

## AP PHYSICS SUMMER ASSIGNMENT 2022

### INTRODUCTION: THE NATURE OF SCIENCE AND PHYSICS

#### DUE THE FIRST DAY OF SCHOOL!

##### Part A:

Earth Science Research – Briefly research and answer each of the following prompts in a **one paragraph response**. Include the **URL citation** for your research.

1. Summarize the Big Bang Theory. Include evidence of universal motion and composition of matter.
2. How does the sun generate energy and transfer energy to the Earth? Include discussion about the life cycle of a star.
3. Discuss the scientific history of the Earth's formation and the Theory of Plate Tectonics.

##### Part B:

Math Review: 1. Scientific Notation, 2. Solving Equations, and 3. Trigonometry. Show your work for each problem and circle your answers. Clearly number section and problem. Put "Math Review" and your name at the top right of each page.

##### Part C:

1. Go to the OpenStax College Physics for AP Courses online textbook at <https://openstax.org/books/college-physics-ap-courses/pages/1-connection-for-ap-r-courses>.
2. Study all sections of Chapter 1:
  - 1.1 Physics: An introduction
  - 1.2 Physical Quantities and Units
  - 1.3 Accuracy, Precision and Significant Figures
  - 1.4 Approximation
3. Answer Conceptual Questions #1-11  
<https://openstax.org/books/college-physics-ap-courses/pages/1-conceptual-questions>  
Answer in complete sentences. Clearly number each answer. Put "Conceptual Questions" and your name at the top right of each page.
4. Answer Problems and Exercises #1-36  
<https://openstax.org/books/college-physics-ap-courses/pages/1-problems-exercises>  
Show your work for each problem and circle your answers. Clearly number each question. Put "Problems and Exercises" and your name at the top right of each page.

Complete Staple all your answer papers together. Put your name at the top right on each page. At the top left of the first page, put "AP Physics Summer Assignment 2021". Have this ready to turn in on the first day of school.

##### Have Questions? Need Help?

Email Mrs. Botelho: [jbotelho@tusd.net](mailto:jbotelho@tusd.net)

Send Mrs. Botelho questions by text: 209-597-8756