



# AP Physics C Instructional Plan:

## Course Overview

This year-long course introduces students to the fundamental concepts and applications of physics, as outlined in the Midland ISD Year at a Glance (YAG). The program blends conceptual understanding, mathematical problem solving, and hands-on laboratory experiences to help students make sense of the physical world.

Students will investigate topics such as motion, forces, energy, momentum, waves, sound, light, electricity, and magnetism. Each unit develops both the science content and the scientific practices needed for success in future STEM coursework. Algebra-level mathematics is applied extensively in modeling, calculations, and problem analysis.

The course emphasizes:

- Conceptual Understanding – explaining and interpreting physical principles.
- Analytical Skills – solving quantitative problems and interpreting data.
- Scientific Practices – designing experiments, analyzing results, and communicating conclusions.
- Real-World Applications – connecting physics concepts to everyday phenomena and engineering contexts.

## Contact Information

Teacher Name:

Email:

Phone:

## Classroom Expectations

The classroom is a respectful, safe, and collaborative learning environment where students are expected to be prepared, participate actively, and respect others. The goal is academic success and personal growth for all.

## Core Expectations

1. **Be Prepared** – Bring required supplies, attend regularly, and be ready to learn.
2. **Participate & Take Responsibility** – Complete assignments on time, engage in discussions, and contribute to learning.
3. **Respect the Learning Environment** – Follow behavior guidelines and report problems appropriately.

## Behavior & Consequences

Positive reinforcement and routines support success. If expectations aren't met, the process is: reteach → redirect → parent contact → office referral. Students are expected to act with maturity and respect, as if preparing for college.

## Materials

3 ring binder, Loose-leaf paper, pencils/pens, Chromebook, and composition lab notebooks

## Assignments & Schedule

Six-week calendars outline assignments, though dates may change. Students must check posted or online updates.



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## Tutoring

Available mornings, during lunch, and afternoons on specified days. Exact dates will be posted on Class Dojo and Google Classroom. Students are responsible for seeking help when needed.

## Attendance Policy & Its Importance

Regular attendance is critical for success in Physics. This course develops problem-solving skills, scientific reasoning, and laboratory experience that cannot be fully replicated through make-up work. Physics concepts build on each other, and missing class can create gaps that are difficult to close. The Midland ISD grading policy will be followed for late work.

## Learning Objectives

By the end of the year, students will be able to:

- Engage in the three core science practices:
  - **Creating Representations** – drawing diagrams, graphs, and models to explain phenomena.
  - **Mathematical Routines** – performing calculations, deriving formulas, making predictions.
  - **Scientific Questioning & Argumentation** – designing experiments, analyzing results, and supporting claims with evidence.
- Master key physics concepts in **motion, forces, energy, waves, light, electricity, and magnetism.**
- Apply **conservation laws** (momentum, energy, charge) to explain and predict outcomes.
- Connect physics concepts to **real-world situations** and engineering applications.

Semester 1	Semester 2
Unit 01: Linear Motion – P.5A, P.5B, P.5C Unit 02: Projectiles – P.5A, P.5C, P.5D Unit 03: Forces – P.5E, P.5F, P.5G Unit 04: Gravitation & Circular Motion – P.5D, P.5F, P.5H Unit 05: Work, Energy, and Power – P.7A, P.7B, P.7C Unit 06: Momentum & Collisions – P.7D, P.7E	Unit 07: Electrostatics – P.6A, P.6C Unit 08: Circuits & Magnetism – P.6D, P.6E, P.6B Unit 09: Waves & Sound – P.8A, P.8B, P.8C, P.8D, P.9B, P.1A, P.1G, P.3A Unit 10: Light & Optics – P.8E, P.9B, P.8D, P.8G, P.1F, P.4A, P.4B Unit 11: Quantum Physics – P.8F, P.9A, P.9C, P.9D, P.4C

## Course Resources

- Chromebook (provided by Midland ISD)
- MISD-provided instructional materials (Course approved textbooks, etc.)
- K-12 Summit
- Online resources such as physicsclassroom, Phet Labs, etc.



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## Grading Policy

Major assignments - 60% Minor assignments - 40%  
Semester exams count as 15% toward the final semester grade

*According to Midland ISD Grading Policy:*

The summative evaluation of a student's grade during a recording period should be based on sufficient data collected in class in the form of various assessments. Regular and periodic assessment of student progress ensures a student has ample time for remediation.

Students must receive feedback on every graded assignment within three to seven days. Major assignments will receive feedback within ten days. Teachers will, at a minimum, communicate with students and their guardians every ten school days regarding upcoming assessments, classroom reminders, learning topics covered in class, and/or expectations. Regular communication may be electronic through the adopted Student Information System or other messaging applications. Teachers will maintain a parent communication log during each grading cycle.

Please feel free to reach out with any questions or concerns. We are excited to work together to make this a successful year of learning!

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**Please fill out the portion below and return this portion to your teacher.**

We acknowledge that we have read and that we understand the expectations of 11th Grade US History. We agree to contact the teacher should we have any questions or concerns regarding this instructional plan.

Parent Name: \_\_\_\_\_

Student Name: \_\_\_\_\_

Cell Phone Number: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Parent Signature : \_\_\_\_\_

Student Signature: \_\_\_\_\_

Date: \_\_\_\_\_