

CHEMISTRY 11

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Objective

To develop the attitudes, skills, and knowledge necessary for scientific literacy by working and communicating scientifically, practicing scientific inquiry, thinking critically and creatively, and acting with personal and social responsibility.



Course Description

For a detailed breakdown of B.C.'s new curriculum "Building Student Success" please refer to the Ministry website @ curriculum.gov.bc.ca.

Curricular Competencies

- Questioning and Predicting
- Planning and Conducting
- Processing and Analyzing data and information
- Communicating
- Applying and Innovating
- Evaluating

Big Ideas

- Atoms and molecules are the fundamental building blocks of matter.
- Chemical bonds are the result of electrostatic forces.
- Periodicity can be explained by atomic structure.
- The mole is a convenient way to express quantities of particles.
- The rearrangement of atoms in chemical reactions is predictable.
- Matter and energy are conserved in chemical reactions.
- Chemical reactions and their applications have significant implications for human health, society, and the environment.
- Solubility within a solution is determined by the nature of the solute and the solvent. Solution chemistry and its applications have significant implications for human health, society and the environment.
- Carbon's ability to form four bonds, with itself and other elements, results in a wide variety of organic compounds.
- Organic chemistry and its applications have significant implications for human health, society, and the environment.

Content

Atoms and Molecules

Classification of Matter, Atomic Models, Subatomic Structure, Quantum Mechanics, Periodicity, Chemical Bonding

The Mole

Significance and use of the Mole, Avogadro's Hypothesis, Significant Figures and Stoichiometric Calculations

Chemical Reactions

Physical and Chemical Changes, Formula Equations, Energy, Significant Figures and Stoichiometric Calculations

Practical and Local Applications

Solution Chemistry

Solubility of Molecular and Ionic compounds, Dissociation, Polarity, Properties of Solutions, Precipitate Formation

Significant Figures and Stoichiometric Calculations, Environmental Impacts of Non-metal Oxides

Organic Chemistry

Features and Applications of Organic Chemistry, Functional Groups, Bonding/ Forces, Geometry, Organic Synthesis

Classroom Responsibilities

Successful students...



- ☑ *Attend class daily.*
- ☑ *Arrive on time and are prepared to participate bringing the required materials.*
- ☑ *Actively participate in lessons and use class time constructively.*
- ☑ *Complete all assignments, to the best of their ability, and submit them on time.*
- ☑ *Respect a working and learning environment for both staff and students.*
- ☑ *Practice safe lab procedures to maintain personal and peer safety.*
- ☑ *Use personal electronic devices responsibly and respectfully.*

Resource Materials

Three Ring Binder, Lined Paper, Graph Paper, Dividers, Pencil Case, Scientific Calculator, Pencils, Eraser, Pens, Ruler (15 cm), Scissors, Pencil Crayons, Glue Stick, Face Masks, Small bottle of unscented hand sanitizer, Personal Electronic Device for use with Microsoft Teams

NOTE: All students are required to wear goggles during lab activities. Goggles will be provided for student use and are cleaned between classes, however many students prefer to purchase their own pair. If you choose to do so, please ensure the goggles in which you invest are CSA approved.

Attendance

When you are absent, please have your parents/guardians notify the school of your absence and your reason via email (argyle@sd44.ca) or telephone message (604-903-3314) as soon as possible. It is your responsibility to make up any missed work. Be sure to follow-up with me directly on Teams to make arrangements to access work, write tests or submit assignments. Patterns of absence may result in a failing grade.

Assessment and Evaluation

The work of students will be evaluated in a variety of ways:

- *Formative assessment* will be used to monitor student learning in order to modify teaching and learning strategies with the goal of improving student mastery.
- *Summative assessment* will be used to evaluate skill acquisition, student learning and mastery of specific content areas in order to summarize student development at a particular time.
- *Performance based assessment* uses a set of criteria that require students to demonstrate their knowledge and skills, including the manner in which they solve problems. Performance based assessment will be used to measure how well students can apply what they know, often to real-world situations.



Students may be given the opportunity to redo and resubmit assignments that do not meet the required criteria.

Marks will be cumulative for the entire semester and may include an in-class midterm in addition to a final.

Assignment completion, ongoing study and review, and an organized notebook are keys to success in Chemistry 11.