

*“Climate Change: A
Local Focus on a Global
Issue” Newfoundland and
Labrador Curriculum
Links 2010-2011*



climatechange
education centre

HEALTH

Kindergarten:

NONE

Grade 1:

NONE

Grade 2:

- Know that litter can spoil the environment.

Grade 3:

NONE

Grade 4:

- Recognize the importance of clean air and water for everyday life.
- Understand the responsibility of governments, communities, families, and individuals for maintaining an aesthetic and healthful environment.
- Describe how air and water pollution can be controlled and/or reduced.
- Recognize the potential health hazards of air and water contamination.

Grade 5:

- Discuss the importance of reusing, reducing and recycling waste for environmental health.

Grade 6:

- Describe how natural and man-made changes in the environment may have negative as well as positive implications.
- Identify ways to reduce, reuse and recycle in the community.
- Explain the greenhouse effect, the ozone layer, and pollution and the implications of these in terms of health.
- Demonstrate ways to conserve energy and/or products in the school setting.

Grade 7:

- To identify practices and activities that pose a threat to the environment and the health of people.
- To consider the kinds of changes that are necessary to protect the environment and the health of individuals.

- To consider ways of initiating and participating in social actions that may lead to protection of the environment and the promotion of health.
- To 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.
- To develop a plan of action that would result in specific decisions and actions to enhance health and protect the environment.

Grade 8:

NONE

Grade 9:

NONE

LEVEL I - III:

NO HEALTH CURRICULUM

LANGUAGE ARTS

Kindergarten:

- Know the importance of looking at the speaker
- Listen attentively for short periods of time

Grade 1:

- Students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imaginations
 - Use writing and other forms of representing to convey meaning.
- Students will speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences
 - Begin to ask and respond to questions, seeking information (who? What? Why? Where? When?).

Grade 2:

- Students will speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences
 - Ask and respond to questions to clarify information or gather further information
- Students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imaginations.
 - use writing and other forms of representing for a variety of functions
 - to express feelings, opinions, and imaginative ideas

Grade 3:

- Students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imaginations.
 - Discover and express personal attitudes and opinions
 - Express feelings and imaginative ideas.

Grade 4:

- 2.4 – Engage in and respond to oral presentations.
- 3.1 – Show basic courtesies of conversation in group interactions
- 8.1 – Use strategies in writing and other ways of representing to
 - discover and express personal attitudes, feelings, and opinions.

- Describe feelings, reactions, values, and attitudes.

Grade 5:

- 8.1 – Use a range of strategies in writing and other ways of representing to:
 - describe feelings, reactions, values, and attitudes
 - record, develop, and reflect on ideas, attitudes, and opinions
 - record and reflect on experiences and their responses to them.

Grade 6:

- 8.1 – Use and refine a range of strategies in writing and other ways of representing to:
 - record, develop, and reflect on ideas, attitudes, and opinions
 - describe feelings, reactions, values, and attitudes
 - record, reflect on, share, and respond to experiences.

Grade 7:

- 8.1 – Experiment with a range of strategies for writing and other ways of representing to:
 - reflect on their feelings, values, and attitudes.

Grade 8:

- 1.4 – Listen to interpret key points in oral presentations, and evaluate the relevancy of supporting details.
- 3.1 – Demonstrate such speaking and listening skills as making eye contact, questioning, rephrasing when appropriate, clarifying comments, extending refining, and/or summarizing points
- 8.1 – Use a range of strategies for writing and other ways of representing to:
 - reflect on their feelings, values, and attitudes.

Grade 9:

- 1.4 – Listen to assess the relevancy and adequacy of the evidence that speakers give.
- 3.1 – Demonstrate such speaking and listening skills as making eye contact, questioning, rephrasing when appropriate, clarifying comments, extending refining, and/or summarizing points.
- 8.1 – Use a range of strategies for writing and other ways of representing to:
 - reflect on their feelings, values, and attitudes.

English 1201:

- 1.4 - Listen critically to analyze and evaluate ideas and information in order to formulate and refine opinions and ideas.
- 8.1 - Use writing and other ways of representing to:
 - reflect on their feelings, values, and attitudes.

English 1202:

- 1.4 - Listen critically to understand and analyze ideas and information.
- 3.1 - Demonstrate active listening and respect for the needs, rights, and feelings of others.
- 3.2 - Demonstrate the awareness of the power of spoken language.
- 8.1 - Use writing and other ways of representing to:
 - reflect on their feelings, values, and attitudes.

