

Chemistry I, Lawrence North H.S.

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Molecule Man's Cyber-rific
Periodic Table of the Elements

1	H																	He
2	Li	Be											B	C	N	O	F	Ne
3	Na	Mg											Al	Si	P	S	Cl	Ar
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	Ac	Rf	Db	Sg	Bh	Ht	Mt	Uuh	Uuu	Uub						

Lanthanoid Series: Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu
Actinoid Series: Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr

Legend:
Alkali Metals (yellow), Alkaline Metals (orange), Transition Metals (red), Other Metals (blue), Nonmetals (green), Noble Gases (purple)

Course Description

Chemistry is the study of matter. Major themes of this study include measurement, chemistry laboratory procedures and safety, atomic models, compounds, the periodic table of the elements, chemical formulas, chemical bonds, and chemical reactions. An activity based, multimedia approach to the study of these concepts includes the use of demonstrations, experiments, computer simulations, lectures, group learning, multimedia student presentations, Internet assignments, and student projects.

General Goals

Chemistry I will help the student to:

- Develop a consistent model of the physical universe.
- Develop and apply an organized approach to the solution of problems by the systematic collection and the logical analysis of evidence.
- Practice group process skills.
- Increase quantitative skills related to measurement and computation.
- Perceive frequent application of course content to everyday life.

Major Ideas

- Periodic Table
- Groups of Elements
- Chemical Formulas and Bonding
- Introduction to Measurement
- Energy and Matter
- Atomic Structure
- Electron Configurations
- Molecular Shape
- Chemical Reactions and Equations
- Understanding the Mole and Stoichiometry

Text: *Chemistry*, Glencoe, 2005

Methods of Evaluation

- Tests and Quizzes—Tests and quizzes are cumulative and spiral in nature in order to promote long-term learning. Tests and quizzes will account for about 1/3 of the grade.
- A loose-leaf notebook must be developed as a portfolio of all assignments, returned tests, etc. assembled **in complete accordance with the detailed directions that will be provided in a separate document.** **This** notebook/portfolio will account for about 1/3 of the grade.
- Teacher evaluation of effort, skill, technique, creativity, and perseverance in the doing of science.
- Because of the differences in the types of evaluation instruments, the level of difficulty of the topics tested, and the thinking level skills which are being evaluated, no single grading scale will apply to the variety of evaluations.

- e. In order to encourage the development of higher level thinking skills instead of basic recall and recognition, **half-page crib sheets will be used on tests and quizzes where memorization of concepts does not play an integral part in the long-term learning of chemistry. Students should check in advance to see whether or not a crib sheet will be allowed for any test or quiz.**
- f. Projects—Students will complete projects that investigate or demonstrate applications of the current topics being learned in class. Projects will worth approximately 1/3 of the grade.

Rules and Expectations

- a. You are expected to check e-mail regularly and complete on-line homework assignments.
- b. Follow all rules of student behavior as outlined in the student handbook as well as all laboratory safety rules.
- c. Avoid any behavior that would interfere with the teacher's right to teach or a student's right to learn.
- d. Listen to and follow all directions the first time they are given.
- e. Bring class materials everyday including pen, pencil, textbook, notebook, and calculator.
- f. Be honest.
- g. Refrain from bringing food or drink into the classroom.
- h. Practice kindness, respect, and consideration.
- i. Work on assignments when assigned. Chemistry takes practice. Waiting until the evening before a test to practice the homework problems usually results in low-test scores and much frustration.

Make-up Policies

- a. **It is the responsibility of the student to determine what assignments have been given or evaluated during an absence.**
- b. You are expected to make-up a test or quiz the day you return to school when the test/quiz is announced in advance.
- c. You have as many days to make things up from an absence as the number of days you are gone.
- d. Students who miss an in-class activity that cannot be easily made-up should consult with the teacher for an appropriate alternative assignment to earn comparable credit. ***This is the responsibility of the student.***

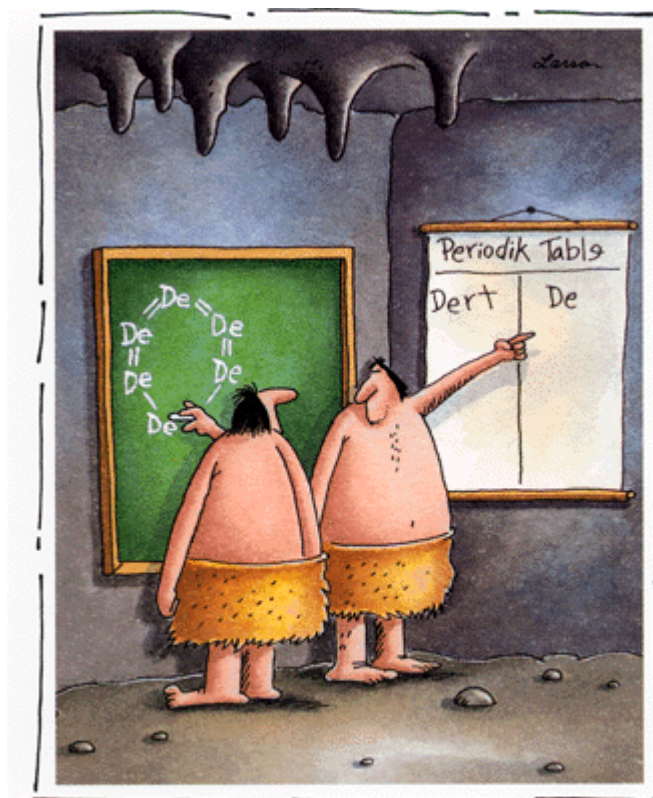
Grading System

- a. Homework is required in that it is essential to understanding the concepts involved in chemistry. *However, complete homework will intentionally be worth a low point value in the notebook checks.* This discourages dishonesty and takes pressure off of those who do their homework to allow assignments to be copied by other students. Students who complete homework assignments in order to understand the concepts, rather than just completing the assignments, will score better on tests and quizzes and will learn chemistry. Students will be able to check homework answers and ask questions pertaining to problems in class. **It is essential that students work on homework assignments throughout a unit rather than the evening before an exam.**
- b. **The grading system for this course is done on a point basis.** However, the point system will be aligned with the school grading scale. Each assignment, lab, or test will be worth a particular amount of points. After the assignment has been graded, the instructor will determine the necessary points for letter grades, corresponding to Lawrence North's grading scale. Points are cumulative throughout each nine-week period. **Semester grades are determined by adding the points from each grading period with the exam grade.**
- c. Rounding up grades is left solely to the discretion of the instructor.
- d. Students will not be allowed to skip the final exam for Chemistry I. Because the course is a Core-40 class, all students will take the Core-40 exam second semester.
- e. It is possible that a student may improve/resubmit work from the last grading period after the end of the grading period, but those improvements will not change the letter grade on the report card for the original grading period. Improvements will count toward the final point total in determining the final semester grade. Improving work from a previous grading period must be approved by the instructor on an individual basis.

- f. The school's on-line grading program will be used to periodically post a single percent grade. At any given time, a parent or student may e-mail the instructor for a detailed record of performance.

Help

Any student who needs help during the course should see, call, or e-mail the teacher for suggestions and/or help. The instructor is normally available for *scheduled* meetings before or after school. Students are encouraged to call the instructor at home before 9:00 PM. If the instructor is not at home, please leave a message that includes your phone number and the latest time that the instructor may call back.



Early chemists describe
the first dirt molecule.

Cartoon by Gary Larson, *The Far Side*