Grade	Subject	Outcomes Related to Energy and the Environment
Nine	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 nine** • Inquire into the motion and characteristics of astronomical bodies in our solar system and the universe. • Analyze scientific explanations of the formation and evolution of our solar system and the universe • Examine how various cultures, past and present, including First Nations and Métis, understand and represent astronomical phenomenon. • Analyze human capabilities for exploring and understanding the universe, including technologies and programs that support such exploration.
	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 nine

DR9.3 Assess the relationship of the natural environment in the development of a society.

a. Explain the influence of the major water systems, the topography, and the climate on the ways of life and worldviews in the societies studied.
b. Connect the characteristics of the natural environment with the settlement and movement of people in the societies studied.
c. Give examples of ways in which the natural environment influenced technological development in the societies studied.
d. Give examples of ways in which the development of societies studied impacted the natural environment.
e. Explain the effect of the natural environment in the

		progress or decline of the societies studied. f. Analyze the influence of the natural environment on the territorial expansion, colonization, or empire-building in the societies studied. g. Analyze the effects of colonization, territorial expansion, and empire-building on the natural environment. ***RW9.2 Appraise the significance of trade and transportation in the development of the societies studied.*** a. Analyse the impact of physical geography on modes of transportation in the societies studied.
	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.