# Alberta Canada Science Standards

SCIENCE GRADES 7–8–9 Program of Studies 2003 (Updated 2009, 2014)

Grades 7-8-9
Earth Force focuses on all four Foundations: STS, Knowledge, Skills, and Attitudes
Developing a Nature of Science Emphasis: All Concepts, All Skills
Developing a Social and Environmental Emphasis: All Concepts, All Skills

The units listed below are those that the Earth Force Process fits well within. All objectives and standards of these units are met with following the Earth Force Curriculum.

Grade 7- Most Relevant Unit

**Unit A:** Interactions and Ecosystems (Social and Environmental Emphasis) Overview: Ecosystems develop and are maintained by natural processes and are affected by human action. To foster an understanding of ecosystems, this unit develops student awareness of ecosystem components and interactions, as well as natural cycles and processes of change. Building on this knowledge, students investigate human impacts and engage in studies that involve environmental monitoring and research. By reflecting on their findings, students become aware of the intended and unintended consequences of human activity, and recognize the need for responsible decision making and action.

Grade 8: Most Relevant Unit

**Unit E:** Freshwater and Saltwater Systems (Social and Environmental Emphasis) Overview: Earth is sometimes described as the water planet: over two-thirds of Earth's surface is covered by oceans and freshwater features. By exploring examples of aquatic systems, students come to appreciate the dynamic nature of these systems and learn about the interaction of landforms, sediments, water and climate. Students also investigate factors that affect the distribution and health of living things in aquatic environments and the supply and quality of water for human use.

Grade 9- Most Relevant Units

**Unit A:** Biological Diversity (Social and Environmental Emphasis) Overview: Biological diversity is reflected in the range of species found in local and global environments and by subtle variations in characteristics found within individual species. In this unit, students learn that diversity is maintained through natural processes of sexual and asexual reproduction, though the survival of individual species—and variations within those species—may be influenced by ecological and

human-caused factors. Students examine trends toward loss of diversity and examine related issues concerning environmental quality and the impact of technologies.

**Unit C:** Environmental Chemistry (Social and Environmental Emphasis) Overview: Environments are often viewed from a physical and biological perspective, but to fully understand how they function, it is important to view them from a chemical perspective as well. A study of environmental chemistry helps students understand that chemical substances make up the underlying fabric of the world and are part of the process in all natural cycles and changes. Through this unit, students also become aware of human-produced chemical substances that enter and interact with environments, and they investigate potential impacts of different substances on the distribution and abundance of living things.