



# AP Physics 1 Instructional Plan:

## Course Overview

This is a year-long, algebra-based, introductory college-level physics course, designed to develop deep understanding of classical mechanics through hands-on, inquiry-based laboratory work, as well as classroom investigations and modeling. Students explore foundational concepts such as systems, fields, force interactions, change, and conservation principles. Students will prepare effectively for both the AP Exam and future college coursework.

## Contact Information

Teacher Name: Margaret Kendrick

Email: [margaret.kendrick@midlandisd.net](mailto:margaret.kendrick@midlandisd.net)

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.

## 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 essential for success in AP Physics. This course builds critical problem-solving skills, scientific reasoning, and laboratory experience that cannot be replicated through make-up work alone. Physics concepts build on one another, and frequent absences can create gaps that are difficult to close. MidlandISD grading policy will be followed for late work.



# AP Physics 1 Instructional Plan:

## Learning Objectives

By the end of the first semester, students will be able to:

- Engage with the physics content through the three Science Practices:
  1. **Creating Representations** – drawing diagrams, graphs, and models to represent physical phenomena;
  2. **Mathematical Routines** – conducting calculations, deriving symbolic expressions, making estimates, and predicting changes;
  3. **Scientific Questioning and Argumentation** – designing experiments, analyzing data, and using evidence and principles to support claims
- Master eight core content units
- Develop proficiency across “Big Ideas” that span the entire curriculum
  1. **Systems** – analyzing characteristics of physical systems
  2. **Fields** – understanding how interactions can be described using fields.
  3. **Force Interactions** – analyzing forces and their effects.
  4. **Change** – investigating how interactions cause change.
  5. **Conservation** – recognizing that interactions are governed by conservation laws
- **Apply scientific practices consistently**, including modeling, data analysis, argumentation, and connecting concepts across various contexts
- **Dedicate at least 25% of instructional time to laboratory investigations**, reinforcing content through experimental design, data collection, and evidence-based reasoning

Semester 1	Semester 2
Unit 1: Kinematics (10–15%)	Unit 5: Torque & Rotational Dynamics (10–15%)
Unit 2: Force & Translational Dynamics (18–23%)	Unit 6: Energy & Momentum of Rotating Systems (5–8%)
Unit 3: Work, Energy & Power (18–23%)	Unit 7: Oscillations (5–8%)
Unit 4: Linear Momentum (10–15%)	Unit 8: Fluids (10–15%)

## Course Resources

- Chromebook (provided by Midland ISD)
- MISD-provided instructional materials (Course approved textbooks, etc.)
- AP Classroom and AP instructional Materials
- Online resources such as physicsclassroom, Phet Labs, etc.

## 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.



## AP Physics 1 Instructional Plan:

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: \_\_\_\_\_