

Chemistry I Syllabus

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Course Description:

In Chemistry I, students will explore the core ideas and the seven core concepts (patterns; cause and effect; scale, proportion, and quantity; systems and system models; energy and matter; structure and function; and, stability and change) through laboratory techniques, manipulation of chemical quantities, and problem-solving practices. Chemistry courses are also laboratory based and require hands-on investigation.

Course Objectives:

As a student you will be exposed to new scientific language, concepts, technology, and research. You will actively participate in laboratory investigations to help develop or strengthen scientific curiosity and interests. You will be encouraged and guided towards taking an independent responsibility in your own learning, which will prepare you for college, technical school, and/or the workplace. This will be measured by your success in meeting the requirements to pass the class and the chemistry final exam at the end of the year.

Class Requirements:

1. Chromebook
2. A lab fee of \$20.00 (a student on free or reduced lunch may not be required to pay the lab fee, but must complete a FEE WAIVER FORM and be approved).
3. A composition notebook, paper, pencils, colored pencils, earbuds.

Class Rules:

1. Be Respectful
2. Be Responsible
3. Be Ready

Makeup work:

All missed class work, tests, projects, etc. (excused or unexcused absence) is/are required to be made up. It is the responsibility of the student to see all work missed is completed to the satisfaction of the teacher. As stated in the student handbook, a student will be allowed an equal number of days to complete the make-up work as the number of days they missed. (Example: A student who is absent two days should have all work turned in by the second day that the student has returned to school.) More time for make-up work may be granted in special circumstances by making arrangements with the teacher involved.

Late work will be accepted (one day only) but will NOT receive full credit.

Grading System:

All assignments are graded on a point system. The number of points for each assignment will vary depending on the type of assignment and the complexity of the assignment. For example, tests, labs, and projects will be assigned more points than classwork assignments. To calculate the student's average, the total number of points earned is divided by the total number of points possible.

Grading Policy: A= 90-100% B= 80-89% C= 70-79% D= 60-69% F= Below 60%

Honors Classes will be earning 3 extra points in a variety of ways. These students will be utilizing self-study, inquiry based learning, extended reading and writing assignments, virtual labs, and research projects.

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Topic	Standard
Unit 1: Matter as Particles Classification of Matter, Physical and Chemical Properties, States of Matter, Phase Changes, Kinetic Molecular Theory, Intermolecular Forces, Heat, Kinetic Energy, Gas Laws	PS2.2 PS3.1 PS3.2 PS3.4 PS1.5 PS1.6
Unit 2: The Atom Atomic Structure, Atomic Models, Isotopes, Electron Configuration, Nuclear Reactions, Periodic Table, Periodic Trends	PS1.11 PS4.1 PS1.12 PS1.9 PS1.10
Unit 3: Bonding Ionic, Metallic and Covalent Bonds, Polarity, Naming, Formulas, Molecular Shapes, Acids and Bases, Molar Mass	PS1.13 PS1.14 PS2.1 PS1.8 PS1.1
Unit 4: Chemical Reactions Mole Conversions, Balancing Equations, Types of Reactions, Endothermic, Exothermic, Stoichiometry	PS1.2 PS1.3 PS1.4 PS3.3
Unit 5: Solutions Concentration and Molarity, Colligative Properties, Solubility Rate	PS1.7 PS1.1 PS1.15 PS2.2 PS2.3 PS2.4

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