

## Operation Water Health Curriculum Connections

- ❖ Students are guided through an examination of health issues related to drinking water
- ❖ Lessons come in English, French, and Cree
- ❖ Applies to Grades 4 - 12
- ❖ Eight Lesson Plans
- ❖ Curriculum Connections last updated February 2022.

Alberta .....	5
Grade Four .....	5
Grade Five .....	5
Grade Six .....	6
Grade Seven .....	7
Grade Eight .....	7
Grade Nine .....	8
Grade Ten .....	8
Grade Eleven .....	8
Grade Twelve .....	9
British Columbia .....	11
Grade Four .....	11
Grade Five .....	12
Grade Six .....	13
Grade Seven .....	14
Grade Eight .....	15
Grade Nine .....	16
Grade Ten .....	16
Grade Eleven .....	17
Grade Twelve .....	18

Manitoba .....	20
Grade Four .....	20
Grade Five .....	20
Grade Six .....	20
Grade Seven .....	21
Grade Eight .....	21
Grade Nine .....	22
Grade Ten .....	23
Grade Eleven .....	24
New Brunswick .....	25
Grade Four .....	25
Grade Six .....	25
Grade Seven .....	25
Grade Nine .....	26
Grade Ten .....	27
Grade Eleven .....	27
Newfoundland and Labrador .....	29
Grade Four .....	29
Grade Five .....	29
Grade Six .....	30
Grade Seven .....	30
Grade Eight .....	31
Grade Nine .....	32
Secondary Grades .....	32
Northwest Territories .....	38
See Alberta's and Saskatchewan's Curriculum .....	38
Nova Scotia .....	39

Grade Four.....	39
Grade Five .....	39
Grade Six.....	40
Grade Seven.....	40
Grade Eight .....	42
Grade Nine.....	43
Grade Ten.....	44
Nunavut .....	45
See Alberta's Curriculum.....	45
Ontario .....	46
Grade Four.....	46
Grade Five .....	46
Grade Six.....	48
Grade Seven.....	48
Grade Eight .....	50
Grade Nine.....	51
Grade Ten.....	51
Grade Eleven.....	52
Grade Twelve .....	53
Prince Edward Island.....	55
Grade Four.....	55
Grade Six.....	55
Grade Seven.....	55
Grade Eight .....	56
Grade Ten.....	56
Grade Eleven.....	57
Grade Twelve .....	57

Quebec .....	58
Elementary Cycle One.....	58
Elementary Cycle Two and Three .....	58
Secondary Grades.....	59
Saskatchewan .....	60
Grade Four.....	60
Grade Five .....	60
Grade Six.....	60
Grade Seven.....	62
Grade Eight .....	63
Grade Nine.....	64
Grade Ten.....	64
Grade Eleven.....	65
Grade Twelve .....	66
Yukon.....	67
See British Columbia's Curriculum .....	67

**Alberta**  
**Grade Four**  
**Health**

**Curriculum Last Updated: 2002**

Personal Health

- 5: Analyze the need for variety and moderation in a balanced diet; e.g., role of protein, fats, carbohydrates, minerals, water, vitamins

**Math**

**Curriculum Last Updated: 2016**

Number

- Specific Outcome 8: Demonstrate an understanding of fractions less than or equal to one by using concrete, pictorial and symbolic representations to provide examples of where fractions are used

**Science**

**Curriculum Last Updated: 1996**

Topic A: Waste and Our World

- 4-5: Recognize that human activity can lead to the production of wastes, and identify alternatives for the responsible use and disposal of materials

**Social Studies**

**Curriculum Last Updated: 2006**

4.1 Alberta: A Sense of the Land

- 4.1.1: Value Alberta's physical geography and natural environment
- 4.1.2: Examine, critically, the physical geography of Alberta
- 4.1.4: Analyze how Albertans interact with their environment

**Grade Five**  
**Health**

**Curriculum Last Updated: 2002**

Personal Health

- 5: Examine ways in which healthy eating can accommodate a broad range of eating behaviours; e.g., individual preferences, vegetarianism, cultural food patterns, allergies/medical conditions, diabetes

**Science**

**Curriculum Last Updated: 1996**

Topic E: Wetland Ecosystems

- 5-10: Describe the living and nonliving components of a wetland ecosystem and the interactions within and among them

**Social Studies**

**Curriculum Last Updated: 2007**

5.1: Physical Geography of Canada

- 5.1.1: Value Canada's physical geography and natural environment
- 5.1.2: Examine, critically, the physical geography of Canada
- 5.1.3: Analyze how people in Canada interact with the environment

**Grade Six**

**Health**

**Curriculum Last Updated: 2002**

Personal Health

- 5: Analyze personal eating behaviours—food and fluids—in a variety of settings; e.g., home, school, restaurants

**Math**

**Curriculum Last Updated: 2016**

Number

- Specific Outcome 2: Solve problems involving whole numbers and decimal numbers

**Social Studies**

**Curriculum Last Updated: 2007**

6.1: Citizens Participating in Decision Making

- 6.1.6: Analyze how individuals, groups and associations within a community impact decision making of local and provincial governments by exploring and reflecting upon several questions and issues

## **Grade Seven**

### **Math**

**Curriculum Last Updated: 2016**

#### Number

- Specific Outcome 3: Solve problems involving percents from 1% to 100%

### **Science**

**Curriculum Last Updated: 2014**

#### Unit A: Interactions and Ecosystems (Social and Environmental Emphasis)

- 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

### **Social Studies**

**Curriculum Last Updated: 2006**

#### 7.2: Following Confederation: Canadian Expansions

- 7.2.2: Recognize the positive and negative consequences of political decisions

## **Grade Eight**

### **Science**

**Curriculum Last Updated: 2014**

#### Unit E: Freshwater and Saltwater Systems (Social and Environmental Emphasis)

- 1: 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
- 3: Analyze factors affecting productivity and species distribution in marine and freshwater environments
- 4: Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues

**Grade Nine  
Science**

**Curriculum Last Updated: 2014**

**Unit C: Environmental Chemistry (Social and Environmental Emphasis)**

- 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

**Grade Ten  
Science**

**Curriculum Last Updated: 2014**

**Unit D: Energy Flow in Global Systems (Social and Environmental Contexts Emphasis)**

- 1: Describe how the relationships among input solar energy, output terrestrial energy and energy flow within the biosphere affect the lives of humans and other species
- 2: Analyze the relationships among net solar energy, global energy transfer processes—primarily radiation, convection and hydrologic cycle—and climate

**Grade Eleven  
Science**

**Curriculum Last Updated: 2014**

**Unit D: Changes in Living Systems**

- 1: Analyze ecosystems and ecological succession in the local area and describe the relationships and interactions among subsystems and components
- 3: Analyze and describe the adaptation of organisms to their environments, factors limiting natural populations, and evolutionary change in an ecological context



## **Biology**

**Curriculum Last Updated: 2014**

### Unit B: Ecosystems and Population Change

- 1: Explain that the biosphere is composed of ecosystems, each with distinctive biotic and abiotic characteristics

## **Grade Twelve**

### **Science**

**Curriculum Last Updated: 2014**

### Unit A: Living Systems Respond to Their Environment

- 2: Analyze the defense mechanisms used by the human body to protect itself from pathogens found in the external environment

### Unit B: Chemistry and the Environment

- 1: Analyze the sources of acids and bases and their effects on the environment
- 2: Analyze the sources of organic compounds and their effects on the environment
- 3: 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

## **Social Studies**

**Curriculum Last Updated: 2007**

### 30-1-3: To what extent are the principles of liberalism viable?

- 3.5 Analyze the extent to which the practices of political and economic systems reflect principles of liberalism (consensus decision making, direct and representative democracies, authoritarian political systems, traditional economies, free market economies, command economies, mixed economies)
- 3.8 Evaluate the extent to which governments should promote individual and collective rights
- 3.9 Evaluate the extent to which the principles of liberalism are viable in the context of contemporary issues (environment concerns, resource use and development, debt and poverty, racism, pandemics, terrorism, censorship, liberalism)

30-2-3: To what extent should we embrace an ideology?

