Alberta

Grade 5
Science

- Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; e.g.: adding pollutants, changing the flow of water, trapping or hunting pond life *(Topic E: Wetland Ecosystems (9)).*
- Recognize that changes in part of an ecosystem have effects on the whole environment *(Topic E: Wetland Ecosystems (11)).*

Social Studies

- Canadians modify and adapt to natural setting and ways that affect their lifestyle and environment (Topic A: Canada: Its Geography and People).
- Interaction between Canada and other countries (United States, France, the United Kingdom) influences our way of life (Topic C: Canada's Links with Other Countries).

Grade 6
Science

- 6–3 Design and carry out an investigation of a practical problem, and develop a possible solution.

Social Studies

- Difference in needs met by the local provincial and federal governments (Topic A: Local Government)
- The major responsibility of a local government is to deal with issues and concerns of communities (Topic A: Local Government).

Grade 7
Science

- Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions *(Unit A: Interactions and Ecosystems (1)).*
- Monitor a local environment and assess the impacts of the environmental factors on the growth, health, and reproduction of organisms in their environments *(Unit A: Interactions and Ecosystems (3)).*
- Describe the relationships among knowledge, decisions, and actions in maintaining life-supporting environments *(Unit A: Interactions and Ecosystems (4)).*
- Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and the sustainable environment *(Stewardship).*

Social Studies

- 7.2.2 Recognize the positive and negative consequences of political decisions (PADM) (Following Confederacy: Canadian Expansion).

Grade 8
Science

- Describe the distribution and characteristics of water in local and global environments, and identify the significance of water supply and quality to the needs of humans and other living things *(Unit E Freshwater and Saltwater Systems).*
- Investigate and interpret linkages among landforms, water and climate *(Unit E Freshwater and Saltwater Systems).*
- Analyze factors affecting productivity and species distribution in marine and freshwater environments *(Unit E Freshwater and Saltwater Systems).*
- Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues *(Unit E Freshwater and Saltwater Systems).*

Social Studies
Does not apply

Grade 9
Science

- Investigate and describe, in general terms, the role of different substances in the environment in supporting or harming humans and other living things *(Unit C Environmental Chemistry).*
- Identify processes for measuring the quantity of different substances in the environment and for monitoring air and water quality *(Unit C Environmental Chemistry).*
- Analyze and evaluate mechanisms affecting the distribution of potentially harmful substances within an environment *(Unit C Environmental Chemistry).*

Social Studies
Does not apply

Grade 10
Science

- Describe how the relationships among input solar energy, output terrestrial energy and energy flow within the biosphere affect the lives of people and other species, and explain the need to investigate climate change *(Unit D: Energy Flow in Global Systems (1)).*
- Analyze the relationships among net solar energy, global energy transfer processes – primarily radiation, convection and hydrologic cycles—and climate *(Unit D: Energy Flow in Global Systems (2)).*

Social Studies

- The consequences of foreign policy can result in conflict or cooperation with other nations *(Topic A: Challenges for Canada – Theme 1: Sovereignty (e)).*
- Canada's political, economic and social fabric is influenced by geographic factors *(Topic A: Challenges for Canada – Theme 2: Regionalism (b)).*
- The structure and functions of government in Canada are important *(Topic B: Citizenship in Canada – Theme 1: Politics and Government (b)).*
- The political processes are influenced by a variety of groups in the community *(Topic B: Citizenship in Canada – Theme 1: Politics and Government (c)).*
- The degree of citizen participation and the exercise of an individuals political power and responsibility are influenced by a variety of factors *(Topic B: Citizenship in Canada – Theme 2: Citizen Participation).*
- There are basic human rights that need to be protected *(Topic B: Citizenship in Canada – Theme 3: Rights and Responsibility (b)).*
- There are various means that help to protect and preserve rights in Canada *(Topic B: Citizenship in Canada – Theme 3: Rights and Responsibility (c)).*

Grade 11
Science
Science 20

- Analyze ecosystems and ecological succession in the local area and describe the relationships and interactions among subsystems and components *(Unit D: Changes in Living Systems (1))*
- Analyze and describe the adaptation of organisms to their environments, factors limiting natural populations and evolutionary changes in an ecological context *(Unit D: Changes in Living Systems (3))*

Biology 20

- Explain the cycling of matter through the biosphere *(Unit A: Energy and Matter Exchange in the Biosphere (2))*
- Explain that the biosphere is composed of ecosystems, each with distinctive biotic and abiotic characteristics *(Unit B: Ecosystems and Population Change (1))*

Chemistry 20

- Investigate solutions, describing their physical and chemical properties *(Unit C: Matter as Solutions, Acids and Bases)*

Social Studies

- National interests that affect international relationships *(Topic B: Interdependency in the Global Environment – Theme 1: Global Diversity (c))*
- Economic growth and interactions have increased global interdependency *(Topic B: Interdependency in the Global Environment – Theme 2: Economic Development and Interdependence (b))*
- Quality of life is composed of a variety of factors *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (a))*
- Quality of life is defined from different perspectives *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (b))*
- Quality of life is increasingly affected by issues of global concern *(Topic B: Interdependency in*

the Global Environment – Theme 3: Quality of life (c))

- There are issues of common global concern *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (a))*
- Solutions to global concerns often require international dialogue *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (b))*
- There are potential solutions to global concerns *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (c))*

Grade 12
Science
Science 30

- Analyze the defense mechanisms used by the human body to protect itself from pathogens found in external environments *(Unit A: Living Systems Respond to their Environments (2))*
- Analyze the sources of acids and bases and their effects on the environment *(Unit B: Chemistry and the Environment (1))*
- Analyze the sources or organic compounds and their effects in the environment *(Unit B: Chemistry and the Environment (2))*
- Analyze, from a variety of perspectives, the risks and benefits of using chemical processes in meeting human needs and assess technologies for reducing the impact of chemical compounds on the environment *(Unit B: Chemistry and the Environment (3))*

Biology 30
Does not apply

Chemistry 30

- Determine quantitative relationships in simple equilibrium systems *(Unit D: Chemical Equilibrium Focusing on Acid-Base Systems (2))*

Social Studies

- Shift in the balance of power results in new alignments among nations *(Topic B: Global Interactions – Theme 3: The Rise and Interaction of the Superpowers 1945-1991 (a))*
- Global institutions are increasingly influenced by economic developments *(Topic B: Global Interactions – Theme 4: Contemporary Global Institutions (a))*
- Concern for global peace, human rights and the environment has emphasized the need for international cooperation and understanding *(Topic B: Global Interactions – Theme 4: Contemporary Global Institutions (c))*

British Columbia

Grade 5
Science

- identify variables that can be changed in an experiment (Processes of Science)
- evaluate the fairness of a given experiment (Processes of Science)
- describe the steps in designing an experiment (Processes of Science)
- analyze how BC's living and non-living resources are used (Earth and Space Science)
- identify methods of extracting or harvesting and processing BC's resources (Earth and Space Science)
- analyze how the Aboriginal concept of interconnectedness of the environment is reflected (Earth and Space Science)
- Responsibility for and caretaking of resources (Earth and Space Science)
- describe potential environmental impacts of using BC's living and non-living resources (Earth and Space Science)

Social Studies

A1 apply critical thinking skills – including hypothesizing, comparing, imagining, inferring, identifying patterns, and summarizing – to a range of problems and issues (Skills and Processes of Social Studies)
A2 use maps and timelines to locate, interpret, and represent major physical, political, and economic features of BC and Canada (Skills and Processes of Social Studies)
D1 analyze the relationship between the economic development of communities and their available resources (Economy and Technology)
E2 describe the location of natural resources within BC and Canada, including fish and marine resources, forests, minerals, and energy resources (Human and Physical Environment)
E3 explain why sustainability is important (Human and Physical Environment)
E4 analyze environmental effects of settlement in early BC and Canada (Human and Physical Environment)

Grade 6
Science

- apply solutions to a technical problem (e.g., malfunctioning electrical circuit) (Processes of Science)
- demonstrate the appropriate use of tools to examine living things that cannot be seen with the naked eye (Life Science)
- analyze how different organisms adapt to their environments (Life Science)
- distinguish between life forms as single or multi-celled organisms and belonging to one of five kingdoms: Plantae, Animalia, Monera, Protista, Fungi (Life Science)

Social Studies

D3 effects of technology on lifestyle and environment (Economy and Technology)
C1 comparing federal government in Canada with other countries (Governance)
E1 relationship between cultures and their environments (Human and Physical Environment)
E2 factors affecting settlement patterns and population distribution (Human and Physical Environment)

Grade 7
Science

- assess survival needs and interactions between organisms and the environment (Processes of Science)
- assess the requirements for sustaining healthy local ecosystems (Processes of Science)
- evaluate human impacts on local ecosystems (Processes of Science)
- Measure substances and solutions according to pH, solubility, and concentration (Physical Science)

Social Studies
Does not apply

Grade 8
Science
D2 describe how water and ice shape the landscape (Earth and Space Science: Water Systems on Earth)
D3 describe factors that affect productivity and species distribution in aquatic environments (Earth and Space Science: Water Systems on Earth)

