JOHN F. KENNEDY HIGH SCHOOL
6715 GLORIA DRIVE SACRAMENTO CA 95831
JFK.SCUSD.EDU
916.395.5090
HOME OF THE COUGARS

2020--2021 Physics P Syllabus [Distance Learning]

PHYSICS P **1 year (10 Credits)**

Course description

Physics P is a two-semester course covering general physics, which is designed to meet the needs of students pursuing a science major in a university or college. The course encompasses general principles of classical physics. These major areas will overlap to reemphasize and build a sound foundation in physics. The laboratory portion will correlate with the instructional units of this course. This course meets the A-G Requirements for the University of California and is aligned with the Next Generation Science Standards.

Contact Information

- ***Name: Ms. Henry***
- ***Email: yasmin-henry@scusd.edu***
- ***Remind Account: HenryPhyz2021 Code: @h82egd***

Textbook - Online Availablility for Distance Learning

- ***STEMScopes CA-NGSS 3-D* (Rice) 2019. Physics in the Universe: Student STEMscopedia.**
- Student Textbook and Materials will be available online via the student CLEVER account (SCUSD)

Required Materials:

- **Notebook for Physics (Notes)**
- **Pencils/Pens**
- **Computer Access**
- **Scientific Calculator (Not a graphing calculator)**

Grading Policy

As of September 2020, I will be using a "straight points" system. Students will earn points through active participation, lab activities, quizzes, and projects. The grading scale is still being decided upon by the School District and will available as soon as possible. I will post information in Google Classroom as it arises.

Course Outline: Next Generation Science Standards [NGSS]

The Three Dimensions: NGSS method combined practices for learning concepts with performance expectations.

- **The Science and Engineering Practices are what scientists/engineers DO.**
- **The Disciplinary Core Ideas are what scientists/engineers KNOW.**
- **The Crosscutting Concepts are HOW scientists/engineers THINK.**

Crosscutting Concepts: 1. Patterns 2. Cause and effect 3. Scale, proportion, and quantity 4. Systems and system models 5. Energy and matter: flow cycles and conservation 6. Structure and function 7. Stability and change of systems

Science and Engineering Practices: 1. Asking questions (for science) and defining problems (for engineering) 2. Developing and using models 3. Planning and carrying out investigations 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations (for science) and designing solutions (for engineering) 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating information

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Disciplinary Core Ideas:

1. Forces and Motion
2. Forces at a Distance
3. Energy and Energy Conservation
4. Waves and Electromagnetism
5. Nuclear Processes
6. Stars and Universe

Unit Structure and Order of Instruction

1. Motion and Forces
    a. Kinematics
    b. Force, Mass, Acceleration
2. Momentum and Collisions
    a. Momentum
    b. Collisions – tectonic plates
3. Forces at Distance
    a. Gravity/Planetary
    b. Electrostatic force
    c. Forces in materials
4. Energy Conversion
    a. Conservation of energy
    b. Work
5. Electricity and Magnetism
    a. Electricity
    b. Magnetism
    c. Electrical energy
6. Waves
    a. Waves and matter
    b. Sound
    c. Earthquakes
d. EM radiation
    e. Information and energy transfer
7. Nuclear Processes
    a. Nucleus
    b. Radiometric dating
8. Stars and Universe
    a. Stars/space
    b. Bing Bang

Academic Expectations: Geared for Distance Learning

- Create a space and dedicated time for learning
- Break up the day to be their productive best
- Seek help when needed (teachers, guidance, principals)
- Create balance by taking opportunities to work offline and upload tasks
- Sign into the classrooms daily- keep connected
- Use Google Calendar to organize classes
- Demonstrate learning with completion of assignments
- Engage with the classroom and use tools (like headphones) to focus on instructional videos
- Communicate with your teacher and examine feedback
- Follow the SCUSD Code of Conduct
- Demonstrate online learning etiquette
- Reach out to your teachers and counselors if you are overwhelmed
- Collaborate with peers using respectful language and behaviors
- Wear attire acceptable for online learning
- Support each other in this new way of learning
- Be patient with yourselves and your teachers- we are all learning together!

WELCOME TO PHYSICS!

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