



ALTERNATIVE EDUCATION

Contact Information	Teacher Name: Site Phone Number: Teacher Email:
Prerequisite	A mark of at least 50% in Science 9.
Required Materials & Resources	• Four modules and four assignment books • Textbook: Science Connect 1, McGraw-Hill, 2006 • Scientific calculator

Course Overview

Science 14 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. Investigating Properties of Matter	• safe handling, storage and disposal of household chemicals • Workplace Hazardous Materials Information System (WHMIS) and consumer product symbols • solutions and solubility of household substances • dilution and concentration • preparing solutions • separating mixtures • acids and bases • the periodic table: metals, nonmetals and metalloids • elements and compounds • corrosion and rusting	25%
B. Understanding Energy Transfer Technologies	• cooling and heating systems based on radiation, convection, conduction • particle model of matter, temperature, thermal energy and heat • methods to reduce the loss of heat from buildings, our bodies and constructed devices • specific heat capacity • protection against thermal energy transfer • simple machines as force or distance multipliers that transfer energy • energy transfer (work), force and distance • reducing reliance on nonrenewable energy sources	25%
C. Investigating Matter & Energy in Living Systems	• structures and functions of, and the relationship between, the digestive and circulatory systems • diets and human nutritional needs • social influences on human dietary-induced disorders and circulatory diseases • microscopy, structure and function of plant and animal cell parts, and the cell theory • life functions common to living systems • functions of cells in organs and organ systems • photosynthesis and respiration • capture, storage and use of energy by living organisms • role of technology to monitor life functions	25%

D. Investigating Matter & Energy in the Environment	• role of living organisms in cycling matter • flow of energy through the biosphere • food chains, food webs and energy pyramids • maintaining equilibrium in the biosphere • recycling of human-generated wastes • biodegradable materials • impact of modern agricultural technologies • biotic and abiotic factors and ecosystems • field study of ecosystems • factors affecting population growth • human impact on ecosystems	25%
Assessment	The student’s grade will be calculated based on the following:	
	Coursework	20%
	Unit Evaluations – quizzes, exams, labs, projects	80%
	*Final Grade: 100% School awarded mark. 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.	