



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Overview



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Unit 2: How Canada's Resources Are Used to Meet People's Needs and Wants Today

In this unit, students transition from learning about how native Inuit people of the past used the natural resources available in the Arctic to adapt and meet the needs of their community, to learning about how resources found in Canada today are used to meet the needs and wants of people (both locally and in other areas of the Western Hemisphere). In the first half of the unit, students closely read excerpts of text about the natural resources found in Canada and how they are used to make products that meet people's needs and wants. Students work in groups to closely read and answer text-dependent questions in order to build background knowledge on the topic, as well as continue practicing how to quote accurately and use the relationships between words to better understand the meaning of key terms. For the mid-unit assessment, students read and view an unfamiliar informational article then answer text-dependent and short answer questions in order to demonstrate they can support their ideas with evidence from the text and analyze

the meaning of key words by completing Frayer Models (RI.5.1, L.5.4 a and c, and L.5.5 c). In the second half of the unit, students research to answer the questions: "How are Canada's available resources used to meet the needs and wants of people today?" and "How do natural resource industries modify the physical environment?" They practice research skills in preparation for Part 1 of the End of Unit 2 assessment, in which students perform an independent research simulation using a variety of visual, quantitative, and text-based resources to answer questions about how extractive industries in Canada meet modern needs as well as how these major industries modify the physical environment (RI.5.1, RI.5.3, W.5.7 and W.5.8). Students also practice speaking and listening skills in preparation for the second part of the End of Unit 2 Assessment, in which they orally summarize and discuss their research with a small group of their peers (RI.5.3, RI.5.9 and SL.5.2).

Guiding Questions and Big Ideas

- **How are Canada's available resources used to meet people's needs and wants today?**
- **How can I integrate information from a variety of texts and media to build knowledge about a topic?**
- **How do natural resource industries modify the physical environment?**
- *Canada's natural resources are used to meet the needs and wants of people in the Western Hemisphere.*
- *Analyzing information from different types of media can deepen my understanding of an idea.*



Mid-Unit 2 Assessment	Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply” This assessment centers on NYSP12 ELA CCCLS RI.5.1, L.5.4 (a, c), and L.5.5c. students read a new excerpt of text then answer text-dependent and short answer questions by quoting accurately from the text. Students also analyze the meaning of key words from the excerpt by completing Frayer Models to show the relationships between words.
End of Unit 2 Assessment	Research and Response This is a two-part assessment. Part 1 centers on NYSP12 ELA CCLS RI.5.1, RI.5.3, RI.5.9, W.5.7, and W.5.8. For this part of the assessment, students are presented with research resources in a variety of formats (charts, graphs, images, text, videos, etc.) about natural resources found in Canada, how they are used to meet people’s needs and wants, as well as how extractive industries modify the environment in ways that both benefit and harm local communities. Students collect information on the graphic organizer they will have been using throughout the second half of the unit. Part 2 of this assessment centers on NYSP12 ELA CCLA SL.5.1 and SL.5.2. Students orally summarize and discuss their research from Part 1 of the assessment with small groups of peers, using the World Café protocol.

Content Connections

This module is designed to address English Language Arts standards as students read informational text about resource use and distribution in Canada. However, the module intentionally incorporates Social Studies Practices and Themes to support potential interdisciplinary connections to this compelling content. These intentional connections are described below.

Big ideas and guiding questions are informed by the New York State Common Core K–8 Social Studies Framework:
<http://engageny.org/sites/default/files/resource/attachments/ss-framework-k-8.pdf>

5.1 GEOGRAPHY IN THE WESTERN HEMISPHERE: The diverse geography of the Western Hemisphere has influenced human culture and settlement in distinct ways. Human communities in the Western Hemisphere have modified the physical environment.

5.1c The physical environment influences human population distribution, land use, and other forms of economic activity.

- Students will use physical, climate, and vegetation maps in combination with population density maps and land-use and resource distribution maps to discern patterns in human settlement and types of economic activity.



Texts

1. Minerals and Metals in Your Life, <http://www.pdac.ca/mining-matters/resources/education/mining-matters-publications/articles>
2. Video: Ground Rules: Chapter 3, <http://www.youtube.com/watch?v=xmXT1YgfoTA&feature=c4-overview-vl&list=PL31F52074D345CEA2>
3. Natural Resources and Canada's Economy, <http://actionplan.gc.ca/en/page/r2d-dr2/overview>
4. Video and Transcript: Developing a Vital Resource for Canadians and the World, <http://www.actionplan.gc.ca/en/blog/r2d-dr2/developing-vital-resource-canadians-and-world>
5. A Limited Supply, http://www.ecokids.ca/pub/eco_info/topics/canadas_north/nature/resources.cfm
6. Deforestation in Canada, <http://cfs.nrcan.gc.ca/pages/391>
7. Get Energy Wise, page 1, http://www.ecokids.ca/pub/eco_info/topics/energy/intro/index.cfm;
page 2, http://www.ecokids.ca/pub/eco_info/topics/energy/intro/intro_02.cfm



This unit is approximately 2 weeks or 10 sessions of instruction.

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 1	Building Background Knowledge: How Canada's Natural Resources Meet the Needs and Wants of People Today	<ul style="list-style-type: none"> I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (RI.5.1) I can explain the relationships between two or more individuals, events, ideas, or concepts in a technical text based on specific information in the text. (RI.5.3) I can read and comprehend informational texts, including history/social studies, science, and technical texts, independently and proficiently. (RI.5.10) 	<ul style="list-style-type: none"> I can explain how natural resources found in Canada meet the needs and wants of people today. I can use established criteria to select a text for independent reading. 	<ul style="list-style-type: none"> Gist annotations Chalk Talk charts Independent reading selection 	<ul style="list-style-type: none"> Guiding Questions anchor chart Natural Environment anchor chart Group Norms anchor chart Vocabulary Strategies anchor chart Criteria for Selecting Texts anchor chart Big Ideas anchor chart Canada's Natural Resources anchor chart Popcorn Read protocol
Lesson 2	Close Reading and Viewing: Minerals and Metals	<ul style="list-style-type: none"> I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1) I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4) I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c) I can summarize information presented in diverse formats. (SL.5.2) 	<ul style="list-style-type: none"> I can explain how Canada's available natural resources are used to meet the needs and wants of people today, by quoting accurately from the text and video. I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies. I can summarize information presented in diverse formats. 	<ul style="list-style-type: none"> Resource web (from homework) Text-Dependent Questions: Minerals and Metals 	<ul style="list-style-type: none"> Canada's Natural Resources anchor chart Group Norms anchor chart Natural Environment anchor chart Popcorn Read protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 3	Close Reading: “Natural Resources and the Canadian Economy”	<ul style="list-style-type: none"> • I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1) • I can gather relevant information from print and digital sources by paraphrasing information in notes. (W.5.8) • I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4) • I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c) 	<ul style="list-style-type: none"> • I can explain how Canada’s available natural resources are used to meet the needs and wants of Canadians, by quoting accurately from the text. • I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies. • I can gather relevant information about how Canada’s natural resources meet Canadians’ needs and wants, by paraphrasing information in notes. 	<ul style="list-style-type: none"> • Minerals and Metals resource web (from homework) • Text-Dependent Questions: “Natural Resources and the Canadian Economy” 	<ul style="list-style-type: none"> • Canada’s Natural Resources anchor chart • Popcorn Read protocol
Lesson 4	Video and Close Reading: “Developing a Vital Resource for Canadians and the World”	<ul style="list-style-type: none"> • I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1) • I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4) • I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c) • I can summarize information presented in diverse formats. (SL.5.2) 	<ul style="list-style-type: none"> • I can summarize information presented in diverse formats. • I can explain how Canada’s available natural resources are used to meet the needs and wants of people today, by quoting accurately from the video transcript. • I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies. 	<ul style="list-style-type: none"> • “Natural Resources and the Canadian Economy” resource web (completed for homework) • “Developing a Vital Resource for Canadians and the World” note-catcher 	<ul style="list-style-type: none"> • Canada’s Natural Resources anchor chart • Popcorn Read protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 5	Mid-Unit Assessment: Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply”	<ul style="list-style-type: none"> • I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1) • I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4) • I can use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. (L.5.4a) • I can consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases. (L.5.4c) • I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c) 	<ul style="list-style-type: none"> • I can explain how Canada’s available natural resources are used to meet the needs and wants of people today, by quoting accurately from the text. • I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies. 	<ul style="list-style-type: none"> • “Developing a Vital Resource for Canadians and the World” resource web (from homework) • Mid-Unit 2 Assessment: Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply” • Tracking My Progress, Mid-Unit 2 recording form 	<ul style="list-style-type: none"> • Canada’s Natural Resources anchor chart



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 6	Research Skills, Part 1: Natural Resource Development and How It Modifies the Physical Environment	<ul style="list-style-type: none"> I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences. (RI.5.1) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) I can integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (RI.5.9) I can conduct short research projects that use several sources to build knowledge about multiple aspects of a topic. (W.5.7) I can gather relevant information from print and digital sources, summarize information in notes and finished work, and provide a list of sources. (W.5.8) 	<ul style="list-style-type: none"> I can build knowledge about how Canada's resources meet people's needs and wants and how resource industries modify the environment, by using several types of sources to conduct research. I can explain how Canada's resources meet people's needs and wants and how resource industries modify the environment, by quoting accurately from sources. I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources. 	<ul style="list-style-type: none"> "A Limited Supply" resource web (from homework) Research notes 	<ul style="list-style-type: none"> Canada's Natural Resources anchor chart Quote/Paraphrase anchor chart Research Skills and Processes anchor chart Popcorn Read protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 7	Research Skills, Part 2: Natural Resource Development and How It Modifies the Physical Environment	<ul style="list-style-type: none"> I can quote accurately from a text when explaining what the text says using explicitly and when drawing inferences. (RI.5.1) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text (RI.5.3) I can integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (RI.5.9) I can conduct short research projects that use several sources to build knowledge about multiple aspects of a topic. (W.5.7) I can gather relevant information from print and digital sources, summarize information in notes and finished work, and provide a list of sources. (W.5.8) 	<ul style="list-style-type: none"> I can build knowledge about how Canada's resources meet people's needs and wants and how resource industries modify the environment, by using several sources to conduct research. I can explain how Canada's resources meet people's needs and wants and how resource industries modify the environment, by quoting accurately from sources. I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources. 	<ul style="list-style-type: none"> Modifying the Physical Environment research web (from homework) Research notes 	<ul style="list-style-type: none"> Canada's Natural Resources anchor chart Research Skills and Processes anchor chart Popcorn Read protocol
Lesson 8	<ul style="list-style-type: none"> Speaking and Listening Skills: Practice 	<ul style="list-style-type: none"> I can engage effectively in a range of collaborative discussions with diverse partners. (SL.5.1) I can summarize information presented in diverse media and formats, including visually, quantitatively, and orally. (SL.5.2) 	<ul style="list-style-type: none"> I can explain how Canada's natural resources are used to meet people's needs and wants and how resource industries modify the environment, by engaging in collaborative discussions with peers. During peer discussions, I can support my ideas by summarizing information from a variety of sources, including my notes. 	<ul style="list-style-type: none"> Modifying the Physical Environment: Lesson 7 resource web (from homework) Self-assessment on research and response rubric 	<ul style="list-style-type: none"> Canada's Natural Resources anchor chart World Café protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 9	End of Unit Assessment, Part 1: Research and Response	<ul style="list-style-type: none"> I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (RI.5.1) I can explain the relationships between two or more individuals, events, ideas, or concepts in a technical text based on specific information in the text. (RI.5.3) I can integrate information from several texts on the same topic in order to speak about the subject knowledgeably. (RI.5.9) I can conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (W.5.7) I can gather relevant information from print and digital sources. (W.5.8) I can paraphrase information in notes and finished work, and provide a list of sources. (W.5.8) 	<ul style="list-style-type: none"> I can explain how Canada's natural resources meet people's needs and wants and how resource industries modify the environment, by quoting accurately from a variety of sources. I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources. I can prepare to speak knowledgeably about how Canada's natural resources meet people's needs and wants and how resource industries modify the environment, by integrating information from a variety of sources. 	<ul style="list-style-type: none"> End of Unit 2 Assessment, Part 1: Research and Response 	<ul style="list-style-type: none"> Canada's Natural Resources anchor chart
Lesson 10	End of Unit Assessment, Part 2: Research and Response	<ul style="list-style-type: none"> I can engage effectively in a range of collaborative discussions with diverse partners. (SL.5.1) I can summarize information presented in diverse media and formats, including visually, quantitatively, and orally. (SL.5.2) 	<ul style="list-style-type: none"> I can explain how Canada's natural resources are used to meet people's needs and wants today and how resource industries modify the environment, by engaging in collaborative discussions with peers. I can support my ideas by summarizing information from a variety of sources. 	<ul style="list-style-type: none"> Modifying the Physical Environment: Lesson 9 resource web (from homework) End of Unit 2 Assessment, Part 2: Research and Response 	<ul style="list-style-type: none"> Canada's Natural Resources anchor chart World Café protocol



Optional: Experts, Fieldwork, and Service

Experts:

- Invite a geologist to bring mineral artifacts and share with the class how minerals are formed, extracted, and used to make products that people want and/or need.

Fieldwork:

- Arrange for a visit to a local natural history and science museum with a minerals exhibit so students can explore first-hand what minerals are, where and how they are mined, as well as how the various products that people want and need are developed from them.

Service:

- As students learn about the impact that resource industries can have on the physical environment, encourage them to research and/or become involved with local organizations working on reclamation and/or public awareness projects.

Optional: Extensions

- The focus of this unit is related to Social Studies rather than Science content; therefore, instructional time spent addressing the meaning of relatively synonymous terms mentioned throughout various texts in this unit (e.g. *minerals*, *metals*, *coal*, *gas*, *oil*, *petroleum*, *energy*, and so forth) serves primarily to support students' understanding of how natural resources meet the needs and wants of people today and how their related industries modify the physical environment. In the "Preparation and Materials" section of this unit overview, a "Glossary of Terms: Teacher Resource" document has been included for your reference (see page below). Use this as needed to ensure that students' comprehension of big ideas is not hindered by their lack of understanding of scientific terminology.
- Consider conducting a scientific investigation with students about the similarities and differences between the resources mentioned and/or extending students' work with Frayer Models to help them recognize how the terms are both related and different.



Preparation and Materials

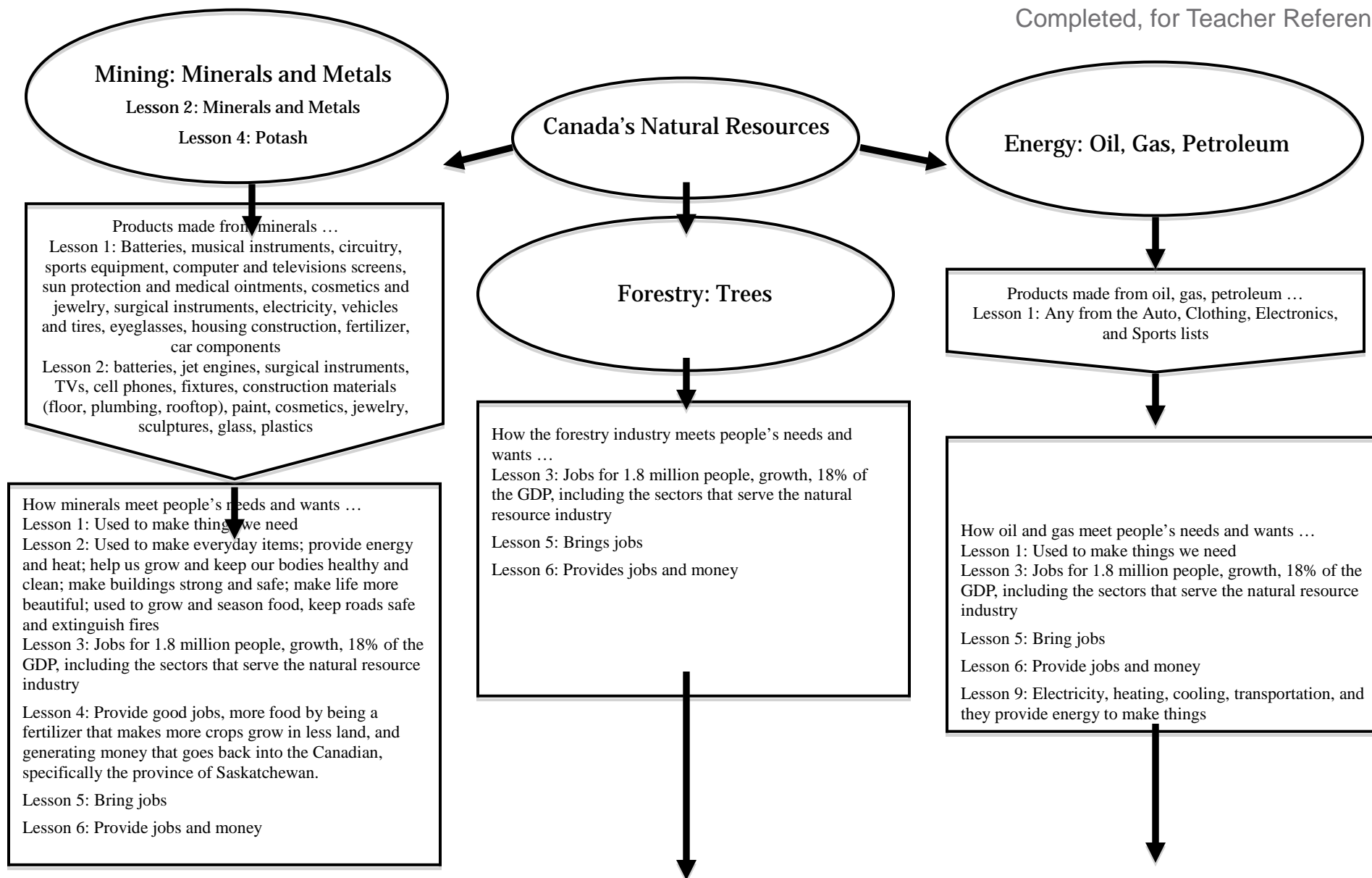
This unit includes a number of routines that involve stand-alone documents.

