

Grade	Subject	Outcomes Related to Energy and the Environment
Six	Science	<p>Aim and Goals</p> <p>The aim of K-12 science education is to enable all Saskatchewan students to develop scientific literacy. Scientific literacy today embraces Euro-Canadian and Indigenous heritages, both of which have developed an empirical and rational knowledge of nature. A Euro-Canadian way of knowing about the natural and constructed world is called science, while First Nations and Métis ways of knowing nature are found within the broader category of Indigenous knowledge.</p> <p>Diverse learning experiences based on the outcomes in this curriculum provide students with many opportunities to explore, analyze, evaluate, synthesize, appreciate, and understand the interrelationships among science, technology, society, and the environment (STSE) that will affect their personal lives, careers, and future.</p> <p>Goals are broad statements identifying what students are expected to know and be able to do upon completion of the learning in a particular area of study by the end of Grade 12. The four goals of K-12 science education are to:</p> <ul style="list-style-type: none"> • Understand the Nature of Science and STSE Interrelationships: Students will develop an understanding of the nature of science and technology, their interrelationships, and their social and environmental contexts, including interrelationships between the natural and constructed world. • Construct Scientific Knowledge: Students will construct an understanding of concepts, principles, laws, and theories in life science, physical science, earth and space science, and Indigenous knowledge of nature, then apply these understandings to interpret, integrate, and extend their knowledge.

- **Develop Scientific and Technological Skills:**

Students will develop the skills required for scientific and technological inquiry, problem solving, and communicating; for working collaboratively; and for making informed decisions.

K-12 Goals for Developing Social Responsibility: • *using moral reasoning* • *engaging in communitarian thinking and dialogue* • *taking social action.*⁷ Science 1

- **Develop Attitudes that Support Scientific**

Habits of Mind: Students will develop attitudes that support the responsible acquisition and application of scientific, technological, and Indigenous knowledge to the mutual benefit of self, society, and the environment.

Grade six

Assess personal, societal, economic, and environmental impacts of electricity use in Saskatchewan and propose actions to reduce those impacts.

Social Studies Social Studies General

Values and attitudes that support active and responsible citizenship are central to social studies learning. These include respect for democratic ideals such as justice and equality, and appreciation of the rights, privileges, and responsibilities of citizenship. Active citizenship also involves willingness to engage in discussion, negotiation, debate, and action regarding Canadian and global social issues. Students will examine the contribution individuals can make to the economic, environmental, and social sustainability of communities.

Goals are broad statements identifying what students are expected to know and be able to do upon completion of the learning in a particular area of study by the end of Grade 12. The four goals of K-12 Social Studies and Social Sciences education are to:

- examine the local, indigenous, and global interactions and interdependence of individuals,
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societies, cultures, and nations (IN).

- analyze the dynamic relationships of people with the land, environments, events, and ideas as they have affected the past, shape the present, and influence the future (DR).
- investigate the processes and structures of power and authority, and the implications for individuals, communities, and nations (PA).
- examine various worldviews about the use and distribution of resources and wealth in relation to the needs of individuals, communities, nations, and the natural environment, and contribute to sustainable development (RW)

Grade six

IN6.1 Evaluate and represent personal beliefs and values by determining how culture and place influence them.

- Plan, conduct, and evaluate an inquiry to illustrate how culture and place influence the beliefs and values of the local community.

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.

- a. Make generalizations about the effects of climate and vegetation in a local area on the historical development of people in the selected area.
 - b. Describe the relationship between the climate and vegetation zones and the lifestyles (e.g., modes of travel, home and building construction, modes of dress, population health, types of sport, recreation and leisure activities, economic activity) of people in Canada and in a selection of countries bordering the Atlantic Ocean.
 - c. Investigate ways in which natural environments are reflected in the artistic expressions (music, dance, painting, sculpture, architecture) in Canada and in a
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selection of countries bordering the Atlantic Ocean.

- d. Investigate the importance of place to the development of first languages and cultures.

DR6.2 Analyze ways in which the land affects human settlement patterns and social organization, and ways in which human habitation affects land.

- a. Identify, on a map or globe, major cities, landforms, and bodies of water in Canada and a selection of countries bordering the Atlantic Ocean.
- b. Propose explanations for population distributions, densities, and growth rates in a selection of countries bordering the Atlantic Ocean, and compare this to population distributions, densities, and growth rates in Canada.
- c. Identify the historical and contemporary factors that influence the migration of people (e.g., environmental, economic, and political factors), and research examples from a selection of countries bordering the Atlantic Ocean.
- d. Conduct an inquiry into the nature of urbanization and examine the impact of urbanization on youth, including indigenous youth, in Canada and in a selection of countries bordering the Atlantic Ocean.

