CONNECTIONS TO THE ALBERTA PROGRAM OF STUDIES

Grade 7-9 Program of Studies via education.alberta.ca

Career and Technology Foundations (Grade 7-9)

Learning Outcomes:

CTF is exploring interests, passions and skills while making personal connections to career possibilities.

- I explore my interests and passions while making personal connections to career possibilities.
- I use occupational area skills, knowledge and technologies.
- I follow safety requirements associated with occupational areas and related technologies.
- I demonstrate environmental stewardship associated with occupational areas.

CTF is planning, creating, appraising and communicating in response to challenges.

- I plan in response to challenges.
- I make decisions in response to challenges.
- I adapt to change and unexpected events.
- I solve problems in response to challenges.
- I create products, performances or services in response to challenges.
- I appraise the skills, knowledge and technologies used to respond to challenges.
- I communicate my learning.

CTF is working independently and with others while exploring careers and technology.

- I determine how my actions affect learning.
- I develop skills that support effective relationships.
- I collaborate to achieve common goals.

Environmental and Outdoor Education (Junior High)

General Learner Expectations:

- Demonstrate awareness and appreciation of living things and understanding of basic ecological processes.
- Demonstrate skill, judgment, confidence and sensitivity in a wide range of environmentally responsible activities in outdoor settings.
- Develop knowledge and skills by investigating the effects of human lifestyles on environments.
- Develop lifestyle strategies that foster contact with the natural world, encourage responsibility for local and global environments and encourage living in harmony with others.

Specific Learner Expectations:

Outdoor Core

1. Students will approach the planning of outdoor activities with a positive regard for themselves, for others and for the environment.

Environmental Core

1. Students will demonstrate knowledge, skills and attitudes regarding the diversity of environments and life forms within those environments.
2. Students will demonstrate awareness of the interactions within environments and understanding of the interconnectedness of the earth's systems.
3. Students will demonstrate the understanding that environments change over time.
4. Students will demonstrate understanding of the air, water and soil cycles by identifying and describing examples.

Outdoor Expeditions

4. Students will demonstrate positive regard for environments and demonstrate environmentally responsible outdoor judgment and skill in carrying out activities.

Environmental Investigations

1. Students will develop skill in environmental investigations.
2. Students will identify strategies for responding to environmental concerns at the local, regional and global level.

Commitment to Action

2. Students will demonstrate appreciation of environments through respectful and considerate use of those environments.
3. Students will develop and act on plans that demonstrate responsibility for local and global environments.

Science (Grade 7)

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.

Outcomes:

1. Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions.
3. Monitor a local environment, and assess the impacts of environmental factors on the growth, health and reproduction of organisms in that environment.
4. Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments.

Unit B: Plants for Food and Fibre (Science and Technology Emphasis)

Overview: Humans have always depended on plants as a source of food and fibre, and to meet a variety of other needs. To better meet these needs, technologies have been developed for selecting and breeding productive plant varieties and for maximizing their growth by modifying growing environments. Long-term sustainability requires an awareness of the practices humans use and an examination of the impacts of these practices on the larger environment.

Outcomes:

1. Investigate plant uses; and identify links among needs, technologies, products and impacts.
3. Analyze plant environments, and identify impacts of specific factors and controls.
4. Identify and interpret relationships among human needs, technologies, environments, and the culture and use of living things as sources of food and fibre.

Science (Grade 8)

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.

Outcomes:

4. Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues.

Science (Grade 9)

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 within 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.

Outcomes:

4. Identify impacts of human action on species survival and variation within species, and analyze related issues for personal and public decision making.

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.

Outcomes:

1. Investigate and describe, in general terms, the role of different substances in the environment in supporting or harming humans and other living things.
2. Identify processes for measuring the quantity of different substances in the environment and for monitoring air and water quality.
3. Analyze and evaluate mechanisms affecting the distribution of potentially harmful substances within an environment.

Science (Grade 9) Continued

Unit D: Electrical Principles and Technologies (Science and Technology Emphasis)

Overview: Electricity provides the means to energize many devices, systems and processes that are part of our technological environment. Electrical devices are used to transfer and transform energy, to provide mechanisms for control and to transmit information in a variety of forms. In this unit, students learn the principles that underlie electrical technologies, by studying the form and function of electrical devices and by investigating ways to transfer, modify, measure, transform and control electrical energy. Using a problem-solving approach, students create and modify circuits to meet a variety of needs. Students also develop skills for evaluating technologies, by comparing alternative designs and by considering their efficiency, effectiveness and environmental impact.

Outcomes:

4. Describe and discuss the societal and environmental implications of the use of electrical energy.

Social Studies (Grade 9)

9.2 Issues for Canadians: Economic Systems in Canada and the United States

General Outcome: Students will demonstrate an understanding and appreciation of how economic decision making in Canada and the United States impacts quality of life, citizenship and identity.

Specific Outcomes

9.2.2 appreciate the relationship between consumerism and quality of life.

9.2.3 appreciate the impact of government decision making on quality of life.

9.2.5 assess, critically, the relationship between consumerism and quality of life in Canada and the United States by exploring and reflecting upon the following questions and issues:

- What are the indicators of quality of life?
- How does individual consumer behaviour impact quality of life (e.g., environmental issues)?
- How does consumerism provide opportunities for and limitations on impacting quality of life?
- To what extent do perspectives regarding consumerism, economic growth and quality of life differ regionally in North America?

9.2.6 assess, critically, the interrelationship between political decisions and economic systems by exploring and reflecting upon the following questions and issues:

- How do government decisions on environmental issues impact quality of life (i.e., preservation, exploitation and trade of natural resources)?