Physics A Syllabus
Webster Groves High School (2018-19)
Jane Knittig/Room 370

Course Description:

This course presents an overview of our scientific understanding of the physical world, covering some of the main concepts, theories, and experimental techniques of physics. The range of topics include: motion, force, energy, matter, sound, electricity, magnetism, light and the atom. During the course, we will also explore some of the historical and technological aspects that have contributed to our understanding of the physical world. Additional emphasis will be placed on problem solving and laboratory skills. Basic algebra skills are expected of the student. Relevant mathematical topics are reviewed as appropriate.

Course Text:

Physics by Raymond A. Serway and Jerry S. Faughn. Published by Houghton, Mifflin, Harcourt; Copyright 2017.

Grading Policy:

Your semester grade will be compiled from the following assignments:

- Homework **25%** of progress grade
- Labs/Projects **25%** of progress grade
- Quizzes **10%** of progress grade
- Tests **40%** of progress grade
- Semester Exam **15%** of semester grade
- Semester Grade **85%** progress, **15%** final

Student Expectations:

1. RESPECT the time we have together in the classroom. Be on time to class. Do not be disruptive to the learning that is taking place in the classroom.
2. Be RESPONSIBLE for your education. Bring all supplies to class and complete assignments on time.
3. Be INVOLVED in class. Participate in classroom discussions and labs. Be an active learner.
4. Be SAFE. Follow instructions. This course does have a laboratory component. Safety precautions will be discussed separately for each lab.
5. Make your EDUCATION a priority. Help me, help you!

Course Tools:

- Physics text
- Scientific Calculator
- Pencil or pen
- 3-ring binder (D-ring recommended)

1st Semester Topics

- The Science of Physics (Ch. 1)
- Motion in One-Dimension (Ch. 2)
- Two-Dimensional Motion and Vectors (Ch. 3)
- Forces and the Laws of Motion (Ch. 4)
- Work and Energy (Ch. 5)
- Momentum and Collisions (Ch. 6)

2nd Semester Topics

- Electric Field and Forces (Ch. 16)
- Electrical Energy and Current (Ch. 17)
- Circuits (Ch.18)
- Magnetism (Ch. 19)
- Electromagnetic Induction (Ch. 20)
- Light & Reflection (Ch. 13)
- Refraction & Interference (Ch. 14 & 15)
- Sound (Ch. 12)

Additional Information:

- E-mail: knittig.jane@wgmail.org
- Available before & after school: 7:15-7:50 (MTWRF) & 2:35-3:05 (MTWRF)
- Planning: 3rd and 6th hours (let me know if you plan on coming)
- 2nd lunch (let me know if you plan on coming)
- Extension 11370