**Physics Syllabus**

Course description: Science is the systematic study of the universe, and physics involves the study of matter and its motion. In this course, algebraic computation will be used to understand and describe mechanics, energy transfer and conservation, wave motion, electricity, and nuclear interactions. Throughout the course, lab work will be important, and emphasis will be on problem solving and aspects of science that relate to everyday life.

**Colorado Science Standard and Extended Evidence Outcome accomplishments expected of students**:

**Physical Science—**Students know and understand common properties, forms and changes in matter and energy.

* Observe, explain, and predict natural phenomena governed by Newton's laws of motion, acknowledging the limitations of their application to very small or very fast objects
* Apply an understanding of atomic and molecular structure to explain the properties of matter, and predict outcomes of chemical and nuclear reactions
* Apply an understanding that energy exists in various forms, and its transformation and conservation occur in processes that are predictable and measurable

**Class Rules:**

1. Treat everyone and their property with respect.

2. Participate appropriately in class. No electronic devices other than lab equipment and calculators!

3. Use all equipment properly.

**Instructional and grading methods to be used:**

1. Assignments—usually, but not always, an area of investigation will have associated problem sets or worksheets. Worksheets and problems are due on the day indicated, and will not be accepted more than one (1) week late. Work turned in one (1) day late will carry a grade reduction of ONE LETTER GRADE (10%). Work turned in more than five (5) school days late will receive a score of ZERO. If a student is absent, it is the student’s responsibility to obtain any assignments that may have been made while that student was gone.

2. Notebook—every student **must** have a notebook, which he or she should bring every day. It is the student’s responsibility to get the notes from a person who was in class if he or she is absent. Reading in physics can be demanding, so note-taking and class participation is very important.

3. Laboratories—laboratories are a mandatory part of this class. Laboratory reports are required for all labs. If a student is absent during a lab, he or she must make special arrangements to come in before or after school to make up the lab. **A lab safety contract must be turned in before any student can participate in labs. If this contract is not returned, the student will receive a grade of ZERO (0) on each lab missed.**

4. Class participation—each student is awarded 5 points per day for participation. These points may be lost by disruptive behavior. Every student should try to be in class, and be on best behavior, so that all of us can learn. Tardiness is a disruption of class, will cause a loss of class points, and will have consequences that follow the BHS handbook policies.

5. Examinations—every student should expect to take a test over every topic covered in class. Byers High School grading system applies.

6. Semester examination—the semester exam in this class is cumulative in content, and makes up approximately 10% of the semester grade. Each quarter grade contributes to the semester grade.

The textbook this year is an ebook. Virtual labs and other exciting add-ons can be accessed by all students. The Essential Physics community login is at

http://essential-physics.com/EP/stateselect. Our login is: 2725936767.

If you have questions or concerns about the class or topics, please ask! Contact me via email at: greenman.elizabeth@byers.k12.co.us. The information (class schedule, reading assignments, etc.) will be posted on my web site at: www.ergreenman.com . Please use this resource to help you in class!

Essential Outcomes:

Semester 1: The student will:

Describe the interrelation of physics with other sciences.

Understand the use and importance of the scientific method.

Use proper technique in making laboratory measurements and calculations involving data.

Explain the motion of objects using Newton’s laws of motion.

Explain the transfer and conservation of energy.

Semester 2: The student will:

Describe the interrelation of physics with other sciences.

Understand the use and importance of the scientific method.

Use proper technique in making laboratory measurements and calculations involving data.

Explain the motion and properties of sound and light based on wave theory.

Use calculations to explain the interactions of electric charges.

Describe the causes and effects of nuclear reactions.

After reading, sign and date the section below. Return it for your first grade in class!

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I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have read and understood the Physics syllabus. (student name—please print)

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(Student signature and date) (Parent/guardian signature and date)

IMPORTANT! Please provide an active email address for parent/guardian. This is essential to make certain parent/guardian is informed about missing/late assignments, as well as any schedule changes necessary.

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(parent/guardian email)