AP Physics 2

Overview

AP Physics 2 is equivalent to a second-semester college course in algebra-based physics. Physics aims to explain the everything around us; from the tiniest particle to the formation of the universe it attempts to explain observations of facts and develop them into theories. Students engaged in this program will work with a mentor to improve their observation, critical thinking and analytical skills in order to gain an appreciation of the intimate workings of the universe. In this program, students will work in collaboration with a mentor to build on their existing understanding by using multiple representations of physical processes, solving multi-step problems, and designing investigations. Finally, students will develop their writing and presentation skills in order to translate their critical thinking and analysis into meaningful reports.

Objectives

- Analyse objects and systems that have properties such as mass and charge
- Understand that fields existing in space can be used to explain interactions
- Understand and apply conservation laws
- Understand the waves can transfer energy and momentum without permanent change in mass

Structure

- Reflect on current knowledge of the range of topics that Physics covers and identify strengths and weaknesses
  - Develop a personalised curriculum
- Investigating Physics-related studies and theories in the world today
  - Real-world examples
  - Ethical concerns
  - Develop critical thinking skills to problem-solve
  - Understand how physics relates to real life problems
  - Limitations of scientific endeavours
- Collaboratively develop data analysis skills
  - Observation skills
  - Question reliability and validity of data to improve critical thinking
- Practice reporting primary and secondary data in the form of a report
  - Scientific writing style
  - Narrative, mathematical and graphical representations
- Exam practice
  - Past papers
  - Planning and structuring responses
  - Time management
  - Analysing and evaluating sources

20 hour
PROGRAM

Hour 0-1	Hour 1-4	Hour 4-12	Hour 12-16	Hour 16-20
Introduction & Reflection	Data Analysis Skills	Discover & Discuss Physics Studies & Theories	Report Writing	Hone & Master

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