The corrections should then be stapled to the top of the test and then given back to the instructor for assessment. The test corrections will serve as a learning log for students to identify their strengths and weaknesses. The student is also responsible for calculating the amount of points that should be given back before test corrections are returned for grading. You can earn up to half of the test points back by doing corrections! Tests will be sent home through the student after the test corrections are graded and have been given credit. Test corrections will be due up to one week after handing back the test. Corrections are not available for homework reading guizzes or for the final exams. Corrections are only available for in-class exams. Test corrections MUST show work for each question missed and have the full correct response to a question written out to be given full credit.

Multiple choice sections of in-class tests and quizzes will be given through the <u>Classroom Performance System</u> ® (CPS Pulse) responder system. Homework reading quizzes for textbook and close reading selections will be given through Google Forms ®. <u>Cheating will result in a zero for the test/quiz and a referral to the assistant principal/honor court if it is severe and/or repeated.</u>

Projects will be assigned periodically. These will generally require some research and homework outside of class. Their completion may require some work over weekends if students procrastinate. You can count on having one project per quarter. The use of http://www.turnitin.com may be required before submitting written products. Projects must be documented through the Noodle Tools or EasyBib websites or through the Google Docs. application using MLA bibliography and parenthetical documentation, or they will not be accepted. Copying another persons work (plagiarism) is considered cheating and will earn a zero for the assignment and a referral to the assistant principal/honor court if it is severe and/or repeated.

Sample test questions typical of Mr. Traeger's tests follow for your reference:

Multiple Choice (1 point each)

- 1. A car engine exerts 3000 kg x m/s² of force on the drive wheels of a car. It accelerates at 2 meters per second per second. Neglecting the friction force, what is the mass of the car?
- a) 500 kg
- b) 1000 kg
- c) 1500 kg
- d) 3000 kg
- 2. The frequency of a simple pendulum depends on
- a. mass
- b. length
- c. the acceleration due to gravity (g)
- d. both b and c are correct
- e, both a and b are correct

Matching (1 point each)

Please match the following electrical measurements with their correct units.

- 1. Power
- 2. Current
- 3. Voltage
- 4. Resistance
- 5. Energy

- a. Joules/Second
- b. Joules
- c. Joules/Coulomb
- d. Coulombs/second
- e. Volts/Amps

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Short Answer/Response

1. Mr. Traeger got really sleepy last night while making this test. Consequently, he went to sleep without turning out the light. The light bulb in Mr. Traeger lamp is rated at a power of 100 Watts. If Mr. Traeger sleeps for 5 hours before getting up to turn off the light, how much energy did he waste? (Hint: There are 60 seconds in one minute and 60 minutes in one hour.) (4 points)



- 2. If the Pacific Plate is moving at a rate of 5 cm/yr toward the northwest, then how many years will it take for the big island of Hawaii to move 100 km? **Show work!** (5 points)
- Classwork, Homework, Labs, and Participation (50% Weighting) is probably the most important part of the course because it gives the practice necessary to perform well on tests, quizzes, and projects. Classwork includes participation in discussions, warm-ups, labs, note taking, worksheets, and in-class assignments. Participation will be gauged through use of the Classroom Performance System (CPS Pulse) responder system by responses to questions given during lecture. Notebooks may be inspected at random intervals to ensure that students are taking notes. Because science is a collaborative effort, students will be expected to work with partners and/or in groups. Safety is very important during labs, so see the section entitled Safety+for more details. It is difficult to make up labs that require equipment and materials when a student is absent, so it is very important to be in attendance every day. Classwork assignments vary in point value from around 10 to 60 points each. We may correct some assignments together in class. Copying another persons work (plagiarism) is considered cheating and will earn a zero for the assignment and a referral to the assistant principal/honor court if it is severe and/or repeated.
- Homework can be expected to be assigned on Monday through Thursday nights. Homework will not be assigned over weekends or break periods unless procrastination on a project requires it or study time is required for an exam given on a Monday. Homework will be used to reinforce concepts introduced in class. When homework is assigned, it should be recorded in your notebook or school agenda. Its completion should require anywhere from 15 to 45 minutes of time. Most homework assignments will be completed from the online textbook and/or problem sets given out. Random unannounced quizzes may be given with the <u>Classroom Performance System</u> ® (CPS Pulse) responder system to assess homework completion at any time. Homework that is not submitted to Google Forms ® on time will be given half credit, up to two weeks from when it was assigned. Homework assignments are generally around 5 to 20 points each. Please check the white board in class and web site every day for assignments and their due dates. A computer with Internet connection will be required for completing homeworks. It is suggested that you use the computers in the IRC or my classroom if you do not have a computer with Internet connection at home. Copying another persons work (plagiarism) is considered cheating and will earn a zero for the assignment and a referral to the assistant principal/honor court if it is severe and/or repeated.
- Extra Credit will be used sparingly. When done, extra credit will be applied towards the classwork category. Students should make sure to do any extra credit that is offered. Copying another persons work (plagiarism) is considered cheating and will earn a zero for the assignment and a referral to the assistant principal/honor court if it is severe and/or repeated.
- Late makeup work due to an excused absence must be made up within the number of days absent plus one to receive full credit. Late makeup work must be marked %absent+with the date(s) the student was absent in order to receive full credit. Late work for any other reason besides an excused absence will receive ½ credit, up to 2 weeks from the time it was assigned. Otherwise, a zero grade will be assigned. It is the students responsibility to check the late work file and ask the teacher for any missing work! If the student missed a lab that requires equipment, the student must schedule a make-up time with the instructor as soon as possible.

