

Physics – 2020-2021 Syllabus

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Course Description: The Physics curriculum is designed to continue student investigations of the physical sciences that began in grades K-8 and provide students the necessary skills to be proficient in Physics. This curriculum includes more abstract concepts such as interactions of matter and energy, velocity, acceleration, force, energy, momentum, and charge. Students investigate physics concepts through experience in laboratories and field work using the processes of inquiry.

Standards: Course standards can be found at www.georgiastandards.org.

<u>First Semester Unit Topics</u>	<u>Second Semester Unit Topics</u>
1. Physics Foundations 2 weeks	9. Electrostatics 2 weeks
2. 1D/2D Vectors & Graphing 3 weeks	10. Current, Electricity & Circuits 3 weeks
3. Kinematics 1-D 2 weeks	11. Magnetism & Electromagnetism 2 weeks
4. Kinematics 2-D 2 weeks	12. Waves & Simple Harmonic Motion 3 weeks
5. Dynamics: Forces & Newton’s Laws 3 weeks	13. Sound 3 weeks
6. Universal Gravitation & Rotational Motion 2 weeks	14. Light & Color 2 weeks
7. Momentum & Impulse 2 weeks	15. Optics 2 weeks
8. Energy, Work & Power 2 weeks	16. Nuclear (if time allows) 1 week
MID-TERM EXAM	FINAL EXAM

Textbook: Physics – Principles and Problems, Glencoe Science, McGraw Hill, 2005

Students will not be issued individual copies of the textbook. A class set of books will be housed in each Physics classroom.

Learning Resources/Textbook(s): All learning resources, both print and digital, are meant to support and enhance the student learning experience of this class. Below are the names of the textbooks and websites that will be used in this course. Some of the web-based resources require parent permission per federal regulations. Federal laws that guide parent permission requirements are as follows:

- **Children’s Internet Protection Act (CIPA):** The school is required by CIPA to have technology measures and policies in place that protect students from harmful materials including those that are obscene and pornographic. Any harmful content contained within inappropriate sites will be blocked. <http://fcc.gov/cgb/consumerfacts/cipa.html>
- **Children’s Online Privacy Protection Act (COPPA):** COPPA applies to commercial companies and limits their ability to collect personal information from children under 13 years of age. No personal student information is collected for commercial purposes. <https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions-0>
- **Family Educational Rights and Privacy Act (FERPA):** FERPA protects the privacy of student education records and gives parents the right to review records. Under FERPA, schools may disclose directory information in certain circumstances. <http://www2.ed.gov/policy/gen/guid/fpco/ferpa>

Please review the resource list. Each website related to the curriculum resources is provided along with their privacy policies. Should you have any questions regarding these resources immediately contact the course teacher via email or phone.

Name of Resource*	Digital	Privacy Policy
Physics: Principles & Problems - Glencoe (2009)	Open Source eReader	Terms of Service
College Physics by Serway/Chris Vuille	AP Physics Cengage/NGLsync	https://www.cengage.com/privacy
College Physics - Reasoning and Relationships - Cengage (2015)	AP Physics Cengage/NGLsync	https://www.cengage.com/privacy

Physics for Scientists & Engineers - Cengage (2014)	AP Physics Cengage/NGLsync	https://www.cengage.com/privacy
OpenStax	On-level Physics Algebra-based College Physics	Terms of Service
Georgia Virtual School	On-level Physics AP Physics I AP Physics II AP Physics C Electricity AP Physics C Mechanics	http://www.gavirtuallearning.org/terms.aspx
Discovery Education	Classlink Access SP1-SP6	Discovery Media Terms of Use
NewsELA Physics	Classlink Access CLEVER	NewsELA Privacy Policy
CK-12 FlexBook: Physics	Classlink Access CLEVER	CK-12 Terms of Use
Georgia Public Broadcasting Streaming Inquiry Labs	GPB Chemistry & Physics	GPB

** The following resources are county approved. These resources may vary by school due to sequencing, pacing, curriculum design, and/or individual needs of students.*

Grading Calculations:

Non-EOC Course Average = 50% (1st Sem. Course Work) + 50% (2nd Sem. Course Work)

1st and 2nd Semester Course Work = 75% Summative + 25% Formative

Grading Policy:

A = 90 – 100

B = 80 – 89

C = 70 – 79

Failing = Below 70

Formative Assessments include, but are not limited to homework, class work, quizzes, practice tests, rough drafts, and sections of projects/ research papers/presentations.

Summative Assessments include, but are not limited to unit tests, final projects, final essays, final research papers, quizzes, labs, and final presentations.