- Closely review the **Canada's Natural Resource anchor chart (complete, for teacher reference)**, provided below, to become familiar with the arrangement of information on the web and how it is added to during the Opening of Lessons 2–9.
- Review and refer to the **Glossary of Terms: Teacher Resource**, also provided below, to help students access key information from text and media sources included in this unit.
- Determine whether students will remain in their same groups from Unit 1 or whether you will assign them to new groups of four.
- Review the Recommended Texts list for this unit and consider working with a media specialist to collect a variety of books for students to choose from for independent reading, starting with Lesson 1.



Canada's Natural Resources Anchor Chart

Completed, for Teacher Reference





How it modifies the physical environment ...

Lesson 6: Disrupts wildlife, pollutes water, cuts down trees that are slow to regrow and totally changes the landscape

Lesson 7: Cut down trees, pollute water with lead

How it modifies the physical environment ...

Lesson 6: Disrupts wildlife, pollutes water, cuts down trees that are slow to regrow and totally changes the landscape

Lesson 7: Cut down trees

How it modifies the physical environment ...

Lesson 6: Disrupts wildlife, pollutes water, cuts down trees that are slow to regrow and totally changes the landscape; reclamation projects try to return the land to its natural state



Glossary of Terms:
Teacher Resource

Term	Definition
Mining products “Mining products provide many of the essential items that we use every day.”	Mining is the extraction, or pulling out, of a variety of minerals or geologic materials. The materials miners are mining for are sometimes in their raw form and must be processed or refined before they can be used for consumer goods.
Petroleum, oil, and gas “What products are made from oil and gas? What’s the first thing that comes to mind when you think about something made from petroleum?”	Petroleum is a crude material extracted from the ground. It can be separated and refined into oil and gas.
Petroleum-based products “Even if you don’t drive a car or carry your groceries home in plastic bags, you still use dozens—or even hundreds—of petroleum-based products every day.”	These are any products that are derived from petroleum—they all come from the same mining product (petroleum).
Minerals and metals “Minerals and metals are a part of everyday life.”	<p>Minerals are chemical compounds—they can be found in rocks, underground. There are a large number of minerals, and they can be identified by studying their shape, color, structure, and properties.</p> <p>Minerals are chemical substances. Some, like gold or silver, are made of only one element. Other minerals, like quartz, are combinations of elements.</p> <p>Metal is an element. Most metals are naturally present as minerals. Metals are more reactive than minerals. Metals and the respective materials of those metals have different appearances. Pure metals cannot be broken down into anything else.</p>



Reserves of energy “This country has enormous natural wealth, from huge reserves of energy to massive tracts of forest and an abundance of minerals and metals.”	Estimated quantities of energy (in the form of oil, coal, or gas) that are known, with reasonable certainty, to exist and can be recovered with present technology
Energy, mining, and forestry industries “The energy, mining, and forestry industries provide over \$30 billion a year in revenue to governments—money that supports critical social programs such as health, education, and public pensions.”	Forest industry = logging Mining industry = extraction of resources (coal, iron) Energy industries = drilling for petroleum, refinement of coal (i.e., turning it into electricity), hydropower
Resource extraction “As more areas of the north are opened up for resource extraction, more roads are needed for transportation.”	This means pulling crude oil (petroleum) out of ground, mining for coal, drilling for natural gas.
Ore “Metallic ores including iron, copper, lead, zinc, gold, and silver are mined in the Arctic, as well as limestone, diamonds, and uranium.”	An ore is a type of rock that contains minerals with important elements including metals. Ores are extracted through mining; then they are refined to extract the valuable metal.



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Grade 5: Module 3B: Unit 2:

Recommended Texts



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The list below includes texts with a range of Lexile® text measures about the resources found in Canada today. This provides appropriate independent reading for each student to help build content knowledge about the topic. Note that districts and schools should consider their own community standards when reviewing this list. Some texts in particular units or modules address emotionally difficult content.

It is imperative that students read a high volume of texts at their reading level in order to continue to build the academic vocabulary and fluency demanded by the CCLS.

Where possible, texts in languages other than English are also provided. Texts are categorized into three Lexile measures that correspond to Common Core Bands: below grade band, within band, and above band. Note, however, that Lexile® measures are just one indicator of text complexity, and teachers must use their professional judgment and consider qualitative factors as well. For more information, see Appendix 1 of the Common Core State Standards.

Common Core Band Level Text Difficulty Ranges:

(As provided in the NYSED Passage Selection Guidelines for Assessing CCSS ELA)

- Grades 2–3: 420–820L
- Grades 4–5: 740–1010L
- Grades 6–8: 925–1185L

Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures below band level (under 740L)			
<i>Using Coal, Oil, and Gas</i>	Sharon Katz Cooper (author)	Informational	500*
<i>National Geographic Readers: Rocks and Minerals</i>	Kathleen Weidner Zoehfeld (author)	Informational	630*
<i>Oil Spills! The Perils of Petroleum</i>	Jane Duden and Susan Walker (authors)	Informational	660
<i>Fossil Fuels</i>	Marcia Zappa (author)	Informational	725*

*Lexile based on a conversion from Accelerated Reading level.



Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures within band level (740L–1010L)			
<i>Fossil Fuels</i>	Andrew Solway (author)	Informational	790
<i>Oil and Coal</i>	Nikole Brooks Bethea (author)	Informational	820
<i>Forestry</i>	Jane Drake and Ann Love (authors) Pat Cupples (illustrator)	Informational	840
<i>Minerals, Rocks, and Soil</i>	Barbara J. Davis (author)	Informational	850
<i>Life in a Forestry Community</i>	Lizann Flatt (author)	Informational	870
<i>Harmony Children's Edition: A Vision for Our Future</i>	Prince of Wales Charles (author)	Informational	900*
Lexile text measures above band level (over 1010L)			
<i>Northern Industries</i>	Heather C. Hudak (author)	Informational	1025*
<i>Scholastic Discover More: Rocks and Minerals</i>	Dan Green (author)	Informational	1050
<i>Energy in Crisis</i>	Catherine Chambers (author)	Informational	1060
<i>Is There a Future for Fossil Fuels?</i>	Ellen Rodger (author)	Informational	1090

*Lexile based on a conversion from Accelerated Reading level.

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Grade 5: Module 3B: Unit 2: Lesson 1

Building Background Knowledge: How Canada's Natural Resources Meet the Needs and Wants of People Today



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (RI.5.1)

I can explain the relationships between two or more individuals, events, ideas, or concepts in a technical text based on specific information in the text. (RI.5.3)

I can read and comprehend informational texts, including history/social studies, science, and technical texts, independently and proficiently. (RI.5.10)

Supporting Learning Targets

- I can explain how natural resources found in Canada meet the needs and wants of people today.
- I can use established criteria to select a text for independent reading.

Ongoing Assessment

- Gist annotations
- Chalk Talk charts
- Independent reading selection



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Engaging the Reader: Natural Resources in Canada (10 minutes) 2. Work Time <ol style="list-style-type: none"> A. Annotating the Gist: Products Made from Mineral, Oil, and Gas Resources (15 minutes) B. Second Read: Creating Resource Webs to Explain How Canada's Natural Resources Meet People's Needs and Wants (20 minutes) C. Independent Reading Selection (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Debrief and Review of Learning Targets (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Reread the article "Products of Mining in Canada: From Batteries to Vehicles." B. Complete your Homework: Resource Web 	<ul style="list-style-type: none"> • In this second unit, students shift their focus from learning about how Inuit people of the past used the natural resources available in the Arctic to adapt and meet the needs of their community, to learning about the types of resources currently found in Canada, how they are used to meet the needs and wants of people today, and the ways that resource industries can modify the physical environment. • The first half of the unit focuses solely on the types of natural resources found in Canada and how they are used to develop products that meet the needs of people throughout the Western Hemisphere. The second half of the unit continues to build students' understanding of how people's needs and wants are met through natural resources but adds an additional focus on ways that resource industries can modify (affect, change) the physical environment. • Note that throughout this unit, every effort has been made to locate a variety of texts and images at a fifth-grade level that offer a balanced perspective regarding the use of natural resources as well as the effects of resource extraction. The texts and media intentionally blend information not only about negative effects on surrounding land, air, and water but also ways that resource industries implement reclamation projects aimed at returning areas to their natural condition. • During the Opening, students revisit the guiding questions from Unit 1 to synthesize their learning and share out big ideas. Then, students are introduced to the new guiding questions that will ground their work for the first half of the unit (the third guiding question for this unit will be introduced in Lesson 6). • After reading to determine and annotate the gist of two new informational articles about mineral, oil, and gas resources in Canada, and how they are used to meet people's needs and wants, students work within groups to complete Chalk Talk charts to show and explain how minerals, oil, and gas are used to create products that people want and/or need. Then, students share out ideas from their Chalk Talk charts to help create a new class anchor chart titled Canada's Natural Resources. Students will refer to this anchor chart and add to it throughout the unit to help them "see" the multiple ways in which natural resources are used to meet people's daily needs and wants. • During the final part of Work Time, students use the Criteria for Selecting Texts anchor chart from Unit 1 to help them choose a new independent reading text. • In advance: <ul style="list-style-type: none"> – Add the first two Unit 2 guiding questions to the Guiding Questions anchor chart from Unit 1 (see Unit 2 Overview as well as the Opening of this lesson).



Agenda	Teaching Notes (continued)
	<ul style="list-style-type: none">– Prepare technology for students to explore the “Products” website found at http://www.oilandgasinfo.ca/oil-gas-you/products/ or for you to display this website for students to read with you.– Review the Popcorn Read protocol and Thumb-o-Meter in Checking for Understanding techniques (Appendix 1).– Create a new anchor chart: Big Ideas.– Preview Glossary of Terms: Teacher Resource in “Preparation and Materials” from the Unit 2 Overview to support students’ understanding of the topics addressed in this unit.– Create a new anchor chart titled Canada’s Natural Resources (see blank example in supporting materials and the complete teacher resource in Unit 2 Overview).– Create one Chalk Talk chart for each group (see example in supporting materials).– Have a variety of independent reading texts for students to choose from.– Determine whether you will have students remain in their same groups from Unit 1 or whether you will assign students to new groups of four; display groups, for student reference.– Post: Learning targets; anchor charts from Unit 1: Guiding Questions, Natural Environment, Group Norms, Vocabulary Strategies, Criteria for Selecting Texts.



Lesson Vocabulary	Materials
available, resources, needs, wants, integrate, media, build, knowledge, explain, criteria, select; provide, essential, products, consumer goods, infrastructure, central role	<ul style="list-style-type: none">• Guiding Questions anchor chart (from Unit 1, Lesson 1)• Big Ideas anchor chart (new; teacher-created)• Natural Environment anchor chart (from Unit 1, Lesson 2)• Document camera• Oil and Gas map (one to display)• Glossary of Terms: Teacher Resource (see Unit 2 Overview, "Preparation and Materials")• Minerals map (one to display)• Group Norms anchor chart (from Unit 1, Lesson 1)• "Products of Mining in Canada: From Batteries to Vehicles" (one per student)• "Products" website and technology to display it (found at http://www.oilandgasinfo.ca/oil-gas-you/products/)• Vocabulary Strategies anchor chart (from Unit 1, Lesson 2)• Chalk Talk chart (one per group; teacher-created)• Chalk Talk task card (one per group)• Canada's Natural Resources anchor chart (new; teacher-created)• Criteria for Selecting Texts anchor chart (from Unit 1, Lesson 1)• Homework: Resource Web (one per student)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Natural Resources in Canada (10 minutes)</p> <ul style="list-style-type: none"> • Congratulate the class on completing the first unit of this module, during which they learned about how the native Inuit people of the past used animal, plant, and land resources to adapt to the harsh Arctic environment and to meet the needs of their community. • Focus students' attention on the Guiding Questions anchor chart and read the Unit 1 guiding questions aloud: <ul style="list-style-type: none"> * "How do people adapt to their environment and use the resources that are available to meet their needs?" * "How do the ideas conveyed through informational texts help us understand complex relationships?" • Then, direct students to the new Big Ideas anchor chart and ask them to think about and discuss with nearby peers: <ul style="list-style-type: none"> * What do you think were the big ideas of Unit 1?" • After 1 or 2 minutes, invite a few students to share their thinking aloud. Listen for suggestions such as: <ul style="list-style-type: none"> * "The Inuit people adapted to their environment and used natural resources such as animals, plants and stone to meet the needs of their community; they used natural resources to build homes, make clothing and tools. * "The ideas conveyed through features found in informational texts such as images, captions, italicized font, and section titles texts can help us understand complex relationships." • Record a synthesis of students' ideas on the Big Ideas anchor chart. • Point out and ask students to chorally read the new Unit 2 guiding questions on the Guiding Questions anchor chart: <ul style="list-style-type: none"> * "How are Canada's available resources used to meet people's needs and wants today?" * "How can I integrate information from a variety of texts and media to build knowledge about a topic?" • Underline the words <i>available</i>, <i>resources</i>, <i>needs</i>, <i>wants</i>, <i>integrate</i>, <i>media</i>, <i>build</i>, and <i>knowledge</i>. • Ask students to think about and discuss with a partner what they think these terms mean, based on context and previous understandings of familiar terms. • After 2 or 3 minutes, cold call a few students to share their thinking with the class. Listen for ideas such as: <ul style="list-style-type: none"> – "Available means something you can get; it exists and is obtainable." – "Resources are supplies—things people need or want to use." – "Needs are what people need to survive; they are requirements." 	<ul style="list-style-type: none"> • Provide sentence starters to support students who have difficulty expressing their ideas orally. • Locate and display pictorial representations of key terms from the guiding questions to support ELLs and visual learners.



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">– “<i>Wants</i> are things that people wish for and would like to have.”– “<i>Integrate</i> means to combine, put together.”– “<i>Media</i> refers to the different ways we get information, such as articles, videos, images, and maps.”– “<i>Build</i> in this context means to develop.”– “<i>Knowledge</i> means information, facts.”• If students are not able to define the meaning of these words, define for them.• Ask students to think about the meaning of key terms, review the Unit 2 guiding questions, and then discuss with nearby classmates:<ul style="list-style-type: none">* “What do you think we will learn about in this unit?”• After 1 or 2 minutes, invite a few students to share out whole group.• Bring students' attention to the Natural Environment anchor chart from Unit 1. Then say something like: “In Unit 1, we learned about the animal, plant, and land resources the native Inuit used to meet their needs and adapt to life in the Arctic. In this unit, we are going to focus on the natural resources that are currently found in Canada and how they are used to meet the needs and wants of people in Canada as well as the United States today.”• Using a document camera, display the Oil and Gas map. Ask students to review the map and then share with a partner what they notice and wonder.• After 2 or 3 minutes, cold call students to share their thinking with the class. Listen for:<ul style="list-style-type: none">– “I notice there are images that represent oil and gas found in Canada.”– “I wonder how oil and gas are used to meet people's needs.”• Ask students to consider and then share what they think the definitions of “oil” and “gas” are (see Glossary of Terms: Teacher Resource to reinforce students' definitions and/or clarify any misconceptions that students may have; i.e. students may think that “gas” is the same as gasoline).• Next, display the Minerals map and ask students to review and share with a nearby peer what they notice and wonder.	



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• After 2 or 3 minutes, cold call students to share their thinking aloud. Listen for ideas such as:<ul style="list-style-type: none">– “I notice a lot of different kinds of minerals.”– “I notice minerals are found all over Canada.”– “I wonder what these minerals are used for, and how they meet people’s needs and wants.”• Invite students to share out a definition for the word “minerals” (again refer to Glossary of Terms: Teacher Resource).• Draw students’ attention back to the Natural Environment anchor chart and point to “land.” Tell students that during the next part of Work Time, they will read to learn about how minerals, gas, and oil found in areas of Canada are used to meet the needs and wants of people today.• Draw two arrows from “land” on the Natural Environment anchor chart. Write and circle “minerals” below one arrow and “oil and gas” below the other arrow.	



