

# Introduction to Physics

Ms. Helton

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Temima High School 2011-2012 (5771-5772)

**Introduction:** Welcome to an Introduction to Physics! Science is a way of thinking, not just a class. In this course, we will learn how to apply scientific problem solving to the physical concepts of life. We start our scientific journey with physics in the 9<sup>th</sup> grade because physics is the most basic of all the sciences. It gives us the foundation for motion, forces, energy, matter, sound, light, and the composition of atoms. In this class, emphasis will be placed on understanding these concepts and identifying them in everyday life. Class time will be divided between lectures, discussions, activities, and problem solving formats. The course will be fast paced and extremely hands on with a laboratory component to enhance our understanding.

**Materials:** A 3-ring binder  
Note taking paper  
Graphing paper  
A scientific calculator  
Writing utensils, both pens and pencils  
Tissues!!!

**Textbooks:** Conceptual Physics, Third edition. Paul G Hewitt.

Each student will be given a textbook at the beginning of the year. The student is responsible for the condition of the book upon return at the end of the year. The cost of a replacement text is \$75.00. Each student should bring the book to class on a daily basis. Open textbook quizzes may be given without notice.

A lab manual will be purchased for each student. The lab manual fee is \$4.00 and will be expected to be turned into the office by Sept 2. The lab manual should be returned at the end of the year. The cost of replacement is \$8.00.

## Grading Rubric:

Homework and Class work 20%

Daily assignments that will be announced and/or posted

Physics in My Life 5%

Will be assigned bi-weekly

Class Participation 5%

Will be marked daily

Quizzes 10%

Will be announced or unannounced and graded for correctness

Laboratory Write-ups 25%

Will follow ALL lab experiments and will be graded on correctness and completeness

Tests and Projects 35%

Announced in advance and graded on correctness and completeness.

Midterm & Final Exams will be 3 test grades each

Extra credit is given as bonus questions on the tests.

Grade expectations are as follows:

An *A* means that the student has completed proficient work on all course objectives and advanced work on most of the objectives.

A *B* means the student has completed only proficient work on all course objectives.

A *C* means the student has completed proficient work on the most important objectives, although not on all objectives.

A *D* means the student has completed proficient work on at least one-half of the course objectives but is missing some important objectives and is at significant risk of failing the next course in the sequence.

An *F* means the student has completed proficient work on less than one-half of the course objectives and cannot successfully complete the next course in the sequence.

**Procedures:**

- In this class, we will follow all policies in the student handbook.
- When the tardy bell rings, we will be seated, with a writing utensil, paper, and textbook out ready for the instructions of the day.
- Class will be dismissed by the teacher, with ample time to copy homework in the Yoman and tidy up each person's area before leaving class.
- We will show respect to anyone who is speaking by not talking and raising our hands when we would like to speak.
- We will come to class prepared and will remain in class once the tardy bell has rung.
- We will adhere to the one bathroom pass per day policy for our class and respect our fellow students by not taking advantage of it.
- We will communicate with Ms. Helton through the correct channels and contact her for additional tutoring.
- Anyone not respecting the class procedures will earn a demerit.
- Anyone tardy to class will be reported. Three tardies will equal one demerit. Absences will be handled as per the student handbook.

**Instructional Objectives:**

- Observe and discuss science as a body of knowledge and investigative process
- Use science to systematically assess problems and form solutions
- Interpret graphs, data, essays, formulas, etc. and their context to scientific learning
- Employ oral and written communication skills to explain the basic concepts of nature

**Course Curriculum Suggested Time Frame:**

**Semester 1**

Unit 1	Physics as a Science	August
Unit 2	Kinematics	September
Unit 3	Forces	October
Unit 4	Momentum and Energy	November
Unit 5	Circular and Satellite Motion	December
Unit 6	Properties of Matter	January

**Semester 2**

Unit 7	Thermodynamics	February
Unit 8	Wave Phenomena/Sound	March
Unit 9	Light	April

Regent's Test

Unit 10	Electricity and Magnetism	May & June
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**Parent/Guardian Signature (Please, no initials)**

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**Student Signature** \_\_\_\_\_