

Honors Freshman Physics

The goals of this unit will allow each student to:

- a. gain a better understanding of structure of the periodic table as well as the significance of an element's position on the periodic table in terms of periodic law & chemical properties.
- b. continue making proper scientific measurements and calculations
- c. define and properly use all vocabulary
- d. properly apply all terms in describing/explaining real world examples
- e. relate these concepts her/his daily activities and behaviors
- f. teach someone else the concepts discussed
- g. practice proper laboratory safety

Performance Objectives: After completing this unit, when asked in class or on a written test or quiz, each student will:

Know the element symbols names, and spelling of selected elements as well as their general location on the periodic table.

1. **Contrast** the contributions of Mendeleev & Moseley to the development and organization of the periodic table and the concept of Periodic Law.
2. **Use** the periodic table to predict the properties of an unknown element
3. **Describe** the periodic law of the elements using specific examples of periodic properties
4. **Recognize** what the physical state elements exist in at room temperature as they appear on the periodic table
5. **Locate & label** metals, nonmetals, transition metals, rare earth metals, and metalloids.
6. **Compare** general characteristics & properties of metals, metalloids, and nonmetals
7. **Distinguish** between groups of elements and periods of elements on the periodic table
8. **Know** the names & spellings of the columns (groups/families) and rows (period/series) on the periodic table.
9. **Recognize** the significance of the elements column and row position.
10. **Distinguish** between naturally occurring elements & synthetic elements on the periodic chart.
11. **Identify** the number of valence electrons for main block elements.
12. **Draw** electron dot diagrams (Lewis dot diagrams) for elements.
13. **Know** the oxidation numbers for main block elements
14. **Recognize** trends of atomic size and reactivity for both periods & groups,
15. **Define** and properly use all vocabulary.

Quiz Dates: TBA

TEST- January 16

Name: _____ **Period:** _____

This sheet will be used to keep track of reading, homework assignments due dates and scoring. Each individual homework assignment is **worth 25pts** and must be turned in on the **DUE DATE**. This sheet must be kept and turned in on the TEST DATE for the unit. Late homework will not be accepted.

In order to receive FULL CREDIT for a homework assignment, your work must reflect **quality***. All assignments must be labeled and out on your desk at the start of the class period along with this sheet.

***Quality Work** is having the answer reflect the question. On **UV** assignments, the terms and definitions are written out. (Answering with the "term" only is not quality.) Each assignment turned in must be labeled with the following in the right-hand corner of the paper. Your Name, Date, Period, Homework # , Unit Name (Periodic Table)

Each section must be clearly labeled with a heading UV, RC, SP or AYK and the problem numbers. Example:

Section 9.2 UV: 6-9 (then number & do the problems). Repeat for RC, SP and/or AYK

Textbook Reference – Physics A First Course – CPO Science

Textbook Homework

UV-Understanding Vocabulary RC-Reviewing Concepts SP- Solving Problems AYK- Applying Your Knowledge

Due Date	Read	Homework Assignments 1 - 4	Teacher Signature
Jan. 12	p. 224-228	p. 236-237 UV: 6-9 RC: 11-13 SP: 8-10	
TBA		TBA	
TBA		TBA	
TBA		TBA	
Total Homework Score			
Points Added to Test			

Check the class Website to get updates or to print out a new assignment sheet or other docs.

www.waltonhigh.org → Departments→ Science →Honors Freshmen Physics → Fall Handouts → Current unit.

Lingo to be learned - definitions are provided on-line

electron dot diagram, energy level, chemical symbol, group, period, periodic law, nucleus, proton, atomic number, neutron, isotope, electron cloud, atomic mass number, average atomic mass, atomic mass number, electron, electron cloud, metal, nonmetal, metalloid,