- 3.4 Explore the extent to which governments should encourage economic equality
- 3.8 Evaluate the extent to which the values of liberalism are viable in the context of contemporary issues (environment concerns, resource use and development, debt and poverty, racism, pandemics, terrorism, censorship)

## **British Columbia**

### **Grade Four**

#### **Math**

**Curriculum Last Updated: 2016**

#### Big Ideas

- Fractions and decimals are types of numbers that can represent quantities

#### Content

- Number concepts to 10 000
- Decimals to hundredths
- Ordering and comparing fractions

#### **Physical and Health Education**

**Curriculum Last Updated: 2016**

#### Big Ideas

- Personal choices and social and environmental factors influence our health and well-being

#### Content

- Practices that promote health and well-being, including those relating to physical activity, sleep, healthy eating, and illness prevention
- Communicable and non-communicable illnesses

#### **Science**

**Curriculum Last Updated: 2016**

#### Big Ideas

- All living things sense and respond to their environment

#### **Social Studies**

**Curriculum Last Updated: 2016**

#### Big Ideas

- The pursuit of valuable natural resources has played a key role in changing the land, people, and communities of Canada

- Interaction between First Peoples and Europeans led to conflict and co-operation, which continue to shape Canada's identity

### Content

- Early contact, trade, co-operation, and conflict between First Peoples and European peoples
- The impact of colonization on First Peoples societies in British Columbia and Canada
- Physiographic features and natural resources of Canada

## **Grade Five**

### **Physical and Health Education**

**Curriculum Last Updated: 2016**

### Big Ideas

- Personal choices and social and environmental factors influence our health and well-being

### Content

- Practices that promote health and well-being, including those that prevent communicable and non-communicable illnesses
- Sources of health information and support services

## **Science**

**Curriculum Last Updated: 2016**

### Content

- Solutions and solubility
- The nature of sustainable practices around BC's resources

## **Social Studies**

**Curriculum Last Updated: 2016**

### Big Ideas

- Canada's policies for and treatment of minority peoples have negative and positive legacies
- Natural resources continue to shape the economy and identity of different regions of Canada

- Canadian institutions and government reflect the challenge of our regional diversity

## Content

- Human rights and responses to discrimination in Canadian society
- Levels of government (First Peoples, federal, provincial, and municipal), their main functions, and sources of funding
- Resources and economic development in different regions of Canada
- First Peoples land ownership and use

## **Grade Six**

### **Math**

**Curriculum Last Updated: 2016**

#### Big Ideas

- Mixed numbers and decimal numbers represent quantities that can be decomposed into parts and wholes
- Computational fluency and flexibility with numbers extend to operations with whole numbers and decimals

#### Content

- Small to large numbers (thousandths to billions)

### **Science**

**Curriculum Last Updated: 2016**

#### Big Ideas

- Everyday materials are often mixtures

#### Content

- Heterogeneous mixtures

### **Social Studies**

**Curriculum Last Updated: 2016**

#### Big Ideas

- Economic self-interest can be a significant cause of conflict among peoples and governments
- Complex global problems require international co-operation to make difficult choices for the future
- Systems of government vary in their respect for human rights and freedoms

## Content

- The urbanization and migration of people
- Global poverty and inequality issues, including class structure and gender
- Roles of individuals, governmental organizations, and NGOs, including groups representing indigenous peoples
- Economic policies and resource management, including effects on indigenous peoples
- International co-operation and responses to global issues
- Regional and international conflict

## Grade Seven

### Science

Curriculum Last Updated: 2016

## Content

- Survival needs
- Elements and compounds are pure substances

## Social Studies

### Big Ideas

- Increasingly complex societies required new systems of laws and government

## Content

- Human responses to particular geographic challenges and opportunities, including climates, landforms, and natural resources
- Scientific, philosophical, and technological developments
- Social, political, legal, governmental, and economic systems and structures, including at least one indigenous to the Americas

## **Grade Eight Physical and Health Education**

**Curriculum Last Updated: 2016**

### **Content**

- Potential short-term and long-term consequences of health decisions, including those involving nutrition, protection from sexually transmitted infections, and sleep routines
- Sources of health information

## **Science**

**Curriculum Last Updated: 2016**

### **Big Ideas**

- Life processes are performed at the cellular level

### **Content**

- Cell theory and types of cells
- The relationship of micro-organisms with living things:
  - Basic functions of the immune system
  - Vaccination and antibiotics
  - Impacts of epidemics and pandemics on human populations

## **Social Studies**

**Curriculum Last Updated: 2016**

### **Big Ideas**

- Human and environmental factors shape changes in population and living standards
- Exploration, expansion, and colonization had varying consequences for different groups

### **Content**

- Social, political, and economic systems and structures, including those of at least one indigenous civilization
- Scientific and technological innovations
- Exploration, expansion, and colonization
- Changes in population and living standards

## **Grade Nine**

### **Physical and Health Education**

**Curriculum Last Updated: 2016**

#### Content

- Potential short- and long-term consequences of health decisions, including those involving nutrition, protection from sexually transmitted infections, and sleep routines
- Sources of health information

## **Grade Ten**

### **Science**

**Curriculum Last Updated: 2018**

#### Big Ideas

- Energy change is required as atoms rearrange in chemical processes

#### Content

- How do chemical processes - personal, local, or global - affect your life?

## **Social Studies**

**Curriculum Last Updated: 2018**

#### Big Ideas

- The development of political institutions is influenced by economic, social, ideological, and geographic factors

#### Content

- Environmental issues, including climate change, renewable energy, overconsumption, water quality, food security, conservation
- Describe the structure and function of Canada's federal, provincial, and local governments
- Evaluate attitudes and practices in resource development in British Columbia and their impact on contemporary resource management



## **Planning**

**Curriculum Last Updated: 2007**

### Healthy Living

- C1: Analyze factors that influence health

### Health Information

- C2: Analyze health information for validity and personal relevance

## **Grade Eleven**

### **Life Sciences**

**Curriculum Last Updated: 2018**

### Big Ideas

- Life is a result of interactions at the molecular and cellular levels

### Content

- Identification of bacteria and viruses
- Through the study of viruses and bacteria, how might scientists find new and innovative ways to prevent the spread of future diseases?

## **Civic Studies**

**Curriculum Last Updated: 2005**

### Civic Deliberation

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

## **Earth Science**

**Curriculum Last Updated: 2018**

### Big Ideas

- Earth materials are changed as they cycle through the geosphere and are used as resources, with economic and environmental implications
- The distribution of water has a major influence on weather and climate

## Content

- What criteria must be met for an earth material to be considered a "resource"?
- Why might water be considered Earth's most important resource?
- Identify environmental problems (ex. water contamination) related to development of a natural resource (such as water)
- Suggest strategies to conserve both material and energy resources

## Science and Technology

**Curriculum Last Updated: 2008**

- E1: Describe the major natural resources found in British Columbia
- E2: Evaluate methods used in the extraction, processing, use and management of a locally used or produced resource
- E3: Discuss the impact of society on natural resource management and the environment
- E4: Analyze the impact of technologies on the environment

## Social Studies

**Curriculum Last Updated: 2018**

### Big Ideas

- Physical features and natural resources influence demographic patterns and population distribution (adapted from Human Geography 12)
- Decision making in urban and regional planning requires balancing political, economic, social, and environmental factors (from Urban Studies 12)
- Cultural expressions convey the richness, diversity, and resiliency of B.C. First Peoples

## Content

- Natural resource use and local, regional, national, or global development (adapted from Human Geography 12)

## Grade Twelve

### Biology

**Curriculum Last Updated: 2006**

### A3: Interpret data from a variety of text and visual sources

- Using the data found throughout the lessons students will be able to make inferences and generalizations

- Draw and present conclusions

### B2: Describe the characteristics of water and its role in biological systems

- Describe the role of water and understand the chemicals it is treated with and for which contaminants and components it is tested

### B3: Describe the role of acids, bases, and buffers in biological systems in the human body

- Relate pH values to whether a solution is acidic or basic
- Differentiate among acids, bases, and buffers
- Describe the importance of pH to biological systems in the human body

## **First Nations Studies**

**Curriculum Last Updated: 2018**

### Big Ideas

- The impact of contact and colonialism continues to affect the political, social, and economic lives of B.C. First Peoples
- Through self-governance, leadership, and self-determination, B.C. First Peoples challenge and resist Canada's ongoing colonialism

### Content

- Provincial and federal government policies and practices that have affected, and continue to affect, the responses of B.C. First Peoples to colonialism
- Resistance of B.C. First Peoples to colonialism

**Manitoba**  
**Grade Four**  
**Math**

**Curriculum Last Updated: 2013**

Number

- 4.N.8.: Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to provide examples of where fractions are used

