ON-LEVEL CHEMISTRY

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Introduction

Chemistry is a comprehensive course offering to the student general background knowledge about the composition and structure of the physical world. The goal of chemistry is to instill in the student a curiosity about matter and its interaction; to initiate a lifetime of using an organized, evidence based problem solving approach; and to recognize the significance of chemistry to the understanding of all other sciences and its applications to everyday lives and real world situations. The chemistry curriculum is designed to develop the students reasoning and analytical skills. Experimental investigations are designed, analyzed, interpreted, applied, and communicated throughout the course.

UNITS OF STUDY:

Fall Semester	
Unit	*Summary Statement*
Classification of Matter	Distinguish between chemical and physical properties, dimensional analysis, class of substance, Density
Formula Writing	Write the chemical symbols and names of substances
Equations	Represent chemical changes in symbolic form- balance and predict products
The Mole	Introduction of the concept of the mole conversions and Avogadro's number
Stoichiometry	Calculate and measure quantitative relationships in chemical changes
Atomic Theory	Models of fundamental structures
Periodicity	Periodic trends are observable and predictable patterns

Spring Semester	
Unit	*Summary Statement*
Gas Laws /Kinetic Molecular Theory	Effects of change in Pressure, Vol, Temp, moles on samples. Position, motion, and energy of particles in states of matter.
Bonding	Interaction of atoms to form complex structures
Solutions	Investigate types, concentration, and solubility of homogeneous mixtures
Equilibrium	Describe factors that affect systems at equilibrium
Acids and Bases	Differentiate between acids, bases, buffers, and salts based on their properties
Titrations	Practical application of acid/ base reactions.
Thermo-dynamics and Kinetics	Reactions in matter that involve changes in energy

STUDENT OBJECTIVES: REQUIREMENTS AND GRADES

1. *Classwork / Lab* - Laboratory experiences are a major focus of this course. All students are expected to participate fully in these activities whether graded or non-graded.
2. *Homework / Written Assignments* - Assignments may be reading the text, answering questions, problem solving, or completing work begun in class. Work may introduce, reinforce or review concepts treated in the classroom. Most homework assignments are due the day after assigned. Homework may be given for practice and/or grade.
3. *Tests* - Tests usually consist of a variety of multiple choice, short answer, BCR and problems.
4. *Quizzes* - Frequently throughout the semester short quizzes will be given. These quizzes may be unannounced and based on the homework from previous days.
5. Grades are calculated based on a weighted average.
   45 % Tests and 45 % Quizzes, labs et al and 10 % Homework.

MATERIALS:

- TEXTBOOK- *Chemistry* - Prentice Hall – ISBN: 0-13-251210-6
- Loose-leaf paper, binder or folder and writing instruments
- Calculator –This calculator should be able to perform logarithmic functions, exponents, and square roots. (Any programmable calculator must be "Mem cleared" and checked by your teacher before use on tests or quiz. "Mem cleared" removes all games and functions from your calculator.)

EXPECTATIONS:

A. Classroom

- Participate in class in a scholarly manner. Ask *AND* answer questions.
- Be on time to class and ready to begin when the bell rings. If you have a pass, show it to me immediately. If you don't show it to me, it is unexcused.
- Personal needs should be taken care of either *before* or *after* class.
- A science laboratory is an inappropriate location for eating and drinking. All behaviors should be appropriate to the learning environment. Safety in the classroom and laboratory is a primary concern, any students who do not follow safety rules and precautions will not be permitted to complete the activity.
- Bring materials to class daily: textbook, notebook, calculator, pencils/pens. Students are not allowed to borrow one another's calculators during a test. Do NOT bring food.

B. Assignments

- All assignments will be collected on the *due date*. All assignments turned in after the *due date* will be penalized 10%. No assignment will be accepted after the *deadline*. Assignments not completed by the deadline will be given a 0%.
    - ♦**Homework -**The due date and deadline for daily homework assignments are the same. Late HW is not accepted since it is reviewed in class daily.
    - ♦**Other Assignments –**The deadline will be the day after the due date. Work must be turned in Directly to the teacher. No work will be accepted in the teacher's mailbox, desktop, or other locations.

- Make Up for Lab Work- After an excused absence, a student should make arrangements *immediately* upon his/her return to school. Only students with an *excused* absence will receive credit for the laboratory or quiz/test. No consideration will be given for labs not made up within the allotted time. It is never OK to copy another student's lab data and turn it is as your own work. Both students will receive a zero if this happens.

- Science, by its nature, is often a cooperative endeavor in the laboratory as such we will be working in groups to perform the laboratory activity and complete the lab report. Lab reports and other analysis are to be *done as individuals* followed by consultation with the group to produce the best quality responses. To reinforce the cooperative nature of science, all lab reports will be collected from the group. The group will select their best lab to be graded. The "best lab" must be produced by a different group member on a rotating basis. It is the responsibility of the group to make sure that each member of the group fully understands the lab and completes the lab report. There will be no tolerance for copying answers in lab reports (or any other work.) There is a difference between working as a group to produce the best quality answers and copying one member of the group's answers. All members of the group will be required to sign a statement with each lab indicating their full participation in the lab and lab report. Each member will also rate the participation of the other members of the group in order to ensure equal participation. The policy for academic dishonesty and cheating is outlined in the agenda book on page 30. Students should read and understand the policy and the consequences associated with these actions. Labs may also be checked by lab quizzes these will be *unannounced*.

- This is a course that requires you to build your understanding. Missed concepts will prevent students from developing the necessary background for a strong foundation. If the student is having difficulty, he/she should NOT WAIT for the test day to dawn to get help. Chemistry staff is available most mornings (approximately 6:45 a.m.) and the tutoring schedule will be posted.

GRADING

- Grades will be determined on a 100% scale.
- Students who have not met their learning goals may have the opportunity to be reassessed a formative quiz. Reassessments will be announced to the class and limited to one day at lunch to reassess. Students should not assume all quizzes are reassessable as teachers will utilize their professional judgement to determine which assessments are eligible to be reassessed. Reassessment must occur before the unit test.
- Students must complete all homework, labs, etc with legitimate effort in order to be eligible for reassessment.
- Unit tests and labs will not be reassessed.