

CURRICULUM ALIGNMENT – Digging Deeper: Uranium Mining

Saskatchewan

Grade	Course Name and Number	Unit/Module	Specific Outcome
7	Science 7	Earth and Space Science: Earth's Crust and Resources (EC)	Outcome EC7.2 Identify locations and processes used to extract Earth's geological resources and examine the impacts of those locations and processes on society and the environment. <i>e. Relate processes used to extract primary mineral resources in Saskatchewan (e.g. open-pit mining, underground mining, and solution mining) to the location, type, and depth of the resource.</i>
7	Science 7	Earth and Space Science: Earth's Crust and Resources (EC)	Outcome EC7.2 Identify locations and processes used to extract Earth's geological resources and examine the impacts of those locations and processes on society and the environment. <i>f. Provide examples of technologies used to further scientific research related to extracting geological resources (e.g. satellite imaging, magnetometer and core sample drilling).</i>
7	Science 7	Earth and Space Science: Earth's Crust and Resources (EC)	Outcome EC7.2 Identify locations and processes used to extract Earth's geological resources and examine the impacts of those locations and processes on society and the environment. <i>g. Evaluate different approaches taken to answer questions, solve problems and make decisions when searching for geological resources within Earth (e.g. trial-and-error prospecting versus core sampling).</i>
10	Energy and Mines 10, 20, 30	Module 1: Introduction to Energy and Mines (Core)	Foundational Objective: To become familiar with the technology of the energy and mining industries.
10	Energy and Mines 10, 20, 30	Module 4: Sustainability (Core)	Foundational Objective: To become familiar with the technology of the energy and mining industries.
10	Energy and Mines 10, 20, 30	Module 4: Sustainability (Core)	Learning Objective 4.4: To explore the environmental impact, both short-term and long-term, of common methods of mineral resource exploration, extraction, transportation, processing and consumption.
10	Energy and Mines 10, 20, 30	Module 12: Uranium - Formation, Location and Exploration (Optional)	Foundational Objective: To understand the geological and geophysical principles underlying the process of resource exploration.
10	Energy and Mines 10, 20, 30	Module 12: Uranium - Formation, Location and Exploration (Optional)	Foundational Objective: To assess the environmental impact of resource exploration, production, transport and processing.

10	Energy and Mines 10, 20, 30	Module 12: Uranium - Formation, Location and Exploration (Optional)	Learning Objective 12.4: To describe and illustrate current technologies in uranium exploration.
12	Energy and Mines 10, 20, 30	Module 13: Uranium - Production and Processing (Optional)	Foundational Objective: To become familiar with the nature and components of Saskatchewan's major underground resources and how they are extracted and purified through refining and processing.
12	Energy and Mines 10, 20, 30	Module 13: Uranium - Production and Processing (Optional)	Foundational Objective: To become familiar with the technology of the energy and mining industries.
12	Energy and Mines 10, 20, 30	Module 13: Uranium - Production and Processing (Optional)	Common Essential Learning: To employ correct terminology in describing uranium mining and milling.
12	Energy and Mines 10, 20, 30	Module 13: Uranium - Production and Processing (Optional)	Learning Objective 13.1: To compare and contrast the two major types of uranium mines.
12	Energy and Mines 10, 20, 30	Module 14: Uranium - Refinement, Distribution and Uses (Optional)	Foundational Objective: To become familiar with the nature and components of Saskatchewan's major underground resources and how they are extracted and purified through refining and processing.
12	Energy and Mines 10, 20, 30	Module 14: Uranium - Refinement, Distribution and Uses (Optional)	Common Essential Learning: To use correct terminology in describing uranium processing and nuclear energy.
12	Energy and Mines 10, 20, 30	Module 15: Workplace Safety, Environmental Safety and Careers (Optional)	Foundational Objective: To assess the environmental impact of resource exploration, production, transport and processing.
12	Energy and Mines 10, 20, 30	Module 15: Workplace Safety, Environmental Safety and Careers (Optional)	Learning Objective 15.2: To investigate the potential environmental effects of uranium exploration, mining, milling, transport, refining and use as nuclear fuel.