**Grade Five**  
**Science**

**Curriculum Last Updated: 2000**

Cluster 1: Maintaining a Healthy Body

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

**Grade Six**  
**Math**

**Curriculum Last Updated: 2013**

Number

- 6.N.6.: Demonstrate an understanding of percent (limited to whole numbers), concretely, pictorially, and symbolically

**Social Studies**

**Curriculum Last Updated: 2006**

Cluster 4: Canada Today. Democracy, Diversity, and the Influence of the Past

- 6.4.1: Expressions of Canadian Identity
- 6.4.4: Creating a Just Society
- 6.4.5: Canadian Democracy in the World Context

## **Grade Seven Science**

**Curriculum Last Updated: 2000**

### Cluster One: Interactions within Ecosystems

- 7-1-06: Identify environmental, social, and economic factors that should be considered in the management and preservation of ecosystems
- 7-1-14: Identify beneficial and harmful roles played by micro-organisms

## **Social Studies**

**Curriculum Last Updated: 2003**

### Cluster 2: Global Quality of Life

- 7.2.1: What Is the Good Life?
  - 7-KC-002: Describe the impact of various factors on quality of life in Canada and elsewhere in the world
  - KC-004: Describe ways in which their personal actions may affect quality of life for people elsewhere in the world
  - KI-006: Identify diverse cultural and social perspectives regarding quality of life
  - KP-039: Give examples of government decisions that affect quality of life
- 7.2.2: Universal Human Rights
  - 7-KG-037: Identify universal human rights and explain their importance

### Cluster 4: Human Impact in Europe or the Americas

- 7-VL-009: Be willing to take actions to help sustain the natural environment in Canada and the world

## **Grade Eight Science**

**Curriculum Last Updated: 2000**

### Cluster 4: Water Systems

- 8-4-01: Use appropriate vocabulary related to their investigations of water systems
- 8-4-14: Identify sources of drinking water and describe methods for obtaining water in areas where supply is limited
- 8-4-15: Explain how and why water may need to be treated for use by humans
- 8-4-16: Compare the wastewater disposal system within their communities to one used elsewhere

- 8-4-17: Identify substances that may pollute water, related environmental and societal impacts of pollution, and ways to reduce or eliminate effects of pollution
- 8-4-18: Identify environmental, social, and economic factors that should be considered in the management of water resources
- 8-4-19: Use the design process to develop a system to solve a water-related problem

## **Grade Nine**

### **Social Studies**

**Curriculum Last Updated: 2007**

#### Cluster 2: Democracy and Governance

- 9.2.1: Law, Order, and Good Government
  - KC-005: Give examples of ways in which government affects their daily lives
- 9.2.2: Representing Canadians
  - KP-046: Give examples of ways in which people can individually and collectively influence Canada's political and social systems

#### Cluster 3: Canada in the Global Context

- 9.3.2: Canada's Global Responsibilities
  - KG-034: Give examples of Canada's connections with other nations
  - KG-038: Give examples of Canada's participation within international organizations
  - KG-039: Evaluate Canada's contributions to international aid and development
- 9.3.3: Living in an Industrialized Consumer Society
  - KE-049: Evaluate implications of living in a consumer-based economy
  - KE-050: Give examples of the cultural, political, and economic impact of globalization on Canada

#### Cluster 4: Canada: Opportunities and Challenges

- 9.4.1: A Changing Nation
  - KH-033: Give examples of social and technological changes that continue to influence quality of life in Canada
- 9.4.3: Social Justice in Canada
  - KI-023: Identify possible ways of resolving social injustices in Canada
  - KL-027: Give examples of opportunities and challenges related to First Nations treaties and Aboriginal rights

- KE-052: Identify poverty issues in Canada and propose ideas for a more equitable society
- VL-006: Respect traditional relationships that Aboriginal peoples of Canada have with the land
- 9.4.4: Taking Our Place in the Global Village
  - KL-028: Evaluate Canadian concerns and commitments regarding environmental stewardship and sustainability
  - KG-042: Describe Canada's responsibilities and potential for leadership regarding current global issues
  - KP-047: Identify opportunities and challenges regarding Canadian-American relationships

## **Grade Ten**

### **Social Studies**

**Curriculum Last Updated: 2006**

#### Cluster 2: Natural Resources

- 2.2: Diverse Perspectives
  - KI-004: Identify Aboriginal perspectives and rights regarding natural resources and their use
  - KH-033: Identify factors that influence the changing use of natural resources over time
  - KP-041: Identify ways in which competing interests and needs influence control and use of the land and natural resources in Canada
- 2.3: Sustainable Development
  - KC-002 Describe sustainability issues related to natural resource extraction and consumption

### **Science**

**Curriculum Last Updated: 2001**

#### Cluster 1: Dynamics of Ecosystems

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

**Grade Eleven  
Biology**

**Curriculum Last Updated: 2010**

**Unit 5: Protection and Control**

- B11-5-02: Describe the body's response to allergens, vaccines, and viruses/bacteria



## **New Brunswick**

### **Grade Four**

#### **Math**

**Curriculum Last Updated: 2008**

#### Number

- SCO: N8: Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to provide examples of where fractions are used

### **Grade Six**

#### **Health**

**Curriculum Last Updated: 2005**

#### Caring for Yourself, Your Family and Your Community

- A2: Identify and describe various environmental factors that affect our health

#### **Math**

**Curriculum Last Updated: 2010**

#### Number

- SCO: N6: Demonstrate an understanding of percent (limited to whole numbers) concretely, pictorially and symbolically

### **Grade Seven**

#### **Health**

**Curriculum Last Updated: 2005**

#### Caring for Yourself, Your Family and Your Community

- A2: Describe selected examples of infectious and noninfectious disease, identifying their detection and prevention

#### **Science**

**Curriculum Last Updated: 2002**

#### Unit 1: Interactions within Ecosystems

- 306-3: Describe interactions between biotic and abiotic factors in an ecosystem
- 306-4: Identify signs of ecological succession in a local ecosystem

## **Social Studies**

**Curriculum Last Updated: 2005**

### Unit 1: Introduction

- 7.1.1: Explore the general concept of empowerment

### Unit 2: Economic Empowerment

- 7.2.2: Investigate the various ways economic systems empower or disempowered people
- 7.2.3: Analyze trends that could impact future economic empowerment

### Unit 3: Political Empowerment

- 7.3.1: Evaluate the conditions of everyday life for diverse peoples living in British North America in the mid-1800s, including Aboriginal peoples, African-Canadians and Acadians

### Unit 4: Cultural Empowerment

- 7.4.3: Analyze the degree of empowerment and disempowerment for Aboriginal peoples in present day Atlantic Canada

## **Grade Nine**

### **Science**

**Curriculum Last Updated: 2002**

### Unit 2: Physical Science: Atoms and Elements

- 307-12: Investigate materials and describe them in terms of their properties
- 307-13: Describe changes in the properties of materials that result from some common chemical reactions

## **Social Studies**

**Curriculum Last Updated: 2006**

### Unit 4: Citizenship

- 9.4.1: Take age-appropriate actions that demonstrate the rights and responsibilities of citizenship

## **Grade Ten Science**

**Curriculum Last Updated: 2002**

### **Unit 1: Life Science: Sustainability of Ecosystems**

- 318-1: Illustrate the cycling of matter through biotic and abiotic components of an ecosystem by tracking carbon, nitrogen, and oxygen
- 318-6: Explain how biodiversity of an ecosystem contributes to its sustainability
- 331-6: Analyze the impact of external factors on an ecosystem

## **Grade Eleven Biology 111/112**

**Curriculum Last Updated: 2008**

### **Unit 2: Biodiversity**

- 331-6: Analyze the impact of external factors on an ecosystem

### **Unit 3: Maintaining Dynamic Equilibrium**

- 314-1: Identify chemical elements that are commonly found in living systems
- 314-2: Identify the role of compounds, such as water, found in living systems
- 314-3: Identify and describe the structure and function of important biochemical compounds, including carbohydrates, proteins and lipids

## **Environmental Science 120**

**Curriculum Last Updated: 2012**

### **Unit 1: An Overview of Environmental Science**

- Explore and communicate current understanding of local, regional and global environmental issues
- Identify links between personal behavior and local, regional and global environmental issues
- Identify ways to measure environmentally sustainable behaviours, and describe links to economic and social factors
- Explore one or a few local or regional issues with respect to the impact on the environment, and on history, economics and social systems
- Practice research and presentation skills including experimenting to test environmental impact, identifying and accessing various organizations for information and expertise, and considering the legislation which impacts on environmental issues.

