General Physics

Rules of the Road

1. Usual Motivating Paragraph

This is a laboratory course in Physics that prepares the students in physics by covering the appropriate State Science Standards. The essential topics are motion and forces, conservation of energy and momentum, waves, and electronic and magnetic phenomena. In class the emphasis is on concepts, lab work, and making appropriate connections with the pre-calculus classes.

2. Contact Info

Teacher: Mr. Nate Fulmer
Email: nfulmer@lcusd.net
Website: fulmerphysics.weebly.com

I will check my email on the regular; it's the best way to get ahold of me.

3. Required Materials

Come to class each day fully equipped with the following tools of the trade: writing utensils (pen or pencil), scientific calculator (you may use graphing calculators for in-class work and homework, however, graphing calculators will NOT be allowed on tests or quizzes), college rule paper, textbook

Our textbook for the year is *Conceptual Physics* by Paul G. Hewitt. The textbooks will be provided, and the student will be responsible for their care until they are returned at the end of the school year.

4. Class Rule(s)

I have one rule in my class: DDDT
Don't
Do
Dumb
Things

If you can abide by this one rule, things will go swimmingly.

a. How to avoid doing dumb things

- Respect yourself, the teacher, classmates, and the classroom environment
- Be punctual
- Refrain from distracting your classmates
- Do not cheat. Academic dishonesty of any kind will result in a zero mark, family will be contacted, and the student responsible will be referred to the Honor Court
- In general, before doing something, ask yourself, "Is this a dumb thing to do?" If the answer is yes, then don't do it!
- Be prepared, alert, and ready to learn!

b. What if I do dumb things?

Failure to adhere to classroom expectations will result in progressive disciplinary action: verbal warning, parent phone call, detention, referral, suspension - depending on the severity of the offense.

5. Grade Breakdown

Grades will be built on a system of experience points. Experience points can be gained by completing assignments and projects and by answering questions correctly on tests and quizzes. Once a certain amount of experience points has been gained, you will grow in level. Your level is what will translate to a letter grade for the class. Levels and their corresponding letter grade are outlined below for various landmarks throughout the school year.

		A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-
Linear	1	16	16	15	15	14	13	13	12	12	11	11	10
Projectile	2	22	21	20	20	19	18	17	16	16	15	14	14
Forces	3	28	26	26	25	24	23	22	21	20	19	18	17
MIDTERM I	4	33	32	31	30	28	27	26	25	24	23	22	21
Energy	5	39	37	36	35	33	32	31	29	28	27	25	24
Momentum	6	45	43	41	40	38	37	35	34	32	31	29	28
Rot Mech	7	50	48	47	45	43	41	40	38	36	35	33	31
FINAL I	8	56	54	52	50	48	46	44	42	40	39	36	35
Gravity	9	62	59	57	55	53	51	49	46	44	43	40	38
Waves	10	67	64	62	60	58	55	53	51	49	46	44	42
Electrostatics	11	73	70	68	65	62	60	58	55	53	50	47	45
MIDTERM II	12	79	75	73	70	67	65	62	59	57	54	51	49
Electricity	13	84	81	78	76	72	69	67	63	61	58	55	52
Magnetism	14	90	86	83	81	77	74	71	68	65	62	58	56
Light	15	96	92	89	86	82	79	76	72	69	66	62	59
FINAL II	16	101	97	94	91	87	83	80	76	73	70	66	63

Bear in mind, it will take an increasing number of experience points to reach each subsequent level (i.e. it takes more experience point to move from level 9 to 10 than it did to move from 8 to 9). However, bigger opportunities for experience points will also present themselves as the year goes on.

6. Homework

Outside of select, mandatory class projects, no particular assignment will be allotted on a given day. Instead, a list of available homework assignments will be posted to my website and updated regularly. Students may choose which assignments from that list that they wish to complete. Experience points will be awarded for any and all assignments which are completed (generally granted for completeness rather than correctness). The more difficult the assignment, or the more time it is expected to take to complete, the more experience points it will be worth. The general expectation is that each student complete at least one assignment per day.

7. Tests and Quizzes

Tests and quizzes will be used to assess your ability to recall information and apply knowledge. *Anything* from lecture notes, homework, and assigned reading will be fair game for tests and quizzes.

Quizzes and especially tests are the biggest opportunities to gain experience points which we will encounter with frequency throughout the year. Multiple choice questions will be awarded points for correctness, while free-response questions will be will awarded points for both the correct answer as well as the work which led to that answer.

If the student is absent on the day of a quiz, *there will be no make-up quiz*. A missed quiz will neither help nor hurt you. A missed test, however, must be made up. *It is the student's responsibility to arrange a time with Mr. Fulmer to make-up the test*.

8. Midterm and Final

The midterms will take place roughly halfway through each semester and will include all material covered during first and third quarter respectively. The finals will take place at the end of each semester and will examine the semester's material comprehensively. The second semester final will only explicitly test second semester material but will use tools and draw from knowledge gained during the first half of the school year.