Work Time (continued)	Meeting Students' Needs
<p>A. Annotating the Gist: Products Made from Mineral, Oil, and Gas Resources (15 minutes)</p> <ul style="list-style-type: none"> • Display student groups and then ask students to join group members. Review and refer students to the Group Norms anchor chart as necessary to remind them of the criteria for successful collaborative work. • Distribute the article “Products of Mining in Canada: From Batteries to Vehicles.” • Ask students to skim the texts and notice the bolded words: <i>provide, essential, products, consumer goods, infrastructure, and central role</i>. • Tell students that as they read for the gist, they should try to determine the meaning of bolded words and phrases, from context, to help them determine what these passages are mostly about. Remind students to refer to the Vocabulary Strategies anchor chart as needed. • Instruct students to follow along silently as you read aloud the article, “Products of Mining in Canada: From Batteries to Vehicles.” Read the first paragraph, then pause and ask students to think about the gist, briefly discuss it in groups, and then write the gist of the first paragraph in the margin. • Continue with the chart in this text; read the name of each product and the minerals it is made from. Ask students to consider the text and key words, discuss the gist of the chart, and record the gist in the margin of the article. • Cold call a few students to share out the meaning of key words and the gist statements they wrote. Listen for suggestions such as: <ul style="list-style-type: none"> – “<i>Provide</i> means to supply, make available, or offer.” – “<i>Essential</i> means things people need—these things are necessary and important.” – “<i>Products</i> are things that are made, goods.” – “<i>Consumer goods</i> are things that people buy.” – “<i>Infrastructure</i> means highways, roads, communications, and housing.” – “The gist of the first paragraph is that minerals are used to make products that are essential to people, things that people need.” – “The gist of the chart is that it takes a lot of different minerals to make the things people want or need—for example, homes, batteries, circuits, fertilizer, and glasses.” • Next, either display or invite students to read the first page of the “Products” website on their internet technology. Ask them to follow along silently as you read the page aloud. 	<ul style="list-style-type: none"> • Allow students who struggle with writing to dictate their gist statements to an adult or peer who can scribe for them. • Allow students who struggle with language to create pictorial representations for the gist, in the margin of their articles. • Provide sentence starters to support students during group discussions: “The gist of this section of the text is _____,” and “Mineral, oil, and gas resources meet people’s needs because _____.” • Consider rereading challenging passages from the text to support students who have difficulty processing oral information.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask students to think about the gist and discuss it in groups.• Select students to share the gist. Listen for students to explain that the gist is that lots of products, including things we use around the house are made from oil and gas.• Go through and read each of the pages linked in the list of categories on the right side of the page. Invite students to discuss the gist of each one in their groups.• Ask students to discuss in groups:<ul style="list-style-type: none">* "How do mineral, oil, and gas resources found in Canada meet people's needs today?"• After 1 or 2 minutes, cold call a few groups to share out with the class (answers will vary, but listen for students to mention that land resources such as minerals, oil, and gas are used to make products that people depend on).• Explain to students that during the next part of Work Time, they will participate in group Chalk Talks to further build their understanding of how Canada's mineral, oil, and gas resources are used to make products that meet people's needs and wants.	



Work Time (continued)	Meeting Students' Needs
<p>B. Second Read: Creating Resource Webs to Explain How Canada's Natural Resources Meet People's Needs and Wants (20 minutes)</p> <ul style="list-style-type: none"> Ask students to read the first learning target aloud with you: <ul style="list-style-type: none"> * "I can explain how natural resources found in Canada meet the needs and wants of people today." Underline the key words from the target students are familiar with from the Opening and previous units: <i>explain, natural resources, needs, and wants</i>. Ask students to think about what each term means and then discuss with group members what they think they will be learning about during this part of Work Time. After 1 minute, cold call a few students to share their thinking with the class. Distribute a Chalk Talk chart and a Chalk Talk task card to each group. Review the chart prompts and task card directions with students and answer any clarifying questions. When students are ready, ask them to begin. Circulate to offer guidance. After 10–12 minutes, or when most students have completed their charts, pause students in their work and ask them to consider and discuss in groups: <ul style="list-style-type: none"> * "Based on the sketches and information you recorded in each square of your charts, in what ways do you think Canada's natural resources meet people's needs and wants?" After 2 minutes, cold call a few groups to share their thinking with the class. Listen for: <ul style="list-style-type: none"> – "Minerals, oil, and gas are used to make things that people use every day, such as clothing, housing, glasses, sports equipment, and other items." – "The minerals, oil, and gas found in Canada are used to make essential products such as medicine, shelter, and roads." Ask students to review their charts and consider ideas shared out by their peers. Then they should discuss with group members how they could write a statement at the bottom of their charts to explain how natural resources in Canada are used to meet the needs and wants of people today. Display the new Canada's Natural Resources anchor chart. Point out that this chart is very similar to the resource webs students created in Unit 1 about seals, caribou, walruses, wood, and stone. Review the Popcorn Read protocol with students and clarify as needed. Point out the circle "Minerals" and then focus students on the square "Products made from minerals." Explain to students that they will refer to the Chalk Talk charts they completed in groups to "popcorn" share information that could be added to this square. Cold call one student to begin the popcorn, and add students' ideas to the anchor chart (listen for students to share the names of items from the minerals article, such as batteries, musical instruments, etc.). 	<ul style="list-style-type: none"> Locate and display pictorial representations of key terms from the targets to support ELLs and visual learners. Consider working with a small group of struggling learners to offer additional support with completing the Chalk Talk chart. For students who have difficulty following multistep directions, consider asking them to highlight and complete one step of the task card at a time. Provide sentence frames to allow all students access to the conversation. Example: "Minerals are used to make _____, so they meet people's need for _____."



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> Ask students to refer to the products now listed on the Canada's Natural Resources anchor chart and discuss in groups: <ul style="list-style-type: none"> * "Based on the number and types of products made from minerals, what can you infer about how minerals meet people's needs and wants?" After 1 or 2 minutes, cold call a few groups to share out. Listen for suggestions such as: <ul style="list-style-type: none"> – "Minerals are used to make products that entertain people and provide things they need, such as shelter and roads." Record a strong example or synthesis of students' thinking in the box "How minerals meet people's needs and wants." Repeat the above steps for the oil and gas sections of the anchor chart. Listen for students to share specific examples of products made from oil and gas that are mentioned on the "Products" website (e.g., sports equipment, vehicle parts) and to make an inference such as: <ul style="list-style-type: none"> – "Oil and gas is used for many everyday needs and wants such as clothing, transportation, and entertainment." Explain to students that as they closely read and view a variety of media and texts about how Canada's natural resources meet the needs and wants of people today, they will continue to add to this resource chart to build their understanding of the relationship between people's needs and wants and the resources that are currently available in Canada. 	
<p>C. Independent Reading Selection (10 minutes)</p> <ul style="list-style-type: none"> Tell students that today they will choose a new independent reading book to read for homework throughout this second unit. Read the second learning target aloud: <ul style="list-style-type: none"> * "I can use established criteria to select a text for independent reading." Remind students that to become better readers and writers, they should read a variety of books—and that the more students read, the more they are able to learn about their world. Display the Criteria for Selecting Texts anchor chart. Remind students this is the same criteria they used in Module 2B to self-select appropriate texts for independent reading (review criteria as needed). Give students 7 or 8 minutes to choose a book. If any students are unable to choose a book in the time allotted, find other times during the day for them to review the independent reading choices and select a text. 	<ul style="list-style-type: none"> For struggling readers who may have trouble selecting appropriate texts based on multiple criteria, consider asking them to choose one criterion from the anchor chart to focus on as they make their selection. If some students are not able to choose a text in the time given, consider finding time later in the day for them to select a text.



Closing and Assessment	Meeting Students' Needs
<p>A. Debrief and Review of Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Focus students' attention whole group. Ask students to consider and discuss with a partner who is not a member of their regular group:<ul style="list-style-type: none">* "How did the various types of media, including maps, images, charts and text, help you understand how Canada's natural resources meet the needs and wants of people today?"• After 1 or 2 minutes, invite a few students to share out. Answers will vary, but listen for students to refer to specific features of the maps, images of minerals, bulleted lists, charts, highlighted, and/or small chunks of text and how these features supported their understanding of the ideas presented.• Ask students to read the learning targets aloud with you and pause after each to show their level of mastery using a Thumb-O-Meter.• Distribute Homework: Resource Web and read the directions with students. Answer any clarifying questions.	<ul style="list-style-type: none">• Provide sentence starters or frames to support student discussions.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Reread the article "Products of Mining in Canada: From Batteries to Vehicles."• Complete your Homework: Resource Web.	<ul style="list-style-type: none">• Consider providing struggling readers with a partially completed resource web.• Allow struggling writers to dictate their ideas to someone at home to scribe for them.• Consider providing an audio recording of the articles.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 1

Supporting Materials

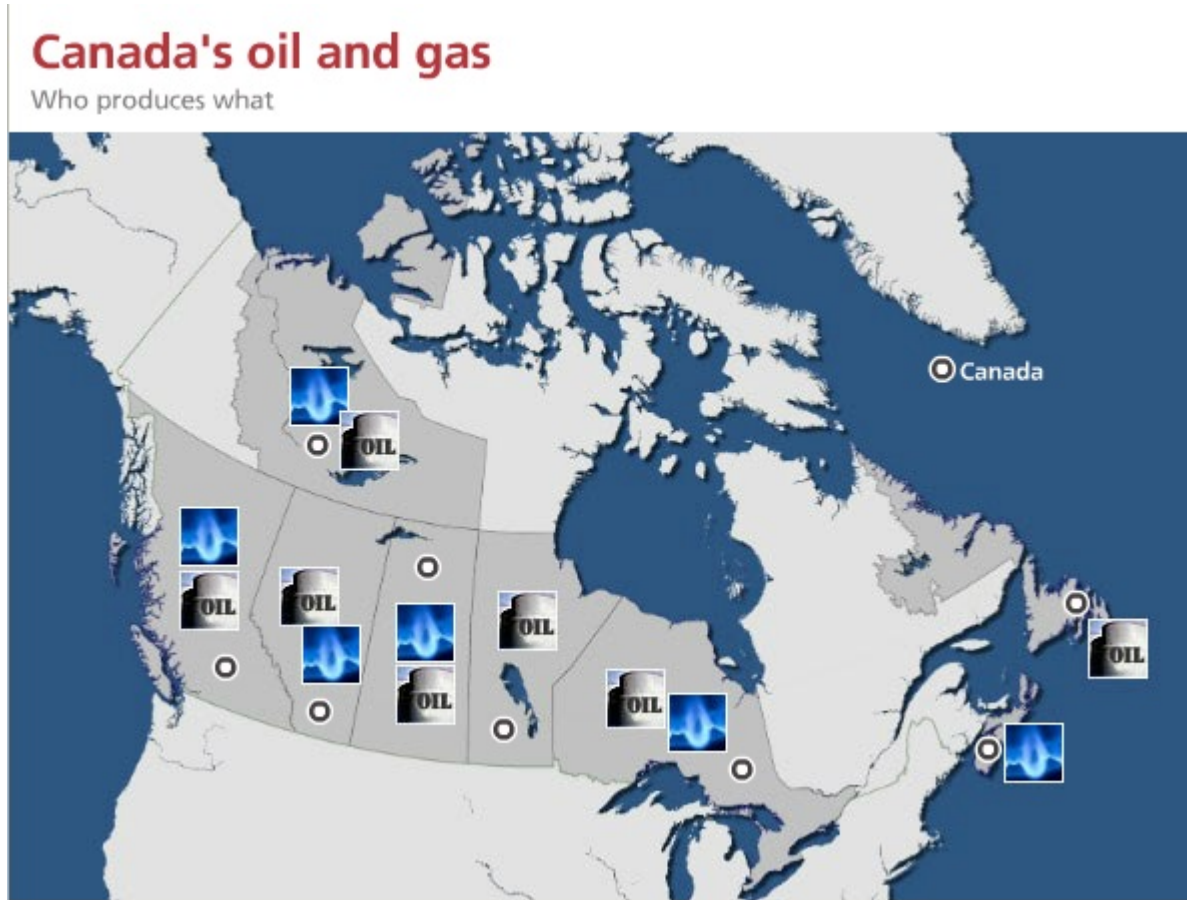


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Oil and Gas Map



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Minerals Map











Products of Mining in Canada: From Batteries to Vehicles

Did you know? Mining products **provides** many of the **essential** items that we use every day. The **products** of mining provide not only many of the **consumer goods** we use, but also much of the **infrastructure** that we rely on daily—highways, electrical and communications networks, and housing, to name a few. It's difficult to imagine a world without them! Check out the following examples of mining products in action:

	Batteries – cadmium, lithium, nickel, and cobalt		Musical instruments – copper, silver, steel, nickel, brass, cobalt, copper, iron, and aluminum
	Circuitry – gold, copper, aluminum, steel, silver, lead, and zinc		Sports equipment – graphite, aluminum, and titanium
	Computer and television screens – silicon, boron, lead, phosphorus, and indium		Sun protection and medical ointments – zinc
	Cosmetics and jewelry – gold, diamonds, iron oxide, zinc, and titanium dioxide		Surgical instruments – stainless steel



Products of Mining in Canada: From Batteries to Vehicles

	Electricity – coal and uranium		Vehicles and tires – steel, copper, zinc, barium, graphite, sulphur, and iodine
	Eyeglasses – limestone, feldspar, and soda ash		Housing construction – gypsum, clay, limestone, sand, and gravel
	Fertilizer – phosphate, nitrogen, sulphur, and potash		Hybrid car components – rare earth elements such as dysprosium, lanthanum, neodymium, and samarium



Chalk Talk Chart
(Example, for Teacher Reference)

Guiding Question: How are Canada's available resources used to meet people's needs and wants today?

Sketch and list 5 examples of products made from minerals.	Sketch and list 5 examples of products made from oil and gas.
Synthesize: Write a statement to explain how products made from minerals meet people's needs and wants.	Synthesize: Write a statement to explain how products made from oil and gas/petroleum meet people's needs and wants.

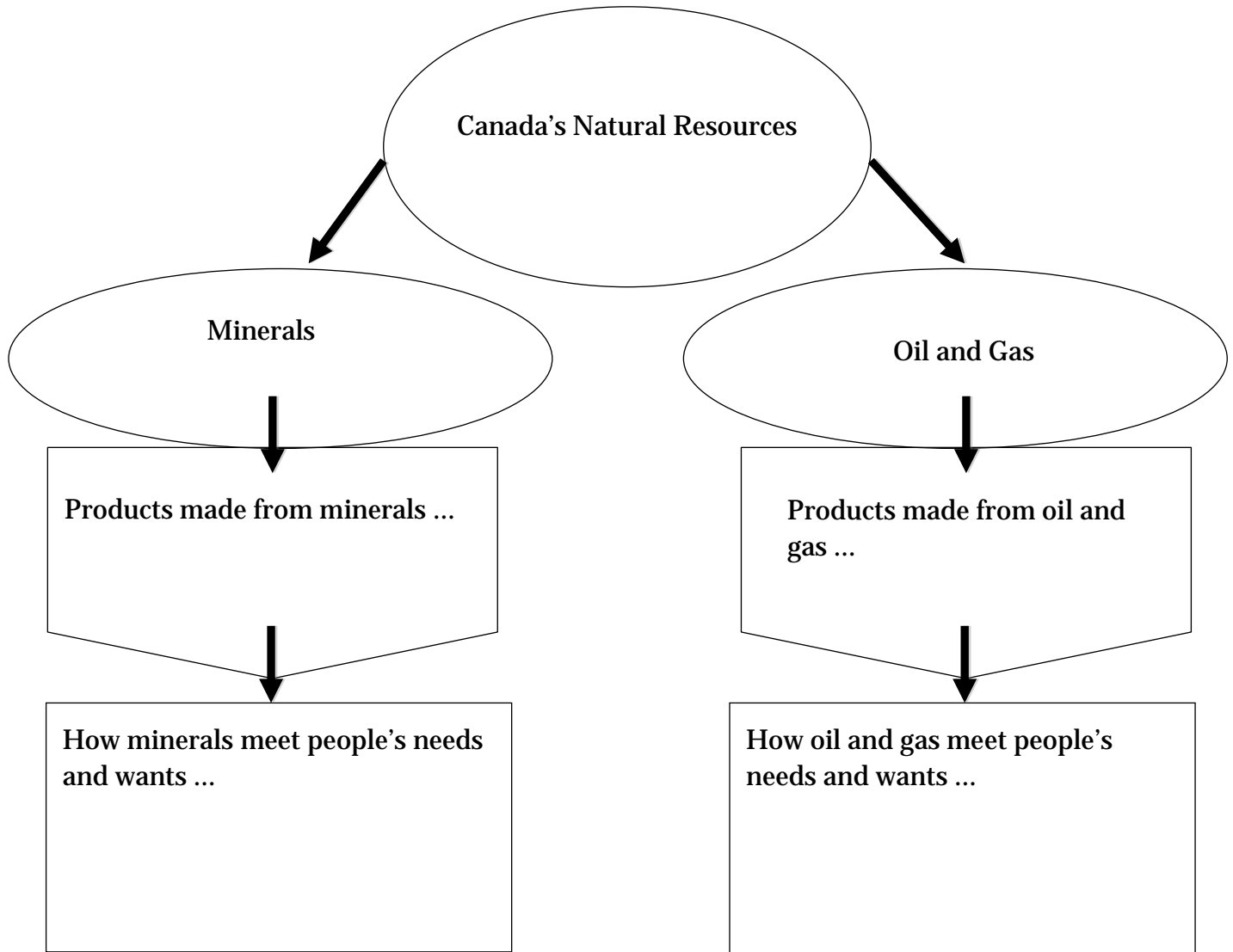


Chalk Talk Task Card

1. With group members, refer to the article “Products of Mining in Canada: From Batteries to Vehicles” to locate and circle 5–10 examples of products made from minerals.
2. Focus on the upper-left square, **“Sketch and list 5–10 examples of products made from minerals.”** Work with group members to draw a quick sketch of each product you located and circled, and then write the name of each product next to each sketch in this square.
3. Focus on the lower-left square, **“Synthesize: Write a statement to explain how products made from minerals meet people’s needs and wants.”** Review the product sketches and names you added to your chart, and then work collaboratively with group members to write one to two sentences that explain how products made from minerals meet people’s needs and wants.
4. With group members, refer to the article “Products” to locate and circle 5–10 examples of products made from oil and gas.
5. Focus on the upper-right square, **“Sketch and list 5-10 examples of products made from oil and gas.”** Work with group members to draw a quick sketch of each product you located and circled, and then write the name of each product next to each sketch in this square.
6. Focus on the lower-right square, **“Synthesize: Write a statement to explain how products made from oil and gas meet people’s needs and wants.”** Review the product sketches and names you added to the oil and gas square of your chart, and then work collaboratively with group members to write one to two sentences that explain how products made from oil and gas meet people’s needs and wants.
7. After completing each square, discuss in groups: How are Canada’s natural resources used to meet the needs and wants of people today? Be prepared to share your thinking with the class.



