

**ALTERNATIVE EDUCATION**

Contact Information	Teacher Name: Site Phone Number: Teacher Email:
Prerequisite	A mark of at least 50% in Science 10.
Required Materials & Resources	• Four modules and four assignment booklets • Textbook: Science 20, Alberta Education, 2006 • Science data booklet • Scientific calculator

Course Overview

Science 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 of Study	Weighting
A. Chemical Change: Chapter 1: Aqueous Solution Chapter 2: The reduction and Oxidation of metals	electrolytes • nonelectrolytes • concentration • dilution • oxidation/anode • reduction/cathode • spontaneity • applications of oxidation-reduction reactions • voltaic cell • electrolytic cell • naming and drawing structural formulas for saturated/unsaturated hydrocarbons (containing up to eight carbon atoms in the parent chain) • hydrocarbon reactions important to industry in Alberta	25%
B. Change in Motion: Chapter 1: Describing Motion Chapter 2: Collisions	• displacement, time, velocity, acceleration • application of laws of motion and principles of momentum in the design of sports equipment and transportation safety devices • conservation of momentum in one dimension • impulse and force • Newton's laws of motion	25%
C. The Changing Earth: Chapter 1: The Abyss of Time Chapter 2: A Tropical Alberta Chapter 3: Changing Climates	• Earth's internal structure • major characteristics and life forms of past eras • theory of plate tectonics • gradualism compared to punctuated equilibrium • energy transmission in earthquakes • mass extinctions • fossilization, radiometric dating and half-life • evidence of variations in Earth's climate	25%
D. Changes in Living System: Chapter 1: The Biosphere of Life Chapter 2: Changing Populations	• biotic and abiotic factors • population size • primary and secondary succession • habitat destruction, reclamation • species diversity	25%

	• human interventions in biogeochemical (nitrogen, carbon, water) cycles • autotrophs, heterotrophs, food chains, food webs • trophic levels, biomass, energy and pyramids • human population growth, biodiversity and carrying capacity • adaptation of organisms, natural selection • evidence for the theory of evolution	
Assessment	The student's grade will be calculated based on the following:	
	Coursework	20%
	Unit Evaluations – quizzes, unit assessments, labs,	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.	