

Public Academy for Performing Arts

Class Syllabus

Physics

Teacher Information

Teacher: **Mr. Ramirez**

Room #7

Email: cramirez@paparts.org

Teacher website: Google Classroom: Codes will be given in class

Phone (at PAPA): 505-830-3128 ext 24610

Office hours: My prep is 3rd period, and I am always welcoming of students for assistance during lunch or after school (usually past 8th period).

Course Description

This course introduces students to the fundamental concepts and principles of physics. It covers topics related to mechanics, waves, optics, electricity, magnetism, general and special relativity, and particle physics. Through a combination of theoretical discussions, laboratory experiments, and problem-solving activities, students will develop an understanding of the physical laws that govern the natural world.

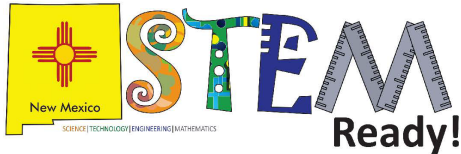
Course objectives

1. Understand the basic principles and laws of classical physics.
2. Apply mathematical concepts to solve physics problems.
3. Develop critical thinking and problem-solving skills through practical applications.
4. Conduct and analyze experiments to explore physical phenomena.
5. Communicate scientific ideas and findings effectively.
6. Relate physical phenomena and laws to various arts.

Next Gen Science Standards and Curriculum Map

This class is taught with a few core ideas in mind. They are that students should be taught what will be covered on the End of Course Exam, students should be prepared for the New Mexico Assessment of Science

Readiness (NM-ASR), students should be prepared for entry level Physics courses at the post high school level, and students should be taught science in a way that makes them think critically of the world around them. I will be following generally the Recommended Course Curriculum Map for Physics that NMPED has put out. The map follows the newly adopted Next Gen Science Standards and should be a good road map for success in the current testing format.



High School Recommended Discipline Specific Course Map

Biology

<p>Engineering Design</p> <p>HS-ETS1-1 HS-ETS1-2 HS-ETS1-3 HS-ETS1-4</p> <p>From Molecules to Organisms: Structures and Processes</p> <p>HS-LS1-1 HS-LS1-2 HS-LS1-3</p> <p>Matter and Energy in Organisms and Ecosystems</p> <p>HS-LS1-5 HS-LS1-6 HS-LS1-7 HS-LS2-3 HS-LS2-4 HS-LS2-5</p> <p>Interdependence in Ecosystems</p> <p>HS-LS2-1 HS-LS2-2 HS-LS2-6 HS-LS2-7 HS-LS2-7 NM HS-LS2-8 HS-LS4-6</p>	<p>Inheritance and Variation of Traits</p> <p>HS-LS1-4 HS-LS3-1 HS-LS3-2 HS-LS3-3</p> <p>Natural Selection and Evolution</p> <p>HS-LS4-1 HS-LS4-2 HS-LS4-3 HS-LS4-4 HS-LS4-5</p> <p>Earth's Systems</p> <p>HS-ESS2-4 HS-ESS2-7</p> <p>Earth and Human Activity</p> <p>HS-ESS3-1 HS-ESS3-3 HS-ESS3-4</p>
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Physics

<p>Engineering Design</p> <p>HS-ETS1-1 HS-ETS1-2 HS-ETS1-3 HS-ETS1-4</p> <p>Forces and Interactions</p> <p>HS-PS2-1 HS-PS2-2 HS-PS2-3 HS-PS2-4 HS-PS2-5 HS-PS2-6</p> <p>Energy</p> <p>HS-PS3-1 HS-PS3-2 HS-PS3-3 HS-PS3-4 HS-PS3-5</p> <p>Waves and Electromagnetic Radiation</p> <p>HS-PS4-1 HS-PS4-2 HS-PS4-3 HS-PS4-4 HS-PS4-5</p>	<p>Space Systems</p> <p>HS-ESS1-1 HS-ESS1-2 HS-ESS1-3 HS-ESS1-4</p> <p>History of Earth</p> <p>HS-ESS1-5 HS-ESS1-6 HS-ESS2-1</p> <p>Earth's Systems</p> <p>HS-ESS2-2 HS-ESS2-3</p> <p>New Mexico Specific Standard</p> <p>HS-SS-2</p>
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Chemistry