- Explore how technology is used to gather and communicate information, and to address the issues

## **History of Canada**

**Curriculum Last Updated: 2014**

### **Cluster 5: Defining Contemporary Canada (1982-Present)**

- 11.5.3: How are the First Nations, Métis, and Inuit peoples seeking a greater degree of cultural, political, and economic self-determination?

## **Newfoundland and Labrador**

### **Grade Four**

#### **Math**

**Curriculum Last Updated: 2014**

#### Fractions and Decimals

- SCO 4N4: Demonstrate an understanding of fractions less than or equal to one by using concrete, pictorial and symbolic representations to provide examples of where fractions are used

### **Grade Five**

#### **Health**

#### **Environmental Health**

- Recognize the potential health hazards of the community garbage disposal site
- Describe how litter creates an unpleasant and unsafe community environment
- Discuss the importance of reusing, reducing and recycling waste for environmental health

#### **Social Studies**

**Curriculum Last Updated: 2012**

- Environment affects people's ways of living and people, in turn, modify and change the environment
- The effect of geographic conditions on ways of living
- The basic needs of people are the same everywhere
- Conservation and utilization of natural resources
- Public issues affecting the local community
- Rights and duties of citizenship

#### **Science**

**Curriculum Last Updated: 2017**

#### Unit 4: Body Systems

- 67.0: Describe how body systems help humans meet their basic needs
- 73.0: describe nutritional and other requirements for maintaining a healthy body

#### Unit 3: Properties and Changes of Materials

- 57.0: Identify properties that allow materials to be distinguished from one another

## **Grade Six**

### **Math**

**Curriculum Last Updated: 2015**

#### Ratio and Percent

- SCO 6N6.: Demonstrate an understanding of percent (limited to whole numbers) concretely, pictorially and symbolically

### **Social Studies**

**Curriculum Last Updated: 2007**

#### Unit 2: Environment and Culture

- 6.2.2 Assess the relationship between culture and environment in a selected cultural region
- 6.2.3 Compare the use of resources and sustainability practices between Canada and a selected country

#### Unit 5: World Issues

- 6.5.2 Examine selected examples of human rights issues around the world
- 6.5.3 Take age-appropriate actions to demonstrate an understanding of responsibilities as global citizens

## **Grade Seven**

### **Health**

#### Safety and Environmental Health

- 8: Identify practices and activities that pose a threat to the environment and the health of people
- 9: Consider the kinds of changes that are necessary to protect the environment and the health of individuals
- 10: Consider ways of initiating and participating in social actions that may lead to protections of the environment and the promotion of health
- 11: Examine some of our own actions and identify some changes that can be made on an individual basis in relation to personal and environmental health

## **Science**

**Curriculum Last Updated: 2013**

### Unit 1: Interactions within Ecosystem

- 306-3: Describe interactions between biotic and abiotic factors in an ecosystem

### Unit 3: Mixtures and Solutions

- 307-2: Identify and separate the components of mixtures

## **Social Studies**

**Curriculum Last Updated: 2004**

### Unit 5: Societal Empowerment

- 7.5.1: Evaluate the conditions of everyday life for the peoples of Canada at the turn of the 20th century

## **Grade Eight Science**

### Unit 2: Fluids

- 307-6: Compare the viscosity of various liquids
- 307-7: Describe factors that can modify the viscosity of a liquid
- 307-8: Describe the relationship between the mass, volume, and density of solids, liquids, and gases using the particle theory of matter gaseous fluids are compressed or heated

## **Social Studies**

**Curriculum Last Updated: 2005**

### Unit 2: History as a Story of People

- 2.1: The student will be expected to demonstrate an understanding of the Aboriginal peoples who lived in Newfoundland and Labrador in the 19<sup>th</sup> Century
- 2.4: The student will be expected to demonstrate an understanding of the political context and challenges in Newfoundland and Labrador in the 19th century

### Unit 5: History as a Story of the Past in the Present

- 5.1: The student will be expected to demonstrate an understanding of the role of history in shaping our current circumstances

**Grade Nine  
Social Studies**

**Curriculum Last Updated: 2012**

**Unit Six: Canada's Changing Identity: Creating a Preferred Future**

- *SCO 15:* The student will be expected to demonstrate an understanding of economic challenges and opportunities that may affect Canada's future
- *SCO 16:* The student will be expected to demonstrate an understanding of political challenges and opportunities that may affect Canada's future
- *SCO 17:* The student will be expected to demonstrate an understanding of social and cultural challenges and opportunities that may affect Canada's future

**Secondary Grades  
Biology 2201**

**Curriculum Last Updated: 2020**

*GCO 1* Students will develop an understanding of the nature of science and technology, of the relationships between science and technology, and of the social and environmental contexts of science and technology.

- 27.0 analyze natural systems to interpret and explain their structure and dynamics
- 32.0 analyze from a variety of perspectives the risks and benefits to society and the environment of applying scientific knowledge or introducing a particular technology
- 34.0 provide examples of how science and technology are an integral part of their lives and their community
- 36.0 propose courses of action on social issues related to science and technology, taking into account an array of perspectives, including that of sustainability

*GCO 3* Students will construct knowledge and understandings of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge.

- 28.0 analyze interactions within and between populations
- 33.0 evaluate Earth's carrying capacity, considering human population growth and its demands on natural resources

**Canadian Geography 1202**

**Curriculum Last Updated: 2012**



## 2.1 Understandings

- 2.1.4: Activities and issues related to how Canadians use resources on the land
- 2.1.5: Activities and issues related to how Canadians use resources in the ocean environment

## Canadian History 1201

**Curriculum Last Updated: 2011**

### Unit 7: Issues in Canada

- 7.0: The student will be expected to demonstrate an understanding of important contemporary issues in Canada
- 7.1: Aboriginal rights: legislation, women's rights, land claims, self-government

## Chemistry 3202

**Curriculum Last Updated: 2019**

### Unit 1: From Kinetic to Equilibrium

- 42.0: Explain how different factors affect chemical equilibrium

### Unit 2: Acids and Bases

- 51.0: Predict products of acid-base reactions
- 52.0: Calculate the pH of an acid or a base given its concentration, and vice versa
- 54.0: Explain how acid-base indicators function

## Environmental Science 3205

**Curriculum Last Updated: 2010**

### Unit 1: Introduction to Environmental Science

- 1.03: Describe the Newfoundland and Labrador transition, from aboriginals, European settlers, to present day, in terms of how they impacted the land
- 1.08: Identify the relationship between human population growth, demand for resources, and increased consumerism
- 1.11: Define environmental conservation
- 1.16: Recognize that environmental monitoring is an essential component of sustainability
- 1.19: Describe your community's impact on the environment
- 1.20: Describe environmental responsibility

- 1.21: Define *eco-citizenship*
- 1.40: Identify career opportunities related to the study of environmental issues

#### Unit 4: Water Use and the Environment

- 4.02: Recognize that water is a finite resource
- 4.12: Identify physical, biological, and chemical impacts on water quality
- 4.13: Evaluate the impacts of human activities on the water resources
- 4.18: List the main sources of drinking water in Newfoundland and Labrador
- 4.19: Outline the risks involved in drinking untreated water
- 4.20: Identify the main components of the multi-barrier approach to ensure safe drinking water
- 4.21: Identify the phases of treating municipal water
- 4.22: Describe alternate methods of water treatment
- 4.23: List sources of wastewater
- 4.24: Indicate the impacts of untreated wastewater on freshwater and marine ecosystems
- 4.25: Describe the disposal and treatment methods for municipal and industrial effluent

#### Science 1206

Curriculum Last Updated: 2018

#### Unit 4: Sustainability of Ecosystems

- 68.0: Illustrate and explain the cycling of matter through biotic and abiotic components of an ecosystem by tracking carbon, nitrogen, and oxygen
- 71.0: Analyze the impact of external factors on an ecosystem

#### Social Studies 3201

Curriculum Last Updated: 2020

#### SCO 4.0: Demonstrate an understanding of quality of life

- 4.1: explain the concept of quality of life
- 4.2: explain indicators that can be used to measure quality of life

#### SCO 6.0: Evaluate the relationship between sustainability and quality of life

- 6.1: explain the concept of sustainability
- 6.2: explain how sustainability influences the human experience
- 6.3: respond to issues related to sustainability

SCO 7.0: Demonstrate an understanding of how economic factors influence quality of life

- 7.1: explain the concept of economic disparity
- 7.2: explain factors that influence economic disparity

SCO 9.0: Respond to issues of political and economic concern that influence quality of life