Canada's Natural Resources Anchor Chart
(Blank Example, for Teacher Reference)





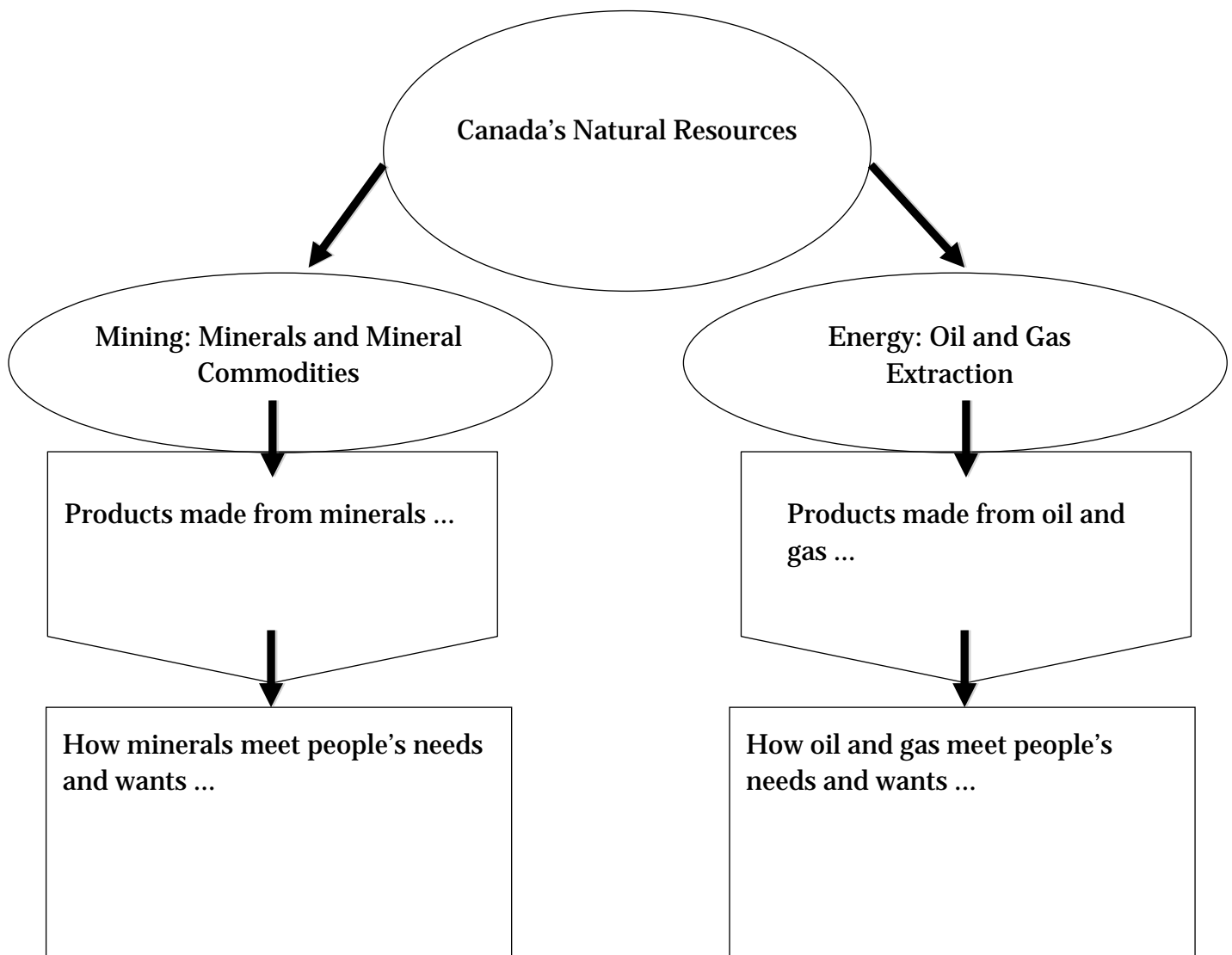
Criteria for Selecting Texts Anchor Chart

- The book interests me.
- I can make connections between this book and other texts read, topics explored, or experiences I have had.
- I know many, but not all of the words in the book.
- The book contains some text or images I don't understand, but I am able to get a sense of what the book is mostly about.



Homework:
Resource Web

- Reread the text(s) to locate information that helps you complete the web.
- Record the names of at least two products made from minerals in the box “Products made from minerals.” Then write a short sentence to explain how minerals meet people’s needs and wants.
- Record the names of at least two products made from oil and gas in the box “Products made from oil and gas.” Then write a short sentence to explain how oil and gas meet people’s needs and wants.





EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 2

Close Reading and Viewing: Minerals and Metals



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)

I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4)

I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c)

I can summarize information presented in diverse formats. (SL.5.2)

Supporting Learning Targets

- I can explain how Canada's available natural resources are used to meet the needs and wants of people today, by quoting accurately from the text and video.
- I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.
- I can summarize information presented in diverse formats.

Ongoing Assessment

- Resource web (from homework)
- Text-Dependent Questions: Minerals and Metals



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader: Resource Web (5 minutes)2. Work Time<ol style="list-style-type: none">A. Annotating the Gist: Minerals and Metals (10 minutes)B. Close Reading and Viewing Guide: Minerals and Metals (40 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Synthesizing Information (5 minutes)4. Homework<ol style="list-style-type: none">A. Reread the text “Minerals and Metals in Your Life” and complete your resource web.B. Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• In this lesson, students closely read an informational text and view a short video about how minerals mined in Canada are used to meet the needs and wants of people today.• During Work Time A, students hear the text read aloud and annotate for the gist. Then, they view a brief video and record a gist statement in their journals before moving on to a close read and viewing each resource in Work Time B (note that students complete the “Text-Dependent Questions: Minerals and Metals” as you lead them through a close read and view, using the “Close Reading and Viewing Guide.”)• At the end of the lesson, students synthesize their learning in relation to the guiding question through group and whole group discussions. This information is not recorded on an anchor chart until the beginning of the next lesson because students synthesize this information first in writing for their homework.• In advance:<ul style="list-style-type: none">– Read the excerpt of “Minerals and Metals in Your Life”– Watch the video “Ground Rules: Chapter 3” (0:00–1:36), found at http://www.youtube.com/watch?v=xmXT1YgfoTA&feature=c4-overview-vl&list=PL31F52074D345CEA2.– Please bear in mind that Youtube, social media video sites, and other website links may incorporate inappropriate content via comment banks and ads. While some lessons include these links as the most efficient means to view content in preparation for the lesson, be sure to preview links, and/or use a filter service, such as www.safeshare.tv, for actually viewing these links in the classroom.– Review the Close Reading and Viewing Guide.– Be sure technology for viewing and listening to the video is available and in working order.– Review the Popcorn Read protocol (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
explain, natural resources, meet, needs, wants, quoting, meaning, strategies, diverse formats; multi-taskers, cosmetics, sculptures, improving, filtering, wants, needs, literally, connected	<ul style="list-style-type: none">• Canada's Natural Resources anchor chart (begun in Lesson 1)• Canada's Natural Resources anchor chart (complete, for teacher reference; see Unit 2 Overview)• Journal (one per student; begun in Unit 1)• Group Norms anchor chart (from Unit 1, Lesson 1)• "Minerals and Metals in Your Life" (one per student and one for display)• Glossary of Terms: Teacher Resource (see Unit 2 Overview, "Preparation and Materials")• Computer, LCD and speakers (for viewing and listening to video)• "Ground Rules: Chapter 3" video (0:00–1:36), found at http://www.youtube.com/watch?v=xmXT1YgfoTA&feature=c4-overview-vl&list=PL31F52074D345CEA2. (Used with permission © 2013 Caterpillar All Rights Reserved)• Dictionaries (enough for students to refer to as needed)• Thesauruses (enough for students to refer to as needed)• Text-Dependent Questions: Minerals and Metals (one per student)• Index cards (four per student)• Highlighters (one per student; any color)• Close Reading and Viewing Guide: Minerals and Metals (for teacher reference)• Natural Environment anchor chart (from Unit 1, Lesson 2)• Sample Thesaurus Entry: "Want" (one for display)• Homework: Minerals and Metals resource web (one per student)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Resource Web (5 minutes)</p> <ul style="list-style-type: none">• Remind students that for homework they were to reread the texts “Products of Mining in Canada: From Batteries to Vehicles” and “Products” to complete a resource web for homework. Ask students to locate their homework and join group members.• Invite students to briefly share their resource webs with their group, and to make any additions or revisions based on what they see and hear from others.• Refocus the whole group. Invite volunteers to share their responses with the whole group. Add appropriate student suggestions to the Canada's Natural Resources anchor chart. Refer to the Canada's Natural Resources anchor chart (completed, for teacher reference) for how the anchor chart should look.	<ul style="list-style-type: none">• Consider allowing students who have difficulty expressing their ideas aloud to write their ideas on a white board to hold up and share during the whole group discussion.



Work Time	Meeting Students' Needs
<p>A. Annotating the Gist: Minerals and Metals (10 minutes)</p> <ul style="list-style-type: none"> Remind students of the guiding questions: <ul style="list-style-type: none"> * “How are Canada’s available natural resources used to meet people’s needs and wants today?” * “How can I integrate information from a variety of texts and media to build knowledge about a topic?” Tell students that today they will read a short text and watch a brief video to build their knowledge about how Canada’s mineral and metal resources are used to create products that meet people’s needs and wants. Then ask students to collect their journals and briefly confer with group members to determine and quickly share out a group norm they will focus on to ensure their collaborative work today is successful (refer students to the Group Norms anchor chart as needed). Display and distribute “Minerals and Metals in Your Life.” Tell students the first read is aloud; so they are going to follow along silently, pausing to annotate for the gist in the margin of the text. Begin with the title and pause at the end of the first paragraph. Ask students to think about and discuss in groups: what is the gist of the first paragraph?. After 1 minute, cold call a few students to share out. Listen for ideas such as: “It’s about how we use minerals and metals in our everyday lives.” Clarify the meaning of minerals versus metals for students as needed, using the Glossary of Terms: Teacher Resource. After several students share out, direct all students to record the gist of the first paragraph in the margin of the text. Then ask students to follow along silently as you read the second paragraph aloud. Pause once again to ask them to think about and discuss: what is the gist of the second paragraph? After 1 minute, cold call members from two or three groups to share out. Listen for ideas such as: “The second paragraph is about how minerals and metals are used to make buildings and keep us healthy.” Direct students to annotate the gist of the second paragraph in the margin, and then go on to read the third paragraph aloud as students follow along silently. Give students a brief moment to discuss the gist of the third paragraph and then cold call students to share out. Listen for: “The third paragraph is about how minerals and metals are used to make life beautiful,” or other ideas supported by the text. Again, tell students to record a gist statement in the margin. Focus students on the bullet point, read it aloud as students follow along, and then ask them to discuss the gist of the bullet point in groups. After 1 minute, cold call students to share aloud. Listen for: “The gist of the third bullet is that Halite (salt) is used for many things,” and similar suggestions. 	<ul style="list-style-type: none"> Allow students who struggle with language to draw a sketch of the gist with a one- to three-word caption, or to scribe their gist statements to you or another adult.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> Once several students have shared out, ask students to record the gist of the bullet point in the margin of the text. Then ask: <ul style="list-style-type: none"> * “So what is this article mostly about?” Tell students to quickly refer to each gist statement they wrote, discuss their thinking with group members, and then prepare to share out whole group. After 1 minute, cold call a few students to share out. Listen for them to synthesize the gist statement they recorded by sharing answers like: “Minerals and metals are used to make things we want and need, things that make life easier, better.” Ask students to quickly write an overall gist statement for the article at the bottom of the text. Then tell students to prepare to watch and listen to a short video. Tell students they will have an opportunity to watch the video twice before considering the gist. Use a computer, LCD and speakers to play the “Ground Rules: Chapter 3” video (0:00–1:36) for the first time. Pause briefly for students to discuss their initial thinking about the gist in groups. Then replay the video. Ask students to consider and discuss the gist of the video with group members. Then, cold call a few groups to share out with the class. Listen for suggestions such as: <ul style="list-style-type: none"> – “The video is about how many minerals we use every day.” – “It’s about how minerals are found in products we use, in our homes, and used to make roads and buildings.” Ask students to turn to the next blank page in their journals to record the gist of the video. 	
<p>B. Close Reading and Viewing Guide: Minerals and Metals (40 minutes)</p> <ul style="list-style-type: none"> Note that you will need the Sample Thesaurus Entry: “Want” on hand during this portion of the lesson. Focus students on the learning targets. Invite the class to read them with you: <ul style="list-style-type: none"> * “I can explain how Canada’s available natural resources are used to meet the needs and wants of people today, by quoting accurately from the text and video.” * “I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.” * “I can summarize information presented in diverse formats.” 	<ul style="list-style-type: none"> Posting learning targets allows students to reference them throughout the lesson to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask students to review the targets and to notice they are similar to targets they have worked toward in previous units and modules. Cold call a few students to share out what they think they will be doing during this part of Work Time, based on previous experiences and their knowledge of key terms such as <i>explain</i>, <i>natural resources</i>, <i>meet</i>, <i>needs</i>, <i>wants</i>, <i>quoting</i>, <i>meaning</i>, <i>strategies</i>, and <i>diverse formats</i>.• Tell students they will now be led through a close reading of the text and close viewing of the video to further their understanding of the natural resources available in Canada and how those resources are used to meet people's everyday needs and wants.• Distribute dictionaries, thesauruses, Text-Dependent Questions: Minerals and Metals, index cards, and a highlighter to each student. When students are ready, lead them through a close reading of the text and close viewing of the video, using the Close Reading and Viewing Guide: Minerals and Metals (for teacher reference). Be sure to lead the class through the activities in the Close Reading and Viewing Guide by following the teaching notes in the right-hand column. Discuss and monitor student responses to each question, and model strategies for navigating complex sections of the text as needed.	<ul style="list-style-type: none">• Learning targets are a research-based strategy that helps all students, especially challenged learners.• See suggested accommodations in the "Teaching Notes" column of the Close Reading Guide: Minerals and Metals (for teacher reference). These include: Define key terms that may interfere with students' understanding of relevant content, and reread and replay the video as needed.• Consider working with a small group of students who may need more support understanding ideas conveyed through the text and video, key terms, and/or crafting responses to the note-catcher questions.• Provide a scribe for students who struggle to record their thinking in writing, or consider allowing them to record their responses into a recording device.



Closing and Assessment	Meeting Students' Needs
<p>A. Synthesizing Information (5 minutes)</p> <ul style="list-style-type: none">• Focus students whole group and direct them to the guiding questions. Ask students to refer to the text and their notes and discuss in groups:<ul style="list-style-type: none">* “What natural resources do the text and video suggest are available in Canada?”• After 1 or 2 minutes, ask students to “popcorn” share their ideas. Listen for: minerals, metals, nickel, calcium, iron, magnesium, phosphorus, Halite (salt).• Ask students to refer to the text and their notes and discuss in groups:<ul style="list-style-type: none">* “How are those natural resources used to meet the needs and wants of people today?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for:<ul style="list-style-type: none">– “They are used to make a lot of items we use every day, like batteries and buildings.”– “They are used to grow food and keep us healthy.”– “They are used to make things that make life beautiful, such as art.”– “Halite is used to season food and keep roads safe; minerals keep us connected.”• Tell students they will synthesize their thinking in writing for homework on the next resource web.• Distribute Homework: Minerals and Metals resource web.	<ul style="list-style-type: none">• Consider designating one student to start the popcorn share or start it yourself, to model for students.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Reread the text “Minerals and Metals in Your Life” and complete your resource web.• Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• For students who have difficulty reading or completing tasks independently, consider providing an audio recording of the text and/or a partially completed resource web.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 2

Supporting Materials



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Minerals and Metals in Your Life

Minerals and metals are a part of everyday life. They are the original multi-taskers. For example, nickel is in batteries, jet engines, surgical tools, color televisions, cell phones, and kitchen and bathroom fixtures!

We use minerals and metals to make homes and schools, to generate heat and power, and for everyday comfort items like shampoo and toothpaste. Minerals keep us healthy—we need calcium, iron, magnesium, phosphorus, and many more minerals to grow and stay healthy. Minerals help our food grow too—you can find up to 14 minerals in fertilizer. Minerals and metals make our homes and buildings strong and safe—from the floors to the plumbing to the rooftop, construction materials are all based on minerals and metals.

We even use minerals and metals to make life beautiful! There are minerals in paint and cosmetics, and we use metals to make jewelry and sculptures. Minerals and metals are also used to help keep our environment clean by improving our cars, and filtering the air we breathe and the water we drink.

- Halite, or salt, is used to flavor food, keep roads safe in the winter, and even to extinguish fires. Halite is also used in glass, paint, plastics, and cosmetics.



Text-Dependent Questions: Minerals and Metals

Name: _____

Date: _____

Guiding Questions:

What are Canada's available resources?

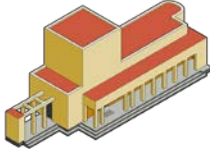

How are Canada's available resources used to meet people's needs and wants today?

*Refer to the text "Minerals and Metals in Your Life" as well as the video "Ground Rules: Chapter 3" to help you respond to the following questions.

Directions	Questions
Focus on the first paragraph and highlight the first sentence: <i>"Minerals and metals are a part of everyday life."</i> Read the entire first paragraph aloud with your group members. Then work together to respond to the questions on the right.	Locate and record the word "multi-taskers" in the center of one of your index cards. What familiar words or parts of words do you see in this word? What do you think "multi-taskers" might mean? Write a short definition for "multi-taskers" in the upper left-hand corner of your index card. Sketch and label at least three examples of how the mineral nickel is a multi-tasker.