<p>Engineering Design</p> <p>HS-ETS1-1 HS-ETS1-2 HS-ETS1-3 HS-ETS1-4</p> <p>Structures and Properties of Matter</p> <p>HS-PS1-1 HS-PS1-3 HS-PS1-8 HS-PS2-6 (repeat)</p> <p>Chemical Reactions</p> <p>HS-PS1-2 HS-PS1-4 HS-PS1-5 HS-PS1-6 HS-PS1-7</p> <p>Energy (repeat)</p> <p>HS-PS3-1 HS-PS3-2 HS-PS3-3 HS-PS3-4 HS-PS3-5</p> <p>Earth's Systems</p> <p>HS-ESS2-4 (repeat) HS-ESS2-5 HS-ESS2-6</p>	<p>Human Sustainability</p> <p>HS-ESS3-2 HS-ESS3-5 HS-ESS3-6</p> <p>New Mexico Specific Standard</p> <p>HS-SS-1</p>
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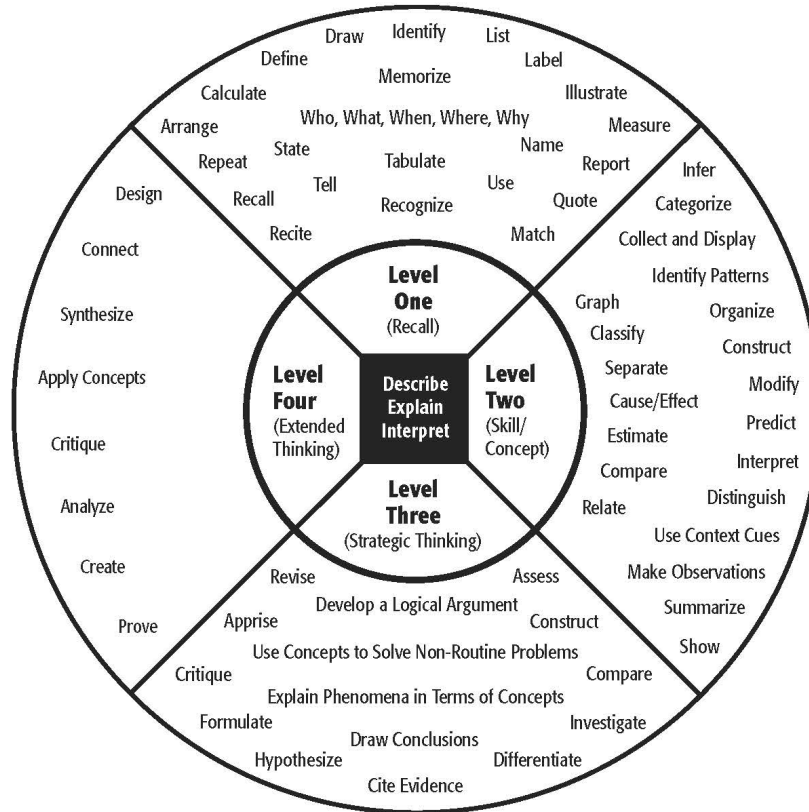
*Biology, Physics, and Chemistry may be taken in any sequence.

Webb's Depth of Knowledge

Webb's DOK is a framework for thinking about students and how they engage with content and knowledge. Gone are the days of simple rote memorization taking up all of the academic day (hopefully). Students in my class, and all of PAPA for that matter, are taught in multiple engaging ways to stimulate learning at more than just the surface level. Ideally, students are taught to recall facts, demonstrate, or communicate

information, think strategically about the information and finally delve even deeper and utilize that material.

Depth of Knowledge (DOK) Levels



Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
Recall elements and details of story structure, such as sequence of events, character, plot and setting.	Identify and summarize the major events in a narrative.	Support ideas with details and examples.	Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/ solutions.
Conduct basic mathematical calculations.	Use context cues to identify the meaning of unfamiliar words.	Use voice appropriate to the purpose and audience.	
Label locations on a map.	Solve routine multiple-step problems.	Identify research questions and design investigations for a scientific problem.	Apply mathematical model to illuminate a problem or situation.
Represent in words or diagrams a scientific concept or relationship.	Describe the cause/effect of a particular event.	Develop a scientific model for a complex situation.	Analyze and synthesize information from multiple sources.
Perform routine procedures like measuring length or using punctuation marks correctly.	Identify patterns in events or behavior.	Determine the author's purpose and describe how it affects the interpretation of a reading selection.	Describe and illustrate how common themes are found across texts from different cultures.
Describe the features of a place or people.	Formulate a routine problem given data and conditions.	Apply a concept in other contexts.	Design a mathematical model to inform and solve a practical or abstract situation.
	Organize, represent and interpret data.		

Webb, Norman L. and others. "Web Alignment Tool" 24 July 2005. Wisconsin Center of Educational Research. University of Wisconsin-Madison. 2 Feb. 2006. <<http://www.wcer.wisc.edu/WAT/index.aspx>>.

Google Classroom

Google Classroom will be the primary class website. All assignments, resources, links, etc. will be posted to Google Classroom. Students are expected to check their Google Classroom daily and parents are suggested to check it once or twice a week. Zoom links, resources, assessments/assessment links and assignments will all be posted in the “Assignments” tab and placed into weekly topic folders.