- 9.1: identify the issue
- 9.2: analyze the issue
- 9.3: develop a cogent response to the issue

SCO 10.0: Demonstrate an understanding of how population changes influence quality of life

- 10.1: explain the relationship between population, carrying capacity, science and technology

SCO 11.0: Respond to issues related to population that influence quality of life

- 11.1: identify the issue
- 11.2: analyze the issue
- 11.3: develop a cogent response to the issue

SCO 12.0: Demonstrate an understanding of how human-environmental interactions influence quality of life

- 12.1: explain the relationship between natural resource use and quality of life
- 12.2: explain the consequences of issues arising from human-environmental interaction
- 12.3: evaluate responses to issues of human-environmental interaction

SCO 13.0: Respond to issues related to human-environmental interaction that influence quality of life

- 13.1: identify the issue
- 13.2: analyze the issue
- 13.3: develop a cogent response to the issue

**Social Studies 3202**

**Curriculum Last Updated: 2021**

SCO 4.0: Demonstrate an understanding of quality of life

- 4.1: explain the concept of quality of life
- 4.2: explain indicators that can be used to measure quality of life

SCO 6.0: Evaluate the relationship between sustainability and quality of life

- 6.1: explain the concept of sustainability
- 6.2: explain how sustainability influences the human experience
- 6.3: respond to issues related to sustainability

SCO 7.0: Demonstrate an understanding of how economic factors influence quality of life

- 7.1: explain the concept of economic disparity
- 7.2: explain factors that influence economic disparity

SCO 9.0: Respond to issues of political and economic concern that influence quality of life

- 9.1: identify the issue
- 9.2: analyze the issue
- 9.3: develop a cogent response to the issue

SCO 10.0: Demonstrate an understanding of how population changes influence quality of life

- 10.1: explain the relationship between population, carrying capacity, science and technology

SCO 11.0: Respond to issues related to population that influence quality of life

- 11.1: identify the issue
- 11.2: analyze the issue
- 11.3: develop a cogent response to the issue

SCO 12.0: Demonstrate an understanding of how human-environmental interactions influence quality of life

- 12.1: explain the nature of natural resource use and quality of life

- 12.2: explain the consequences of issues arising from human-environmental interaction
- 12.3: evaluate responses to issues of human-environmental interaction

SCO 13.0: Respond to issues related to human-environmental interaction that influence quality of life

- 13.1: identify the issue
- 13.2: analyze the issue
- 13.3: develop a cogent response to the issue

## **Northwest Territories**

### **See Alberta's and Saskatchewan's Curriculum**

The Northwest Territories makes use of Alberta's curriculum for K-12 math, as well as grade 7 to grade 12 sciences and social studies, physical education, and career and technology studies. It also makes use of Saskatchewan's curriculum for grade 1 to grade 9 arts education and Alberta's curriculum for high school arts education.

## **Nova Scotia**

### **Grade Four**

#### **Math**

**Curriculum Last Updated: 1999**

- SCO A1: Identify and model fractions and mixed numbers

### **Grade Five**

#### **Health**

**Curriculum Last Updated: 2012**

#### **Healthy Self**

- 1.5: Demonstrate an understanding of the basic nutrients found in food and the function they serve within the body

#### **Science**

**Curriculum Last Updated: 2012**

#### **Maintaining a Healthy Body**

- 302-7, 302-8: Describe the body's defenses against infections and describe the role of the skin
- 206-4, 302-9: Describe nutritional and other requirements for maintaining a healthy body and evaluate the usefulness of different information sources in answering questions about health and diet

#### **Social Studies**

**Curriculum Last Updated: 2012**

#### **Citizenship, Power, and Governance**

- A: Demonstrate an understanding of the rights and responsibilities of citizenship and the origins, functions, and sources of power, authority, and governance

#### **Interdependence**

- D: Demonstrate an understanding of the interdependent relationship among individuals, societies, and the environment—locally, nationally, and globally—and the implications for a sustainable future

## People, Place, and Environment

- E: Demonstrate an understanding of the interactions among people, places, and the environment

## **Grade Six** **Health**

**Curriculum Last Updated: 2012**

### Healthy Community

- 3.1: Identify responsibilities of global citizenship and take age-appropriate action to address a global health issue

## **Social Studies**

**Curriculum Last Updated: 2012**

### Citizenship, Power, and Governance

- A: Demonstrate an understanding of the rights and responsibilities of citizenship and the origins, functions, and sources of power, authority, and governance

### Interdependence

- D: Demonstrate an understanding of the interdependent relationship among individuals, societies, and the environment—locally, nationally, and globally—and the implications for a sustainable future

## People, Place, and Environment

- E: Demonstrate an understanding of the interactions among people, places, and the environment

## **Grade Seven** **Health**

**Curriculum Last Updated: 2012**

### Healthy Community

- 7.18: Demonstrate an understanding that communities have resources that youth can access for help for a variety of health issues



- 7.22: Recognize the characteristics of supportive environments within various community contexts for healthy eating, environmental sustainability, physical activity, and non-use of tobacco and alcohol

## Science

Curriculum Last Updated: 2012

### Physical Science: Mixtures and Solutions

#### Mixtures

- 209-6, 307-2: Examine and separate the components of a variety of mixtures, safely using materials in a laboratory

#### Concentration of Solutions

- 208-1, 210-9: Perform and solve testable questions about solutions' concentrations
- 210-16, 109-4: Identify questions and use a technology for collecting data

#### Mixtures, Solutions, and the Environment

- 112-7, 113-1: Identify and explain examples of mixtures and solutions that have an impact on development in science, technology, and environment
- 111-5: Describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems

### Life Science: Interactions within Ecosystems

#### Components of an Ecosystem

- 208-2, 208-3, 210-1: Identify questions, investigate, and record collected data on the ecosystem's components using materials effectively
- 306-3: Describe interactions between biotic and abiotic factors in an ecosystem
- 304-1, 109-1, 109-12: Distinguish and explain how biological classification reflects the diversity of life on Earth, using specific terms and characteristics

#### Action

- 113-11, 211-5, 113-10: Defend a proposal to protect a habitat and provide examples of various issues that can be addressed in multiple ways

- 112-4, 112-8, 209-5: Research individuals/groups in Canada that focus on the environment, using various print and electronic sources

## **Social Studies**

**Curriculum Last Updated: 2012**

### Unit One: Introduction

- 7.1.1: Explore the general concept of empowerment

### Unit Two: Economic Empowerment

- 7.2.2: Investigate the various ways economic systems empower or disempowered people
- 7.2.3: Analyze trends that could impact future economic empowerment

### Unit Three: Political Empowerment

- 7.3.2: Analyze how the struggle for responsible government was an issue of political empowerment and disempowerment

### Unit Four: Cultural Empowerment

- 7.4.3: Analyze the degree of empowerment and disempowerment for Aboriginal peoples in present day Atlantic Canada during this period

### Unit Seven: Reflection

- 7.7.1: Portray an understanding of the extent of empowerment of individuals, groups, and the nation up to 1920

## **Grade Eight**

### **Health**

**Curriculum Last Updated: 2012**

### Healthy Community

- 8.11 demonstrate an understanding that there are many factors that contribute to our health status

## **Science**

**Curriculum Last Updated: 2012**

### **Physical Science: Fluids**

#### Forces in Fluids

- 111-1, 113-2: Provide examples and a course of action of how science and technology affect personal and community needs

## **Social Studies**

**Curriculum Last Updated: 2012**

### Unit Four: Citizenship

- 8.4.1: take age-appropriate actions that demonstrate the rights and responsibilities of citizenship (local, national, and global)
- 8.4.3: demonstrate an understanding of the structure and operation of government in Canada under a federal system

## **Grade Nine**

### **Health**

**Curriculum Last Updated: 2012**

#### Healthy Community

- 9.17: Examine how people support healthy communities locally and globally, and take age-appropriate action to support a community health issue of interest to them

## **Science**

**Curriculum Last Updated: 2012**

### **Atoms and Elements**

#### Physical and Chemical Changes

- 209-7, 111-6, 210-11: Perform experiments, collect evidence, report findings, and demonstrate a knowledge of WHMIS standards in the laboratory
- 307-12: Investigate materials and describe them in terms of their physical properties
- 307-13: Describe changes in the properties of materials that result from some common chemical reactions

## Periodic Table

- 210-1, 210-2: Use the periodic table as a classification system and compile data about its structure
- 112-3, 112-8: Explain and provide examples of how society's needs for chemistry incorporate science, technology, and environment

