

GRADE 7

See the Preface for important information on the organization of the following material.

The Arts (2009)

A. DANCE

A1. Creating and Presenting

A1.2 use dance as a language to communicate ideas from their own writing or media works (*e.g., create a dance piece inspired by a student-authored poem about relationships with the natural world ...*)

A2. Reflecting, Responding, and Analysing

A2.1 construct personal interpretations of the messages in their own and others' dance pieces, including messages about issues relevant to their community and/or the world (*e.g., dance pieces on topics such as urban sprawl, land claims, poverty, homophobia, homelessness*), and communicate their responses in a variety of ways (*e.g., through writing, class discussion, oral reports, song, drama, visual art*)

Teacher prompt: "What statement did the dance we just watched make about global warming? Do you agree or disagree with the message the dance conveyed? Why? Was the message effectively conveyed?"

A2.2 analyse, using dance vocabulary, their own and others' dance pieces to identify the elements of dance and the choreographic forms used in them and explain how they help communicate meaning (*e.g., use of crouching shapes low to the ground and bound energy communicates the idea of confined space; use of site-specific locations [outdoor playground] to structure a dance communicates the idea of connection to the environment*)

A3. Exploring Forms and Cultural Contexts

A3.1 describe the evolution of dance and performance as different groups of people have responded to external factors such as migration, a new environment, and/or contact with other groups or cultures (*e.g., the evolution of Maritime Acadian folk dances into Louisiana Cajun dances such as fais do do and the Mardi Gras dance Krewes; the origins and development of French and Scottish jigs; the evolution of the Métis jig out of imitations of wildlife movements [prairie wild birds] and the intricate footwork of Native dancing and European jigs*)

B. DRAMA

B2. Reflecting, Responding, and Analysing

B2.1 construct personal interpretations of drama works, connecting drama issues and themes to their own and others' ideas, feelings, and experiences (*e.g., ... write in role about an environmental issue, first from the point of view of an audience member and then from the point of view of an animal whose habitat is threatened*)

Teacher prompt: "This drama presented one side of an environmental issue. Whose perspective is missing? Why do you think it has been left out? How do you feel about that? What words might you give to this voice?"

C. MUSIC

C1. Creating and Performing

C1.3 create musical compositions in a variety of forms for specific purposes and audiences (*e.g., ... create compositions using found sounds or recycled materials*)

D. VISUAL ARTS

D1. Creating and Presenting

D1.1 create art works, using a variety of traditional forms and current media technologies, that express feelings, ideas, and issues, including opposing points of view (*e.g., ... performance art or an installation that portrays both sides of the struggle between humankind and nature; ...*)

Teacher prompts: "How will your art work convey opposing perspectives on an issue that you have chosen to explore (*e.g., consumerism versus sustainability, land development versus conservation, global warming, poverty*)?" ... "How does your installation communicate the benefits and challenges of environmental stewardship?"

D2. Reflecting, Responding, and Analysing

D2.1 interpret a variety of art works and identify the feelings, issues, themes, and social concerns that they convey (*e.g., compare the mood of two different works by two peers, such as Above the Gravel Pit by Emily Carr and Reflections, Bishop's Pond by David Milne; ...*)

D3. Exploring Forms and Cultural Contexts

D3.1 identify and describe some of the ways in which visual art forms and styles reflect the beliefs and traditions of a variety of cultures and civilizations

Teacher prompts: ... "Compare the ways in which Impressionist artists and contemporary Cree artists depict nature. How are they different?" ...

French As a Second Language – Extended French, French Immersion (2001); Core French (1998)

Although no overall or specific expectations explicitly address environmental education, in each of the strands the learning context (e.g., a topic or thematic unit related to the environment) and/or learning materials (e.g., books, websites, media) could be used to foster in students the development of environmental understanding.

Health and Physical Education (1998)

ACTIVE PARTICIPATION

As students apply living skills in physical activities (third overall expectation), they can develop an appreciation of the natural environment, gain an experiential knowledge of the environment, and develop the problem-solving skills necessary for an environmentally literate citizen.

History and Geography (2004)

HISTORY

New France

The following overall expectation in the History strand addresses the interactions between humans and the environment within a historical context.

- use a variety of resources and tools to gather, process, and communicate information about how settlers in New France met the physical, social, and economic challenges of the new land

GEOGRAPHY

The Themes of Geographic Inquiry

- identify and explain the themes of geographic inquiry: location/place, environment, region, interaction, and movement
- analyse current environmental issues or events from the perspective of one or more of the themes of geographic inquiry

The following overall expectation provides students with opportunities to develop the skills of environmentally literate citizens (e.g., inquiry, higher-level thinking, futures thinking, and communication) in an environmental context.

- use a variety of geographic resources and tools to gather, process, and communicate geographic information

Patterns in Physical Geography

- explain how patterns of physical geography affect human activity around the world

The following overall expectation provides students with opportunities to develop the skills of environmentally literate citizens (e.g., inquiry, higher-level thinking, futures thinking, and communication) in an environmental context.

- use a variety of resources and tools to gather, process, and communicate geographic information about the earth's physical features and patterns

Natural Resources

- describe how humans acquire, manage, and use natural resources, and identify factors that affect the importance of those resources
- use a variety of resources and tools to gather, process, and communicate geographic information about the distribution, use, and importance of natural resources
- describe positive and negative ways in which human activity can affect resource sustainability and the health of the environment

Language (2006)

Although no specific or overall expectations explicitly address environmental education, in each of the strands the learning context (e.g., a topic or thematic unit related to the environment) and/or learning materials (e.g., books, websites, media) can be used to foster in students the development of environmental understanding, with a focus on critical literacy. Also, in each of the strands, there are some expectations that can provide opportunities for exploring environmental education – for example, expectations on making inferences, making connections, analysing and evaluating texts, developing a point of view, and doing research. Critical literacy involves the capacity for analysing texts and challenging their underlying messages, demonstrating self-criticism, and remaining open to further insights into the text. The example in the following expectation from the language document provides a context for environmental education.

