

Green Mining

Alberta & Nunavut	
Grade 5	
Topic E: Wetland Ecosystem	
<u>Specific Learner Expectations:</u>	<p>9. Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; e.g., adding pollutants, changing the flow of water, trapping or hunting pond wildlife.</p> <p>10. Identify individual and group actions that can be taken to preserve and enhance wetland habitats.</p> <p>11. Recognize that changes in part of an environment have effects on the whole environment.</p>
Skills and Attitudes	
<u>General Learner Expectations:</u>	<p>5–3 Design and carry out an investigation of a practical problem, and develop a possible solution.</p> <p>5–4 Demonstrate positive attitudes for the study of science and for the application of science in responsible ways.</p>
Grade 6	
Topic E: Trees and Forests	
<u>Specific Learner Expectations:</u>	<p>9. Identify human actions that enhance or threaten the existence of forests.</p>
Skills and Attitudes	
<u>General Learner Expectations:</u>	<p>6–3 Design and carry out an investigation of a practical problem, and develop a possible solution.</p> <p>6–4 Demonstrate positive attitudes for the study of science and for the application of science in responsible ways.</p>

Grade 7

Unit A: Interactions in Ecosystems

Specific Outcomes:

1. Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
 - identify examples of human impacts on ecosystems, and investigate and analyze the link between these impacts and the human wants and needs that give rise to them (e.g., identify impacts of the use of plants and animals as sources of food, fibre and other materials; identify potential impacts of waste products on environments)
 - analyze personal and public decisions that involve consideration of environmental impacts, and identify needs for scientific knowledge that can inform those decisions
4. Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments
 - identify intended and unintended consequences of human activities within local and global environments (e.g., changes resulting from habitat loss, pest control or from introduction of new species; changes leading to species extinction)
 - describe and interpret examples of scientific investigations that serve to inform environmental decision making

General Outcomes

Skills Outcomes:

- Ask questions about the relationships between and among observable variables, and plan investigations to address those questions
- identify science-related issues
 - identify questions to investigate arising from practical problems and issues
- Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data
- research information relevant to a given problem or issue
 - select and integrate information from various print and electronic sources or from several parts of the same source
- Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results
- communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means

Attitude Outcomes:

- Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields
- Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues
- Work collaboratively in carrying out investigations and in generating and evaluating ideas
- Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment

Grade 8

Unit E: Freshwater and Saltwater Systems

<u>Specific Outcomes:</u>	<p>4. Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues</p> <ul style="list-style-type: none">• identify current practices and technologies that affect water quality, evaluate environmental costs and benefits, and identify and evaluate alternatives (e.g., research and analyze alternatives for ensuring safe supplies of potable water; research, analyze and debate alternatives for a specific water quality issue, such as the location and design of a landfill, the protection of a natural waterway, the use of secondary and tertiary wastewater treatment, the salinization of soils due to irrigation, the eutrophication of ponds and streams due to excess use of phosphates in fertilizers and detergents, or a proposal to export water resources• illustrate the role of scientific research in monitoring environments and supporting development of appropriate environmental technologies (e.g., describe a local example of aquatic monitoring, and describe how this research contributes to watershed management)
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General Outcomes

<u>Skills Outcomes:</u>	<p>Ask questions about the relationships between and among observable variables, and plan investigations to address those questions</p> <ul style="list-style-type: none">• identify science-related issues• identify questions to investigate arising from practical problems and issues <p>Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data</p> <ul style="list-style-type: none">• research information relevant to a given problem or issue• select and integrate information from various print and electronic sources or from several parts of the same source <p>Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results</p> <ul style="list-style-type: none">• communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means
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<u>Attitude Outcomes:</u>	<ul style="list-style-type: none">• Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields• Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues• Work collaboratively in carrying out investigations and in generating and evaluating ideas• Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment
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