## Social Studies

**Curriculum Last Updated: 2012**

### Theme One: Physical Setting

- 9.1.4: Link human activity to the natural resources of the Atlantic region

### Theme Five: Interdependence

- 9.5.1: Explore his/her concept of world view and explain the factors that influence and are influenced by it
- 9.5.3: Access the individual qualities and attributes Atlantic Canadians need to become contributing members of the global community
- 9.5.4: Demonstrate an understanding that the future well-being of Atlantic Canada involves co-operation with the national and global communities

## Grade Ten

### Science

**Curriculum Last Updated: 2012**

### Life Science: Sustainability of Ecosystems

- 114-1: Question and analyze how a paradigm shift in sustainability can change society's views
- 318-2, 318-5: Distinguish between biotic and abiotic factors, determining the impact on the consumers at all trophic levels due to bioaccumulation, variability, and diversity
- 214-1, 318-6: Describe how the classification involved in the biodiversity of an ecosystem is responsible for its sustainability
- 212-4, 214-3, 331-6: Predict and analyze the impact of external factors on the sustainability of an ecosystem, using a variety of formats
- 213-7, 215-1, 318-4: Diagnose and report the ecosystem's response to short-term stress and long-term change

## **Nunavut**

### **See Alberta's Curriculum**

Nunavut currently makes use of the Alberta curriculum materials

**Ontario  
Grade Four  
Math**

**Curriculum Last Updated: 2020**

**B1. Number Sense - Whole Numbers**

- B1.1 - Read, represent, compose, and decompose whole numbers up to and including 10 000, using appropriate tools and strategies, and describe various ways they are used in everyday life.

**B1. Number Sense - Fractions and Decimals**

- B1.4 - Represent fractions from halves to tenths using drawings, tools, and standard fractional notation, and explain the meanings of the denominator and the numerator.

**Grade Five  
Health and Physical Education**

**Curriculum Last Updated: 2019**

**Strand D: Healthy Living**

- D1: Demonstrate an understanding of factors that contribute to healthy development
- D2: Demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being
- D3: Demonstrate the ability to make connections that relate to health and well-being - how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being

**Math**

**Curriculum Last Updated: 2020**

**B2. Operations - Mental Math**

- B2.3 Use mental math strategies to multiply whole numbers by 0.1 and 0.01 and estimate sums and differences of decimal numbers up to hundredths, and explain the strategies used.

## Addition and Subtraction

- B2.4 Represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms.

## Multiplication and Division

- B2.6 Represent and solve problems involving the multiplication of two-digit whole numbers by two-digit whole numbers using the area model and using algorithms, and make connections between the two methods.

## Science

**Curriculum Last Updated: 2007**

### Understanding Life Systems: Human Organ Systems

- 1: Analyze the impact of human activities and technological innovations on human health

### Understanding Matter and Energy: Properties of and Changes in Matter

- 1: Evaluate the social and environmental impacts of processes used to make everyday products

## Social Studies

**Curriculum Last Updated: 2018**

### Strand B. People and Environments: The Role of Government and Responsible Citizenship

- B1: Assess responses of governments in Canada, including First Nations, Métis, and Inuit governments, to some significant issues, and develop plans of action for governments and citizens to address social and environmental issues
- B2: Use the social studies inquiry process to investigate Canadian social and/or environmental issues from various perspectives, including those of Indigenous peoples as well as of the level (or levels) of government responsible for addressing the issues
- B3: Demonstrate an understanding of the roles and key responsibilities of citizens and of the different levels of government in Canada, including First Nations, Métis, and Inuit governments

## **Grade Six**

### **Health and Physical Education**

**Curriculum Last Updated: 2019**

#### **Strand D: Healthy Living**

- D1: Demonstrate an understanding of factors that contribute to healthy development
- D2: Demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being
- D3: Demonstrate the ability to make connections that relate to health and well-being - how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being

## **Social Studies**

**Curriculum Last Updated: 2018**

#### **Strand B: People and Environments: Canada's Interactions with the Global Community**

- B1: Explain the importance of international cooperation in addressing global issues, and evaluate the effectiveness of selected actions by Canada and Canadian citizens in the international arena
- B2: Use the social studies inquiry method to investigate some global issues of political, social, economic, and/or environmental importance, their impact on the global community, and responses to the issues
- B3: Describe significant aspects of the involvement of Canada and Canadians in some regions around the world, including the impact of this involvement

## **Grade Seven**

### **Health and Physical Education**

**Curriculum Last Updated: 2019**

#### **Strand D: Healthy Living**

- D1: Demonstrate an understanding of factors that contribute to healthy development
- D2: Demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being



- D3: Demonstrate the ability to make connections that relate to health and well-being - how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being

## **Geography**

**Curriculum Last Updated: 2018**

### Strand B: Natural Resources around the World: Use and Sustainability

- B1: Analyse aspects of the extraction/harvesting and use of natural resources in different regions of the world, and assess ways of preserving these resources
- B2: Use the geographic inquiry process to investigate issues related to the impact of the extraction/harvesting and/or use of natural resources around the world from a geographic perspective
- B3: Demonstrate an understanding of the sources and use of different types of natural resources and of some of the effects of the extraction/harvesting and use of these resources

## **Science**

**Curriculum Last Updated: 2007**

### Understanding Life Systems: Interactions in the Environment

- 1: Assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts
- 2: Investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem
- 3: Demonstrate an understanding of interactions between and among biotic and abiotic elements in the environment

### Understanding Matter and Energy: Pure Substances and Mixtures

- 1: Evaluate the social and environmental impacts of the use and disposal of pure substances and mixtures
- 2: Investigate the properties and applications of pure substances and mixtures
- 3: Demonstrate an understanding of the properties of pure substances and mixtures, and describe these characteristics using the particle theory

## **Grade Eight**

### **Health and Physical Education**

**Curriculum Last Updated: 2019**

#### Strand D: Healthy Living

- D1: Demonstrate an understanding of factors that contribute to healthy development
- D2: Demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being
- D3: Demonstrate the ability to make connections that relate to health and well-being - how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being

### **Science**

**Curriculum Last Updated: 2007**

#### Understanding Structures and Mechanisms: Systems in Action

- 1: Assess the personal, social, and/or environmental impacts of a system, and evaluate improvements to a system and/or alternative ways of meeting the same needs

#### Understanding Matter and Energy: Fluids

- 1: Analyze how the properties of fluids are used in various technologies, and assess the impact of these technologies on society and the environment
- 2: Investigate the properties of fluids
- 3: Demonstrate an understanding of the properties and uses of fluids

#### Understanding Earth and Space Systems: Water Systems

- 1: Assess the impact of human activities and technologies on the sustainability of water resources
- 2: Investigate factors that affect local water quality
- 3: Demonstrate an understanding of the characteristics of the earth's water systems and the influence of water systems on a specific region

## **Grade Nine Geography**

**Curriculum Last Updated: 2018**

### **Strand B: Interactions in the Physical Environment**

- B1: The Physical Environment and Human Activities: analyze various interactions between physical processes, phenomena, and events and human activities in Canada
- B2: Interrelationships between Physical Systems, Processes, and Events: analyze characteristics of various physical processes, phenomena, and events affecting Canada and their interrelationship with global physical systems
- B3: The Characteristics of Canada's Natural Environment: describe various characteristics of the natural environment and the spatial distribution of physical features in Canada, and explain the role of physical processes, phenomena, and events in shaping them

## **Science**

**Curriculum Last Updated: 2008**

### **B. Biology: Sustainable Ecosystems**

- B1: Assess the impact of human activities on the sustainability of terrestrial and/or aquatic ecosystems, and evaluate the effectiveness of courses of action intended to remedy or mitigate negative impacts
- B2: Investigate factors related to human activity that affect terrestrial and aquatic ecosystems, and explain how they affect the sustainability of these ecosystems

## **Grade Ten Science**

**Curriculum Last Updated: 2008**

### **D. Earth and Space Science: Climate Change**

- D1: Analyze some of the effects of climate change around the world, and assess the effectiveness of initiatives that attempt to address the issue of climate change
- D2: Investigate various natural and human factors that influence Earth's climate and climate change
- D3: Demonstrate an understanding of natural and human factors, including the greenhouse effect, that influence Earth's climate and contribute to climate change

