

Honors Freshman Physics/Chemistry Solutions and Acids & Bases Study Guide

The goals of this unit will allow each student to:

- a. gain a better understanding of **properties of solutions**.
- 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:

SPS6. Students will investigate the properties of solutions.

- a. Describe solutions in terms of:
 - solute/solvent
 - conductivity
 - concentration
 - b. Observe factors affecting the rate a solute dissolves in a specific solvent (solid & gas)
 - c. Demonstrate that solubility is related to temperature by constructing a solubility curve.
 - d. Compare and contrast the components and properties of acids and bases.
 - e. Determine whether common household substances are acidic, basic, or neutral.
1. Identify the solute, solvent, and type of a given solution.
 2. Explain the concepts of "like dissolves like" & detergents.
 3. Define electrolyte
 4. Distinguish between unsaturated, saturated, and supersaturated.
 5. Interpret solubility curves.
 6. Define acid, base, hydronium ion, and indicator.
 7. Define pH and use it to determine acid/base.
 8. Define neutralization reaction and identify its products.
 9. Identify the acid, base, and salt in a neutralization reaction.
 10. Define & calculate density

Solutions and Acids & Bases

Quiz- February 20

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

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
TBA	pg. 193	Density Problems 1-7 pg. 1	
TBA	Notes & powerpoints	Solubility Questions 8 -18 pg. 2	
TBA	Notes & powerpoints	Acids & Base Questions 19 – 24 pg. 2 -3	
TBA	Notes & powerpoints	Solubility Curve Questions 25 -30 pg. 3	
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 → Spring Handouts → Current unit.

Lingo to be learned - definitions are provided on-line

synthesis reaction, decomposition reaction, single displacement reaction, double displacement reaction, subscript, yield, oxidation number, coefficient, endothermic, exothermic, chemical equation, reactants, products, combustion reaction