



MALDEN CATHOLIC

Leading Beyond

Summer Assignment – AP Physics 1

All work is due Day 1 2024-2025

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Welcome to AP Physics 1

This course focus is based on AP Physics 1 Big Ideas -Major Concepts

The big ideas serve as the foundation of the course and allow students to create meaningful connections among concepts. They are often abstract concepts or themes that become threads that run throughout the course. Revisiting the big ideas and applying them in a variety of contexts allows students to develop deeper conceptual understanding. Below are the big ideas of the course and a brief description of each.

BIG IDEA 1: SYSTEMS

Objects and systems have properties such as mass and charge. Systems may have internal structure.

BIG IDEA 2: FIELDS

Fields existing in space can be used to explain interactions.

BIG IDEA 3: FORCE INTERACTIONS

The interactions of an object with other objects can be described by forces.

BIG IDEA 4: CHANGE

Interactions between systems can result in changes in those systems.

BIG IDEA 5: CONSERVATION

Changes that occur because of interactions are constrained by conservation laws.

TEXTBOOK: Etkina, Planinsic & Van Heuvelen, College Physics: Explore and Apply 2nd Edition ISBN-13: 978-0134601823, Pearson 2019

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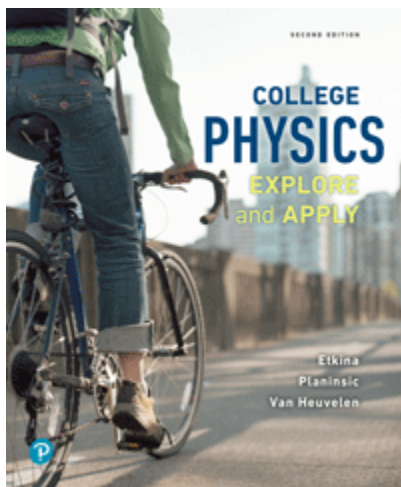
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To get started, this summer packet is a mathematical review/concept to enable us to start off Day 1 into Kinematics.

Assignment

1. Review Chapter 1 in Textbook-Textbook is your reference guide.
2. Watch links to videos for review & examples.
3. Work on the problems assigned-all answers online.



Items -Summer Checklist of Assignments on E-textbook

1. A Welcome to the Physics Primer!
2. Scientific Notation
3. Calculator Use
4. Unit Conversions
5. Working with Fractions
6. Simplifying Algebraic Expressions
7. Solving Two Equations and Two Unknowns
8. Interpreting Graphs - Lines
9. Right Triangles
10. Inverse Trigonometric Functions
11. Introduction to Graphing Questions
12. Introduction to Vector Drawing Questions
13. Getting Started: Dynamic Study Modules
14. Mastering Your Mindset
15. Introduction to Numeric and Symbolic Answers
16. A Welcome to Mastering!
17. Mastering Your eText

Additional videos to watch and take notes in your composition book. Notebook will be collected on September 9, 2024.

Watch Video on What is Physics

<https://aplusphysics.com/courses/regents/videos/WhatIsPhysics/WhatIsPhysics.html>

Watch Video on Significant Figures.

<https://www.aplusphysics.com/courses/regents/videos/SigFigs/SigFigs.html>

Watch video on Scientific Notation

<https://www.aplusphysics.com/courses/regents/videos/SciNotation/SciNotation.html>

Watch video on Metric System

https://www.aplusphysics.com/courses/regents/videos/Metric_System/Metric_System.html

Watch video on Scalar and Vector Quantities

<https://www.aplusphysics.com/courses/regents/videos/VectorScalar/VectorScalar.html>