Social Studies
Does not apply

Grade 9
Science

- infer that diet and lifestyle are critical in helping maintain a healthy body (Life Science (Factors Affecting Body Systems))
- distinguish among the different ways that raw materials necessary for human life are utilized by the body (Life Science (Factors Affecting Body Systems))
- explain the effects of some disease-causing agents and their diseases on body systems (Life Science (Factors Affecting Body Systems))

Social Studies
Does not apply

Grade 10
Science

- describe the interactions between scientific developments and the beliefs and values of society
- identify and consider ethical implications of scientific investigations

Social Studies
Does not apply

Grade 11
Science
Biology
A1 demonstrate safe and correct technique for a variety of laboratory procedures (Processes of Biology)
A3 interpret data from a variety of text and visual sources (Processes of Biology)
D1 analyze the functional inter-relationships of organisms within an ecosystem (Ecology)
E1 evaluate the evidence used to classify viruses as living or non-living (Microbiology)
E2 evaluate the effects of viruses on human health (Microbiology)

Chemistry
B5 select an appropriate way of separating the components of a mixture

Earth Science
- identify sources of heat that drive dynamic changes in the atmosphere, hydrosphere, and interior of the earth
- describe methods of obtaining, visualizing, and analyzing local and regional information about the earth
- distinguish between renewable and non-renewable resources

Social Studies
- explain how Canadians can effect change at the federal and provincial levels (Politics and Government)
- compare Canada's standard of living with those of developing countries, with reference to poverty and key indicators of human development (Human Geography)
- assess environmental challenges facing Canadians, including: global warming, ozone layer depletion, fresh water quality and supply (Human Geography)

Civic Studies
- analyze the domestic and international effects of Canada's record with respect to issues and events in one or more of the following categories: environment, trade, foreign aid, peace and security, human rights

Grade 12
Science
Biology
B2 describe the characteristics of water and its role in biological systems (Cell Compounds and Biological Molecules)
B3 describe the role of acids, bases, and buffers in biological systems in the human body (Cell Compounds and Biological Molecules)

Chemistry
Not Applicable

Earth Science
S1. Describe the nature and constituents of subsurface water, including water table, zone of saturation, and zone of aeration, perched and confined water tables, aquifers, and impermeable layers S2. Demonstrate how the abundance, availability, and movement of subsurface water are

directly related to the porosity and permeability of geologic materials S3. Construct a subsurface water profile from sample data S4. Describe how the following human activities affect the quality and quantity of groundwater:

- Urbanization
- Waste disposal
- Agriculture
- Conservation and reclamation

Social Studies
BC First Nations Studies

- relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions, including language (Land and Relationships I)
- analyze the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: governance, economics, environment (Land and Relationships II)

Geography

- contrast the different ethics related to resource management and use (Resources of the Earth (Management of Resources))
- explain how conditions within a biome can affect resource management (Resources of the Earth (Management of Resources))
- evaluate the interrelationships of the four spheres as they apply to a local and global resource-management issue (Resources of the Earth (Management of Resources))
- assess the compatibility of human activities and population growth with concepts of sustainability (Resources of the Earth (Sustainability of Resources))
- identify how bias, data availability, and data interpretation affect the evaluation of resource sustainability (Resources of the Earth (Sustainability of Resources))
- analyze factors that make proposed resource-management solutions challenging to implement (Resources of the Earth (Sustainability of Resources))
- develop and defend a thesis relating to the sustainability of a resource (Resources of the Earth (Sustainability of Resources))

Manitoba
Grade 5
Science

- Identify components of the human body's defenses against infections, and describe their role in defending the body against infection *(Cluster 1: Maintaining a Healthy Body 5-1-09)*
- Identify and describe factors necessary to maintain a healthy body *(Cluster 1: Maintaining a Healthy Body 5-1-13)*
- Explain how human health may be affected by lifestyle choices and natural- and human-caused environmental factors *(Cluster 1: Maintaining a Healthy Body 5-1-15)*

Social Studies
Does not apply

Grade 6
Science
Does not apply

Social Studies

- KI-014 Identify changes and developments regarding Aboriginal rights in Canada from 1867 to the present (*6.3.2 A Changing and Diverse Population*)
- KL-026 Describe the influence of the natural environment on life in Canada (*6.4.1 Expressions of Canadian Identity)*
- KL-026A Describe the influence of the land on their First Nation, Inuit, or Métis identity (*6.4.1 Expressions of Canadian Identity)*
- VL-011 Value the natural environment (*6.4.1 Expressions of Canadian Identity)*
- VL-011A Respect the spiritual dimension of nature (*6.4.1 Expressions of Canadian Identity)*
- KC-005 Identify rights and freedoms described in the 1982 Canadian Charter of Rights and Freedoms and explain why they are important (*6.4.4 Creating a Just Society*)
- KG-047 Give examples of Canada's connections to other regions of the world. *Examples: environmental, social, political, economic... (6.4.5 Canadian Democracy in the World Context)*

Grade 7
Science

- Identify and describe positive and negative examples of human interventions that have an impact on ecological succession or the makeup of ecosystems *(Cluster 1: Interactions within Ecosystems 7-1-05)*
- Identify environmental, social, and economic factors that should be considered in the management and preservation of ecosystems *(Cluster 1: Interactions within Ecosystems 7-1-06)*
- Identify beneficial and harmful roles played by micro-organisms *(Cluster 1: Interactions within Ecosystems 7-1-14)*

Social Studies

- KC-002 Describe the impact of various factors on quality of life in Canada and elsewhere in the world. *Examples: access to shelter, food, water, health care, and education; globalization... (7.2.1 What Is the Good Life?)*
- KC-004 Describe ways in which their personal actions may affect quality of life for people

elsewhere in the world. *Examples: consumer choices, conservation actions, sharing of resources, letters and petitions... (7.2.1 What Is the Good Life?)*
- KI-006 Identify diverse cultural and social perspectives regarding quality of life. *Examples: differing concepts of poverty and wealth; materialism... (7.2.1 What Is the Good Life?)*
- KP-039 Give examples of government decisions that affect quality of life *(7.2.1 What Is the Good Life?)*
- KI-007 Describe the impact of discriminatory attitudes and practices on quality of life. *Include: racism, prejudice, stereotyping. (7.2.2 Universal Human Rights)*
- KG-037 Identify universal human rights and explain their importance *(7.2.2 Universal Human Rights)*
- KG-036 Identify various international organizations and describe their role in protecting or enhancing global quality of life. *Examples: United Nations, Amnesty International, Greenpeace, Médecins sans frontières... (7.2.5 Global Cooperation)*
- VG-011 Value the contributions of international agencies and humanitarians to quality of life. *Examples: Mennonite Central Committee, Red Cross; Nelson Mandela, Mother Teresa... (7.2.5 Global Cooperation)*

Grade 8
Science
- Identify sources of drinking water and describe methods for obtaining water in areas where supply is limited *(Cluster 4: Water Systems on Earth 8-4-14)*
- Explain how and why water may need to be treated for use by humans *(Cluster 4: Water Systems on Earth 8-4-15)*
- Compare the waste-water disposal system within their communities to one used elsewhere *(Cluster 4: Water Systems on Earth 8-4-16)*
- Identify substances that may pollute water, related environmental and societal impacts of pollution, and ways to reduce or eliminate effects of pollution *(Cluster 4: Water Systems on Earth 8-4-17)*
- Identify environmental, social, and economic factors that should be considered in the management of water resources *(Cluster 4: Water Systems on Earth 8-4-18)*
- Use the design process to develop a system to solve a water-related problem *(Cluster 4: Water Systems on Earth 8-4-19)*

Social Studies
Does not apply

Grade 9
Science
Does not apply

Social Studies
- Give examples of ways in which government affects their daily lives. *Examples: rights and freedoms, security, laws, education, health care, services... (Cluster w2: Democracy and Governance in Canada 9.2.1 Law, Order, and Good Government, KC-005)*
- Give examples of ways in which people can individually and collectively influence Canada's political and social systems. *Examples: voting, political parties, labour organizations, civil disobedience, NGOs, lobbying... (Cluster 2: Democracy and Governance in Canada 9.2.2 Representing Canadians, KP-046*)

