Grade	Subject	Outcomes Related to Energy and the Environment
Eight	Science	**Aim and Goals** 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. 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. **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: • **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 eight** • Analyze the characteristics of cells, and compare structural and functional characteristics of plant and animal cells. • Demonstrate proficiency in the use of a compound light microscope to observe plant and animal cells. • Distinguish structural and functional relationships among cells, tissues, organs, and organ systems in humans and how this knowledge is important to various careers.
	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, 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 eight

DR8.1 Develop an understanding of the significance of land on the evolution of Canadian identity.

a. Examine the influence of the land on the Canadian personality depicted in literary texts, songs, media presentations, visual art and dance, sport and recreation.
b. Analyze the relationship between the traditional Aboriginal concept of land (an animate being; the source of life) and the contemporary Western European notion of land (a resource to be owned and exploited) through the centuries.
c. Illustrate on a map various designated lands in Canada (e.g., lands set aside such as reserve lands, settlement lands, heritage sites, homesteads, wildlife refuges, parks, crown land and trans-boundary areas) and explain such designations.
d. Investigate the importance of the land in the Canadian economy (e.g., agriculture, trapping,

hydroelectricity, fishing, mining, forestry, tourism), and speculate about the impact on the identity of Canadians.

e. Investigate the impact of land on the identity of First Nations, Métis, and Inuit peoples.

DR8.2 Describe the influence of the treaty relationship on Canadian identity.

a. Describe the influence of varying views of the land in motivating the treaty relationship.

c. Explore the Treaty Land Entitlement process in Canada.

d. Relate land claims and fishing and hunting rights to treaty provisions.

RW8.1 Analyze the social and environmental consequences of living in the Canadian mixed market economy based on consumerism

b. Categorize the producers of goods and services in the local economy as belonging to the public or private sector, and define the differences of the two groupings.

c. Identify the purpose and characteristics of:

- public enterprise
- private enterprise

g. Determine the positive and negative social and environmental consequences for family, school, and community in the Canadian mixed market economy.

RW8.3 Critique the approaches of Canada and Canadians to environmental stewardship and sustainability.

a. Represent on a timeline the evolution of Canadian policy on global environmental issues, including historical First Nations approaches to environmental stewardship.

		b. Outline the issues involved in finding solutions to an environmental challenge (e.g., sharing water resources with the US, logging in Canadian forests, expansion of nuclear energy, development of tar sands). c. Tell the story of changes made in his or her behaviour to protect the environment (e.g., walking, purchasing locally-produced or seasonal products, recycling; composting; disposing responsibly of garbage; using less paper; using less plastic; factoring packaging into purchases).
	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. • 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.