Required Assignments: Students will be required to complete at least one project each semester as well as numerous daily work assignments, laboratory experiments, quizzes, and unit assessments. A required assignment does not automatically mean it will be part of the gradebook. The fact that it is required is to form the skills and the knowledge that is needed to be successful in this course. The number of summative assessments will be determined as the semester progresses. **Summative assessments will not be given until all formative feedback has been returned.**

Extra Help: As the school year proceeds, we hope to offer consistent, in-person help times. At this time, all extra help must be scheduled by appointment and will most likely be virtual in nature through a platform like Google Meets or Microsoft Teams.

Late work: All work is due IN CLASS on the due date. Assignments, and even tests, will be marked as **MISSING** in Parent Portal until they are turned in/made up. Missing assignments not turned in at the end of a semester will become a permanent zero in the gradebook.

- “As your teacher, I will hold you responsible for late work and missing assignments by labeling them as **MISSING** in Student Portal. In an effort to create opportunities for all students to turn in late or missing assignments, LASSO will be available on Saturdays throughout each semester as well as Lunch and Learn support available daily.”

Makeup Work: All missed work and assessments are **the responsibility of the student** when they are absent from school. A student who is **absent** on the class **day before** a regularly scheduled assessment will be responsible for completing the assignment **on the regularly scheduled day and time.** Students who have been

absent more than two consecutive days (including the assessment day) will be given five (5) school days to make up the assessment and/or other assignments. This does not include major projects, research papers, etc., where the deadline has been posted in advance. At teacher's discretion, a longer period of time to make up work may be granted for extenuating circumstances.

Grade Recovery: LHS is a standards-based grading school, therefore we will provide some opportunities for students to recovery from poor grades. The quiz grades you earn during a unit of study can be replaced by the unit test (provided the unit test is a higher grade), if you complete the review material for that unit. In the event that there is more than one quiz in a given unit, the test grade can replace multiple quizzes in that respective unit. Another recovery opportunity happens at the end of each semester. You will be given the opportunity to replace your lowest test of each semester with the midterm/final exam (should the midterm/final score be higher) with the submission of your completed exam study guide.

Daily requirements: students need to bring a notebook, pen or pencil, and **scientific calculator** to class **EVERYDAY.**

Classroom Expectations: All students are expected to stay on task at all times. Respect, character, and honesty are essential to maintaining a productive and enjoyable classroom environment. To provide the necessary discipline to facilitate your learning, the following disciplinary actions will be taken for each policy infraction:

- 1st offense – Verbal warning
- 2nd offense – Phone call to parents
- 3rd offense – Detention and phone call to parents
- 4th offense – Detention and phone call to parents
- 5th offense – Administrative Referral

Computer Usage: Students may bring laptops/iPads to class as per school policy, but usage is restricted to instruction, data analysis, research, and compiling lab write-ups/graphs. **Classroom devices are to be used only with permission and for the reasons listed above.**

Guidelines for BYOT Use:

LHS teachers and students will work together to ensure the most productive learning environment in the classroom. Use of BYOT supports the use of technology devices as a tool in a student's education.

- Devices are to be "powered down" as the classroom teacher directs.
- Disregard of a directive by the classroom teacher to power down will be addressed with a progressive approach beginning with a verbal warning.
- Continued disregard of a directive by the classroom teacher to power down may be considered insubordination and addressed as a code of conduct violation.
- During summative assessments, devices will be powered down and put out of sight until all students in the classroom have completed the assessment and all materials have been collected by the teacher.

Academic Integrity:

Academic integrity is the pursuit of scholarly activity in an honest and responsible manner. In the classroom, academic integrity involves a range of issues, including – but not limited to – cheating, plagiarism, and facilitating acts of academic dishonesty by others. Violations of academic integrity as outlined in the Forsyth County Schools Code of Conduct will be addressed according to the guidelines listed there.

Safety Goggles

To reduce the possible spread COVID-19 by lab safety goggles, every lab will be equipped with a spray bottle of 70% isopropyl alcohol solution to sterilize goggles between each use. Students are welcome to bring their own goggles provided the goggles meet safety standards. They must be splash proof and have a Z87+ impact rating. The linked goggles should meet the safety guidelines required at most colleges as well. Safety glasses are not acceptable protection. Suitable goggles are linked below. An electronic copy of the syllabus can be accessed on Itslearning so that you can follow the links.

Flinnsci.com [AP3306](#) or [AP3309 for Fog Free.](#)

Amazon.com - [Green Safety Goggles](#)