- Give examples of Canada's connections with other nations. *Examples: trade, communication, environment, entertainment, sports... (Cluster 3: Canada in the Contemporary World 9.3.2 Canada's Global Responsibilities KG-034)*
- Give examples of Canada's participation within international organizations. *Examples: United Nations, Commonwealth, la Francophonie, Olympics... (Cluster 3: Canada in the Contemporary World 9.3.2 Canada's Global Responsibilities KG-038)*
- Evaluate Canada's contributions to international aid and development. *Include: government and NGOs. (Cluster 3: Canada in the Contemporary World 9.3.2 Canada's Global Responsibilities KG-039)*
- Evaluate implications of living in a consumer-based economy. *Examples: social, political, environmental... (Cluster 3: Canada in the Contemporary World 9.3.3 Living in an Industrialized Consumer Society KE- 049)*
- Give examples of the cultural, political, and economic impact of globalization on Canada. *Include: transnational corporations. (Cluster 3: Canada in the Contemporary World 9.3.3 Living in an Industrialized Consumer Society KE- 050)*
- Give examples of social and technological changes that continue to influence quality of life in Canada. *Examples: education, health care, social programs, communication, transportation... (Cluster 4: Canada: Opportunities and Challenges 9.4.1 Changing Nation KH- 033)*
- Identify possible ways of resolving social injustices in Canada *(Cluster 4: Canada: Opportunities and Challenges 9.4.3 Social Justice in Canada KH-023)*
- Give examples of opportunities and challenges related to First Nations treaties and Aboriginal rights. *(Cluster 4: Canada: Opportunities and Challenges 9.4.3 Social Justice in Canada KH-027)*
- Identify poverty issues in Canada and propose ideas for a more equitable society. *Examples: homelessness, child poverty, health care, education, nutrition... (Cluster 4: Canada: Opportunities and Challenges 9.4.3 Social Justice in Canada KE-052)*
- Respect traditional relationships that Aboriginal peoples of Canada have with the land. *(Cluster 4: Canada: Opportunities and Challenges 9.4.3 Social Justice in Canada VL-006)*
- Evaluate Canadian concerns and commitments regarding environmental stewardship and sustainability.. *(Cluster 4: Canada: Opportunities and Challenges 9.4.4 Taking Our Place in the Global Village KL-028)*
- Describe Canada's responsibilities and potential for leadership regarding current global issues. *Examples: refugees, international development, environmental stewardship, military defense... (Cluster 4: Canada: Opportunities and Challenges 9.4.4 Taking Our Place in the Global Village KG-042)*
- Identify opportunities and challenges regarding Canadian-American relationships. *Examples: protection of national sovereignty, trade, defense, environment... (Cluster 4: Canada: Opportunities and Challenges 9.4.4 Taking Our Place in the Global Village KP-047)*

Grade 10
Science

- Describe bioaccumulation and explain its potential impact on consumers *(Cluster 1: Dynamics of an Ecosystem S2-1-03)*
- Investigate how human activities affect an ecosystem and use the decision-making process to propose a course of action to enhance its sustainability *(Cluster 1: Dynamics of an Ecosystem S2-1-10)*

Social Studies

- Identify major natural resources on a map of the world, a map of North America, and a map of Canada. *Include: water, forestry, fossil fuels, metallic and non-metallic minerals. (Cluster 2: Natural Resources 2.1: Location KL-019)*
- Identify Aboriginal perspectives and rights regarding natural resources and their use. *Examples: perspectives—sacred, caretaking; resources—land claims, fishing and hunting rights, mineral rights... (Cluster 2: Natural Resources 2.2: Diverse Perspectives KI-004)*
- Identify factors that influence the changing use of natural resources over time. *Examples: technology, culture... (Cluster 2: Natural Resources 2.2: Diverse Perspectives KH-033)*
- Identify ways in which competing interests and needs influence control and use of the land and natural resources in Canada. *Examples: mining, forestry, water... (Cluster 2: Natural Resources 2.2: Diverse Perspectives KP-041)*
- Describe sustainability issues related to natural resource extraction and consumption *(Cluster 2: Natural Resources 2.3 Sustainable Development KC-002)*

Grade 11
Science
Biology

- Increase awareness of personal wellness as well as personal and family health history *(Unit 1: Wellness and Homeostasis S3B-1-01)*
- Describe examples that illustrate the critical role of the immune system in maintaining personal and societal health and investigate related issues *(Unit 5: Protection and Control S3B-5-05)*
- Describe how personal lifestyle and environmental factors can influence protection and/or control systems *(Unit 5: Protection and Control S3B-5-11)*
- Investigate and describe conditions/disorders that affect protection and/or control in the human body *(Unit 5: Protection and Control S3B-5-12)*
- Use the decision-making process to investigate the role of public health and government regulations in protecting public health *(Unit 6: Wellness and Homeostatic Changes S3B-6-04)*

Chemistry
Does not apply

Social Studies

- What effect have the changes in farm and household technology had on the economic way of life in rural Canada? On the social organization (e.g., use of time, standard of living, educational opportunities, transportation and communication links)? *(Unit 4: Social and Economic Changes in Modern Canada Since 1850 Topic 1: The Effect of Industrialization on Rural and Urban Canada)*

Grade 12
Science
Biology

- Investigate an issue related to the conservation of biodiversity. Examples: heritage seeds, water quality in Lake Winnipeg, land use designations, hydroelectric development… *(Unit 5: Conservation of Biodiversity (4))*

Chemistry
Does not apply

Social Studies
Does not apply

New Brunswick

Grade 5
Science
- The body's defense against infection
- Chemical changes that occur when materials interact with each other to form totally new materials
- Environmental Issues

Social Studies
Does not apply

Grade 6
Science
- Microorganisms

Social Studies
- Environment and culture

Grade 7
Science
- Water systems on earth

Social Studies
- Cultural empowerment
- Societal empowerment

Grade 8
Science
- Water systems on earth

Social Studies
- Water forms in all Atlantic Canada
- Sustainability

Grade 9
Science
Does not apply

Social Studies
- Geographic influences
- Decades of change
- Citizenship

Grade 10
Science
- Sustainability of ecosystems
- Weather dynamics

Social Studies
- Canadian Geography

Grade 11
Science
Biology
- Energy and matter exchange in ecosystems

Chemistry
- Matter and energy in chemical changes

Social Studies
Unknown

Grade 12
Science
Biology
- Changes in populations, communities and species

Environmental Development
- Sustainable Development
- Pollution
- Resources

Social Studies
Unknown

Newfoundland and Labrador

Grade 5
Science
- Describe the body's defenses against infections (302-8 Meeting Basic Needs and Maintaining a Healthy Body)
- Weather

Social Studies
- Our province, Newfoundland and Labrador

Grade 6
Science
- Microorganisms

Social Studies
- Role of individual, school, community, and church
- Conservation and use of natural resources

Grade 7
Science
- Changes in the land

Social Studies
- North American interaction with environment and each other
- Political institutions in North America
- Social cultural, political, and environmental diversity in North America

Grade 8
Science
- Environmental Interactions

Social Studies
- Causality as it applies to world cultures
- Importance of humanitarianism, interdependence and cooperation of world cultures

Grade 9
Science
- Environmental Quality

Social Studies
- Physical environment and social environment shape the nation
- Importance of natural resources, industries, and groups in building Canada

Grade 10
Science
Does not apply

Social Studies
- The issue of equality and human rights *(Unit 1: Canadian Culture and Social Issues)*
- National, provincial, and local environment concerns *(Unit 3: Canadian Economic and Environmental Concerns)*

Grade 11
Science
Biology
- Interactions among living things

Chemistry
- Organic chemistry

Physical Science
- Environmental issues

Social Studies
Canadian Economy
- Explain why resources would soon be depleted, exhausted, or unavailable if people could acquire any quantity of goods and services that they wanted without constraint. *(Unit 1: Fundamental Economic Concepts)*
- Describe a situation in which needs and wants are unlimited while resources for producing goods and services are limited. *(Unit 1: Fundamental Economic Concepts)*
- Define Gross Domestic Product (GDP), economic growth, and Gross National Product (GNP) *(3.1.1 Macroeconomics Unit 3)*

Grade 12
Science
Biology
- Maintaining dynamic equilibrium II

Chemistry
- Acids and Bases

North West Territories

Grade 5
Science

- Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; e.g.: adding pollutants, changing the flow of water, trapping or hunting pond life *(Topic E: Wetland Ecosystems (9))*
- Recognize that changes in part of an ecosystem have effects on the whole environment *(Topic E: Wetland Ecosystems (11))*

Social Studies

- Describe responsibilities and rights of Canadian citizens *(Citizenship Learning Outcomes 5-K-C-001)*
- Describe their responsibilities and rights as First Nations, Inuit, or Métis citizens of Canada *(Citizenship Learning Outcomes 5-K-C-001A)*
- Value oral tradition, narratives, and stories as sources of knowledge about the land *(The Land: Places and People 5-V-L-012)*
- Respect and appreciate the land that is Canada *(The Land: Places and People 5-V-L-013)*
- Demonstrate care and concern for the environment in their actions, e.g., *reduce, reuse, recycle (The Land: Places and People 5-V-L-014)*
- Appreciate the significance of natural resources in early Canada *(Economics and Resources 5-V-E-020)*

Grade 6
Science

Unknown

Social Studies

- Describe the role of key international agencies in protecting human welfare, e.g., *United Nations, UNICEF, Amnesty International, Médecins sans frontiers (Global Connections 6-K-G-030)*
- Describe universal human rights as defined by the U.N. Declaration of Human Rights, and the Declaration of the Rights of the Child *(Global Connections 6-K-G-031)*
- Identify factors that affect quality of life for young people in the world, e.g., *labour practices, access to education, shelter, food and water, health care (Economics and Resources 6-K-E-038)*