Textbooks

Textbooks are rarely used in class and will not be assigned. They are resources that will be used in class occasionally but may be checked out by students at any time for reference. Students must sign them out and be conscious of taking care of them when doing so.

Materials Necessary

Every student will need one notebook to copy notes and answer bell ringers into. Students will also be required to have one folder or binder to store their work in. Students are expected to come to class every day with pens and pencils. Scientific calculators are recommended.

Late Work/ Make-up Work

All late work/make-up assignments will be accepted for full credit at a reasonable timeframe for excused absences only. Late work turned in without an excused absence will be accepted up to 1 week late. However, each day of lateness will be penalized by 15% of the full grade.

Grading

Grading will consist of a total point system, in which all grades, unless otherwise stated, will be of an equal weighting. Semester grades will consist of 40% period 1, 40% period 2, and 20% final exam. Please check your grades on Powerschool at least once a week. The grading scale will go as follows.

Letter Grade	Percentage Points
A+	100 – 97
A	96.9 – 93
A-	92.9 – 90

B+	89.9 – 87
B	86.9 – 83
B-	82.9 – 80
C+	79.9 – 77
C	76.9 – 73
C-	72.9 – 70
D+	69.9 – 67
D	66.9 – 63
D-	62.9 – 60
F	Below 60

Extra Credit

Extra credit may be earned at various points throughout the year through various means. Test or classwork corrections may be made for partial credit at my own discretion. I will also make you aware of lectures, performances, or demonstrations outside of class that you may attend for extra credit.

Class Expectations and Norms

Students In my class will be held to the highest of standards in the following domains. Please know that what I ask of you I also intend on following. I will try my best to model respectfulness and professionalism every day with every student.

- Respectfulness
 - E.g.
 - Practice active listening to faculty and peers.
 - Practice inclusiveness and kindness
 - Take care of class materials.
 - Assume best intent.
- Professionalism
 - E.g.
 - Come prepared to class. With materials and work necessary.
 - Put your best effort in your work.
 - Practice collaboration and problem solving with peers
 - Wear appropriate academic clothing.
 - Be *Present* in class. Focus on the task/class at hand.
 - Use technology appropriately.

- *Academic Dishonesty and Cheating*

Students are expected to put in their top effort academically and show integrity throughout the course. Plagiarism is not tolerated in this class. Whether that be from an article or a friend. We will discuss how to properly cite your sources and how you should help others and receive help from others appropriately.

- *Food and Drink Policy*

Students may not eat in class during class. You may finish your snacks before entering my class or place them on the side ledge by the entrance until you leave. Students may drink water freely. Anything else must be in a spill resistant container (soda with a cap or bottle that snaps/locks shut) or placed at the side of the classroom.

- Students caught eating in class or drinking anything other than water in inappropriate containers will receive the following recourse.
 - 1st offence: A warning and instructions to place food/drink inside of classroom.
 - 2nd offence: Student will come into class during lunch to vacuum the area student was eating/drinking.
 - 3rd offence: Student will come into class during lunch to vacuum half of the classroom. Parents will be notified.
 - 4th or greater offence: Student will vacuum entire classroom, parents will be notified and administration will be alerted.

- *Cell Phone policy*

Cell phones should not be used in class unless permission is explicitly granted by myself. I will not be collecting cell phones as a blanket policy since they may be used appropriately from time to time. This may look like taking picture of work on the white board, listening to music during independent work, or accessing sites/apps per my own instructions.

- Use of cell phones not in accordance with the above guidelines will result in the following actions.
 - 1st offence: A verbal or nonverbal reminder to put phone away.

- 2nd offence: I may confiscate the phone until the end of the class.
- 3rd offence: I may confiscate the phone for as long as the entire day. I will also communicate the issue to parents or guardians.
- 4th offence: A meeting will be arranged with parents and administration to determine further actions.

If at any point a student does not wish to relieve a phone to myself, administration will be contacted to hold onto the device instead.

- *Laptop Usage*

The class COW has enough chromebooks for every student. Students will use computers regularly throughout the year. They are expected to take care of them to their best abilities to prolong their lifespan. Students are also expected to use them responsibly. That means that they should be used only for the designated task at hand. Failure to use laptops responsibly may result in loss of use for class laptops. (Say hello to worksheets and dictionaries). Laptops are numbered and should be returned to their rightful location and plugged in after each use.

- Bathroom Policy

Students are to sign out and back in anytime that they leave the classroom. This will be through google forms to record your name, destination, exit time and return time. If you need to leave the class for any reason, you *MUST* make a visible request that I acknowledge and approve of. This is for your own safety as well as proper classroom function. There are two lanyards that are used for bathroom passes. No more than two students may be out at a time.