**Grade Eleven  
Biology**

**Curriculum Last Updated: 2008**

**B. Diversity of Living Things**

- B1: Analyze the effects of various human activities on the diversity of living things
- B2: Investigate, through laboratory and/or field activities or through simulations, the principles of scientific classification, using appropriate sampling and classification techniques
- B3: Demonstrate an understanding of the diversity of living organisms in terms of the principles of taxonomy and phylogeny

**Chemistry**

**Curriculum Last Updated: 2008**

**E. Solutions and Solubility**

- E1: Analyze the origins and effects of water pollution, and a variety of economic, social, and environmental issues related to drinking water

**Environmental Science**

**Curriculum Last Updated: 2008**

**B. Scientific Solutions to Contemporary Environmental Challenges**

- B1. Analyze social and economic issues related to an environmental challenge, and how societal needs influence scientific endeavors related to the environment
- B3: Demonstrate an understanding of major contemporary environmental challenges and how we acquire knowledge about them

**C. Human Health and the Environment**

- C1: Analyze initiatives, both governmental and non-governmental, that are intended to reduce the impact of environmental factors on human health
- C2. Investigate environmental factors that can affect human health, and analyze related data
- C3. Demonstrate an understanding of various environmental factors that can affect human health, and explain how the impact of these factors can be reduced

**Regional Geography (University/College Prep)**  
**Curriculum Last Updated: 2015**

**C. Sustainability and Stewardship**

- C1: Sustainability and Stewardship of Natural Resources - analyse issues associated with sustainability and stewardship of natural resources in the selected region
- C3: Development Projects/Megaprojects - analyse various issues associated with development projects

**E. Dynamics and Change**

- E3: Climate Change and Natural Hazards - explain how climate, including climate change, and natural hazards affect the selected region

**Grade Twelve**  
**Biology**

**Curriculum Last Updated: 2008**

**E. Homeostasis**

- E1: Evaluate the impact on the human body of selected chemical substances and of environmental factors related to human activity
- E2: Investigate the feedback mechanisms that maintain homeostasis in living organisms

**Chemistry**

**Curriculum Last Updated: 2008**

**B. Organic Chemistry**

- B1: Assess the social and environmental impact of organic compounds used in everyday life, and propose a course of action to reduce the use of compounds that are harmful to human health and the environment

**The Environment and Resource Management (University/College Prep)**  
**Curriculum Last Updated: 2015**

**C. Sustainability and Stewardship of Natural Resources**

- C1: Policies and Strategies - analyse the roles and contributions of individuals, governments, and organizations with respect to the sustainable management of the world's natural resources
- C3: Availability and Use of Natural Resources - assess the availability of various natural resources, and analyse factors affecting their exploitation and use

#### D. Ecological Systems - Interconnections and Interdependence

- D2: Impacts of Pollution - evaluate impacts of various types of pollution on the natural environment and on human health

### **World Issues: A Geographic Analysis (University Prep)**

**Curriculum Last Updated: 2015**

#### B: Spatial Organization - Relationships and Disparities

- B1: Natural Resource Disparities - analyse relationships between quality of life and access to natural resources for various countries and regions

#### C: Sustainability and Stewardship

- C3: Caring for the Commons - analyse issues relating to the use and management of common-pool resources

#### E: Social Change and Quality of Life

- E3: Continuing Challenges - analyse issues relating to human rights, food security, health care, and other challenges to the quality of life of the world's population

## **Prince Edward Island**

### **Grade Four**

#### **Math**

**Curriculum Last Updated: 2015**

#### Number

- SCO N8: Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations

### **Grade Six**

#### **Math**

**Curriculum Last Updated: 2014**

#### Number

- SCO N6: Demonstrate an understanding of percent (limited to whole numbers) concretely, pictorially and symbolically

### **Grade Seven**

#### **Social Studies**

**Curriculum Last Updated: 2006**

#### Unit 2: Economic Empowerment

- 7.2.1: Analyze how commodities that lead to economic empowerment have changed
- 7.2.2: Investigate the various ways economic systems empower or disempowering people
- 7.2.3: Analyze trends that could impact future economic empowerment

#### Unit 4: Cultural Empowerment

- 7.4.3: Analyze the degree of empowerment and disempowerment for Aboriginal peoples in present-day Atlantic Canada during this period

#### Unit 3: Societal Empowerment

- 7.5.1: Evaluate the conditions of everyday life for the peoples of Canada at the turn of the 20th century

## **Science**

**Curriculum Last Updated: 2016**

### Life Science: Interactions within Ecosystems

- LS1: Explain how different parts of an ecosystem interact and affect each other

### Physical Science: Mixtures and Solutions

- PS3: Design and conduct experiments to explore methods of separating mixtures and solutions and extend the impact of those methods on society and the environment

## **Grade Eight**

### **Social Studies**

**Curriculum Last Updated: 2006**

#### Citizenship

- 8.4.1: Take age appropriate actions that demonstrate the rights and responsibilities of citizenship (local, national and global)
- 8.4.2: Demonstrate an understanding of how citizenship has evolved over time
- 8.4.3: Demonstrate an understanding of the structure and operation of government in Canada under a federal system

## **Grade Ten**

### **Canadian Studies 401A**

**Curriculum Last Updated: 2007**

#### Canada's Place in the World

- GCO: Students will be expected to demonstrate an understanding of the interactions among people, places, and the environment.

## **Science SCI431A**

**Curriculum Last Updated: 2019**

### Unit 1: Ecosystems: Sustainability of Ecosystems

- 318-1: Illustrate the cycling of matter through biotic and abiotic components of an ecosystem by tracking carbon, nitrogen, and oxygen
- 331-6: Analyze the impact of external factors on an ecosystem



- 318-6: Explain how biodiversity of an ecosystem contributes to its sustainability

## **Grade Eleven**

### **Geography 531A**

**Curriculum Last Updated: 2011**

#### Unit 2: Physical Patterns of the World

- 2.4: Explain the significance of water as a renewable resource

## **Grade Twelve**

### **Environmental Science 621A**

**Curriculum Last Updated: 2011**

#### Ecological Principles

- 3.5: Illustrate the cycling of matter through biotic and abiotic components of an ecosystem
- 3.6: Conduct an experiment to measure abiotic factors of an ecosystem

#### Natural Resources

- 5.8: Demonstrate an understanding of sustainable water use at local, national, and global levels
- 5.9: Evaluate the significance of water resources for international relations

#### Environmental Challenges and Successes

- 6.10: Summarize the main types, sources and effects of water pollution
- 6.11: Explain strategies that reduce air and water pollution
- 6.12: Conduct an experiment to determine water pollutants
- 6.13: Identify the types of solid domestic waste
- 6.14: Evaluate pollution management strategies from solid domestic waste on Prince Edward Island
- 6.15: Propose a course of action on a social issue related to waste management, taking into account human, economic, and environmental needs

**Quebec**  
**Elementary Cycle One**  
**Science and Technology**

**Curriculum Last Updated: 2011**

Earth and Space

A. Matter

- 3: Transformation of matter

Living Things

D. Systems and interaction

- 2: Use of living things for consumption

**Elementary Cycle Two and Three**  
**Science and Technology**

**Curriculum Last Updated: 2011**

Living Things

B. Energy

- 1: Sources of energy for living things

D. Systems and interaction

- 3: Interaction between humans and their environment

**Mathematics**

**Curriculum Last Updated: 2011**

Arithmetic

Understanding and Writing Numbers

- B: Fractions (using objects or drawings)

Operations Involving Numbers: Natural Numbers

- Natural numbers (based on the benchmarks for each cycle)

## **Secondary Grades**

### **General Biology**

**Curriculum Last Updated: 1990**

#### **Module II: Balance in Nature**

- Show that an ecosystem is a group of interacting components
- Show that the interactions among living and non-living things are regulating mechanisms that exist within an ecosystem
- Show that certain regulating mechanisms are necessary to maintain a balanced ecosystem
- Associate quality of life with a well-balanced organism and a stable ecosystem

### **Ecology**

**Curriculum Last Updated: 1985**

#### **Module 5: Environmental Influences on Living Organisms**

- Be aware of the details of environmental phenomena
- Be willing to take an investigative approach
- Be willing to follow a structured approach in consulting reference material
- Be willing to re-examine the ways in which they relate to nature

### **Physical Science (Physical Environment)**

**Curriculum Last Updated: 1987**

- Gain knowledge of certain physical phenomena in the environment, and consequently, learn about the properties of matter
- Develop certain skills necessary for scientific experiments
- Develop certain attitudes regarding the scientific method, such as a critical sense and a taste for research