Grade 7
Science

- Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions *(Unit A: Interactions and Ecosystems (1))*
- Monitor a local environment and assess the impacts of the environmental factors on the growth, health, and reproduction of organisms in their environments *(Unit A: Interactions and Ecosystems (3))*
- Describe the relationships among knowledge, decisions, and actions in maintaining life-supporting environments *(Unit A: Interactions and Ecosystems (4))*
- Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and the sustainable environment *(Stewardship).*

Social Studies

- Appreciate the influence of the northern environment on life in Canada *(The Land: Places and People 7-VL-008)*
- Appreciate the influence of the land on their identities, values, beliefs, traditions, customs, art, and clothing *(The Land: Places and People 7-V-L-008A)*
- Demonstrate willingness to support the principles of stewardship and sustainability in their choices and actions *(The Land: Places and People 7-V-L-009)*
- Respect the spiritual dimension of nature *(The Land: Places and People 7-V -L-009A)*
- Demonstrate awareness of environmental issues particular to northern latitudes, e.g., *fragile ecosystems, natural hazards, resource depletion, global warming (The Land: Places and People 7-K-L-013)*
- Demonstrate understanding of the concepts of stewardship and sustainability *(The Land: Places and People 7-K-L-021)*
- Describe the main responsibilities of municipal, provincial or territorial, federal, and Aboriginal governments in Canada *(Power and Authority 7-K-P-043)*
- Demonstrate awareness of economic, environmental, technological, and social factors that affect quality of life *(Economics and Resources 7-K-E-047)*
- Describe the economic conditions shared by peoples and nations in the circumpolar world, e.g., *high cost of living, resource-dependent economies, non-renewable resource use, transportation costs (Economics and Resources 7-K-E-048)*
- Give examples of natural resources found in the circumpolar world *(Economics and Resources 7-K-E-049)*
- Give examples of technologies that have enabled people to adapt to Canada's northern environment *(Economics and Resources 7-K-E-051)*

Grade 8
Science

- Describe the distribution and characteristics of water in local and global environments, and identify the significance of water supply and quality to the needs of humans and other living things *(Unit E Freshwater and Saltwater Systems)*
- Investigate and interpret linkages among landforms, water and climate *(Unit E Freshwater and Saltwater Systems)*
- Analyze factors affecting productivity and species distribution in marine and freshwater environments *(Unit E Freshwater and Saltwater Systems)*
- Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues *(Unit E Freshwater and Saltwater Systems)*

Environmental Science
- Basic ecological concepts
- Global environmental issues

Social Studies
World Geography
- 3.5.1 Draw conclusions about possible shorter and long-term impacts of a threat to an ecosystem (a) (Unit 3: Ecosystems)
- 3.5.2 Anticipate actions needed to help ameliorate an environmental risk. (i) (Unit 3: Ecosystems)
- 3.5.3 Relate climatic zones to areas of environmental risk. (a) (Unit 3: Ecosystems)
- 3.5.4 Analyze value positions taken on environmental issues. (a) (Unit 3: Ecosystems)

Social Studies
- Give examples of the influences of the natural environment on ways of life and worldviews in societies studied *(The Land: Places and People 8-K-L-016)*
- Give examples of ways in which the natural environment influenced technological development in societies studied *(The Land: Places and People 8-K-L-017)*
- Analyze the movement and settlement patterns of people in societies studied *(The Land: Places and People 8-K-L-018)*
- Describe diverse approaches to land ownership, use, and development in societies studied *(The Land: Places and People 8-K-L-019)*

Grade 9
Science
- Investigate and describe, in general terms, the role of different substances in the environment in supporting or harming humans and other living things *(Unit C Environmental Chemistry)*
- Identify processes for measuring the quantity of different substances in the environment and for monitoring air and water quality *(Unit C Environmental Chemistry)*
- Analyze and evaluate mechanisms affecting the distribution of potentially harmful substances within an environment *(Unit C Environmental Chemistry)*

Social Studies
- Demonstrate willingness to exercise their roles, responsibilities, and rights as Canadian citizens *(Citizenship Learning Outcomes 9-V-C-001)*
- Demonstrate willingness to exercise their roles, responsibilities, and rights as First Nations, Inuit, or Métis citizens of Canada *(Citizenship Learning Outcomes 9-V-C-001A)*
- Appreciate the significance of treaties and claims *(The land: Places and People 9-V-L-011)*
- Demonstrate willingness to support the principles of stewardship and sustainability their choices and actions *(The land: Places and People 9-V-L-012)*
- Appreciate the traditional relationships that Aboriginal peoples have with the land *(The land: Places and People 9-V-L-013)*
- Demonstrate awareness of issues related to natural resource use, stewardship, and sustainability in contemporary Canada*(The land: Places and People 9-K-L-027)*
- Evaluate how competing interests and needs influence the division, use, and control of the land and resources in Canadian society, e.g., *land claims, treaties, fishing and hunting rights, mining, forestry, hydroelectric development (The land: Places and People 9-K-L-028)*

- Demonstrate understanding of the long-term implications of First Nations treaties and Aboriginal rights to land and resources *(The land: Places and People 9-K-L-029)*
- Demonstrate understanding of First Nations, Inuit, and Métis traditional responsibilities as caregivers of the land *(The land: Places and People 9-K-L-029A)*
- Evaluate the effects of negotiated political arrangements on Canadians, e.g., *treaties, federal-provincial agreements, the constitution (Time, Continuity, and Change 9-K-T-032)*
- Identify reasons for Canada's participation in international organizations, e.g., *United Nations, Commonwealth, Arctic Council, la Francophonie, North Atlantic Treaty Organization (Global Connections 9-K-G-042)*
- Demonstrate awareness of Canadian concerns and commitments regarding global environmental protection, e.g., *Kyoto protocol, sustainability (Global Connections 9-K-G-044)*
- Distinguish local, provincial or territorial, First Nations, and federal government Responsibilities *(Power and Authority 9-K-P-046)*

Grade 10
Science

- Describe how the relationships among input solar energy, output terrestrial energy and energy flow within the biosphere affect the lives of people and other species, and explain the need to investigate climate change *(Unit D: Energy Flow in Global Systems (1))*
- Analyze the relationships among net solar energy, global energy transfer processes – primarily radiation, convection and hydrologic cycles—and climate *(Unit D: Energy Flow in Global Systems (2))*

Social Studies

- The consequences of foreign policy can result in conflict or cooperation with other nations *(Topic A: Challenges for Canada – Theme 1: Sovereignty (e))*
- Canada's political, economic and social fabric is influenced by geographic factors *(Topic A: Challenges for Canada – Theme 2: Regionalism (b))*
- The structure and functions of government in Canada are important *(Topic B: Citizenship in Canada – Theme 1: Politics and Government (b))*
- The political processes are influenced by a variety of groups in the community *(Topic B: Citizenship in Canada – Theme 1: Politics and Government (c))*
- The degree of citizen participation and the exercise of an individuals political power and responsibility are influenced by a variety of factors *(Topic B: Citizenship in Canada – Theme 2: Citizen Participation)*
- There are basic human rights that need to be protected *(Topic B: Citizenship in Canada – Theme 3: Rights and Responsibility (b))*
- There are various means that help to protect and preserve rights in Canada *(Topic B: Citizenship in Canada – Theme 3: Rights and Responsibility (c))*

Grade 11
Science
Science 20

- Analyze ecosystems and ecological succession in the local area and describe the relationships and interactions among subsystems and components *(Unit D: Changes in Living Systems (1))*
- Analyze and describe the adaptation of organisms to their environments, factors limiting natural populations and evolutionary changes in an ecological context *(Unit D: Changes in*

Living Systems (3))

Biology 20

- Explain that the biosphere is composed of ecosystems, each with distinctive biotic and abiotic characteristics *(Unit B: Ecosystems and Populations (1))*

Chemistry 20

Does not apply

Social Studies

- National interests that affect international relationships *(Topic B: Interdependency in the Global Environment – Theme 1: Global Diversity (c))*
- Economic growth and interactions have increased global interdependency *(Topic B: Interdependency in the Global Environment – Theme 2: Economic Development and Interdependence (b))*
- Quality of life is composed of a variety of factors *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (a))*
- Quality of life is defined from different perspectives *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (b))*
- Quality of life is increasingly affected by issues of global concern *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (c))*
- There are issues of common global concern *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (a))*
- Solutions to global concerns often require international dialogue *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (b))*
- There are potential solutions to global concerns *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (c))*

Grade 12
Science
Science 30

- Analyze the defense mechanisms used by the human body to protect itself from pathogens found in external environments *(Unit A: Living Systems Respond to their Environments (2))*
- Analyze the sources of acids and bases and their effects on the environment *(Unit B: Chemistry and the Environment (1))*
- Analyze the sources or organic compounds and their effects in the environment *(Unit B: Chemistry and the Environment (2))*
- Analyze, from a variety of perspectives, the risks and benefits of using chemical processes in meeting human needs and assess technologies for reducing the impact of chemical compounds on the environment *(Unit B: Chemistry and the Environment (3))*