English 2201:

- 8.1 - Use writing and other ways of representing to:
 - express their feelings, and reflect on experiences that have shaped their ideas, values, and attitudes.

English 2202:

- 8.1 - Use writing and other ways of representing to:
 - express their feelings, and reflect on experiences that have shaped their ideas, values, and attitudes.

English 3201:

- 1.4 - Listen critically to analyze and evaluate concepts, ideas, and information.
- 3.1 - Consistently demonstrate active listening and respect for the needs, rights, and feelings of others.
- 8.1 - Use writing and other ways of representing to explore extend, and reflect on:
 - the basis for their feelings, values, and attitudes.

English 3202:

- 1.4 - Listen critically to analyze and evaluate concepts, ideas, and information.
- 3.1 - Consistently demonstrate active listening and respect for the needs, rights, and feelings of others.
- 8.1 - Use writing and other ways of representing to explore extend, and reflect on:
 - the basis for their feelings, values, and attitudes.

RELIGIOUS EDUCATION

Kindergarten:

- 6.1 – Demonstrate an appreciation for their immediate environment.

Grade 1:

- Students will be expected to:
 - recognize and accept responsibility for their surroundings

Grade 2:

- Students will be expected to:
 - 7.2 – Recognize and accept responsibility for their surroundings

Grade 3:

NONE

Grade 4:

NONE

Grade 5:

- 5.3 – Discuss the impacts of one’s actions on self and others.

Grade 6:

- 5.3 – Examine the implications of one’s actions on self and others.
- 5.4 – Examine why people must take responsibility for their actions.

Grade 7:

NONE

Grade 8:

NONE

Grade 9:

- 6.1 – Develop an awareness of the world as a global village.

SCIENCE

Kindergarten:

- Describe and demonstrate ways we use our knowledge of materials to maintain a healthy environment. Include reduce, reuse, recycle. (102-8).

Grade 1:

Grade 1 Earth and Space Science: Daily and Seasonal Changes

- describe ways of qualitatively measuring and recording environmental changes that occur in daily and seasonal cycles (101-6)
- observe and describe outdoor temperature changes at different times of the day and year and use terms like hot, water, cold, etc. (100-14)
- observe and describe the types of precipitation that occur at various seasons of the school year (100-14)

Grade 1 Life Science: Needs and Characteristics of Living Things

- recognize that humans and other living things depend on their environment, and identify personal actions that can contribute to a healthy environment (103-2)
 - recycling and composting
 - energy conservation

Grade 2:

Grade 2 Earth and Space Science: Air and Water in the Environment

- describe the effects of weather (103-7a)
- Include: building damage, road damage, behaviour changes in living things
- identify the importance of clean water for humans, and suggest ways they could conserve water (103-8)

Grade 3:

Grade 3 Life Science: Plant Growth and Changes

- ask and investigate questions related to growing conditions for plants. (200-1)
 - describe the conditions that are necessary for plant growth.
Air, Nutrients, Water, Sunlight, Space, Warmth

Grade 4:

Life Science: Habitats Grade 4

- identify questions to investigate about the types of plants and/or animals at a local habitat, and the conditions under which they live (204-1)

- identify their own and their families' impact on habitats, and describe how personal actions help conserve habitats (108-6, 108-3)
- predict how the removal of a plant or animal population affects the rest of the community (301-1)
- relate habitat loss to the endangerment or extinction of plants and animals (301-2)
- identify examples of positive and negative effects of technological developments on natural habitats (108-1)

Life Science: Light Grade 4

- identify ways of conserving energy through conservative use of home lighting (108-6)

Life Science: Rocks, Minerals, and Erosion Grade 4

- describe the effects of wind, water, and ice on the landscape (301-5)
- describe natural phenomena that cause sudden and significant changes to the landscape (301-7)

Grade 5:

Earth and Space Science: Weather Grade 5

- identify weather-related technological innovations and products that have been developed by various cultures in response to weather conditions (107-14)
- relate the transfer of energy from the sun to weather conditions (303-21)
- identify examples of weather phenomena that are currently being studied (105-1)
- identify positive and negative effects of technologies that affect weather and the environment (108-1)
- describe how studies of the depletion of the ozone layer, global warming and the increase in acid rain have led to new inventions and stricter regulations on emissions from cars, factories, and other polluting technologies (106-40)

Grade 6:

NONE

Grade 7:

