Physics I Syllabus

Teacher: Jeff Lester **Room:** S503 in MTSU Hall
email: Jeff.Lester@tcsedu.net
Textbook: Glencoe *Physics: Principles and Problems*
Course Description: This advanced course is designed to give the student a background in Newtonian Physics. Course topics will include the following: Matter and Interactions, Forces and Motion, Energy, Waves and their Interactions and Applications.
Course content includes development of an understanding of physics, cultivation of problem-solving and critical-thinking skills related to physics, application of physics knowledge to decision-making about scientific and technological issues, recognition of the importance of physics in daily life, and understanding of benefits as well as limitations of science and technology.

Supplies:

Pencils
Preferred writing utensil for notes (blue or black ink pens)
loose-leaf notebook paper
folder with prongs or binder (pages able to be added and removed)
colored pencils
glue sticks (3)
box of tissue
roll of paper towels
calculator

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Lab Fee: There is a $20.00 lab fee for this course (assessed for all science classes). The lab fee is essential for conducting quality science classes and does not cover the above list of materials. The more fee money we collect, the more activities we can conduct.

Classroom Expectations:

My responsibilities as your teacher are:

1. To treat you with respect and care as an individual.
2. To teach you the required content.
3. To provide you an orderly classroom environment, providing the necessary discipline and motivation, so that you can learn.
4. To constantly work to improve my knowledge and skills so that I can be a better teacher to you.
5. To listen to your suggestions and strive to make this class better each day.

You can succeed in this class, and I will help you do so!

Your responsibilities as my student are:

1. To abide by school and class rules at all times.
2. Follow the 5 P's.
    - Be prompt. Everything will run smoothly, if you arrive in class and are seated, working when the bell rings.
    - Be prepared. Bring your necessary supplies. You will not be allowed to return to your locker, and you will not participate effectively in your learning without materials.
    - Be polite. The world is much more pleasant when we are all respectful to ourselves and others.
    - Be persistent. Never, never quit working hard in this classroom. I will not be idle, and I never expect you to be, either.
    - Be proud to be a Wildcat! THS is an excellent school.

Discipline: If you choose to disrupt class, the following sequence of interventions will occur:

1. A verbal warning.
2. Teacher detention (on my schedule), Behavior Management Plan, parent contact.
3. If detention is not completed or if there is still a discipline problem, administrative detention will be assigned; parents will be called.
4. Sent to office.

Severe disruptions: Student will be sent immediately to office.

Grading: Total Points from Quizzes, Tests, Simulations, Labs

Final Exam will count 15% of Total Grade

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Late Work: Late work may be accepted (at the discretion of the teacher) through the end of the week during which it was due. Chronic late work will not be accepted. Points will be deducted for all late work. I notify you of due dates in plenty of time. You cannot get behind and expect to perform well on the final.

Make-up Work: Because this class involves hands-on activities and exercises, attendance is very important; days missed are difficult to make up. Students should attend school every day possible to ensure their success. It is always the student's responsibility to find out what was missed and to ensure that it is turned in.

Excused/Unexcused Absence: **Get daily assignments by checking the class calendar online. Most of the materials will be posted and downloadable; others you will need to get from me on your return. This is your responsibility!** These are due within three days. Any quizzes, lab work, or tests missed will need to be rescheduled for a later date **on the day you return** to school. A written report will be assigned to make up for a missed hands-on activity.

Notebook: You are required to keep a notebook with all of your work for this class. **All materials for this class are to be placed in your notebook.** It is your decision how you choose to organize the notebook, but you need to be able to access materials upon request.

** Important Note: You ***WILL*** have homework in this class. It is not possible to learn physics without actively involving yourself in studying the material. Do not expect to pass if you do not complete homework in a timely manner. **

PHYSICS: COURSE OVERVIEW

The Physics academic standards were written to establish the core content and practices for all schools in the state of Tennessee. The core and component ideas in the Physical Sciences section in A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ides were used to subdivide the Physics course content into four sections:

Physics (PHYS) Physical Sciences

Matter and Its Interactions (Week 13-15)

- Structure and properties of matter
- Chemical reactions
- Nuclear process

Motion and Stability: Forces and Interactions(Week 1-6)

- Forces and motion
- Types of interactions
- Stability and instability in physical systems

Energy (Week 7-12)

- Definitions of energy
- Conservation of energy and energy transfer
- Relationship between energy and forces
- Energy in chemical processes and everyday life

Waves and Their Applications in Technologies for Information Transfer(Week 16-18)

- Wave properties
- Electromagnetic radiation
- Information technologies and instrumentation