Biology 30
Does not apply

Chemistry 30
Does not apply

Social Studies

- Shift in the balance of power results in new alignments among nations *(Topic B: Global Interactions – Theme 3: The Rise and Interaction of the Superpowers 1945-1991 (a))*
- Global institutions are increasingly influenced by economic developments *(Topic B: Global Interactions – Theme 4: Contemporary Global Institutions (a))*
- Concern for global peace, human rights and the environment has emphasized the need for international cooperation and understanding *(Topic B: Global Interactions – Theme 4: Contemporary Global Institutions (c))*

Nova Scotia

Grade 5
Science
Unknown

Social Studies
Unknown

Grade 6
Science
Unknown

Social Studies
Unknown

Grade 7
Science

- Provide examples of problems That arise in the environment that cannot be solved using scientific or technical knowledge (113-10) *[Interactions within Ecosystems]*
- Mixtures and solutions

Social Studies
Unknown

Grade 8
Science

- Provide examples of public and private Canadian institutions that support scientific and technological research involving the oceans (112-5) *[Water Systems on Earth]*
- Apply the concept of systems to show how changes in one component of a body of water causes change in other components in that system (111-6) *[Water Systems on Earth]*
- Analyze factors that affect productivity and species distribution in marine and fresh water environments *[Water Systems on Earth]*
- Describe some positive and negative effects of marine technologies in the ocean (113-2) *[Water systems on Earth]*
- Provide examples of problems related to the oceans that cannot be resolved using scientific and technological knowledge (113-10) *[Water Systems on Earth]*

Social Studies

- Take age-appropriate action that demonstrates the rights and responsibilities of citizenship (local, national, and global) (*Unit 4: Citizenship*)

Grade 9
Science
Unknown

Social Studies
- Identify landforms and water forms in Atlantic Canada that contribute to the aesthetic appeal and character of the region (I) *[Physical Setting]*
- Identify a human-made threat to each of the resource industries (A) *[Physical Setting]*
- Research the issue of sustainability in one resource industry and suggest the steps that are necessary to achieve this (I) *[Physical Setting]*

Grade 10
Science
- Explain how a paradigm shift can change scientific world views in understanding sustainability (114-1) *[Sustainability of Ecosystems]*
- Plan changes to, predict the effects of, and analyze the impact of external factors on an ecosystem (331-6, 213-8, and 212-4) [Sustainability of Ecosystems]
- Analyze the impact of external factors on the ecosystem (331-6) *[Sustainability of Ecosystems]*
- Explain why the ecosystem may respond differently to short-term stress and long-term change (318-4) *[Sustainability of Understanding]*

Social Studies
Unknown

Grade 11
Science
Biology
- An understanding of Canadian ecology and geography promotes national awareness and good decision-making *[Interactions Among Living Things]*
- Propose and evaluate courses of action on social issues related to the natural balance of ecosystems (118-10) *[Interactions Among Living Things]*

Chemistry
Does not apply

Social Studies
Unknown
Grade 12
Science
Biology
Does not apply

Chemistry
Does not apply

Social Studies
World Geography

- To help students evaluate the term resource crisis by examining human consumption, the natural storehouse, and the influence of one upon the other. *[Unit 5: Global Resources: The Good Earth]*
- To examine methods of managing consumption that enhance the conservation and preservation of renewable and non-renewable resources *[Unit 5: Global Resources: The Good Earth]*

Nunavut

Grade 5
Science
- Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; e.g.: adding pollutants, changing the flow of water, trapping or hunting pond life *(Topic E: Wetland Ecosystems (9))*
- Recognize that changes in part of an ecosystem have effects on the whole environment *(Topic E: Wetland Ecosystems (11))*

Social Studies
- Describe responsibilities and rights of Canadian citizens *(Citizenship Learning Outcomes 5-K-C-001)*
- Describe their responsibilities and rights as First Nations, Inuit, or Métis citizens of Canada *(Citizenship Learning Outcomes 5-K-C-001A)*
- Value oral tradition, narratives, and stories as sources of knowledge about the land *(The Land: Places and People 5-V-L-012)*
- Respect and appreciate the land that is Canada *(The Land: Places and People 5-V-L-013)*
- Demonstrate care and concern for the environment in their actions, e.g., *reduce, reuse, recycle (The Land: Places and People 5-V-L-014)*
- Appreciate the significance of natural resources in early Canada *(Economics and Resources 5-V-E-020)*

Grade 6
Science
Does not apply

Social Studies
- Describe the role of key international agencies in protecting human welfare, e.g., *United Nations, UNICEF, Amnesty International, Médecins sans frontiers (Global Connections 6-K-G-030)*
- Describe universal human rights as defined by the U.N. Declaration of Human Rights, and the Declaration of the Rights of the Child *(Global Connections 6-K-G-031)*
- Identify factors that affect quality of life for young people in the world, e.g., *labour practices, access to education, shelter, food and water, health care (Economics and Resources 6-K-E-038)*

Grade 7
Science
See below

Social Studies

- Appreciate the influence of the northern environment on life in Canada *(The Land: Places and People 7-VL-008)*
- Appreciate the influence of the land on their identities, values, beliefs, traditions, customs, art, and clothing *(The Land: Places and People 7-V-L-008A)*
- Demonstrate willingness to support the principles of stewardship and sustainability in their choices and actions *(The Land: Places and People 7-V-L-009)*
- Respect the spiritual dimension of nature *(The Land: Places and People 7-V -L-009A)*
- Demonstrate awareness of environmental issues particular to northern latitudes, e.g., *fragile ecosystems, natural hazards, resource depletion, global warming (The Land: Places and People 7-K-L-013)*
- Demonstrate understanding of the concepts of stewardship and sustainability *(The Land: Places and People 7-K-L-021)*
- Describe the main responsibilities of municipal, provincial or territorial, federal, and Aboriginal governments in Canada *(Power and Authority 7-K-P-043)*
- Demonstrate awareness of economic, environmental, technological, and social factors that affect quality of life *(Economics and Resources 7-K-E-047)*
- Describe the economic conditions shared by peoples and nations in the circumpolar world, e.g., *high cost of living, resource-dependent economies, non-renewable resource use, transportation costs (Economics and Resources 7-K-E-048)*
- Give examples of natural resources found in the circumpolar world *(Economics and Resources 7-K-E-049)*
- Give examples of technologies that have enabled people to adapt to Canada's northern environment *(Economics and Resources 7-K-E-051)*

Grade 8
Science
See below

Social Studies

- Give examples of the influences of the natural environment on ways of life and worldviews in societies studied *(The Land: Places and People 8-K-L-016)*
- Give examples of ways in which the natural environment influenced technological development in societies studied *(The Land: Places and People 8-K-L-017)*
- Analyze the movement and settlement patterns of people in societies studied *(The Land: Places and People 8-K-L-018)*
- Describe diverse approaches to land ownership, use, and development in societies studied *(The Land: Places and People 8-K-L-019)*

Grade 9
Science **THIS CURRICULUM IS FOR GRADE 7-9 AND IS MEANT TO BE LEARNT OVER A THREE YEAR TIME SPAN

- How organisms adapt to unique environments and situations *(Strand: Life and the Environment)*
- What relationships exist among organisms in their environment *(Strand: Life and the Environment)*
- How "we" interact with the environment: traditional and western perceptions of ecological concepts use of renewable and non-renewable resources, population management, conservation and environmental problems, cycles, present and alternative energy sources *(Strand: Life and the Environment)*
- How industry and technology interact with and affect the Northern environment: benefits, trade-offs, issues *(Strand: Life and the Environment)*
- How they affect and are affected by technology in the North
- Traditional and local knowledge as it pertains to the perception and understanding of their environment: cultures of the North and other world views. *(Strand: Life and the Environment)*

Social Studies

- Demonstrate willingness to exercise their roles, responsibilities, and rights as Canadian citizens *(Citizenship Learning Outcomes 9-V-C-001)*
- Demonstrate willingness to exercise their roles, responsibilities, and rights as First Nations, Inuit, or Métis citizens of Canada *(Citizenship Learning Outcomes 9-V-C-001A)*
- Appreciate the significance of treaties and claims *(The land: Places and People 9-V-L-011)*
- Demonstrate willingness to support the principles of stewardship and sustainability their choices and actions *(The land: Places and People 9-V-L-012)*
- Appreciate the traditional relationships that Aboriginal peoples have with the land*(The land: Places and People 9-V-L-013)*
- Demonstrate awareness of issues related to natural resource use, stewardship, and sustainability in contemporary Canada *(The land: Places and People 9-K-L-027)*
- Evaluate how competing interests and needs influence the division, use, and control of the land and resources in Canadian society, e.g., *land claims, treaties, fishing and hunting rights, mining, forestry, hydroelectric development (The land: Places and People 9-K-L-028)*
- Demonstrate understanding of the long-term implications of First Nations treaties and Aboriginal rights to land and resources *(The land: Places and People 9-K-L-029)*
- Demonstrate understanding of First Nations, Inuit, and Métis traditional responsibilities as caregivers of the land *(The land: Places and People 9-K-L-029A)*
- Evaluate the effects of negotiated political arrangements on Canadians, e.g., *treaties, federal-provincial agreements, the constitution (Time, Continuity, and Change 9-K-T-032)*
- Identify reasons for Canada's participation in international organizations, e.g., *United Nations, Commonwealth, Arctic Council, la Francophonie, North Atlantic Treaty Organization (Global Connections 9-K-G-042)*
- Demonstrate awareness of Canadian concerns and commitments regarding global environmental protection, e.g., *Kyoto protocol, sustainability (Global Connections 9-K-G-044)*
- Distinguish local, provincial or territorial, First Nations, and federal government Responsibilities *(Power and Authority 9-K-P-046)*