Unit 1 - Interactions Within Ecosystems

- 1.01 - Identify questions related to a local ecosystem such as: "What types of species live within a particular ecosystem?" (208-2, 208-3)
- 1.60 - Describe how humans have influenced the environment:
 - Habitat loss / destruction
 - Pollution

- 1.63 – Use various sources to research individuals or groups in Canada interested in protecting the environment (112-4, 112-8, 209-5). Include:
 - Local Groups and Individuals
 - National Groups and Individuals
 - International Groups and Individuals

Unit 2 – Heat

- 2.03 – Relate temperature to everyday experiences. Include:
 - Average temperatures in different geographic areas

Unit 4 – Earth’s Crust

- 4.69 – Define Composting

Grade 8:

Unit 1 – Water Systems on Earth’s Surface

- 1.7 – Describe how long periods of global warming affect glaciers and describe the consequent effect on the environment. (311-12)
- 1.8 – Identify when the last ice age began and ended and what parts of North America were covered in ice.

Grade 9:

NONE

Science 2200:

- Explain how a paradigm shift, with respect to environmental attitudes, can change scientific world views in understanding sustainability (114-1)
- Evaluate relationships that affect the biodiversity and sustainability of life within the biosphere (NLS-1)
- Analyze from a variety of perspectives the risks to society of a biodiversity loss (118-2)
- Analyze a possible cause for extreme weather and describe some of the effects (214-11, 214-17, 330-4, 331-4)
- Describe the cause and effects of seasonal weather events such as localized flash flooding (212-1, 330-6)
- Integrate global climate change to local weather patterns (213-7)
- Describe benefits of weather satellite imaging and identify examples where improved data gathering has resulted in better understanding of weather systems and of forecasting (116-1, 117-10)
 - Distinguish between weather and climate
- Select and display evidence and information, from a variety of sources, to explain how external factors such as global warming or other human activities may have an impact on the distribution of biomes within Canada (213-7, 214-3, 215-4)

- Analyze the interactions between the atmosphere and human activities (330-4)
 - describe how human activities can impact global weather patterns
 - describe the causes and impact of the greenhouse effect
 - identify how human activities may increase the number and intensity of extreme weather events
 - describe the impact of climate change on economic, social, and environmental conditions
 - describe the economic and social impacts of extreme weather events.
- Analyze the impact of external factors on the ecosystem (331-6)
 - Weather Change (e.g. Global Warming)
- Describe and predict the nature and effects of changes to terrestrial systems (331-6)
 - Pollution (e.g. excess CO₂)
 - Weather Change
- Describe global warming and its impact on our local environment (215-1)
- Describe the main causes and effects of extinction (318-5)
 - climate change

Environmental Science 3205

- 1.07 - Identify that anthropocentric attitudes have contributed to many of today's environmental issues.
- 3.05 - Recognize that Newfoundland and Labrador exists within the Boreal forest region.
- 4.02 - Recognize that water is a finite resource
- 4.13 - Evaluate the impacts of human activities on water resources include:
 - personal use
 - community use
 - global use
- 5.02 - List the major functions of Earth's atmosphere. Include:
 - protects from harmful solar radiation
 - traps heat
 - maintains necessary gasses for life
- 5.05 - Identify the anthropogenic interactions that affect Earth's atmosphere. Include:
 - combustion
 - domestic
 - industrial
- 5.09 - Describe how smog affects air quality
- 5.12 - Describe the effects of poor air quality on human health

- 5.13 – Identify ways to improve air quality. Include:
 - individual
 - community
 - provincial
 - national
 - international
- 5.14 – Identify methods to improve air quality. Include:
 - cleaner burning fuels
 - catalytic converters
- 5.17 – Identify that climate change can have a catastrophic effect on Earth. Include:
 - natural sources of greenhouse gasses
 - anthropogenic sources of greenhouse gasses
- 5.18 – Describe the impacts of climate change in Canada on wildlife and natural ecosystems. Include:
 - types of vegetation
 - shifting ecosystem boundaries
 - biodiversity of species
 - adaptation of species
- 5.19 – Describe the impacts of climate change in forests
- 5.20 – Describe the impacts of climate change in Canada on agriculture. Include:
 - length of growing season
 - extreme weather events
 - types of crops
 - precipitation variability
- 5.22 – Describe the impacts of climate change in Canada on coastal zones (sea level changes and areas of human habitat). Include:
 - coastal erosion
 - flooding due to expansion of ocean water caused by melting ice
 - Newfoundland and Labrador locations at risk
- 5.23 – Describe the impacts of climate change in Canada on extreme weather events. Include:
 - frequency
 - intensity
 - vulnerable areas in Newfoundland and Labrador
- 5.24 – Describe the impacts of climate change in Canada on human health. Include:
 - heat stress
 - migration of diseases
- 5.25 – Describe efforts made to address climate change. Include:
 - individuals
 - industries