Text-Dependent Questions: Minerals and Metals

Directions	Questions
Whisper-read the second paragraph as your teacher reads it aloud. Then, work with group members to answer the questions on the right.	<p>How are minerals and metals used in buildings? Write at least three examples on the lines next to the image below.</p>  <p>_____</p> <p>_____</p> <p>_____</p> <p>How do minerals help our bodies? Write at least three examples on the lines next to the image below.</p>  <p>_____</p> <p>_____</p> <p>_____</p>

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Text-Dependent Questions: Minerals and Metals

Directions	Questions
Independently read Paragraph 3 . Then, work with group members to answer the questions on the right.	<p>How do minerals and metals “make life beautiful?” Sketch and label at least two examples of items made from minerals and metals that “make life beautiful.”</p> <p>Write a statement to explain how the items you sketched above might make life beautiful.</p> <hr/> <hr/> <p>Record a quote from the text to explain how minerals and metals help keep our environment clean.</p> <p>In your own words, explain how minerals and metals help keep our environment clean.</p> <hr/> <hr/> <hr/>



Text-Dependent Questions: Minerals and Metals

Directions	Questions				
Whole class, read aloud the bullet point . Then, work with group members to answer the question on the right.	<p>Complete the chart by listing at least two ways that Halite (salt) meets <i>people's wants</i>, and at least two ways it meets <i>people's needs</i>.</p> <table><tr><th>Wants</th><th>Needs</th></tr><tr><td> </td><td> </td></tr></table>	Wants	Needs	 	
Wants	Needs				
With group members, chorally read and then restate the question to the right. Keep the question in mind as you view and listen to the video excerpt (0:00–1:05) , <u>twice</u> . During each viewing and listening, record details from the video in the margin of this page of text-dependent questions, to remind you of key details that will help you answer the question. You will discuss your thinking in groups before recording a response.	At the beginning of the video, the narrator says, “Our world is literally held together by the materials that come out of mines.” What do you think he means? Explain your thinking.				



Text-Dependent Questions: Minerals and Metals

Directions	Questions
With group members, chorally read then restate the question on the right. Keep the question in mind as you view and listen to the video excerpt (1:05–1:36) , <u>twice</u> . During each viewing and listening, record details from the video in the margin of this page of text-dependent questions, to remind you of key details that will help you answer the question. You will discuss your thinking in groups before recording a response.	The narrator says, “Nearly everything is connected to mining in some way.” What does he mean? Explain your thinking.
Synthesis Question: Refer once again to the article and your response to each of the questions above to determine your answer to the question on the right.	Why are minerals and metals an important part of people’s lives? Support your response with at least one example from the article and one example from the video.



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Guiding Questions:

What are Canada's available resources?

How are Canada's available resources used to meet people's needs and wants today?

Total Time: 40 minutes

Directions	Questions	Teaching Notes
<p>Focus on the first paragraph and highlight the first sentence: <i>"Minerals and metals are a part of everyday life."</i> Read the entire first paragraph aloud with your group members. Then work together to respond to the questions on the right.</p>	<p>Locate then record the word "multi-taskers" in the center of one of your index cards.</p> <p>What familiar words or parts of words do you see in this word? What do you think "multi-taskers" might mean? Write a short definition for "multi-taskers" in the upper left-hand corner of your index card.</p> <p>Sketch and label at least three examples of how the mineral nickel is a multi-tasker.</p>	<p>Ask students to read the title of the article aloud with you, "Minerals and Metals in Your Life." Then focus them on the first paragraph and read the directions aloud. Prompt students to go ahead and highlight the first sentence, then ask:</p> <p>"How does this first sentence relate to our guiding question: 'How are Canada's natural resources used to meet people's needs and wants today?'"</p> <p>After students briefly consider and discuss their thinking in groups, invite a few groups to share out. Listen for ideas such as:</p> <p><i>"It says minerals and metals are a part of everyday life, which means they are used by people daily, to meet their needs and wants."</i></p> <p>Confirm or help clarify students' thinking. Then ask them to read the full first paragraph aloud with group members.</p> <p>Direct students to record "multi-taskers" onto an index card, and then ask students to share out what they know about the familiar prefix "multi." <i>Listen for students to say: "many."</i></p>

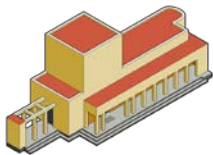



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
		<p>Then, ask students if they recognize any part of the second half of the word. <i>Listen for students to mention: “task,”</i> and then ask them to define “task.” <i>Listen for: “job or chore.”</i></p> <p>Ask: “So what might ‘multi-taskers’ do?” <i>Listen for: “Something that does many jobs.”</i></p> <p>Direct students to record a definition in the upper left of their index card. Ask them to read the third question and locate examples of how the mineral nickel is a multi-tasker.</p> <p>After 1 or 2 minutes, ask students to hold up their sketches and popcorn share their ideas. Look and listen for students to name multiple items made from nickel: <i>batteries, jet engines, surgical tools, color televisions, cell phones, kitchen and bathroom fixtures.</i></p> <p>Focus students on the highlighted sentence and then ask: “So how is the mineral nickel ‘part of our everyday lives’?”</p> <p>Listen for students to say: “<i>Nickel is used to make things people use regularly or daily, such as batteries or phones.</i>”</p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
Whisper-read the second paragraph as your teacher reads it aloud. Then, work with group members to answer the questions on the right.	<p>How are minerals and metals used in buildings? Write at least three examples on the lines next to the image below.</p>  <p>_____</p> <p>_____</p> <p>_____</p> <p>How do minerals help our bodies? Write at least three examples on the lines next to the image below.</p>  <p>_____</p> <p>_____</p> <p>_____</p>	<p>Direct students' attention to the second paragraph and then begin to read aloud as students whisper-read with you.</p> <p>Clarify the pronunciation of likely unfamiliar terms such as "calcium," "magnesium," and "phosphorous." Use this as an opportunity to point out common letter-sound combinations such as: <i>ci (see)</i>; <i>ph (f)</i>; <i>-ous (us)</i>.</p> <p>Direct students to work within groups to answer the first question by referring to the text and then recording three examples of how minerals and metals are used <i>in buildings</i> (emphasize the word "in" to help focus students on the type of information they should list). After 2 minutes, cold call a few students to share out. Listen for:</p> <p><i>They generate heat and power; used to make floors; used to make plumbing; used to make rooftops; used to make construction materials.</i></p> <p>As students share responses, ask them to provide a quote from the text in support of their thinking.</p> <p>Then, direct students to work with group members to answer the second question. Emphasize that the question asks <i>how do minerals</i> help our bodies—it is not asking students to list the names of specific minerals.</p> <p>After 2 minutes, cold call members from several groups to share out whole class. Listen for:</p> <p><i>Help us grow; keep us healthy; shampoo keeps hair clean; toothpaste keeps teeth healthy; helps grow food we eat.</i></p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
Independently read Paragraph 3. Then, work with group members to answer the questions on the right.	<p>How do minerals and metals “make life beautiful?” Sketch and label at least two examples of items made from minerals and metals that “make life beautiful.”</p> <p>Write a statement to explain how the items you sketched above might make life beautiful.</p> <p>Record a quote from the text to explain how minerals and metals help keep our environment clean.</p>	<p>Give students 2 minutes to read the third paragraph. Consider whisper-reading the passage with a small group of students who may struggle to read the text independently.</p> <p>Then, focus students on the first question, read it aloud, and clarify as needed. As students work, encourage them to use a dictionary to look up the meaning of unfamiliar terms that may interfere with their ability to respond to the first question (e.g., <i>cosmetics</i>, <i>sculptures</i>).</p> <p>After 1 or 2 minutes, cold call a few students to share their sketches and thinking whole class. Listen and look for students to draw and label: <i>paint</i>, <i>cosmetics (makeup)</i>, <i>jewelry</i> and/or <i>sculptures (statues; artworks)</i>.</p> <p>Encourage students to define each item they name, to help the class develop a shared understanding of these words or to clear up any misconceptions they have about the meanings.</p> <p>Focus students on the second prompt. Read aloud and then ask students to consider and discuss in groups: “How could paint, cosmetics, jewelry, or sculptures ‘make life more beautiful’?”</p> <p>After 1 minute, invite a few students to share out with the class. Listen for suggestions such as:</p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
	In your own words, explain how minerals and metals help keep our environment clean.	<p><i>Paint is used on/in buildings or to make paintings (art) that people enjoy looking at, think are beautiful; people use cosmetics to make their faces look beautiful; jewelry is used as a sort of personal “decoration” that may make someone look more beautiful; sculptures are a type of art, and art is something people find beautiful.</i></p> <p>Ask students to read the third question aloud with you and then to work within groups to reread the text and formulate a response. After 1 or 2 minutes, cold call a few groups to share out. Listen for:</p> <p><i>Minerals and metals help keep our environment clean, “by improving our cars, and filtering the air we breathe and the water we drink.”</i></p> <p>Ask students to focus on the words <i>improving</i> and <i>filtering</i> in this quote. Ask students to use their knowledge of prefixes, roots, and suffixes as well as available resources (dictionary, thesaurus) to determine the meaning of each term.</p> <p>After 2 minutes, cold call a few students to share their thinking whole group. Listen for ideas such as:</p> <p><i>Improving: making better; upgrading; developing</i></p> <p><i>Filtering: cleaning; sifting</i></p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
		<p>Focus students on the fourth question and direct them to use their understanding of the terms “improving” and “filtering” to explain in their own words (one or two sentences) how minerals and metals help clean the environment. (If necessary, direct students’ attention to the Natural Environment anchor chart and remind them that “air” and “water” are part of the environment.)</p> <p>After 1 or 2 minutes, cold call a few students to share their explanations with the class. Listen for:</p> <p><i>Minerals and metals help keep the environment clean by making cars better and cleaning our air and water.</i></p>
<p>Whole class, read aloud the bullet point. Then, work with group members to answer the question on the right.</p>	<p>Complete the chart by listing at least two ways that Halite (salt) meets <i>people’s needs</i>, and at least two ways it meets <i>people’s wants</i>.</p>	<p>Read the last bullet point aloud with the class, clarifying the pronunciation of the term “Halite” as needed.</p> <p>Then, focus students on the prompt and T-chart and point out the terms “wants” and “needs.”</p> <p>Show students the Sample Thesaurus Entry: “Want.”</p> <p>Point out that “need” is considered a synonym (a word that has a <i>similar</i>, but not exactly the same, meaning as another word) for “want.” Go on to remind students of their work with Frayer Models and how students used them to support their understanding of the fact that even relatively synonymous terms can have important differences between their meanings. Tell students to write the word “want” on one index card and “need” on another; then work with group members to define each term, using a dictionary.</p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
		<p>After 1 or 2 minutes, invite a few students to share their definitions aloud and explain how these words are <i>different</i> from each other. Listen for ideas such as:</p> <p><i>Wants are things you would like to have, that make life easier; needs are things that are necessary for your survival. The difference is that wants are things you could probably live without, whereas needs are things you couldn't live without.</i></p> <p>If necessary, clarify the meaning and difference between the terms. Then ask students to record a short definition of each word on their index cards.</p> <p>Point students to the T-chart. Then ask them to work with group members to record at least two ways Halite (salt) meets people's "wants," on the left, and two ways it meets people's "needs," on the right. As you circulate to offer support, ask students to justify their thinking by asking: "Why is that a <i>want</i>?" "How is that a <i>need</i>?"</p> <p>After 3 minutes, cold call students to share out what they recorded under "wants" and "needs." Be sure to have students explain why they listed each example under either want or need. Listen for ideas such as:</p> <p><i>Wants: flavors food; used to make paint; cosmetics (glass, plastics)</i></p> <p><i>Needs: keeps roads safe; extinguishes fires (glass, plastics)</i></p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
		<p>Focus students back on the first sentence, which they highlighted at the beginning of the close read: “Minerals and metals are a part of everyday life.”</p> <p>Then ask: “What have you learned from this article that helps you understand how minerals and metals are a part of our everyday lives?”</p> <p>After students have an opportunity to think about and briefly discuss their ideas within groups, invite a few students to share out with the class. Answers will vary, but listen for students to synthesize ideas from their note-catchers and to use specific examples from the text to support their thinking.</p> <p>Then, ask students to prepare to review and respond to questions about the video in order to further build their understanding of how natural resources found in Canada are used to meet our everyday needs and wants.</p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
With group members, chorally read and then restate the question to the right. Keep the question in mind as you view and listen to the video excerpt (0:00–1:05), twice. During each viewing and listening, record details from the video in the margin of this page of text-dependent questions, to remind you of key details that will help you answer the question. You will discuss your thinking in groups before recording a response.	At the beginning of the video, the narrator says, “Our world is literally held together by the materials that come out of mines.” What do you think he means? Explain your thinking.	<p>After group members read the question aloud, focus them on the phrase <i>our world is literally held together</i>, and point out the word “literally.” If students are not familiar with “literally,” explain that in this context it is used to express or indicate to the audience that the narrator is not exaggerating the truth; he believes what he is saying is accurate or true. Then invite a few students to share out a restated version of the question, based on their understanding of the word “literally.”</p> <p>Clarify any misconceptions as needed. Then play the video from the beginning and pause at 1:05. Direct students to quickly record details from the video that help them to answer the question in the margin of their note-catchers. After 1 or 2 minutes, ask students to silently reread the question, review their notes in the margin, and then view and listen to the clip a second time, to add to or refine their thinking.</p> <p>After playing the video a second time, tell students to add to their margin notes any new and relevant details they heard. Then begin discussing their ideas with group members. After 2 or 3 minutes, cold call a few groups to share their thinking whole class. Listen for ideas such as:</p> <p><i>What the narrator means is that almost everything we use, want, need is made from materials that come from mines. I think this because the video shows and explains how minerals are made to make everyday things we depend on, like walls and paint (13 different minerals); plastics; the stainless steel in kitchens; TVs have 35 different elements; toothpaste has six different minerals from mining.</i></p> <p>After several students share out, direct students to record a response to the question.</p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
With group members, chorally read then restate the question on the right. Keep the question in mind as you view and listen to the video excerpt (1:05–1:36) , <u>twice</u> . During each viewing and listening, record details from the video in the margin of this page of text-dependent questions,, to remind you of key details that will help you answer the question. You will discuss your thinking in groups before recording a response.	The narrator says, “Nearly everything is connected to mining in some way.” What does he mean? Explain your thinking.	<p>After groups read the question aloud, focus them on the word <i>connected</i> in the quote. Ask them to briefly discuss their understanding of this term in groups, and then invite a few students to share out. Listen for: <i>connected means linked, related, joined</i>. Then ask students to share out a restatement of the question, based on their understanding of “connected.”</p> <p>After students share out, play the video clip from 1:05 to 1:30. Direct students to quickly record details from the video that help them answer the question, in the margin of their note-catchers. After 1 or 2 minutes, ask students to silently reread the question and review their notes in the margin. Then view and listen to the clip a second time, to add to or refine their thinking.</p> <p>After playing the video a second time, tell students to add any new and relevant details they heard to their margin notes. Then they should begin discussing their ideas with group members. After 2 or 3 minutes, cold call a few groups to share their thinking whole class. Listen for ideas such as:</p> <p><i>I think the narrator means that many of the things that connect people are made from things that come from mines, like food cooked at a barbecue/social gathering, recreational (sports, fun) activities we do with others, tractors that are used to plant the food we eat and share, the roads we use to travel on, wires that carry power to homes, and information from one person to another.</i></p> <p>After students share out, ask them to record a response to the question.</p>



Close Reading and Viewing Guide: Minerals and Metals
(For Teacher Reference)

Directions	Questions	Teaching Notes
Synthesis Question: Refer once again to the article and your response to each of the questions above to determine your answer to the question on the right.	Why are minerals and metals an important part of people's lives? Support your response with at least one example from the article and one example from the video.	<p>Ask students to chorally read the question aloud with you and then begin working with group members to formulate a response. Circulate to offer guidance and support (if necessary, replay relevant portions of the video).</p> <p>After 3 minutes, cold call a few students to share their responses whole group. Listen for ideas such as:</p> <p><i>Minerals and metals are important to people because they meet our needs and wants by providing construction materials we use to build our homes and the wires we use to get and exchange information.</i></p> <p>Students' answers will vary, but listen for students to explain that minerals meet needs and wants and to give specific examples from the article and video.</p>

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Sample Thesaurus Entry: “Want”

Want (*noun*)

Synonyms for want

- need
- wish
- appetite
- craving
- demand
- fancy
- hankering
- hunger
- longing
- necessity
- requirement
- thirst
- yearning
- yen

Antonyms for want

- dislike
- distaste
- hate
- hatred
- indifference
- abundance
- disinterest
- plenty



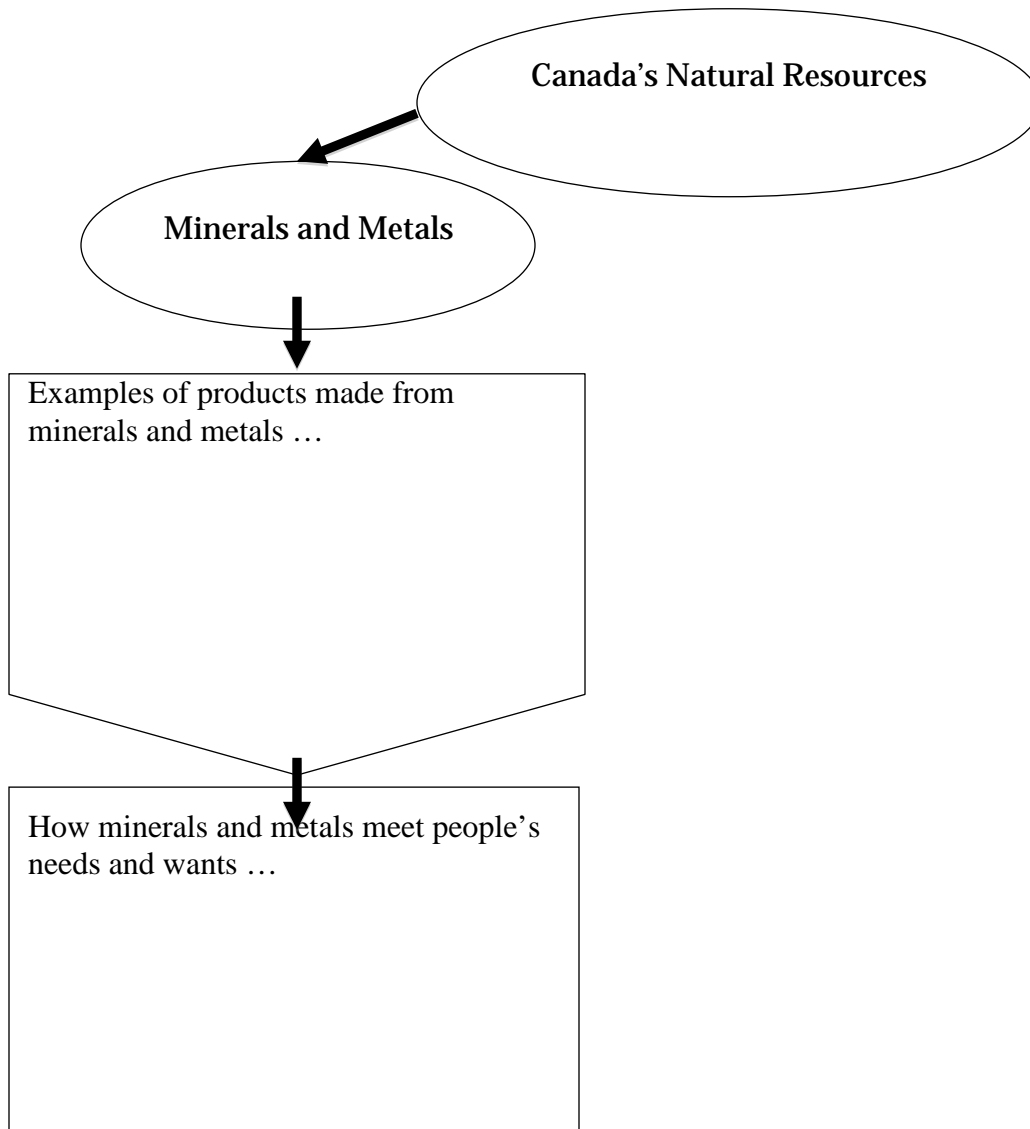
Homework:

Minerals and Metals Resource Web

Name: _____

Date: _____

- Reread the text to locate information that helps you complete the web.
- Record the names of items made from minerals and metals in the box “Examples of products made from minerals and metals ...”
- Write one or two sentences to explain how minerals and metals meet people’s needs and wants, in the lowest box “How minerals and metals meet people’s needs and wants ...”





EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 3

Close Reading: “Natural Resources and the Canadian Economy”



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)

I can gather relevant information from print and digital sources by paraphrasing information in notes. (W.5.8)

I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4)

I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c)

Supporting Learning Targets

- I can explain how Canada’s available natural resources are used to meet the needs and wants of Canadians, by quoting accurately from the text.
- I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.
- I can gather relevant information about how Canada’s natural resources meet Canadians’ needs and wants, by paraphrasing information in notes.

Ongoing Assessment

- Minerals and Metals resource web (from homework)
- Text-Dependent Questions: “Natural Resources and the Canadian Economy”



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader: Minerals and Metals Resource Web (5 minutes)2. Work Time<ol style="list-style-type: none">A. Annotating the Gist: “Natural Resources and the Canadian Economy” (10 minutes)B. Close Reading Guide: “Natural Resources and the Canadian Economy” (40 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Synthesizing Information (5 minutes)4. Homework<ol style="list-style-type: none">A. Reread “Natural Resources and the Canadian Economy” and complete your resource web.B. Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• In this lesson, students closely read an informational text about natural resources and the Canadian economy in order to continue building knowledge about the guiding question: “How are Canada’s available resources used to meet people’s needs and wants today?”• This lesson follows the same structure as Lesson 2.• In advance:<ul style="list-style-type: none">– Read the excerpt of “Natural Resources and the Canadian Economy” and review the Close Reading Guide for this text.– Review the Popcorn Read protocol (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
<p>explain, natural resources, needs, wants, quoting accurately, meaning, strategies, gather, relevant, paraphrasing; economy, fabric, tracts, generations, account, sector, revenue, opportunity, critical</p>	<ul style="list-style-type: none"> • Canada’s Natural Resources anchor chart (begun in Lesson 1) • Canada’s Natural Resources anchor chart (completed, for teacher reference; see Unit 2 Overview) • Journal (one per student; begun in Unit 1) • “Natural Resources and the Canadian Economy” (one per student) • Index cards (two per student) • Dictionaries (enough for students to refer to as needed) • Thesauruses (enough for students to refer to as needed) • Text-Dependent Questions: “Natural Resources and the Canadian Economy” (one per student) • Close Reading Guide: “Natural Resources and the Canadian Economy” (for teacher reference) • Homework: “Natural Resources and the Canadian Economy” resource web (one per student)

Opening	Meeting Students’ Needs
<p>A. Engaging the Reader: Minerals and Metals Resource Web (5 minutes)</p> <ul style="list-style-type: none"> • Ask students to take out the resource webs they completed for homework and to join their groups. Invite them to briefly share their resource webs with their group, and to make any additions or revisions based on what they see and hear from others. • Refocus students whole group. Invite volunteers to share their responses aloud. Add appropriate student suggestions to the Canada’s Natural Resources anchor chart. Refer to Canada’s Natural Resources anchor chart (completed, for teacher reference) for possible responses. 	<ul style="list-style-type: none"> • Provide sentence starters for students who have difficulty expressing their thinking aloud: “Products made from minerals, and metals are ...” and “Minerals and metals meet people’s needs and wants by ...”



Work Time	Meeting Students’ Needs
<p>A. Annotating the Gist: “Natural Resources and the Canadian Economy” (10 minutes)</p> <ul style="list-style-type: none">• Remind students of the guiding question: “How are Canada’s available resources used to meet people’s needs and wants today?”• Ask students to collect their journals then display and distribute “Natural Resources and the Canadian Economy.” Point out the bold words in the text and the glossary at the bottom. Tell students that these are words they may not be able to figure out from the context, so they can refer to this glossary as needed while they work with group members to determine the gist of each passage.• Tell students that you will first be reading aloud; they should read along silently in their heads.• Begin with the title and read to the end of the third paragraph. Pause to ask students to consider and discuss in groups:<ul style="list-style-type: none">* “What is the gist of these first three paragraphs?”• After 1 or 2 minutes, cold call a few groups to share out whole class. Listen for suggestions such as:<ul style="list-style-type: none">– “Canada has a lot of natural resources.”– “Canada’s natural resources provide money and jobs to Canadian people.”– “Canada’s resources are an important part of their economy; they make up the country’s gross domestic product.”• Tell students not to worry about terms they don’t know, as they will dig more deeply into the text and key terms during the close read in Work Time B.• Ask students to annotate the gist of the first three paragraphs in the margin of the text. Then focus students on the fourth paragraph. Ask them to follow along silently as you read the last two paragraphs of the article aloud.• Then, direct students to think about and discuss in groups: “What is the gist of the last two paragraphs of this article?”• After 1 or 2 minutes, cold call a few students to share their thinking with the class. Listen for ideas such as:<ul style="list-style-type: none">– “The last two paragraphs are about how Canada’s natural resources provide a lot of money for social programs and jobs for many Canadians.”• Tell students to annotate the gist of the last two paragraphs in the margin of the text.• Ask them to work within groups to review their gist annotations, the text, and the glossary to determine the overall gist of this article.	<ul style="list-style-type: none">• Allow students who struggle with language and/or writing to draw a sketch of the gist with a one- to three-word caption or to scribe their gist statements to you or another adult.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • After 2 minutes, cold call several groups to share out with the class; listen for suggestions such as: “This excerpt is mostly about how natural resources are really important to Canadians and their economy because they provide money and jobs.” • Tell students to record the gist of the article at the bottom of the text, and then prepare to more closely read the passage in order to continue building their understanding of the ways that Canada’s resources meet people’s needs and wants. 	
<p>B. Close Reading Guide: “Natural Resources and the Canadian Economy” (40 minutes)</p> <ul style="list-style-type: none"> • Focus students on the learning targets. Invite them to read them with you: <ul style="list-style-type: none"> * “I can explain how Canada’s available natural resources are used to meet the needs and wants of Canadians, by quoting accurately from the text.” * “I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.” * “I can gather relevant information about how Canada’s natural resources meet Canadians’ needs and wants, by paraphrasing information in notes.” • Ask students to consider the targets as well as key terms from the targets they are familiar with, such as: <i>explain, natural resources, needs, wants, quoting accurately, meaning, strategies, gather, relevant, and paraphrasing</i>. Then they should discuss with group members what they think they will be building understanding about during the close read today. • After 1 minute, cold call a few students to share their thinking with the class. Answers will vary, but listen for students to recognize that they will be focusing on how resources found in Canada meet the needs and wants of people who live in Canada. • Distribute dictionaries, thesauruses, the Text-Dependent Questions: “Natural Resources and the Canadian Economy” and index cards. Then tell students they will now be led through a close read of “Natural Resources and the Canadian Economy.” • When students are ready, begin the close read using the Close Reading Guide: “Natural Resources and the Canadian Economy” (for teacher reference). 	<ul style="list-style-type: none"> • See suggested accommodations in the “Teaching Notes” column of the Close Reading Guide: “Natural Resources and the Canadian Economy.” Examples include: Define key terms that may interfere with students’ understanding of relevant content and reread as needed. • Consider working with a small group of students who may need more support understanding ideas conveyed through the text, key terms, and/or crafting responses to the note-catcher questions. • Provide a scribe for students who struggle to record their thinking in writing, or consider allowing them to record their responses into a recording device.



Closing and Assessment	Meeting Students’ Needs
<p>A. Synthesizing Information (5 minutes)</p> <ul style="list-style-type: none">• Ask students to refer to the text and their notes and discuss in groups:<ul style="list-style-type: none">* “According to this article, what natural resources are available in Canada?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: energy, forest, minerals, and metals.• Ask students to refer to the text and their notes and discuss in groups:<ul style="list-style-type: none">* “How are those natural resources used to meet the needs and wants of Canadians?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: jobs for 1.8 million Canadians, growth, 18 percent of the GDP including the sectors that serve the natural resource industry.• Tell students that they will synthesize their thinking in writing for homework on the next resource web.• Distribute Homework: “Natural Resources and the Canadian Economy” resource web.	<ul style="list-style-type: none">• Consider designating one student to start the popcorn share.• To allow for balanced airtime, limit the number of popcorn shares to one per student.
Homework	Meeting Students’ Needs
<ul style="list-style-type: none">• Reread the text “Natural Resources and the Canadian Economy” and complete your resource web.• Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• For students who have difficulty reading or completing tasks independently, consider providing an audio recording of the text and/or a partially completed resource web.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 3

Supporting Materials



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Natural Resources and the Canadian Economy

Natural resources are an important part of the fabric of Canada's economy. This country has enormous natural wealth, from huge **reserves** of energy to massive **tracts** of forest and an abundance of minerals and metals.

For **generations**, natural resources have brought opportunity, jobs, and growth to every region of Canada.

Natural resources **account** for 13 percent of our gross domestic product (GDP) and 50 percent of our exports. When you include the spin-off industries that provide goods and services to the **sector**, natural resources account for over 18 percent of our GDP—nearly a fifth of our economy.

The energy, mining, and forestry industries provide over \$30 billion a year in **revenue** to governments—money that supports critical social programs such as health, education, and public pensions. That \$30 billion is equal to about half of all spending by governments on hospitals in Canada last year.

About 950,000 Canadians work in natural resource sectors, while another 850,000 people are employed serving those sectors. Add it up, and close to 1.8 million Canadians depend on natural resources for their jobs—10 percent of all employment in Canada.

Glossary:

Word	Meaning
reserves	spare, not being used; extra
tracts	a large area of land
generations	multiple generations of people—children, their parents, grandparents, great-grandparents, etc.
account	supply or make up a certain amount of
sector	an area of the economy that includes businesses all doing the same thing—for example, producing natural resources
revenue	income, the money earned

Canada's Economic Action Plan. Government of Canada. Web. 6 June 2014.



Text-Dependent Questions:
“Natural Resources and the Canadian Economy”

Guiding Questions:

What are Canada’s available resources?

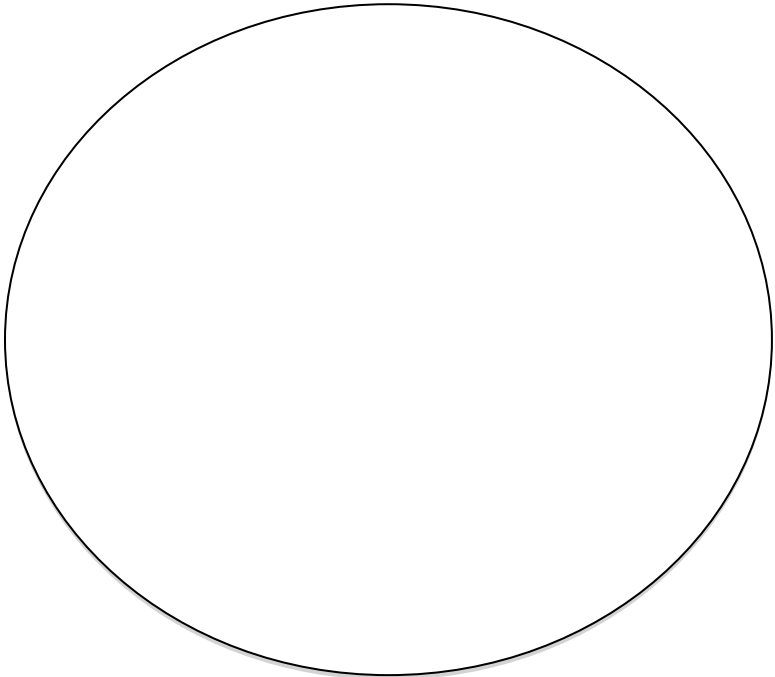
How are Canada’s available resources used to meet people’s needs and wants today?

*Refer to the excerpt of text “Natural Resources and the Canadian Economy” to help you respond to the following questions.

Directions	Questions
With group members, chorally read the title and first paragraph . Then, work together to respond to the questions on the right.	<p>Highlight the word “economy” in the title and text. Write “economy” on an index card and then look up the meaning of this word in a dictionary. Use the dictionary definition and the text to help you determine and record a simple definition of “economy.”</p> <p>In the sentence “Natural resources are an important part of the fabric of Canada’s economy,” what does the word “fabric” mean? Record “fabric” on an index card. Then use context clues or other strategies to determine and record a definition of the word “fabric” on your index card.</p> <p>How does the author’s use of the word “fabric” help the reader understand the importance of natural resources to Canada’s economy?</p> <p>Record a quote from the text to explain the types of natural wealth found in Canada.</p>



Text-Dependent Questions:
“Natural Resources and the Canadian Economy”

Directions	Questions
Whisper-read the second paragraph (sentence) and third paragraph as your teacher reads them aloud. Then work together to answer the questions on the right.	<p>What benefits have natural resources brought to Canada?</p> <p>What do you think spin-off industries are?</p> <p>Gross domestic product (GDP) is the total dollar value of all the goods and services a country produces in a year. Color in the pie graph below to show the fraction of Canada’s GDP that comes from natural resources, including the goods and services from spin-off industries.</p> 



Text-Dependent Questions:
“Natural Resources and the Canadian Economy”

Directions	Questions
Independently read the fourth paragraph . Then, work with group members to answer the questions on the right.	<p>How much money do the energy, forestry, and mining industries provide to the government each year?</p> <p>What is that money used for?</p> <p>Given the examples in this paragraph, what do you think social programs are?</p>
With group members, whisper-read the last paragraph . Then, work together to answer the question on the right.	<p>How many people in Canada depend on natural resources for their jobs?</p>
Synthesis Question: Refer to the text and your responses to the above questions to help you formulate a response to the question on the right. Discuss your thinking with group members before you record an answer.	<p>How do Canada’s natural resources meet the needs and wants of Canadians? Write a two- or three-sentence response, using specific details from the text.</p>



Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Guiding Questions:

What are Canada’s available resources?

How are Canada’s available resources used to meet people’s needs and wants today?