9. Sample Test Questions

MC: Sphere *A* carries a charge of +2 coulombs and an identical sphere *B* is neutral. If the spheres touch one another and then are separated, the charge on sphere *B* would be

A. +1 C
B. +2 C
C. 0 C
D. +4 C
E. none of the above

FRQ: Even tiny Pluto has its own moon, Charon. If Pluto and Charon experience 3.47×10^{18} N of force due to gravity, how far apart must they be? $M_P = 1.31\times10^{22}$ kg, $M_{Ch} = 1.52\times10^{21}$ kg

10. Tardies & Absences

What follows is the policy regarding tardies and absences as laid out by LCUSD

a. Tardies

2 unexcused: The autodialer (called School Messenger) sends voice mail and email to parents
3 unexcused: School Messenger sends voice mail and email to parents
4 unexcused: Will result in a "U" in citizenship for the quarter. Admin. sends an Unexcused Tardy letter home. Admin. will revoke lunch and/or parking permit for lower than overall 2.5 citizenship at the Quarter.
5+ unexcused: Admin. will assign detentions and/or Saturday schools

b. Absences

1 for any reason: School Messenger sends voice mail and email to parents
3 for any reason: School Messenger sends voice mail and email to parents
4 unexcused: Admin. sends an Absence letter to home
6 unexcused: Admin. sends Truancy letter home
6-8 for any reason: Counselor meets with student
7 for any reason: Admin. sends letter #2 home. Possible parent conference
9 for any reason: Admin. adds student to "No-Go List" and notifies student and parent
10+ for any reason: Admin. initiates SST or SART (School Attendance Review Team)
10+ full day absences per semester: Admin. initiates SARB (School Attendance Review Board)

11. Labs

While working in the laboratory, you will have important responsibilities that do not apply to other classrooms. You will be working with materials and apparatuses that, if handled carelessly or improperly, have the potential to cause pain, serious injury, or death. A science laboratory can be a safe place to work, if you are alert, cautious, and follow directions with care. The following practices should be studied:

Laboratory Preparation – Read the procedure and complete any pre-lab assignments before coming to class. Follow the directions precisely (but paraphrase them) and make note of any changes in procedure given.

Eye Protection – Wear safety goggles at all times when doing an experiment involving chemicals. If a chemical splashes into your eye, use the wash fountain by irrigating your eye continuously for 15 minutes. Notify me immediately. Never direct water from the faucet into the eye as the high pressure may cause more damage.

Conditions of Work Area – You should maintain a work area that is free of books, coats, book bags, chemical spills, excess chemicals, and trash. No objects should be on the floor as this may cause someone to trip and fall. Cleanup spills immediately.
Disposal of Waste Material – Waste paper, towels, and other trash must be discarded in the wastebaskets; waste chemicals in the labeled waste containers. Do not throw matches into wastebaskets except after running water over them.
Chemical Spills on Your Body – A safety shower is located in the laboratory and should only be used to wash chemicals from your body if the sink is not sufficient. Contaminated clothing should be removed as soon as possible.
Fire on You or Your Lab Partner – STOP, DROP AND ROLL. Someone should immediately retrieve a fire blanket to roll in. Never wrap a fire blanket around someone who is standing up, as this will cause the fire to rise to the head and chest area. If you are near the safety shower, get under it instead.
Fire in the Laboratory – Notify the teacher immediately if any smoke or fire is seen and then follow their instructions.
Accident Reports – Report any accident to the teacher immediately, no matter how minor. This includes any burn, scratch, cut or contact with corrosive liquid (acid or base). Also report any defective or broken equipment and other potential dangers at once. But most important remember to stay calm.
Safety Stations – Know the location of the emergency shower, eye wash fountain, fire extinguisher, safety goggle storage, and exits.
Hair – Confine long hair with a band, hairpins or a hairnet.
Eating and Drinking – Since there is a possibility of food substances becoming contaminated, no eating or drinking is allowed in the laboratory.
Laboratory Conduct – Be courteous and exercise common sense. There will be no practical-joking, running, pushing or horse-play.
Unauthorized Experiments – Under no circumstances should you conduct any experiment other than those that have been assigned, unless you have discussed it with me and have my permission.
Hands – Wash your hands in the sink before you leave the lab. Avoid touching your eyes and face. Under no circumstances are you to apply make-up in class.
Electrical Appliances – Always remove an electrical plug by the plug and not the cord.

Physics Syllabus Agreement

My signature indicates that I have thoroughly read, understand, and agree to the above-mentioned policies and expectations of Mr. Fulmer's physics course and assume full responsibility for any and all repercussions as a result of non-compliance.

Student Name: _____

Student Signature: _____ **Date:** _____

Parent Signature: _____ **Date:** _____