Grade 10
Science

- Describe how the relationships among input solar energy, output terrestrial energy and energy flow within the biosphere affect the lives of people and other species, and explain the need to investigate climate change *(Unit D: Energy Flow in Global Systems (1))*
- Analyze the relationships among net solar energy, global energy transfer processes – primarily radiation, convection and hydrologic cycles—and climate *(Unit D: Energy Flow in Global Systems (2))*

Social Studies

- The consequences of foreign policy can result in conflict or cooperation with other nations *(Topic A: Challenges for Canada – Theme 1: Sovereignty (e))*
- Canada's political, economic and social fabric is influenced by geographic factors *(Topic A: Challenges for Canada – Theme 2: Regionalism (b))*
- The structure and functions of government in Canada are important *(Topic B: Citizenship in Canada – Theme 1: Politics and Government (b))*
- The political processes are influenced by a variety of groups in the community *(Topic B: Citizenship in Canada – Theme 1: Politics and Government (c))*
- The degree of citizen participation and the exercise of an individuals political power and responsibility are influenced by a variety of factors *(Topic B: Citizenship in Canada – Theme 2: Citizen Participation)*
- There are basic human rights that need to be protected *(Topic B: Citizenship in Canada – Theme 3: Rights and Responsibility (b))*
- There are various means that help to protect and preserve rights in Canada *(Topic B: Citizenship in Canada – Theme 3: Rights and Responsibility (c))*

Grade 11
Science
Science 20

- Analyze ecosystems and ecological succession in the local area and describe the relationships and interactions among subsystems and components *(Unit D: Changes in Living Systems (1))*
- Analyze and describe the adaptation of organisms to their environments, factors limiting natural populations and evolutionary changes in an ecological context *(Unit D: Changes in Living Systems (3))*

Biology 20

- Explain that the biosphere is composed of ecosystems, each with distinctive biotic and abiotic characteristics *(Unit B: Ecosystems and Populations (1))*

Chemistry 20
Does not apply

Social Studies

- National interests that affect international relationships *(Topic B: Interdependency in the Global Environment – Theme 1: Global Diversity (c))*
- Economic growth and interactions have increased global interdependency *(Topic B: Interdependency in the Global Environment – Theme 2: Economic Development and Interdependence (b))*
- Quality of life is composed of a variety of factors *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (a))*
- Quality of life is defined from different perspectives *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (b))*
- Quality of life is increasingly affected by issues of global concern *(Topic B: Interdependency in the Global Environment – Theme 3: Quality of life (c))*
- There are issues of common global concern *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (a))*
- Solutions to global concerns often require international dialogue *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (b))*
- There are potential solutions to global concerns *(Topic B: Interdependency in the Global Environment – Theme 4: Alternative Futures: Possibilities for Change (c))*

Grade 12
Science
Science 30

- Analyze the defense mechanisms used by the human body to protect itself from pathogens found in external environments *(Unit A: Living Systems Respond to their Environments (2))*
- Analyze the sources of acids and bases and their effects on the environment *(Unit B: Chemistry and the Environment (1))*
- Analyze the sources or organic compounds and their effects in the environment *(Unit B: Chemistry and the Environment (2))*
- Analyze, from a variety of perspectives, the risks and benefits of using chemical processes in meeting human needs and assess technologies for reducing the impact of chemical compounds on the environment *(Unit B: Chemistry and the Environment (3))*

Biology 30
Does not apply

Chemistry 30
Does not apply

Environmental Studies 35
- Identify the various categories of environmental pollutants/hazards that affect Northern ecosystems (Air, water, soil)

Social Studies
- Shift in the balance of power results in new alignments among nations *(Topic B: Global Interactions – Theme 3: The Rise and Interaction of the Superpowers 1945-1991 (a))*
- Global institutions are increasingly influenced by economic developments *(Topic B: Global Interactions – Theme 4: Contemporary Global Institutions (a))*
- Concern for global peace, human rights and the environment has emphasized the need for international cooperation and understanding *(Topic B: Global Interactions – Theme 4: Contemporary Global Institutions (c))*

Inuuqatigiit - Water

Grade 4-6
- Learn how bodies of water around your community can become dangerous, and the precautions necessary to ensure safety near water. Appreciate the power of water
- Learn that water in rivers, lakes, and the sea changes under different seasons. Begin to learn Inuit terms for water under different conditions
- Learn how plants depend on water. Discover plans that live in or near water
- Learn some traditional Inuit beliefs about water

Grade 7-9
Understand the relationship between water, weather and seasons
Learn when high and low tides occur and appreciate the power of tides
Learn about currents and channels and lakes, rivers and seas
Learn about plants and animals that live in water

Grade 10-12

Learn how to travel safely on water
Learn how to tell when it is safe to travel by sea
Learn about areas of water that never freeze in lakes, rivers and/or the sea near your community
Learn what can harm water and how to prevent it

Ontario

Grade 5
Science
Does not apply

Social Studies
- Identify services provided by the federal government (5x34)
- Demonstrate an understanding that for every right (e.g. the right of democratic governance) there is a responsibility (e.g. the responsibility to vote) (5z36)
- Research ways in which three levels of government work together (e.g. in responding to natural disasters) (5z48)

Grade 6
Science
- Formulate questions about and identify needs and problems related to the structures and mechanisms in the environment, and explore possible answers and solutions (6s88)

Social Studies
- Describe the relationship between the Aboriginal peoples and the environment (e.g. with respect to food, shelter, cultural practices) (6z5)
- Identify current concerns of Aboriginal peoples (e.g. self0governemnt, land claims) (6z17)

Grade 7
Science
- Investigate the impact of the use of technology on the environment (7s18)
- Identify and explain economic, environmental, and social factors that should be considered in the management and preservation of habitats (7s24)

Social Studies
- Demonstrate an understanding of how Canada's natural resources have contributed to its economic development (7g47)
- Demonstrate an understanding that people use renewable, non-renewable and flow resources in a variety of ways to meet their needs (7g50)

Grade 8
Science
Does not apply

Social Studies
Does not apply

Grade 9
Science
Does not apply

Social Studies
Resource Management
- describe the impact of economic, social, technological, environmental, and health factors on lifestyle decisions (e.g., whether to purchase a product, use a service, or participate in an activity);

Grade 10
Science
- Describe the physical and chemical processes involved in the methods used to clean up a contaminated site (e.g., how absorbent chemicals such as charcoal work in cleaning up oil spills) (Sustainability of Ecosystems)
- Identify and evaluate Canadian initiatives in protecting Canada's ecosystems (Sustainability of Ecosystems)
- Explain changes in popular views about the sustainability of ecosystems and humans' responsibility in preserving them (e.g., the shift from a belief that all resources are inexhaustible to the belief that recycling, reusing, and reducing are important) (Sustainability of Ecosystems)

Social Studies
Does not apply

Grade 11
Science
Biology
- Demonstrate an understanding of the characteristics of various micro-organisms, of their role in the environment, and of their influences on other organisms, including humans (Microbiology)
- Explain the role of micro-organisms with respect to human health and in technological applications in medicine, industry, and the environment. (Microbiology)
- Evaluate the impact of viral, bacterial, and fungal infections on the health of host organisms, and on humans in particular (e.g., examine the relationship between the emergence of new species of bacteria and viruses and the use of antibiotics, and determine the health implications for human populations) (Microbiology)
- Describe some ways in which viruses, bacteria, and fungi are used in biotechnology (e.g., describe the use of viruses as vectors and as restriction enzymes) (Relating Science to Technology, Society, and the Environment – Microbiology)
- Explain and illustrate the roles of viruses and bacteria in genetic engineering (Relating Science to Technology, Society, and the Environment – Microbiology)
- Evaluate the effects of large-scale use of fungicides and pesticides on the diversity of micro-organisms (Relating Science to Technology, Society, and the Environment – Microbiology)
- Describe some beneficial functions of micro-organisms in an ecosystem (e.g., the role of bacteria as decomposers) (Relating Science to Technology, Society, and the Environment – Microbiology)

- Demonstrate an understanding of factors that influence the sustainability of the natural environment and evaluate their importance (Environmental Science)
- Analyze how various factors influence the relationships between organisms and the natural environment (Environmental Science)
- Explain why it is important to be aware of the impact of human activities on the natural environment (Environmental Science)