### **Personal and Social Science**

**Curriculum Last Updated: 1989**

- To enable the student to identify in his/her everyday experience various aspects of life: health, interpersonal relationships, life in society, sexuality, and consumption
- To enable the student to clarify his/her concepts, values, and actions in these various areas of his/her development
- To enable the student to have a better understanding of the social dimension of his/her personality so that he/she may have a rewarding relationship with society
- To enable the student to discover and appreciate the unique character of each human being so that he/she may learn respect for others

- To enable the student to understand his/her rights and responsibilities as a citizen and the necessity for generally accepted standards in a democratic society

## **Saskatchewan**

### **Grade Four**

#### **Math**

**Curriculum Last Updated: 2007**

#### Number Strand

- N4.6: Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to provide examples of where fractions are used

### **Grade Five**

#### **Health**

**Curriculum Last Updated: 2010**

#### Decision Making (DM)

- DM5.1: Analyze possible obstacles and envision solutions to addressing health challenges related to personal eating practices, changes of puberty, impact of illness/disease, identity and well-being, violence, peer pressure, and self-regulation

### **Social Studies**

**Curriculum Last Updated: 2010**

#### Resources and Wealth (RW)

- RW5.1: Explain the importance of sustainable management of the environment to Canada's future

### **Grade Six**

#### **Health**

**Curriculum Last Updated: 2009**

#### Understanding, Skills, and Confidences (USC)

- USC6.3: Demonstrate an understanding of how non-curable infections, including HIV and Hepatitis C infection, are transmitted and how these infections influence the health (i.e., physical, mental, emotional, spiritual) and the identities of self, family, and community

- USC6.6: Develop and demonstrate the knowledge, skills, and personal standards necessary for establishing and supporting safe practices and environments related to various community activities

### Decision Making (DM)

- DM6.8: Assess the role of personal standards in decision making related to healthy relationships, non-curable infections, stress management, body image, safety, and health promotions
- DM6.9: Examine health opportunities and challenges to establish personal goal statements related to healthy relationships, non-curable infections, stress management, body image, safety, and health promotions

### Math

**Curriculum Last Updated: 2009**

#### Number

- N6.5: Demonstrate understanding of percent (limited to whole numbers to 100) concretely, pictorially, and symbolically

### Social Studies

**Curriculum Last Updated: 2009**

#### Interactions and Interdependence of Nations

- IN6.1: Evaluate and represent personal beliefs and values by determining how culture and place influence them
- IN6.3: Develop an understanding that global interdependence impacts individual daily life in Canada and a selection of countries bordering the Atlantic Ocean

#### Dynamic Relationships

- DR6.1: Analyze the impact of the diversity of natural environments on the ways of life in Canada and a selection of countries bordering the Atlantic Ocean
- DR6.2: Analyze ways in which the land affects human settlement patterns and social organization, and ways in which human habitation affects land
- DR6.4: Relate contemporary issues to their historical origins in Canada and a selection of countries bordering the Atlantic Ocean

#### Power and Authority

- PA6.1: Examine the relationship between an individual's power and authority and the power and authority of others
- PA6.2: Analyze the distribution of power and privilege in Canada and a selection of countries bordering the Atlantic Ocean
- PA6.3: Explore examples and explain how people, such as ethnic minority groups, the disabled, youth, and the elderly, may be affected by injustice or abuses of power

### Resources and Wealth

- RW6.1: Examine and analyze factors that contribute to quality of life, including material and non-material factors
- RW6.2: Contribute to initiating and guiding change in local and global communities regarding environmental, social, and economic sustainability

## Grade Seven

### Health

**Curriculum Last Updated: 2009**

#### Understanding, Skills, and Confidences (USC)

- USC7.4: Demonstrate a personalized and coherent understanding of the importance of nurturing harmony in relationships (with self, others, and the environment), and apply effective strategies to re/establish harmony when conflict arises
- USC7.7: Investigate and express an understanding of possible discrepancies in morals (e.g., beliefs, ethics, virtues, and understanding of right/wrong) that may determine and/or affect the commitment to the well-being of self, family, community, and the environment

### Science

**Curriculum Last Updated: 2009**

#### Life Science: Interactions within Ecosystems (IE)

- IE7.3: Evaluate biogeochemical cycles (water, carbon, and nitrogen) as representations of energy flow and the cycling of matter through ecosystems.
- IE7.4: Analyze how ecosystems change in response to natural and human influences, and propose actions to reduce the impact of human behaviour on a specific ecosystem

## **Social Studies**

**Curriculum Last Updated: 2009**

### Dynamic Relationships

- DR7.2: Appraise the impact of human habitation on the natural environment in Canada, and in a selection of Pacific Rim and northern circumpolar countries
- DR7.3: Analyze the relationship between current and historical events and the physical and social environments in Pacific and northern Canada and in a selection of Pacific Rim and circumpolar countries

### Power and Authority

- PA7.1: Compare the sources of power for individuals, nations, and regions in a selection of Pacific Rim and circumpolar countries

### Resources and Wealth

- RW7.2: Investigate the influence of resources upon economic conditions of peoples in circumpolar and Pacific Rim countries

## **Grade Eight**

### **Science**

**Curriculum Last Updated: 2009**

### Earth and Space Science: Water Systems on Earth (WS)

- WS8.1: Analyze the impact of natural and human-induced changes to the characteristics and distribution of water in local, regional, and national ecosystems

## **Social Studies**

**Curriculum Last Updated: 2009**

### Power and Authority

PA8.2: Examine the role of power and authority in the application of diverse decision-making processes in a variety of contexts

- PA8.4: Assess the impact of citizens' willingness and ability to actively engage in the Canadian political processes

## Resources and Wealth

- RW8.1: Analyze the social and environmental consequences of living in the Canadian mixed market economy based on consumerism
- RW8.2: Assess the implications of personal consumer choices
- RW8.3: Critique the approaches of Canada and Canadians to environmental stewardship and sustainability

## **Grade Nine**

### **Social Studies**

**Curriculum Last Updated: 2009**

## Dynamic Relationships

- DR9.3: Assess the relationship of the natural environment in the development of a society

## Power and Authority

- PA9.1: Examine concepts of power and authority in the governance of the societies studied
- PA9.3: Investigate the roles and responsibilities of members of the societies studied and those of citizens in contemporary Canada

## Resources and Wealth

- RW9.1: Compare differing perspectives regarding the acquisition and distribution of resources and wealth in the societies studied

## **Grade Ten**

### **Science**

**Curriculum Last Updated: 2016**

## Climate and Ecosystem Dynamics

- SCI10-CD1: Assess the implications of human actions on the local and global climate and the sustainability of ecosystems



## **Grade Eleven**

### **Environmental Science**

**Curriculum Last Updated: 2017**

#### Aquatic Systems

- ES20-AS1: Analyze the function and condition of freshwater aquatic systems such as rivers, streams, lakes, wetlands and watersheds
- ES20-AS2: Assess the importance of maintaining healthy water for humans and the environment

### **Health Sciences**

**Curriculum Last Updated: 2017**

#### Human Body

- HS20-HB2: Investigate various pathologies and ailments and their effects on cells, tissues, organs, and systems of a healthy human

### **Native Studies**

**Curriculum Last Updated: 1992**

#### Unit Three: Social Justice Case Studies and Readings

- Develop an understanding and increased awareness of the social justice issues and realities of Indigenous peoples in Canada and internationally
- Become aware of specific situations of social injustice, historical and current

### **Social Studies**

**Curriculum Last Updated: 1994**

#### Unit One: Human Rights

- Know that human rights are those rights that an individual is entitled to simply because she or he is human
- Know that a human rights claim by an individual or group imposes a set of responsibilities and obligations which other individuals and groups must honour
- Know that human rights are more than "demands for rights", they involve a moral entitlement to the right in question which other people in society collectively have decided they will honour
- Know that human rights are universal and as such apply to all people regardless of nationality, race, religion, political beliefs, age or gender

## Unit Three: Environment

- Know that the environment is a complex system of interacting, interdependent, living and non-living parts, with the whole environment being greater than the sum of each part
- Know that resources are those parts of the environment considered valuable because they meet human needs

## **Grade Twelve**

### **Native Studies**

**Curriculum Last Updated: 1997**

## Unit Four: Economic Development

- Understand how cultural factors influence a people's relationship to the environment and economic development
- Understand that a range of perspectives exists regarding development
- Appreciate the impact of development of natural resources on Aboriginal peoples

## **Yukon**

### **See British Columbia's Curriculum**

The British Columbia program of studies forms the basis of the Yukon curriculum.