Total Time: 40 minutes

Directions	Questions	Teaching Notes
With group members, chorally read the title and first paragraph . Then, work together to respond to the questions on the right.	<p>Highlight the word “economy” in the title and text. Write “economy” on an index card and then look up the meaning of this word in a dictionary. Use the dictionary definition and the text to help you determine and record a simple definition of “economy.”</p> <p>In the sentence “Natural resources are an important part of the fabric of Canada’s economy,” what does the word “fabric” mean? Record “fabric” on an index card. Then use context clues or other strategies to determine and record a definition of the word “fabric” on your index card.</p>	<p>Support students as they work to define “economy” by asking them to focus on familiar phrases and bolded glossary terms from the text that will help them clarify the meaning of this term, such as: <i>Natural resources are an important part ... of the economy; this country has enormous natural wealth; reserves of energy; massive tracts of forest; abundance of minerals and metals.</i></p> <p>After 2 minutes, invite a few students to share and explain how they arrived at their definition with the group. Listen for:</p> <p><i>I think economy means how much wealth a country has because of its different resources, because the dictionary defines economy as “the organization of money and resources” and the first paragraph says that “natural resources are a part of the fabric of Canada’s economy”; so I think economy has to do with how a country makes money from its different resources.</i></p>



Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Directions	Questions	Teaching Notes
	<p>How does the author’s use of the word “fabric” help the reader understand the importance of natural resources to Canada’s economy?</p> <p>Record a quote from the text to explain the types of natural wealth found in Canada.</p>	<p>If students are not able to articulate a definition or how they determined the meaning, model and explain using the sample answer above.</p> <p>Focus students on the next key term, “fabric.” Prompt them to work with group members to define “fabric” based on the context of this paragraph.</p> <p>After 1 or 2 minutes, cold call a few students to share out. Listen for:</p> <p><i>“Fabric” in this context means structure or framework.</i></p> <p>Focus students on and read aloud the third question. Ask them to discuss their thinking in groups. Then invite a few students to share out with the class. Listen for students to share ideas like:</p> <p><i>Since “fabric” in this context means “structure or framework for Canada’s economy,” then I think the author chose this word to help the reader understand that natural resources are a significant (vital, valuable, central, key, main) part of Canada’s economy, a source of wealth for Canada.</i></p> <p>After a few class members share out, ask students to record a response to the third question.</p>

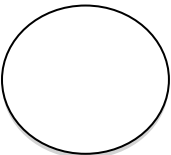


Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Directions	Questions	Teaching Notes
		<p>Ask students to chorally read the fourth question with you. Then ask them to refer to the text to locate a quote that explains the types of natural wealth found in Canada.</p> <p>After 1 or 2 minutes, cold call one or two students to share the quote they recorded. Listen for:</p> <p><i>“This country has enormous natural wealth, huge reserves of energy to massive tracts of forest and an abundance of minerals and metals.”</i></p> <p>Ask students to focus on the two bold words, reserves and tracts, as well as the word “abundance.” Then ask students to use the provided glossary and other resources to determine the meaning of each term and use their understandings to paraphrase the quote in their own words.</p> <p>After 2 minutes, invite a few students to share their thinking whole group. Listen for ideas such as:</p> <p><i>Canada’s wealth comes from its extra energy sources, large areas of forest, and huge amounts of minerals and mines.</i></p>



Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Directions	Questions	Teaching Notes
Whisper-read the second paragraph (sentence) and third paragraph as your teacher reads them aloud. Then work together to answer the questions on the right.	<p>What benefits have natural resources brought to Canada?</p> <p>What do you think spin-off industries are?</p> <p>Gross domestic product (GDP) is the total dollar value of all the goods and services a country produces in a year. Color in the pie graph below to show the fraction of Canada’s GDP that comes from natural resources, including the goods and services from spin-off industries.</p> 	<p>After reading the second and third paragraph, ask students to read the first question chorally in groups and then refer to the text to discuss their thinking.</p> <p>After 1 or 2 minutes, select volunteers to share their answers. Listen for students to say:</p> <p><i>Natural resources have brought opportunity, jobs, and growth.</i></p> <p>Ask students to record a response to the first question. Then, tell them to read the second question aloud with group members and discuss their thinking.</p> <p>Focus students on the second question and ask them to work with group members to determine a response, using details from the text.</p> <p>After 1 or 2 minutes, invite a few students to share their thinking aloud. Listen for:</p> <p><i>Spin-off industries are goods and services that support the natural resource sector (businesses).</i></p> <p>Ask students to discuss with group members what “goods” and “services” mean in this context (encourage students to use context clues and/or a dictionary to help).</p>



Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Directions	Questions	Teaching Notes
		<p>After 1 or 2 minutes, invite a few volunteers to share their thinking aloud. Listen for:</p> <p><i>“Goods” in this context means products, things people want or need; “services” refers to things people do, get paid for doing, for other people.</i></p> <p>Explain that when people work in the natural resources sector, those workers need and want goods and services such as clothing, food, education, childcare, and dry cleaning for them and their families. Schools, grocery stores, restaurants, and daycare centers are examples of spin-off industries that provide goods and services to people who work in fields related to the natural resource industry.</p> <p>Focus students on the third question and the circle that represents a pie graph. If students have not encountered pie graphs in math, take a moment to explain how they are used to show percentages or parts of a whole. Ask students to whisper-read the definition of GDP aloud with you (the first part of the question) and then ask: “How could you describe GDP in your own words, based on the definition provided?”</p> <p>After students have 1 or 2 minutes to consider and discuss their thinking in groups, invite a few students to share out whole group. Listen for ideas such as:</p>



Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Directions	Questions	Teaching Notes
		<p><i>GDP is how much money a country makes from the items it makes/sells (goods) and the services it provides.</i></p> <p>Ask students to look back to the fourth paragraph to determine what percentage of the GDP natural resources, <i>including their spin-off industries</i>, account for.</p> <p>After 1 or 2 minutes, ask students to state their response chorally. <i>Listen for: “18 percent, or about one-fifth.”</i> If students mention 13 percent or 50 percent, help them understand that 13 percent refers only to natural resources (which does <i>not include spin-off industries</i>), and 50 percent represents only exports (goods and services sold and sent to other countries).</p> <p>Then, guide students in dividing their pie graphs into five approximately equal parts. (Although some students may be able to simply divide the circle into five equal parts without the use of tools, others may need to use a protractor.) Emphasize that it is not important that each part be exactly the same size, just that they are fairly close. Lead students in a mini math lesson as needed by asking questions such as:</p> <ul style="list-style-type: none">• “What percentage is one-fifth?” (20 percent)• “Is 18 percent more or less than 20 percent?” (less)• “So what portion of your pie graph will you color in to indicate 18 percent?” (a little less than one of the pieces) <p>Once students complete their pie graphs, invite them to hold them up and share whole class.</p>



Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Directions	Questions	Teaching Notes
Independently read the fourth paragraph . Then, work with group members to answer the questions on the right.	<p>How much money do the energy, forestry, and mining industries provide to the government each year?</p> <p>What is that money used for?</p> <p>Given the examples in this paragraph, what do you think social programs are?</p>	<p>Ask students to begin reading the paragraph independently (consider whisper-reading with a small group of students who may struggle to read the passage independently). Then, direct them to discuss and record a response to the first question.</p> <p>After 1 or 2 minutes, cold call one or two students to share their responses whole group. Listen for:</p> <p><i>Energy, forestry, and mining industries provide over \$30 billion a year to the Canadian government.</i></p> <p>Ask students to work within groups to determine and record a response to the second question. After 1 or 2 minutes, invite a few students to share out with the class. Listen for:</p> <p><i>The money is used to support social programs such as health, education, and public pensions.</i></p> <p>Ask students to read the third question aloud with you and then discuss their thinking within groups. After 1 or 2 minutes, cold call students to share their thinking aloud.</p> <p>Listen for and guide students to understand:</p> <p><i>Social programs are programs that meet the needs of people. People need healthcare and education, and when they can no longer work they need a pension to pay for the things they need and want (define “pension “if needed).</i></p>



Close Reading Guide:
“Natural Resources and the Canadian Economy”
(For Teacher Reference)

Directions	Questions	Teaching Notes
With group members, whisper-read the last paragraph . Then, work together to answer the question on the right.	How many people in Canada depend on natural resources for their jobs?	<p>After students whisper-read the last paragraph, direct them to read the question in groups then discuss their thinking, and record a response.</p> <p>After 1 minute, cold call students to share their answers whole group. Listen for students to explain that <i>1.8 million people depend on natural resources for their jobs</i>.</p>
Synthesis Question: Refer to the text and your responses to the above questions to help you formulate a response to the question on the right. Discuss your thinking with group members before you record an answer.	How do Canada’s natural resources meet the needs and wants of Canadians? Write a two- or three-sentence response, using specific details from the text.	<p>As students discuss the question and refer to the text and their note-catcher responses, circulate to offer guidance as needed.</p> <p>After 2 or 3 minutes, invite members from different groups to share out their thinking. Listen for ideas such as:</p> <p><i>Canada’s natural resources have provided opportunities, jobs, and growth to every part of Canada. The money made from natural resource industries is used to provide important social programs to Canadians, such as healthcare, education, and money to live on after they can no longer work.</i></p>



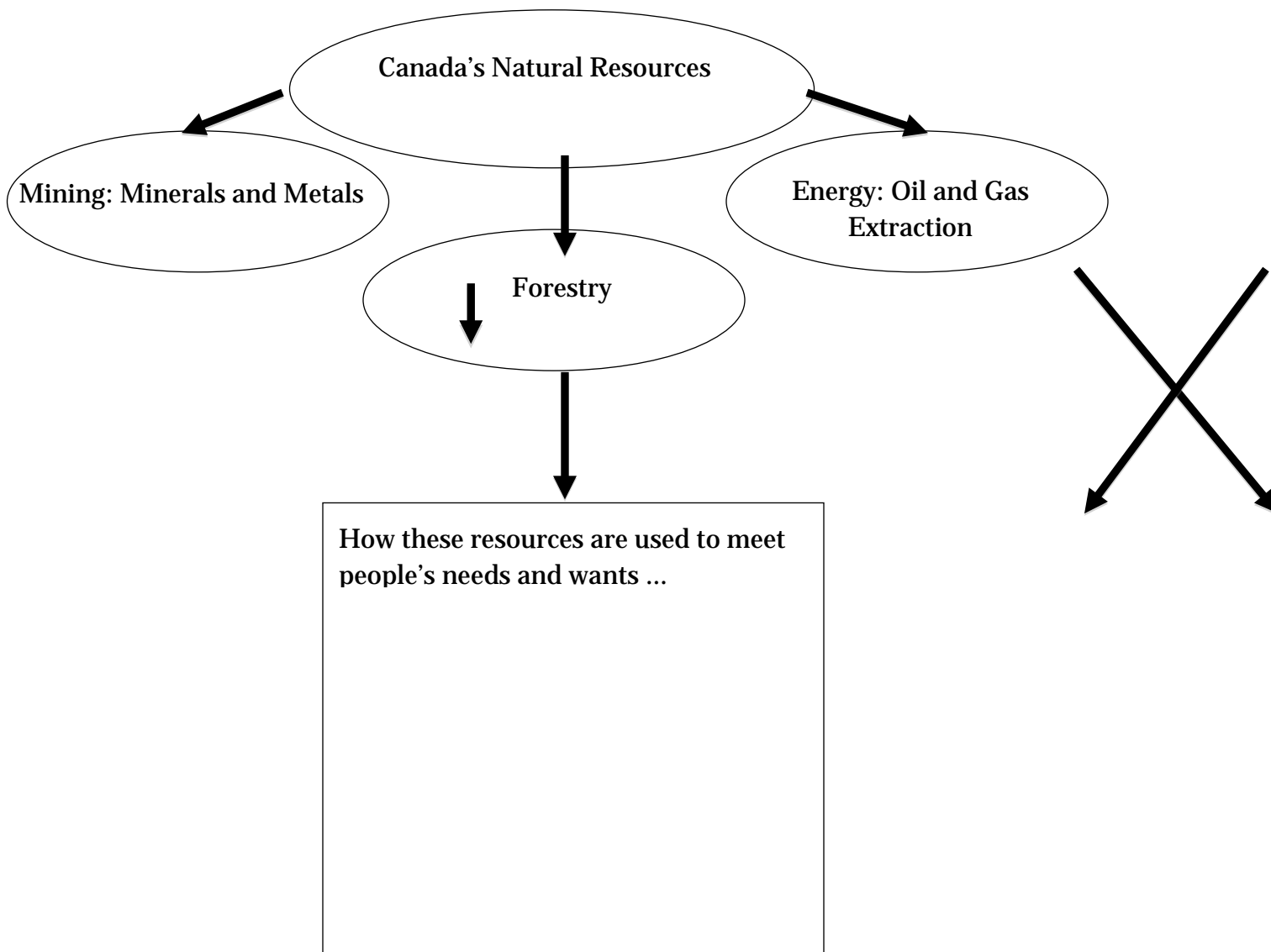
Homework:

“Natural Resources and the Canadian Economy” Resource Web

Name:

Date:

- Reread the text to locate information that helps you complete the web.
- Write a short sentence to explain how the resources are used to meet people’s needs and wants, in the box “How these resources are used to meet people’s needs and wants ...”





EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 4

Video and Close Reading: “Developing a Vital Resource for Canadians and the World”



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)

I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4)

I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c)

I can summarize information presented in diverse formats. (SL.5.2)

Supporting Learning Targets

- I can summarize information presented in diverse formats.
- I can explain how Canada’s available natural resources are used to meet the needs and wants of people today, by quoting accurately from the video transcript.
- I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.

Ongoing Assessment

- “Natural Resources and the Canadian Economy” resource web (completed for homework)
- “Developing a Vital Resource for Canadians and the World” note-catcher



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader: “Natural Resources and the Canadian Economy” Resource Web (5 minutes)Work Time<ol style="list-style-type: none">Watching the Video: “Developing a Vital Resource for Canadians and the World” (15 minutes)Identifying Evidence to Support Answers (20 minutes)Exploring Vocabulary: “Developing a Vital Resource for Canadians and the World” (15 minutes)Closing and Assessment<ol style="list-style-type: none">Synthesizing Information (5 minutes)Homework<ol style="list-style-type: none">Reread the transcript of “Developing a Vital Resource for Canadians and the World” and complete your resource web.Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">In this lesson, students watch an excerpt of a video about potash, a natural resource that is mined and used as a fertilizer in Canada. Students use the transcript of the video to answer questions in order to gain a deeper understanding of the text and to continue to answer the guiding question: “How are Canada’s available resources used to meet people’s needs and wants today?”Before playing the video, tell students what potash is and what the video is about, as the content may be confusing without these explanations. See Work Time A.In advance:<ul style="list-style-type: none">Watch the clip (0:00–2:30) of the video, “Developing a Vital Resource for Canadians and the World,” found at http://www.actionplan.gc.ca/en/blog/r2d-dr2/developing-vital-resource-canadians-and-world.Read the video transcript, and review the Close Reading Guide for the transcript.Review the Popcorn Read protocol (see Appendix).Post: Learning targets.



Lesson Vocabulary	Materials
agriculture, fertilizers, sustainable, vital, fortunate, potash	<ul style="list-style-type: none"> • Canada’s Natural Resources anchor chart (begun in Lesson 1) • Canada’s Natural Resources anchor chart (completed, for teacher reference; see Unit 2 Overview) • Computer, LCD and speakers (for viewing and listening to video) • Video: “Developing a Vital Resource for Canadians and the World” (clip 0:00–2:30 found at http://www.actionplan.gc.ca/en/blog/r2d-dr2/developing-vital-resource-canadians-and-world) • “Developing a Vital Resource for Canadians and the World” note-catcher (one per student and one for display) • “Developing a Vital Resource for Canadians and the World” note-catcher (answers, for teacher reference) • “Developing a Vital Resource for Canadians and the World” transcript (one per student) • “Developing a Vital Resource for Canadians and the World”: Frayer Models (one per student) • Dictionaries (enough for students to refer to as needed) • Thesauruses (enough for students to refer to as needed) • “Developing a Vital Resource for Canadians and the World”: Frayer Models (suggested answers, for teacher reference) • Homework: “Developing a Vital Resource for Canadians and the World” resource web (one per student)

Opening	Meeting Students’ Needs
<p>A. Engaging the Reader: Natural Resources and the Canadian Economy Resource Web (5 minutes)</p> <ul style="list-style-type: none"> • Remind students that for homework they were to reread “Natural Resources and the Canadian Economy” and fill out a “Natural Resources and the Canadian Economy” resource web for the text. • Invite students to briefly share their resource webs with their group, and to make any additions or revisions based on what they see and hear from others. • Refocus students whole group. Invite volunteers to share their responses aloud. Add appropriate student suggestions to the Canada’s Natural Resources anchor chart. Refer to Canada’s Natural Resources anchor chart (complete, for teacher reference) for how the anchor chart should look. 	<ul style="list-style-type: none"> • Provide sentence starters for students who have difficulty expressing their thinking aloud.



Work Time	Meeting Students’ Needs
<p>A. Watching the Video: Developing a Vital Resource for Canadians and the World (15 minutes)</p> <ul style="list-style-type: none"> Focus students on the learning targets. Invite them to read them with you: <ul style="list-style-type: none"> * “I can summarize information presented in diverse formats.” * “I can explain how Canada’s available natural resources are used to meet the needs and wants of people today, by quoting accurately from the video transcript.” * “I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.” Point out these targets are similar to targets students have worked with during previous lessons to help them build understanding about guiding question: “How are Canada’s available resources used to meet people’s needs and wants today?” Tell students that they are going to watch a video about a natural resource in Canada called <i>potash</i>, which is a mined mineral used to fertilize soil so plants will grow better. Explain that in the video they will hear representatives from companies who produce potash talking about what potash has done for people in the area. Use a computer, LCD and speakers to play the video: “Developing a Vital Resource for Canadians and the World” (0:00–2:30). After playing the complete video, ask students to discuss in groups: <ul style="list-style-type: none"> * “Based on information you heard and viewed in this video, what is a natural resource found in Canada?” Invite volunteers to share their responses with the whole group. This is just an initial idea, as students have only watched the video once, but listen for students to explain that “potash” is the natural resource mentioned in the video. Ask students to discuss in groups: <ul style="list-style-type: none"> * “How is this natural resources used to meet the needs and wants of people today?” Cold call students to share their responses with the whole group. Again, this is just an initial idea, as students have only watched the video once, but listen for students to say things such as: “it brings jobs, it helps to grow more food, and it brings money to the economy.” Distribute “Developing a Vital Resource for Canadians and the World” note-catcher. Invite students to read through the questions with you. Tell students to ignore the “final evidence” column for now, as they will return to this later with a transcript of the video. 	<ul style="list-style-type: none"> Learning targets are a research-based strategy that helps all students, especially challenged learners. Posting learning targets allows students to reference them throughout the lesson to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none">• Explain that you are going to play the video clip through three times, giving students time after each play to discuss with their group and record answers to the questions. Encourage students to use the Notes column on their organizer to take some quick notes, just one word or a couple of words, to refresh their memories and refer to as they craft a response to each question. Emphasize that students should not be recording complete, lengthy sentences in this column, as this will stop them from listening to the rest of the video.• Tell students that a good way to do this effectively is to focus on no more than two questions each time the video is played.• Invite students to practice by focusing on question #1 for the second viewing of the video.• Play the full video again.• Give students time to discuss their answers to the question and to record the answer to the question on their note-catchers.• Select volunteers to share their notes and their final answer with the whole group. Where students have taken lengthy notes, model how to shorten these notes to make the process quicker. See “Developing a Vital Resource for Canadians and the World” note catcher (answers, for teacher reference) for ideas students may share and to guide students, as needed. Invite students to revise what they have recorded on their note-catchers, based on what they hear from the group.• Play the video again and give students time to discuss their answers to the question and to record the answer to the question on their note-catchers. This time, don’t invite students to share with the whole group, as this will be done later on in the lesson, once the note-catchers are complete.• Repeat until the video has been viewed three times.	



