

Grade	Subject	Outcomes Related to Energy and the Environment
4	Science Social Studies	<ul style="list-style-type: none"> • Topic A – Waste and Our World • Topic E – Plant Growth and Changes <p>Values and Attitudes Applies to all grades Social studies provides learning opportunities for students to:</p> <ul style="list-style-type: none"> • thrive in their evolving identity with a legitimate sense of belonging to their communities, Canada and the world • demonstrate a global consciousness with respect to humanity and world issues • demonstrate a consciousness for the limits of the natural environment, stewardship for the land and an understanding of the principles of sustainability. <p>Knowledge and Understanding Applies to all grades</p> <ul style="list-style-type: none"> • understand that humans exist in a dynamic relationship with the natural environment. <p>4.1 Alberta: A Sense of the Land General Outcome</p> <ul style="list-style-type: none"> • Students will demonstrate an understanding and appreciation of how elements of physical geography, climate, geology and paleontology are integral to the landscapes and environment of Alberta. <p>4.1.1 value Alberta’s physical geography and natural environment:</p> <ul style="list-style-type: none"> • appreciate the diversity of elements pertaining to geography, climate, geology and paleontology in Alberta • appreciate how Alberta’s fossil heritage contributes to the province’s unique character • appreciate the variety and abundance of natural resources in Alberta • appreciate the environmental significance of national and provincial parks and protected areas in Alberta • appreciate how land sustains communities and quality of life • demonstrate care and concern for the environment through their choices and actions <p>4.1.2 examine, critically, the physical geography of Alberta by exploring and reflecting upon the following questions and issues:</p> <ul style="list-style-type: none"> • Where is Alberta located in relation to the other provinces and territories of Canada? • What are the major geographical and natural vegetation regions, landforms and bodies of water in Alberta (e.g., prairie region, forests, rivers, hoodoos, Rocky Mountains, oil sands)?

- What are the factors that determine climate in the diverse regions of Alberta (e.g., latitude, mountains)?
- What are the significant natural resources in Alberta, and where are they located (e.g., mineral deposits, coal, natural gas and oil, forests)?
- How are Alberta's provincial parks and protected areas and the national parks in Alberta important to the sustainability of Alberta's natural environment?

4.1.3 examine, critically, how geology and paleontology contribute to knowledge of Alberta's physical geography by exploring and reflecting upon the following questions and issues:

- How did archeologists and paleontologists discover the presence of dinosaurs in Alberta?
- What geological features make Alberta unique (e.g., hoodoos, Rocky Mountains, foothills, oil sands)?

4.1.4 analyze how Albertans interact with their environment by exploring and reflecting upon the following questions and issues:

- In what ways do the physical geography and natural resources of a region determine the establishment of communities?
- How are natural resources used by Albertans (i.e., agriculture, oil and natural gas, forests, coal)?
- How do Albertans deal with competing demands on land use (e.g., conservation, solar and wind power, recreation, agriculture, oil exploration, forestry)?
- In what ways does the Royal Tyrrell Museum contribute to scientific knowledge regarding Alberta's fossil heritage?
- How can ownership of a discovered artifact be determined?

Whose responsibility should it be to ensure the preservation of national parks, provincial parks and protected areas in Alberta?

**Language
Arts**

ELA implicitly connects to environmental education because it is processed based. The aim of ELS is to enable each student to understand and appreciate language and to use it confidently and competently in a variety of situations for communication, personal satisfaction and Learning.

Students will listen, speak, read, write, view, and represent

- To explore thoughts, feelings, and experiences. (General Outcome 1)
- To comprehend and respond personally and critically to oral, print, and other media texts. (General Outcome 2)
- To manage ideas and information (General Outcome 3)
- To enhance the clarity and artistry of communication. (General Outcome 4)
- To respect, support and collaborate with others.

(Outcome 5)

Mathematics Mathematics outcomes, whether process or content oriented, can be readily set in the context of energy and environmental issues, notably through problem solving and other real world and other real world applications.

Goals for students

The main goals of mathematics education are to prepare students to:

- solve problems
- communicate and reason mathematically
- make connections between mathematics and its applications
- become mathematically literate
- appreciate and value mathematics
- make informed decisions as contributors to society

Students who have met these goals:

- gain an understanding and appreciation of the role of mathematics in society
- exhibit a positive attitude toward mathematics
- engage and persevere in mathematical problem solving
- contribute to mathematical discussions
- take risks in performing mathematical tasks
- exhibit curiosity about mathematics and situations involving mathematics.

Teachers can assist students in attaining these goal by developing a classroom atmosphere that fosters conceptual understanding through:

- taking risks
- thinking and reflecting independently
- sharing and communicating mathematical understanding
- solving problems in individual and group projects
- pursuing greater understanding of mathematics
- appreciating the value of mathematics throughout history.

Physical Education

Physical Education outcomes readily invite the use of outdoor environments as a context for learning activities, incorporating active, physical components into cross-curricular studies in energy and the environment.

Music

Students may choose to express or respond to ideas or concerns about the environment in their music listening or composing.

Visual Arts

Students may choose to express ideas or concerns about the environment in the development of their own art; students may respond to ideas or concerns about an environmental issue as viewed in the art of others.
