



# SCHERTZ-CIBOLO-UNIVERSAL CITY INDEPENDENT SCHOOL DISTRICT

1060 Elbel Road Schertz, Texas 78154 Phone (210) 945-6227 Fax (210) 945-6024  
www.scuc.txed.net

★ *High Achievement For All Students*  
★ *Highly Qualified and Well-Trained Staff*  
*Effective and Efficient District Operations*

May 14, 2018

Dear AP Physics Student,

Congratulations on your decision to take AP Physics 2 next year! While we are in the process of winding down one school year and looking forward to a break, we are also excited and busy preparing for the upcoming year. The teachers of advanced placement physics from across the district have collaborated to build a strong foundational program to help introduce and review conceptual skills that are necessary to be successful on assessments at every level and to prepare you for the rigors of college.

Just as with athletics and fine arts, consistent practice is essential to keep your skills sharp. While we understand that summer is a time to rest and relax after many months of hard work, we also know that providing a strong foundation regarding concepts in physics will prepare you with the knowledge you need to hit the ground running next school year. Our summer assignments are designed to maintain and polish skills as well as prepare you for new challenges, with hopes of assisting in lowering the stress level for information acquisition at the beginning of next year.

Of course, there are greater expectations of students who elect to take advanced courses, but the rewards are great as well. Graduates often return to share their experiences after high school and how well prepared they were for college level analysis – both in written assignments and class discussions. The additional points students receive on grades in these higher-level courses are an acknowledgment of the time and energy required by students in advanced classes.

Once again, we are thrilled that you are taking on this very rewarding challenge, and we look forward to seeing you next year!

Sincerely,

SCUC ISD AP Physics 2 Teachers

## Contact Information

<b>Clemens High School</b>	<u>AP Physics 2</u> - Roger Alcala <u>Department Lead</u> - Nicole Rosas-Saunders	<a href="mailto:ralcala@scuc.txed.net">ralcala@scuc.txed.net</a> <a href="mailto:nrosassaunders@scuc.txed.net">nrosassaunders@scuc.txed.net</a>
<b>Steele High School</b>	<u>AP Physics 2</u> –Kai Schmidt <u>Department Lead</u> - Scott Thomas	<a href="mailto:kschmidt@scuc.txed.net">kschmidt@scuc.txed.net</a> <a href="mailto:lthomas@scuc.txed.net">lthomas@scuc.txed.net</a>
<b>District Office – Secondary Science</b>	Helen Whisenhunt, Ed.D	<a href="mailto:hwhisenhunt@scuc.txed.net">hwhisenhunt@scuc.txed.net</a>



*Schertz-Cibolo-Universal City ISD provides a safe, secure and challenging learning environment, through the responsible use of all resources, to afford opportunities for all students to realize their individual potential and to become responsible and productive members of society.*

## Summer AP Physics 2 Assignment

Students of AP Physics 2 are to read the text *Alice in Quantumland: An Allegory of Quantum Physics* by Robert Gilmore. (ISBN 978-0387914954) and answer free response questions for each chapter.

Students may access this text in the following ways:

1. Pick up a printed copy from an AP Physics 2 teacher on your campus.

**Clemens**- Room B208- Mr. Alcala

**Steele** – Room Q244- Mrs. Schmidt

2. Download the pdf from your Physics teacher's website.

**Clemens** - <http://www.scuc.txed.net/webpages/ralcala/>

**Steele**- <http://www.scuc.txed.net/webpages/kschmidt/>

3. Purchase a copy from:

[www.Amazon.com](http://www.Amazon.com)

[www.barnesandnoble.com](http://www.barnesandnoble.com)

[www.half.com](http://www.half.com)

## Helpful Physics Websites

<http://www.physicsclassroom.com/>

<http://phyz.org/hewittdrewit/>

<https://www.brightstorm.com/science/physics/>

AN ALLEGORY OF QUANTUM PHYSICS

Alice  
in  
Quantumland

Robert Gilmore



(ISBN 978-0387914954)



### **SCUCISD Mission Statement**



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## Assignment Directions

We are asking that you read the book *Alice in Quantumland: An Allegory of Quantum Physics* in its entirety and answer the following questions by the beginning of class on August 24th.

Chapters	Questions to Answer for Each Chapter
1	Explain what probability distribution is to you and what the chapter says in terms of quantum theory and behavior of particles.
2	What is the Heisenberg Uncertainty principle? How is this concept demonstrated in the chapter?
3	How can electrons & light act as both a wave and a particle? How does Schrodinger's example explain this theory?
4	Which theory do you agree with and why?
5	What type of particles were introduced and what is Pauli's principle?
6	What is meant by anti-Alice and what does it do with virtual reality?
7	How does the state of an electron that occupies an atom determine its location on the periodic table?
8	Explain the various forms of decay?
9	Who are Upo, Downo, and Strangeo? What are they made up of and why?
10	What is the quantum explanation of the world? How would you say you felt about the book and what did you find most interesting?

**For each study question, you must provide:**

1. Your answer to the question, written in complete sentences.
2. Provide text evidence (page numbers, quotes, etc.) to support your answers.

Please complete these questions on notebook paper or in your teacher's Google Classroom that can be accessed from their teacher websites.

All work is to be completed on your own. If you have any questions, please be sure to contact the AP Physics 2 teacher from your respective campus.

**The assignment will be due on August 24th, 2018 at the beginning of class.**

**After this due date, the district late work policy will go into effect. Please use the first three weeks of school to seek any help or guidance needed regarding this assignment.**



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