Chemistry

- Explain the origins of pollutants in natural waters (e.g., landfill leachates, agricultural run-off), and identify the allowable concentrations of metallic and organic pollutants in drinking water (Solutions and Solubility)
- Describe the technology and the major steps involved in the purification of drinking water and the treatment of waste water (Solutions and Solubility)
- Explain hardness of water, its consequences (e.g., pipe scaling), and water-softening methods (e.g., ion exchange resins) (Solutions and Solubility)

Social Studies

Does not apply

Grade 12
Science
Biology

Does not apply

Chemistry

- Demonstrate an awareness of how governmental regulations (e.g., the Great Lakes Action Plan) as well as the actions of individual people can improve air and water quality (e.g., discuss how individuals can contribute to the improvement of air quality through their choice of transportation) (Chemistry in the Environment)
- Assess the environmental, economic, and societal implications of methods of use and disposal of common household products (e.g. analyze the issues involved in the use and disposal in everyday life of detergents containing phosphates, or of batteries and cleaners containing acids and bases) (Chemistry in the Environment)
- Explain the importance of quantitative analysis of substances in air and water samples (e.g., explain how measuring levels of dissolved oxygen in samples of lake or river water is important in monitoring the health and use of the surrounding ecosystem) (Chemistry in the Environment)
- Determine the concentration of dissolved ions (e.g., calcium ions) in a water sample, using gravimetric and colorimetric analysis (Chemistry in the Environment)

Social Studies

Does not apply

PEI

Grade 5
Science
- Meeting basic needs and maintaining a healthy body
- Properties and changes in materials

Social Studies
Unknown

Grade 6
Science
- Diversity of life

Social Studies
Unknown.

Grade 7
Science
- Provide examples of problems That arise in the environment that cannot be solved using scientific or technical knowledge (113-10)
- Mixtures and solutions

Social Studies
See Grade 9 Social Studies

Grade 8
Science
- Water systems on earth

Social Studies
- Take age-appropriate action that demonstrates the rights and responsibilities of citizenship (local, national, and global) (*Unit 4: Citizenship*)

Grade 9
Science
Does not apply

Social Studies
- explain how consumer decisions affect the economy (Individuals, Societies, and Economic Choices)
- examine causes, conditions, consequences and possible solutions to persistent, contemporary and emerging global issues such as health, security, resource allocation, economic development and environmental quality (Global Connections)
- analyze cases and policy statements relating to universal human rights and equity principles (Global Connections)
- analyze the effects of changing technologies on the global community (Global Connections)
- identify and critically examine persistent issues involving the rights, responsibilities, roles and

status of individual citizens and groups in a local, national and global context (Citizenship, Power and Governance)
- articulate the ways in which prejudice and stereotyping in society may be reduced (Citizenship, Power and Governance)
- explain, analyze and compare the effectiveness of various methods of influencing public policy (Citizenship, Power and Governance)

Grade 10
Science
- Sustainability of ecosystems

Social Studies
Unknown

Grade 11
Science
Agriscience
- Relate agriscience to agriculture, agribusiness, and renewable natural resources

Biology
- Performing an aquatic or terrestrial field study, including the gathering and analyzing of both quantitative and qualitative data on abiotic and biotic factors *(Energy and Matter Exchange in Ecosystems)*

Chemistry
Does not apply

Social Studies
Unknown

Grade 12
Science
Agriscience
- Describe the conditions of desirable living spaces

Biology
Does not apply

Chemistry
Does not apply

Social Studies
Unknown

Quebec

General History

- To show the relationship between technological innovations and the recent evolution of Western societies *(Module 7: The 20th Century)*
- To identify some aspects of the continuity, pace and relative nature of change in the world today *(Module 7: The 20th Century)*

General Biology

- To show that an ecosystem is a group of interacting components (Module II: Balance in Nature)
- To show that the interactions among living and non-living things are regulating mechanisms that exist within an ecosystem (Module II: Balance in Nature)
- To show that interactions among living things are regulating mechanisms that exist within an ecosystem (Module II: Balance in Nature)
- To show that certain regulating mechanisms are necessary to maintain a balanced ecosystems (Module II: Balance in Nature)
- To associate quality of life with a well-balanced organism and a sable ecosystem (Module II: Balance in Nature)

Ecology

Module 5: Environmental Influences on Living Organisms

Saskatchewan

Grades 5
Science
- Conservation, pollution, resources, soil, technology, the environment, water supplies *(Core Unit: Resources)*
- Communities, ecosystems, homes, living things, relationships *(Optional Unit: Communities and Ecosystems)*

Social Studies
- Resources, industry, technology, conservation, agriculture, economics, and entrepreneurship *(Unit 3: Interdependence)*
- Rules, laws, government, change, rights, and responsibilities *(Unit 4: Decision Making)*

Grade 6
Science
- Investigate factors which influence an ecosystem *(Core Unit: Ecosystems)*
- Inquire into the effects of change in an ecosystem *(Core Unit: Ecosystems)*
- Develop a sense of responsibility for the preservation of the ecosphere *(Core Unit: Ecosystems)*
- Understand the personal, moral, social, and cultural aspects of how we interact in the ecosphere *(Core Unit: Ecosystems)*
- Understand how technology both shapes society and is shaped by society personal, moral, social, and cultural aspects of how we interact in the ecosphere *(Core Unit: Ecosystems)*

Social Studies
- National Identity *(Unit 3: Identity)*
- International: The Global Village, Meeting Needs and Wants, Links Between People and Environment, Human Rights and Responsibilities *(Unit 4: Interdependence)*
- Canada a World Player *(Unit 4: Interdependence)*

Grade 7
Science
- Recognize the renewable resources of Saskatchewan *(Core Unit: Renewable Resources in Saskatchewan)*
- Recognize some microorganisms *(Optional Unit: Microorganisms)*
- Understand how resource use decisions are made *(Optional Unit: Resource Use)*

Social Studies

- Societies use both renewable and nonrenewable resources to satisfy their needs and wants *(Unit 2: Resources)*
- Resources not evenly distributed *(Unit 2: Resources)*
- Appreciating the vulnerability of the environment (*Unit 2: Resources)*
- Appreciating that individuals and societies have the responsibility to manage and conserve resources, both renewable and nonrenewable *(Unit 2: Resources)*
- Appreciating that equality of opportunity depends upon an equitable distribution of and /or access to resources *(Unit 2: Resources)*
- Know that location, land and use of resources influence and can change the organization and interaction of society *(Unit 4: Change)*

Grade 8
Science

- Recognize how abiotic components of an ecosystem support and influence life *(Core Unit: Adaptation and Succession)*
- Examine how living things alter their environment *(Core Unit: Adaptation and Succession)*

Social Studies

- Labour, land, technology, capital, location, entrepreneur, and human right *(Unit 4: Interdependence)*

Grade 9
Science

- Recognize the diversity of the ecological regions of Saskatchewan *(Core Unit: Saskatchewan – The Environment)*
- Explore the effects of human activity on the landscape of Saskatchewan *(Core Unit: Saskatchewan – The Environment)*
- Develop compassionate, empathetic and fair-minded students who can make positive contributions to society as individuals and as members of groups *(Core Unit: Saskatchewan – The Environment)*

Social Studies

- Know the traditional worldview of Aboriginal peoples with regards to the environment *(Unit 4: Culture: Our First Nations Roots – Topic 5: Relationships with the Environment)*
- Compare various worldviews of Canadians in general with regard to the environment *(Unit 4: Culture: Our First Nations Roots – Topic 5: Relationships with the Environment)*
- Compare Aboriginal peoples' traditional views toward the environment with current attitudes on local or global environmental issues *(Unit 4: Culture: Our First Nations Roots – Topic 5: Relationships with the Environment)*
- Develop an awareness of, and respect for, Aboriginal perspectives on nature *(Unit 4: Culture: Our First Nations Roots – Topic 5: Relationships with the Environment)*
- Understand that treaties are binding agreements between First Nations and the Government of Canada *(Unit 4: Culture: Our First Nations Roots – Topic 6: Treaties and Land Claims)*
- Know the reasons for contemporary Aboriginal land claims *(Unit 4: Culture: Our First Nations Roots – Topic 6: Treaties and Land Claims)*
- Understand the viewpoints of the Aboriginal peoples and governments toward treaties and land claims *(Unit 4: Culture: Our First Nations Roots – Topic 6: Treaties and Land Claims)*

Grade 10
Science

- What is sustainability? *(Sustainability of Ecosystems)*
- How does biodiversity indicate the health of an ecosystem? *(Sustainability of Ecosystems)*
- What natural factors affect the stability of an ecosystem? *(Sustainability of Ecosystems)*
- How do energy and matter flow through ecosystems? *(Sustainability of Ecosystems)*
- How do human activities affect the sustainability of an ecosystem? *(Sustainability of Ecosystems)*
- How can humans in general improve the sustainability of our ecosystems? *(Sustainability of Ecosystems)*

Social Studies

- Economic Decision Making *(Unit 2: Economic Decision Making)*
- Defining an Acceptable Standard of Living *(Unit 2: Economic Decision Making)*
- Containing and Maintaining an Acceptable Standard of Living *(Unit 4: International Economic Organizations)*

