

UNION COUNTY EARLY COLLEGE HIGH SCHOOL



CHEMISTRY

Dear Student:

Welcome to my class! I look forward to a great semester with you! Chemistry is an exciting course with hands-on activities and labs. Chemistry can also be challenging.

To help make chemistry more successful, here are a few tips. Make sure that you understand the ideas behind a problem. Few activities are more frustrating than trying to solve problems that deal with concepts you do not understand. So, be sure to listen and take notes. **Chemistry is a course that builds.** Learning new concepts in chemistry will increasingly depend on your mastery of what came before. So, work hard to gain understanding in the early part of the course.

The best way to become good at solving chemistry problems is to **practice**. The more you practice, the easier the problems will be. Since chemistry is a science of predicting measured quantities, the situations in the problems will make more sense if you have an understanding of the units involved. Remember that your calculator is only a tool-the answer is only as valid as your method of solving the problem.

Please show this **sheet to your parent(s)**. Have them sign stating they have read and understand my expectations and what we are covering this semester.

Mrs. Tonya P. Adams

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Course Schedule:

| Topics: | Dates: First six weeks |
|---|------------------------|
| 1-Scientific Method -safety, data collection, ions, units and measurement, percent error, conversion factors, significant figures, density (Ch 1-2) | |
| 2-Matter-Properties and Changes -mixtures, elements and compounds (Ch 3) | |
| 3-Structure of the Atom -Theories of the atom, subatomic particles (Ch 4) | |
| 4-Electrons in Atoms -Light and quantized energy, people associated with the theories, electron configurations (Ch 5) | |
| 5-The Periodic Table and Periodic Law -Development of the modern periodic table, periodic trends, properties of the block elements (Ch 6-7) | |
| 6-Ionic and Covalent Compounds -forming bonds, characteristics, polarity, intramolecular forces, electron dot diagrams, naming compounds, molecular shapes, electronegativity (Ch 8-9) | |

| Topics: | Dates: Second six weeks |
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| 7-Chemical Reactions -Equations, classifying reactions, aqueous solutions (Ch 10) | |
| 8-The Mole -measuring matter, empirical and molecular formulas, mass \leftrightarrow mole | |

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| <i>calculations, ions must be learned by now, activity series (Ch 11)</i> |
| 9-Stoichiometry -calculations, limiting reactants, percent yield (Ch 12) |
| 10-States of Matter and Gases -barometers, phase change diagrams, gas laws, ideal gas law, gas stoichiometry, net ionic equations (Ch 13-14) |
| 11-Solutions -solution concentration, colligative properties, heterogeneous mixtures, molarity, molality (Ch 15) |
| 12- Acids and Bases -properties, Bronsted-Lowry theory, Arrhenius acids and bases, anhydrous, amphoteric substances, strength, concentration, pH and pOH, neutralization, titration, buffers (Ch 19) |

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| Topics: | Dates: Third six weeks |
| 13- Energy and Chemical Change -heat in chemical reactions and processes, thermochemical reactions, enthalpy and entropy (Ch 16) | |
| 14- Reaction rates -factors that affect reaction rates (Ch 17) | |
| 15-Equilibrium -stresses applied to reactions, Le Chatelier's principle | |
| 16-Review for the exam -One week | |

Supplies: All are required for this course. 3-ring binder with paper for notes, assignments, & quizzes from class, a scientific calculator , and pencils (more helpful than pens), pens-in blue and black ink only, and high lighters.

Expectations:

- Follow directions the first time they are given
- Come to class on time and prepared (*you bring your supplies*)
- Be in your seat when it is time to start class
- Respect yourself and others, including me, in class; do not put your head down, make noises, etc. during class time
- No food or drinks (except water) allowed in the classroom
- Upon entering the classroom, begin the “warm-up” assignment posted
- Deposit your homework assignments on my desk
- Write down your homework assignment which is posted on the white board.

Homework will be assigned daily and assessed most everyday. Write down your homework assignment which is posted on the white board. Deposit your homework assignments on my desk. Late work is not accepted. It will be your responsibility to have a *study buddy* to get help, encouragement and assignments (should you be out). They can get the notes and any work for you. Get their email and phone number. No copying homework, this is cheating and will be dealt with according to the handbook and county policy as well as our class honor code posted on the front beside the periodic table.

Your grade will be calculated as a percentage of the total number of points available for six weeks. While individual assignments, labs and quizzes may vary in number of points, *all tests are worth 100 points*-the highest number of points on an assignment.

Tutoring will be available before school, and after school if you ask me and I have planned to stay for you. Study groups are great and you are welcome to come in my room before and after school to work.

Progress Reports

- 1.
- 2.
- 3.

Report Cards

- 1.
- 2.
- 3.