DR6.3 Appraise the strategies human societies have used to orient themselves within time and place in the natural environment.

- a. Describe and compare diverse approaches to natural resource and land use among First Nations and Métis peoples in Canada, among indigenous peoples in countries bordering the Atlantic Ocean, and non-indigenous peoples of these regions, and explore how these diverse approaches have come into conflict and been in harmony in various time periods and locations.

RW6.1 Examine and analyze factors that contribute to quality of life, including material and non-material

factors.

- a. Assess ways in which technology influences the quality of life for youth in Canada and in a selection of countries bordering the Atlantic Ocean (e.g., ac
 - i. Research sources of wealth (including natural resources and industries) in Canada and a selection of countries bordering the Atlantic Ocean.
 - j. Recognize and assess the relationship between wealth and resources and the distribution of power and authority in Canada and a selection of countries bordering the Atlantic Ocean.

RW6.2 Contribute to initiating and guiding change in local and global communities regarding environmental, social, and economic sustainability

- b. Represent through visual art, music, dance, writing, or other representation the contribution of individuals and communities to initiate change that supports sustainability.
- c. Investigate how individual local consumer choices may affect people elsewhere in the world (e.g., child labour, enslavement, sweat shops, consumption of scarce resources, prosperity through employment).
- d. Develop an action plan for harmonizing one's personal lifestyle with collective needs regarding social, environmental, and economic sustainability.

**English
Language Arts**

ELA implicitly connects to environmental education because it is processed based.

Goals of K-12 English Language Arts:

- Comprehend and Respond (CR). Children will extend their abilities to view, listen to, read, comprehend, and respond to a range of contemporary and traditional grade-level texts in a variety of forms (oral, print, and other texts) from First Nations/Métis, and other cultures for a variety of purposes including for learning, interest, and enjoyment.
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- Compose and Create (CC). Children will extend their abilities to speak, write, and use other forms of representation to explore and present thoughts, feelings, and experiences in a variety of forms for a variety of purposes and audiences.
- Assess and Reflect (AR). Children will assess their own language skills; discuss the skills of effective viewers, representers, listeners, speakers, readers, and writers; and set goals for future improvement.

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.

The four goals for K-12 mathematics are broad statements that identify the knowledge, understandings, skills, and attitudes in mathematics that students are expected to develop and demonstrate by the end of grade twelve. Within each grade level, outcomes are directly related to the development of one or more of these goals.

The goals for K-12 mathematics are:

- **Logical Thinking:** Develop and be able to apply mathematical reasoning processes, skills, and strategies to new situations and problems.
- **Number Sense:** Develop an understanding of the meaning of, relationships between, properties of, roles of, and representations (including symbolic) of numbers and apply this understanding to new situations and problems.
- **Spatial Sense:** Develop an understanding of 2-D shapes and 3-D objects and the relationships between geometrical shapes and objects, and numbers and apply this understanding to new situations and problems.
- **Mathematical Attitude:** Develop a positive attitude towards the ability to understand mathematics and to use it to solve problems.

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.

K–12 Aim and Goals of Physical Education

The K–12 **aim** of the physical education curriculum is to support students in becoming physically educated individuals who have the understandings and skills to engage in movement activity, and the confidence and disposition to live a healthy, active lifestyle.

The K-12 **goals** are broad statements identifying what students are expected to know and be able to do upon completion of study in a particular area of study. The goals of physical education **are interdependent and are of equal importance**. The three goals for students from Kindergarten to Grade 12 are:

- **Active Living** – Enjoy and engage in healthy levels of participation in movement activities to support lifelong active living in the context of self, family, and community.
- **Skillful Movement** – Enhance quality of movement by understanding, developing, and transferring movement concepts, skills, tactics, and strategies to a wide variety of movement activities.
- **Relationships** – Balance self through safe and respectful personal, social, cultural, and environmental interactions in a wide variety of movement activities.

Arts Education Arts Education implicitly connects to environmental education because it is processed based.

The three goals of arts education from Kindergarten to Grade 12 are:

Cultural/Historical (CH) - Students will investigate the content and aesthetics of the arts within cultural, historical, and contemporary contexts and understand the connection between the arts and the human experience.

Critical/Responsive (CR) - Students will respond to

artistic expressions of Saskatchewan, Canadian, and International artists using critical thinking, research, creativity, and collaborative inquiry.

Creative/Productive (CP) - Students will inquire, create, and communicate through dance, drama, music, and visual art.