WRITING

- 1.1 identify the topic, purpose, and audience for more complex writing forms (e.g., ... a report for a community newspaper about a public meeting on an environmental issue affecting local neighbourhoods; ...)

Mathematics (2005)

Although no overall or specific expectations explicitly address environmental education, in each of the strands the learning context could be used to foster in students the development of environmental understanding (e.g., problems relating to climate or waste management could be the focus of student learning). In addition, the mathematical processes (e.g., problem solving, connecting) address skills that can be used to support the development of environmental literacy.

DATA MANAGEMENT AND PROBABILITY

In this strand, the collecting and analysing of data could be extended to include environmental issues.

Native Languages (2001)

Although no overall or specific expectations explicitly address environmental education, in each of the strands the learning context (e.g., a topic or thematic unit related to the environment) and/or learning materials (e.g., books, websites, media) could be used to foster in students the development of environmental understanding. Learning about aspects of Native culture and communities may provide for students opportunities to make connections with local places.

Science and Technology (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
 - 1.1** assess the impact of selected technologies on the environment
 - 1.2** analyse the costs and benefits of selected strategies for protecting the environment
- 2** investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem
 - 2.2** design and construct a model ecosystem (e.g., *a composter, a classroom terrarium, a greenhouse*), and use it to investigate interactions between the biotic and abiotic components in an ecosystem
- 3** demonstrate an understanding of interactions between and among biotic and abiotic elements in the environment
 - 3.1** demonstrate an understanding of an ecosystem (e.g., *a log, a pond, a forest*) as a system of interactions between living organisms and their environment
 - 3.2** identify biotic and abiotic elements in an ecosystem, and describe the interactions between them (e.g., *between hours of sunlight and the growth of plants in a pond; between a termite colony and a decaying log; between the soil, plants, and animals in a forest*)
 - 3.3** describe the roles and interactions of producers, consumers, and decomposers within an ecosystem (e.g., *Plants are producers in ponds. They take energy from the sun and produce food, oxygen, and shelter for the other pond life. Black bears are consumers in forests. They eat fruits, berries, and other consumers. By eating other consumers, they help to keep a balance in the forest community. Bacteria and fungi are decomposers. They help to maintain healthy soil by breaking down organic materials such as manure, bone, spider silk, and bark. Earthworms then ingest the decaying matter, take needed nutrients from it, and return those nutrients to the soil through their castings.*)
 - 3.5** describe how matter is cycled within the environment and explain how it promotes sustainability (e.g., *bears carry salmon into the forest, where the remains decompose and add nutrients to the soil, thus supporting plant growth; through crop rotation, nutrients for future crops are created from the decomposition of the waste matter of previous crops*)
 - 3.7** explain why an ecosystem is limited in the number of living things (e.g., *plants and animals, including humans*) that it can support
 - 3.8** describe ways in which human activities and technologies alter balances and interactions in the environment (e.g., *clear-cutting a forest, overusing motorized water vehicles, managing wolf-killings in Yukon*)

- 3.9** describe Aboriginal perspectives on sustainability and describe ways in which they can be used in habitat and wildlife management (*e.g., the partnership between the Anishinabek Nation and the Ministry of Natural Resources for managing natural resources in Ontario*)

UNDERSTANDING STRUCTURES AND MECHANISMS: FORM AND FUNCTION

- 1** analyse personal, social, economic, and environmental factors that need to be considered in designing and building structures and devices
- 1.1** evaluate the importance for individuals, society, the economy, and the environment of factors that should be considered in designing and building structures and devices to meet specific needs (*e.g., function; efficiency; ease of use; user preferences; aesthetics; cost; intended lifespan; effect on the environment; safety, health, legal requirements*)

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
- 1.1** assess positive and negative environmental impacts related to the disposal of pure substances (*e.g., uranium*) and mixtures (*e.g., paint, sewage*)
- 1.2** assess the impact on society and the environment of different industrial methods of separating mixtures and solutions

UNDERSTANDING EARTH AND SPACE SYSTEMS: HEAT IN THE ENVIRONMENT

- 1** assess the costs and benefits of technologies that reduce heat loss or heat-related impacts on the environment
- 1.1** assess the social and environmental benefits of technologies that reduce heat loss or transfer (*e.g., insulated clothing, building insulation, green roofs, energy-efficient buildings*)
- 1.2** assess the environmental and economic impacts of using conventional (*e.g., fossil fuel, nuclear*) and alternative forms of energy (*e.g., geothermal, solar, wind, wave, biofuel*)
- 3** demonstrate an understanding of heat as a form of energy that is associated with the movement of particles and is essential to many processes within the earth's systems
- 3.7** describe the role of radiation in heating and cooling the earth, and explain how greenhouse gases affect the transmission of radiated heat through the atmosphere (*e.g., The earth is warmed by absorbing radiation from the sun. It cools by radiating thermal energy back to space. Greenhouse gases absorb some of the radiation that the earth emits to space and reradiate it back to the earth's surface. If the quantity of greenhouse gases in the atmosphere increases, they absorb more outgoing radiation, and the earth becomes warmer.*)
- 3.8** identify common sources of greenhouse gases (*e.g., carbon dioxide comes from plant and animal respiration and the burning of fossil fuels; methane comes from wetlands, grazing livestock, termites, fossil fuel extraction, and landfills; nitrous oxide comes from soils and nitrogen fertilizers*), and describe ways of reducing emissions of these gases