



ALTERNATIVE EDUCATION

Contact Information	Teacher Name: Site Phone Number: Teacher Email:
Prerequisite	A mark of at least 50% in Science 10.
Required Materials & Resources	• Seven modules and seven assignment booklets • Textbook: Chemistry, Nelson Education Ltd, 2007 • Chemistry Data Booklet, Updated 2010, Government of Alberta • Scientific calculator

Course Overview

Chemistry 20 consists of four units of study, as outlined below. These units emphasize the nature of science, science and technology and science in societal and environmental contexts.

Unit	Topics Study	Weighting
A. The Diversity of Matter and Chemical Bonding: Chapter 1: Elements and Compounds Chapter 2: Chemical Reactions Chapter 3: Understanding Chemical Compounds	• chemical bond • ionic bond • covalent bond • electronegativity • polarity • valence electron • intramolecular and intermolecular forces • hydrogen bond • electron dot diagrams • Lewis structures • valence-shell electron-pair repulsion (VSEPR) theory	20%
B. Forms of Matter: Gases: Chapter 4: Gases	• Celsius and Kelvin temperature scales • Boyle's law • ideal gas law • standard temperature and pressure (STP) • standard ambient temperature and pressure (SATP) • absolute zero • real and ideal gases • law of combining volumes • Charles's law	16%
C. Matter as Solutions, Acids and Bases: Chapter 5: The Nature and Properties of Solutions Chapter 6: Acids and Bases	• homogeneous mixtures • solubility • electrolyte/nonelectrolyte • concentration • dilution • strong acids and bases • weak acids and bases • monoprotic/polyprotic acid • monoprotic/polyprotic base • Arrhenius (modified) theory of acids and bases • indicators • hydronium ion/pH • hydroxide ion/pOH	32%

D. Quantitative Relationships in Chemical Changes: Chapter 7: Stoichiometry Chapter 8: Chemical Analysis	• neutralization • chemical reaction equations • net ionic equations • spectator ions • reaction stoichiometry • precipitation • limiting and excess reagentsactual, theoretical and percent yield • titration • end point • equivalence point • titration curves for strong acids and bases	32%
Assessment	The student’s grade will be calculated based on the following:	
	Coursework	20%
	Unit Evaluations – quizzes, exams, labs, projects	80%
	*Final Grade: 80% School awarded mark + 20% District Common Summative Assessment. Parents and students are encouraged to keep up to date on PowerSchool and contact their teacher if there are any issues.	
Important Note Regarding Assessment	A wide range of assessment information is used in the development of a student’s final grade. In Edmonton Catholic Schools, individualized assessments provide specific information regarding student progress and overall performance in class. Assessment may vary from student to student, differentiating for various student needs. It should also be noted that not all assignments are used to determine the final grade, and that scale factors may have been used to determine the weight of individual assignments.	