- provincial governments
- federal governments
- international agreements such as the Rio Declaration and the Kyoto Protocol
- 5.26 – Identify alternate sources of energy. Include:
 - wind
 - tidal
 - solar

Earth Systems 3209

- use the effect of human activity on the atmosphere to illustrate the risks and benefits of applying scientific knowledge or introducing a technology (118-1)
- relate the changing composition of the atmosphere to natural phenomena and human activity (330-4, 330-5)
- explain the role of the atmosphere in protecting the earth from solar radiation (331-4)
- recognize that global systems are inherently dynamic, that is they have been undergoing changes since earliest time (332-3, 332-7)
- give examples of changes that have occurred naturally and those that have been caused by human activity (332-3, 332-7)
- use a specific example to illustrate how global systems have changed and are changing over time (332-7, 332-3)

SOCIAL STUDIES

Kindergarten:

NONE

Grade 1:

- 1.2.2 Students will be expected to describe how people depend upon and interact with different natural environments.
 - give examples of how climate and weather influence human activities (local, national, and global)
 - give examples of how natural environments influence human activities (local, national, and global)
 - recognize that our way of life and our environment are affected by the presence and the use of natural resources
- 1.2.3 Students will be expected to take age-appropriate action to practice responsible behavior in caring for the environment.
 - identify examples of conservation and sustainability
 - explain how conservation and sustainability are important to the environment
 - promote sustainable practices on a local, national, and global level

Grade 2:

- 2.1.2 Students will be expected to demonstrate an understanding of how individuals and groups have contributed to change.
 - Identify ways individuals and groups have contributed to change.
- 2.1.4 Students will be expected to predict ways their community might change in the future and how they can contribute to that future.
 - identify and explain examples of changes that may take place in their community in the future
- 2.2.2 Students will be expected to demonstrate an understanding that people have changed technology over time to meet their needs, wants, and interests.
 - predict how changes in technology might affect individuals and communities in the future
 - identify selected technological milestones
 - give examples of the positive and negative impact of technology (local, national, and global)
- 2.4.1 Students will be expected to explain how and why physical environments change over time.

- identify some causes of change in their environment that occur naturally
- 2.4.2 Students will be expected to describe how people's interactions with their environment have changed over time.
 - describe how their local environment has changed over time as people's needs and wants have changed

Grade 3:

- The effect of geographic conditions on ways of living
 - Children will know:
 - That climate affects the way people satisfy basic needs

Grade 4:

- Environment affects peoples way of living, and people in turn, modify and change the environment.
- Conservation and utilization of natural resources

Grade 5:

- Environment affects peoples way of living, and people in turn, modify and change the environment.
- The effect of geographic conditions on ways of living
 - Children will know:
 - Newfoundland and Labrador's geographic features
 - Climate and weather
 - How the environments of sea, land, climate, and weather influence the lifestyle of the people
- The impact of industrial and technological change

Grade 6:

- 6.2.2 - Assess the role between culture and environment in a selected cultural region.
 - Evaluate the impact that culture has on the environment

Grade 7:

NONE

Grade 8:

- 4.5 - The student will be expected to demonstrate an understanding of social changes and issues that Newfoundland and Labrador experienced at the close of the 20th century.

- 4.5.1 Describe how people and organizations can contribute to environmental protection.
- 5.1 – The student will be expected to demonstrate an understanding of the role of history in shaping our current circumstances
 - 5.1.3 Determine the historical roots of current events, issues, and problems

Grade 9:

- 1.3 – Identify the basic weather and climatic patterns of Atlantic Canada.
- 4.1.9 – Recognize that society has contributed to some of society's problems.
- 5.2.6 – Discuss an environmental issue that impacts directly on Atlantic Canada and the global village.

Canadian Geography 1202:

- 2.1.1 Define the term weather.
- 2.1.2 Define the term climate.

World Geography 3202:

- 2.8 – The student will be expected to demonstrate an understanding of how climate conditions may affect human activity, including the following delineations:
 - 2.8.2 Examine how human activity affects climatic conditions (e.g., greenhouse effect, ozone depletion, global warming).
 - 2.8.4 Examine how selected climatic phenomena (e.g., El Nino, lake effect, hurricanes) affect human activity.