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The following grading scale will determine your letter grade for this class. Grades will be calculated using a weighted percentage scale. Assignments with a greater amount of points will have more of an influence on your grade in a given category.

Grading Scale: Academic			
90% to 92.99% = A-	93% to 96.99% = A	97% to 100%	= A+
80% to 82.99% = B-	83% to 86.99% = B	87% to 89.99%	= B+
70% to 72.99% = C-	73% to 76.99% = C	77% to 79.99%	= C+
60% to 62.99% = D-	63% to 66.99% = D	67% to 69.99%	= D+
0% to 59.99% = F			

Suggestions for Success

- When in doubt, ask. I am here for you in room 311 every day from 7:20 a.m. until 3:30 p.m. and by appointment. When Iqn not at school, I can be contacted at the phone number and e-mail address listed in the header. If you e-mail, please make sure to put the studentqs name in the subject line so that I can intercept the e-mail from the district spam filter and white list+ your e-mail address. Once your email address is white listed,+we will then be able to communicate freely via e-mail.
- After you are absent, check with me to see what you missed. Handouts can be found in the file box on the back counter. You must schedule a time with me as soon as possible to make up labs.
- Do not get behind on your assignments! Check your grades often on printouts and Illuminate web server.
- Read the text carefully and take notes while you read. Taking notes includes drawing pictures. I recommend reading the text at least twice. Required methods for problem solving will be gone over.
- Remember to turn your assignments in! Check your grades often on printouts and Illuminate web server.
- Dong be afraid to come in for help. I am here for you!

I am looking forward to being your teacher for the next year. Let make science fun by keeping it safe! See the part about safety on the last page 6. Your signature and your parent's signature below indicate your understanding and agreement to everything in this document.

Detach along the dotted line and return signed by the due date for 10 points of classwork/homework credit.

0	0	0	0	0	0	0	0			0	0	0	0	0		
Ackn	owled	gement	<u>t</u>													
Pleas	e print	your n	name,	sign yo	our nan	ne, an	d enter	the d	late to	indicate	that	you hav	e read	I these p	olicies	and
proce	dures.	Have y	our p	arent/g	uardian	sign t	this she	et as	well to	indicate	that	he/she l	has rea	ad them	also. V	Nhen
you a	re don	e, <u>detac</u>	<u>ch</u> this	sheet	along th	ne dott	ted line	and re	eturn it	to me n	o late	er than T	uesday	, Augus	it 18, 2	2015.
This	signa	ture sł	neet i	s wor	th 10	points	as a	class	swork/h	omewo	ork a	ssignme	ent. Fa	ailing to	turn	this
document in signed will also result in an Unsatisfactory citizenship grade																

Student Name (print)	_ Student Signature				
Period Date					
Parent/Guardian Name (print)	Parent/Guardian Signature				
Parent/Guardian Phone #:	Parent/Guardian E-mail Address:				
Date					

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Safety

Because this is a science class, we must be continually aware of safe behavior and practices in the lab/classroom. Let me remind you that %afety is no accident.+We must take precautions to ensure the health and safety of both ourselves and others.

As a reminder, I have selected a few of the most important rules:

- %Never fool around in the laboratory. Horseplay, practical jokes, and pranks are dangerous and prohibited.+Let me remind you that horseplay while working on labs will result in a lowered score and zero score if the behavior persists.
- % ollow all written and verbal instructions carefully. If you do not understand a direction or part of a procedure, ask the instructor before proceeding.+
- When first entering a science room, do not touch any equipment, chemicals, or other materials in the laboratory area until you are instructed to do so.+
- Always tell the instructor if you have an accident or if you injure yourself!
- Always keep your work area clean and make sure to clean up after yourself!

Always wear goggles and proper clothing when working with projectiles, chemicals, heat, and/or glassware. Your eyes are your most precious sense. Goggles can be replaced, your eyes cannot!

Meeting Place in the Event of an Emergency or a Fire Drill

If there is an emergency that occurs during the school day that is outside of class (break, lunch, before school) or during STEP/Homeroom, you would meet with your STEP/Homeroom class for that day. The evacuation route from room 311 is out the north door, turn left, go down the west outside stairwell, and then proceed to the stadium by walking past the cafeteria all the way to the south entrance of the football stadium. Once you are at the football field, I will take roll again. It is imperative that you stay with our group and not wander around the field talking to other students. We will stay together until the bell sounds for us to return to class. Our meeting place for this class is on the 25 yard line, northeast side closest to the visiting bleachers. See map below for details.