Grade 11
Science
Biology

- Explain how the interactions among the soil, climate, and living organisms produce the ecosystems which can be observed *(Unit 2: Ecology)*
- Analyze a variety of ecosystems *(Unit 2: Ecology)*

Chemistry

- Describe and discuss the impact of the chemical industry on society *(Optional Unit: Consumer Chemistry)*
- Develop a contemporary view of chemical technology and its influence on our lives *(Optional Unit: Consumer Chemistry)*

Social Studies
Social 20

- Defining human rights *(Unit 1: Human Rights)*
- The social construction of human rights *(Unit 1: Human Rights)*
- The human rights necessary for a life of dignity *(Unit 1: Human Rights)*
- Comparing the United Nations' vision of human rights with the reality of human rights in the world *(Unit 1: Human Rights)*
- Achieving social change *(Unit 1: Human Rights)*
- The fundamental relationship between humans and their environment *(Unit 3: Environment)*
- Issues in effective problem solving *(Unit 3: Environment)*
- Growth in the power of science and technology *(Unit 3: Environment)*
- The state of the environment at the end of the twentieth century *(Unit 3: Environment)*

Grade 12
Science
Biology

See Economics Unit of Native Studies 30

Chemistry
Does not apply

Social Studies
Social 30

- Know that models are simplified representations of reality (e.g., pictures, small figures, diagrams, concept maps, recipes, blueprints) *(Unit 2: Economic Development)*
- Models of Social Systems *(Unit 2: Economic Development)*
- Know that the standard of living is a set of criteria which defines human well-being, and if the criteria change, then the definition of standard of living changes *(Unit 2: Economic Development)*

Native Studies 30

- Understand the factors of diversity of Aboriginal nations of Canada *(Unit 1: Aboriginal and Treaty Rights)*
- Understand the influences of worldview on daily life *(Unit 1: Aboriginal and Treaty Rights)*
- Understand the basis of Aboriginal rights *(Unit 1: Aboriginal and Treaty Rights)*
- Understand the effects of Canada's expansionism of the 1800s *(Unit 1: Aboriginal and Treaty Rights)*
- Understand the basis of Treaty rights *(Unit 1: Aboriginal and Treaty Rights)*
- Understand the interpretation and basis for interpretation of Aboriginal and treaty rights *(Unit 1: Aboriginal and Treaty Rights)*
- Understand how cultural factors influence a people's relationship to the environment and economic development *(Unit 4: Economic Development)*
- Understand that Aboriginal and treaty rights influence economic development *(Unit 4: Economic Development)*
- Understand the technical, social and cultural implications associated with economic development projects *(Unit 4: Economic Development)*
- Understand that a range of perspectives exists regarding development *(Unit 4: Economic Development)*

Yukon

Grade 5
Science

- identify variables that can be changed in an experiment (Processes of Science)
- evaluate the fairness of a given experiment (Processes of Science)
- describe the steps in designing an experiment (Processes of Science)
- analyze how BC's living and non-living resources are used (Earth and Space Science)
- identify methods of extracting or harvesting and processing BC's resources (Earth and Space Science)
- analyze how the Aboriginal concept of interconnectedness of the environment is reflected (Earth and Space Science)
- Responsibility for and caretaking of resources (Earth and Space Science)
- describe potential environmental impacts of using BC's living and non-living resources (Earth and Space Science)

Social Studies

- A1 apply critical thinking skills – including hypothesizing, comparing, imagining, inferring, identifying patterns, and summarizing – to a range of problems and issues (Skills and Processes of Social Studies)
- A2 use maps and timelines to locate, interpret, and represent major physical, political, and economic features of BC and Canada (Skills and Processes of Social Studies)
- D1 analyze the relationship between the economic development of communities and their available resources (Economy and Technology)
- E2 describe the location of natural resources within BC and Canada, including fish and marine resources, forests, minerals, and energy resources (Human and Physical Environment)
- E3 explain why sustainability is important (Human and Physical Environment)
- E4 analyze environmental effects of settlement in early BC and Canada (Human and Physical Environment)

Grade 6
Science

- apply solutions to a technical problem (e.g., malfunctioning electrical circuit) (Processes of Science)
- demonstrate the appropriate use of tools to examine living things that cannot be seen with the naked eye (Life Science)
- analyze how different organisms adapt to their environments (Life Science)
- distinguish between life forms as single or multi-celled organisms and belonging to one of five kingdoms: Plantae, Animalia, Monera, Protista, Fungi (Life Science)

Social Studies

- D3 effects of technology on lifestyle and environment (Economy and Technology)
- C1 comparing federal government in Canada with other countries (Governance)
- E1 relationship between cultures and their environments (Human and Physical Environment)
- E2 factors affecting settlement patterns and population distribution (Human and Physical Environment)

Grade 7

Science

- assess survival needs and interactions between organisms and the environment (Processes of Science)
- assess the requirements for sustaining healthy local ecosystems (Processes of Science)
- evaluate human impacts on local ecosystems (Processes of Science)
- Measure substances and solutions according to pH, solubility, and concentration (Physical Science)

Social Studies

Unknown

Grade 8

Science

- D2 describes how water and ice shape the landscape (Earth and Space Science: Water Systems on Earth)
- D3 describes factors that affect productivity and species distribution in aquatic environments (Earth and Space Science: Water Systems on Earth)

Social Studies

Unknown

Grade 9

Science

- infer that diet and lifestyle are critical in helping maintain a healthy body (Life Science (Factors Affecting Body Systems))
- distinguish among the different ways that raw materials necessary for human life are utilized by the body (Life Science (Factors Affecting Body Systems))
- explain the effects of some disease-causing agents and their diseases on body systems (Life Science (Factors Affecting Body Systems))

Social Studies

Unknown

Grade 10
Science
- describe the interactions between scientific developments and the beliefs and values of society
- identify and consider ethical implications of scientific investigations

Social Studies
Unknown

Grade 11
Health/Physical Education
- design and implement plans for balanced, healthy living, including:
    - nutrition
    - exercise
    - rest
    - work
- demonstrate an understanding of the factors that affect the choice of physical activity throughout life, including:
    - age
    - gender
    - time
    - culture
    - environment

Science
Biology
- A1 demonstrate safe and correct technique for a variety of laboratory procedures (Processes of Biology)
- A3 interpret data from a variety of text and visual sources (Processes of Biology)
- D1 analyze the functional inter-relationships of organisms within an ecosystem (Ecology)
- E1 evaluate the evidence used to classify viruses as living or non-living (Microbiology)
- E2 evaluate the effects of viruses on human health (Microbiology)

Chemistry
- B5 select an appropriate way of separating the components of a mixture

Earth Science
- identify sources of heat that drive dynamic changes in the atmosphere, hydrosphere, and interior of the earth
- describe methods of obtaining, visualizing, and analyzing local and regional information about the earth
- distinguish between renewable and non-renewable resources

Social Studies

- explain how Canadians can effect change at the federal and provincial levels (Politics and Government)
- compare Canada's standard of living with those of developing countries, with reference to poverty and key indicators of human development (Human Geography)
- assess environmental challenges facing Canadians, including: global warming, ozone layer depletion, fresh water quality and supply (Human Geography)

Civic Studies

- analyze the domestic and international effects of Canada's record with respect to issues and events in one or more of the following categories: environment, trade, foreign aid, peace and security, human rights

Grade 12
Science
Biology

- B2 describe the characteristics of water and its role in biological systems (Cell Compounds and Biological Molecules)
- B3 describe the role of acids, bases, and buffers in biological systems in the human body (Cell Compounds and Biological Molecules)

Chemistry
Not Applicable

Earth Science

- S1. Describe the nature and constituents of subsurface water, including water table, zone of saturation, and zone of aeration, perched and confined water tables, aquifers, and impermeable layers
- S2. Demonstrate how the abundance, availability, and movement of subsurface water are directly related to the porosity and permeability of geologic materials
- S3. Construct a subsurface water profile from sample data
- S4. Describe how the following human activities affect the quality and quantity of groundwater:
    - o urbanization
    - o waste disposal
    - o agriculture
    - o conservation and reclamation

Social Studies
BC First Nations Studies

- relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions, including language (Land and Relationships I)
- analyze the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: governance, economics, environment (Land and Relationships II)

Geography

- contrast the different ethics related to resource management and use (Resources of the Earth (Management of Resources))
- explain how conditions within a biome can affect resource management (Resources of the Earth (Management of Resources))
- evaluate the interrelationships of the four spheres as they apply to a local and global resource-management issue (Resources of the Earth (Management of Resources))
- assess the compatibility of human activities and population growth with concepts of sustainability (Resources of the Earth (Sustainability of Resources))
- identify how bias, data availability, and data interpretation affect the evaluation of resource sustainability (Resources of the Earth (Sustainability of Resources))
- analyze factors that make proposed resource-management solutions challenging to implement (Resources of the Earth (Sustainability of Resources))
- develop and defend a thesis relating to the sustainability of a resource (Resources of the Earth (Sustainability of Resources))