Work Time (continued)	Meeting Students’ Needs
<p>B. Identifying Evidence to Support Answers (20 minutes)</p> <ul style="list-style-type: none"> • Display and distribute the “Developing a Vital Resource for Canadians and the World” transcript. Tell students that this is the transcript of the video—the words the people they see on the video are saying. Focus students on the glossary at the bottom of the excerpt and remind them that the meaning of words in bold can be found in the glossary. • Invite students to whisper-read the transcript, taking note of the meaning of the bolded words. • Focus students on the final column of their note catcher, “Evidence.” • Tell students that they are now going to use the transcript to cite evidence to support their answers to the questions. Remind students of their previous work with locating and recording evidence, in the form of quotes from the text, to support their thinking. Ask students to share out what they recall about how to record quotes in their notes. Listen for: <ul style="list-style-type: none"> – “When we record quotes, which are the exact words from the text or what someone actually said, we place quotation marks around the text.” • Explain to students that this is a <i>transcript</i> of the video, which means it is a typed version of what the people in the video said. Therefore, the quotes they record from the transcript are what representatives from the potash companies said during the video. As needed, model reading aloud the first question, then looking to the transcript to locate evidence that helps to answer the question, underlining relevant text, and recording a direct quote onto the note-catcher. • Provide further clarification as needed, and then explain that you would like students to do this independently. • Circulate to support students. Ask questions such as: <ul style="list-style-type: none"> * “How do you know that is the answer? What does he say?” * “Where is that in the transcript?” • After 10–12 minutes, refocus the whole group. Go through each question and invite students to share their answers with the class. Refer to the “Developing a Vital Resource for Canadians and the World” note-catcher (answers, for teacher reference) to guide students in the correct answers and the appropriate evidence to support their responses. 	<ul style="list-style-type: none"> • For struggling readers, consider highlighting relevant sections of the transcript for them to focus on. Also consider color-coding by using a different colored highlighter for each question and related text. • Consider providing a partially completed note-catcher and limited text, to second language learners and struggling readers. • Work with a small group of students who may need more support answering each question or navigating the text independently.



Work Time (continued)	Meeting Students’ Needs
<p>C. Exploring Vocabulary: “Developing a Vital Resource for Canadians and the World” (15 minutes)</p> <ul style="list-style-type: none">• Distribute the “Developing a Vital Resource for Canadians and the World”: Frayer Models.• Ask students to review the models and share out what they notice about how the Frayer Model is similar to and different from the Frayer Models they completed during Unit 1.• After 1 minute, invite a few students to share their thinking whole group. Listen for them to mention that this model has only four sections instead of five, and this time they are not making a sketch to show the meaning of the word.• Remind students that they can use a dictionary to check the definition and a thesaurus to identify synonyms, and that doing so may give them a better understanding of what the word means.• Invite students to work in their groups to fill out the Frayer Models for the words <i>vital</i> and <i>fortunate</i>.• Circulate to support students in filling out their models. Ask questions such as:<ul style="list-style-type: none">* “What is the dictionary definition? How would you say that in your own words?”* “What are some examples of that word?”* “What synonyms does the thesaurus suggest?”* “What are antonyms of that word? What is the opposite of that meaning?”• Refocus the whole group. Invite a couple of volunteers to share their models with the class. Invite students to add to or revise their models accordingly. Guide students using the “Developing a Vital Resource for Canadians and the World”: Frayer Models (suggested answers, for teacher reference).	<ul style="list-style-type: none">• Allow students who struggle with language to draw a pictorial representation of the word in the “definition” square.• For students who struggle with language, consider providing a partially filled-in model or limiting the number of synonyms, antonyms, and examples students record to just one of each.• If technology is available, consider allowing second language learners to look up and listen to an online audio pronunciation of each term.



Closing and Assessment	Meeting Students’ Needs
<p>A. Synthesizing Information (5 minutes)</p> <ul style="list-style-type: none">• Ask students to refer to the text and their notes and discuss in groups:<ul style="list-style-type: none">* “What natural resources does this excerpt suggest are available in Canada?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: “potash.”• Ask students to refer to the text and their notes and discuss in groups:<ul style="list-style-type: none">* “How is that natural resource used to meet the needs and wants of people today?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: “It provides good jobs and more food by being a fertilizer that makes more crops grow in a smaller amount of land, and generating money that goes back into the Canadian economy, specifically in the province of Saskatchewan.”• Tell students they will synthesize their thinking in writing for homework on the next resource web.• Distribute Homework: “Developing a Vital Resource for Canadians and the World” resource web.	<ul style="list-style-type: none">• To allow for balanced airtime, limit the number of popcorn shares to one per student.
Homework	Meeting Students’ Needs
<ul style="list-style-type: none">• Reread the transcript “Developing a Vital Resource for Canadians and the World” and complete your resource web.• Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• For students who have difficulty reading or completing tasks independently, consider providing an audio recording of the text and/or a partially completed resource web.• Provide audio versions of independent texts as available, to struggling readers.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 4

Supporting Materials



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“Developing a Vital Resource for Canadians and the World” Note-catcher

.....
Name:
.....

.....
Date:
.....

Questions	Notes	Answers	Evidence (quotes from the transcript)
1. What does <i>potash</i> mean to the people of Saskatchewan?			
2. Why do the people need more food?			
3. Why do they need fertilizers?			



“Developing a Vital Resource for Canadians and the World” Note-catcher

Questions	Notes	Answers	Evidence (quotes from the transcript)
4. Why does one of the speakers consider himself fortunate?			
5. According to the final man who speaks, what has potash provided?			



“Developing a Vital Resource for Canadians and the World” Note-catcher
(Answers, for Teacher Reference)

Questions	Notes	Answers	Evidence (quotes from the transcript)
1. What does <i>potash</i> mean to the people of Saskatchewan?	<i>Economic development, good jobs</i>	<i>It means economic development and good jobs.</i>	<i>“What it means to us is that there’s development, there’s economic development specifically, so there’s a lot of people that can come back to Saskatchewan and have good jobs.”</i>
2. Why do the people need more food?	<i>Growing population</i>	<i>They need more food as a result of more people.</i>	<i>“By 2050 we’ll be at 9 billion people, and with that we need more food.”</i>
3. Why do they need fertilizers?	<i>Grow more food</i>	<i>They need fertilizers to produce more food per acre.</i>	<i>“So in order to get more food, what we have to do is, we have to apply fertilizers, crop nutrients, so that essentially what we do is, per acre of land, we produce more food.”</i>
4. Why does one of the speakers consider himself fortunate?	<i>Effectively mine, sustainable business</i>	<i>The resources can be effectively mined and ensure sustainable business.</i>	<i>“We’re very fortunate not only to have these resources, but to be able to effectively mine them, and be able to have sustainable business from them.”</i>



“Developing a Vital Resource for Canadians and the World” Note-catcher
(Answers, for Teacher Reference)

Questions	Notes	Answers	Evidence (quotes from the transcript)
5. According to the final man who speaks, what has potash provided?	<i>Good lifestyle, money for province</i>	<i>It has provided a good lifestyle for his family and money for the province of Saskatchewan.</i>	<i>“It has definitely provided a very good lifestyle for my family, and this is money that’s going back into the province.”</i>



“Developing a Vital Resource for Canadians and the World” Transcript

Saskatchewan has been blessed with a huge number of resources, specifically potash. You can find it almost everywhere in the southern part of Saskatchewan. What it means to us is that there’s development, there’s economic development specifically, so there’s a lot of people that can come back to Saskatchewan and have good jobs.

By 2050 we’ll be at 9 billion people, and with that we need more food—and at the end of the day, there’s not more land to be had for **agriculture**. So in order to get more food, what we have to do is we have to apply **fertilizers**, crop nutrients, so that essentially what we do is, per acre of land, we produce more food. So at Cory Division, we have a vital role in developing a resource, so that we can help to feed the world’s population.

We’re very fortunate not only to have these resources, but to be able to effectively mine them, and be able to have **sustainable** business from them, because I think that’s one of the most important things in Canada’s economy, and specifically Saskatchewan’s economy as well.

It has definitely provided a very good lifestyle for my family, and this is money that’s going back into the province. I was born and raised in Saskatoon and, to me, it’s huge to be able to stay here. I have a lot of friends and family that have moved to other provinces, and this is good roots. I’m a Saskatchewan boy, and I plan on staying here for a lifetime.

“Developing a Vital Resource for Canadians and the World.” Government of Canada. Web. 27 November 2013.

Glossary:


Word	Meaning
agriculture	farming
fertilizers	something added to the soil to make things grow better
sustainable	continue the same as it is now

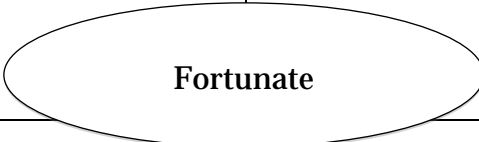


“Developing a Vital Resource for Canadians and the World”: Frayer Models

.....
Name:
.....

.....
Date:
.....

Definition	Synonyms (at least two)
	
Examples (at least two)	Antonyms (at least two)

Definition	Synonyms (at least two)
	
Examples (at least two)	Antonyms (at least two)



“Developing a Vital Resource for Canadians and the World”: Frayer Models
(Suggested Answers, for Teacher Reference)

Definition <i>Absolutely necessary</i>	Synonyms (at least two) <i>Critical</i> <i>Crucial</i> <i>Important</i>
Vital	
Examples (at least two)	Antonyms (at least two) <i>Insignificant</i> <i>Meaningless</i> <i>Optional</i>

Definition <i>Good luck/good fortune</i>	Synonyms (at least two) <i>Lucky</i> <i>Affluent</i> <i>Fortuitous</i>
Fortunate	
Examples (at least two)	Antonyms (at least two) <i>Failing</i> <i>Hopeless</i> <i>Lacking</i>



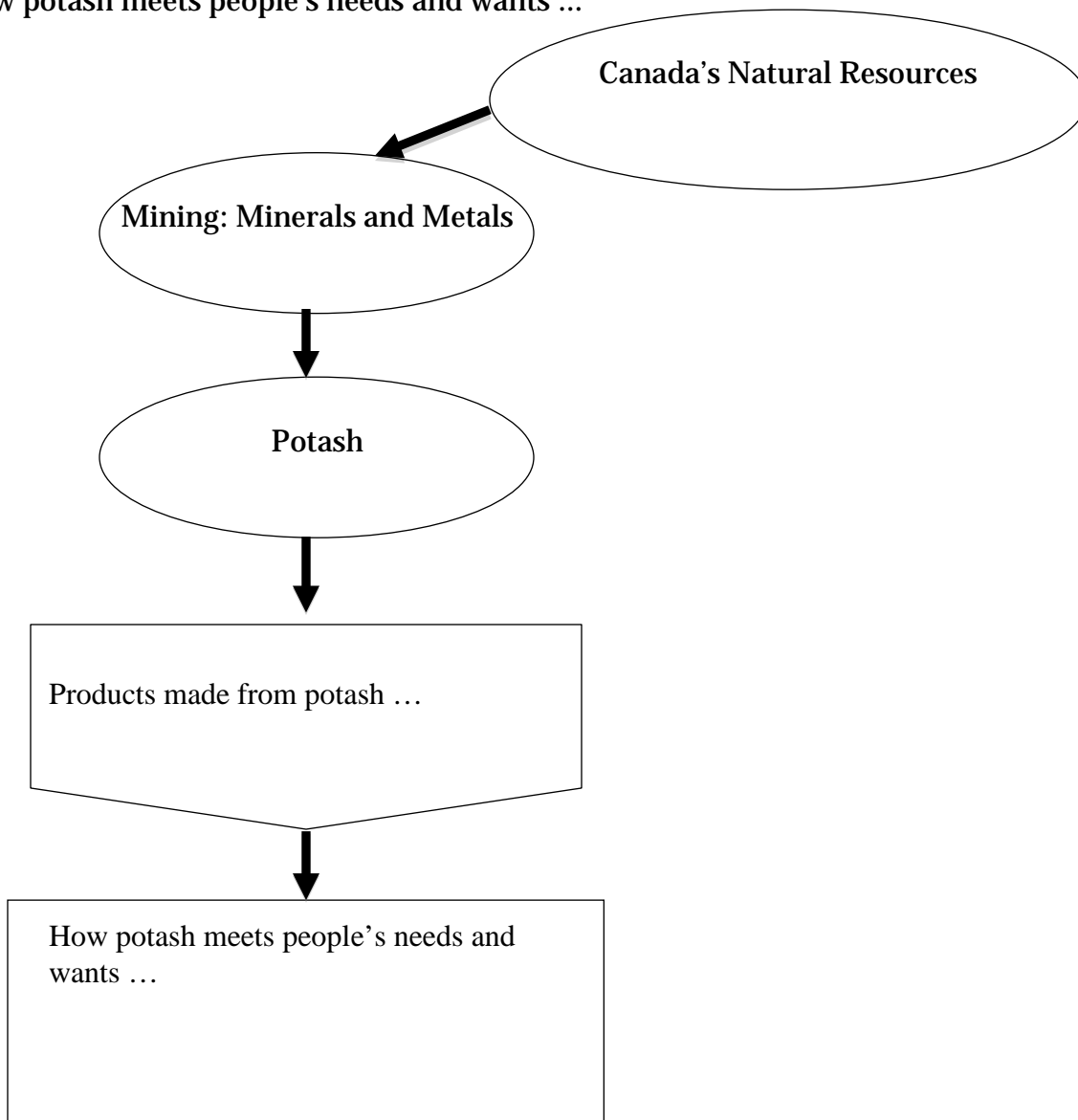
Homework:

“Developing a Vital Resource for Canadians and the World” Resource Web

Name: _____

Date: _____

- Reread the text to locate information that helps you complete the web.
- Record the products made from potash in the box “Products made from potash ...”
- Write a short sentence to explain how potash meets people’s needs and wants, in the lowest box “How potash meets people’s needs and wants ...”





EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 5

Mid-Unit Assessment: Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply”



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)

I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4)

I can use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. (L.5.4a)

I can consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases. (L.5.4c)

I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c)

Supporting Learning Targets

- I can explain how Canada’s available natural resources are used to meet the needs and wants of people today, by quoting accurately from the text.
- I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.

Ongoing Assessment

- “Developing a Vital Resource for Canadians and the World” resource web (from homework)
- Mid-Unit 2 Assessment: Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply”
- Tracking My Progress, Mid-Unit 2 recording form



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader: “Developing a Vital Resource for Canadians and the World: Resource Web” (5 minutes)2. Work Time<ol style="list-style-type: none">A. Mid-Unit 2 Assessment (45 minutes)B. Tracking My Progress (5 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Synthesizing Information to Add to the Anchor Chart (3 minutes)B. Sharing Reflections (2 minutes)4. Homework<ol style="list-style-type: none">A. Reread the text “A Limited Supply” and complete your resource web.B. Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• In this lesson, students are given a mid-unit assessment, in which they apply what they have been learning in previous lessons about using evidence to answer text-dependent questions as well as using synonyms, antonyms, and homonyms to gain a deeper understanding of the meaning of words.• Some students may require additional time to complete this assessment independently. Make provisions for those students accordingly.• Some students may benefit from having someone read the questions aloud to them. Again make provisions for those students accordingly.• Assess students’ responses using the 2-Point Rubric—Short Response. There are also suggested answers in the supporting materials, but be aware that student answers may differ from those suggested—they are to be used as a guideline for the types of responses to look for.• Post: Learning targets.



Lesson Vocabulary	Materials
abundance, environmental consequences, extraction, habitats, disrupts, refineries, migrating, marine, regenerate	<ul style="list-style-type: none">• Canada’s Natural Resources anchor chart (begun in Lesson 1)• Canada’s Natural Resources anchor chart (completed, for teacher reference; see Unit 2 Overview)• Mid-Unit 2 Assessment: Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply” (one per student)• Dictionaries (one per student)• Thesauruses (one per student)• Tracking My Progress, Mid-Unit 2 recording form (one per student)• Mid-Unit 2 Assessment: Text-Dependent and Short-Answer Questions: Excerpts from “A Limited Supply” (Answers, for Teacher Reference)• 2-Point Rubric—Short Response (for teacher reference)• Homework: “A Limited Supply” resource web (one per student)

Opening	Meeting Students’ Needs
<p>A. Engaging the Reader: “Developing a Vital Resource for Canadians and the World” Resource Web (5 minutes)</p> <ul style="list-style-type: none">• Remind students that for homework they were to reread the “Developing a Vital Resource for Canadians and the World” transcript and fill out a resource web for that text.• Invite students to briefly share their resource webs with their group, and to make any additions or revisions based on what they see and hear from others.• Refocus students whole group. Invite volunteers to share their responses aloud. Add appropriate student suggestions to the Canada’s Natural Resources anchor chart. Refer to Canada’s Natural Resources anchor chart (completed, for teacher reference) for how the anchor chart should look.	<ul style="list-style-type: none">• Provide sentence frames to allow all students access to the discussion: “The resource _____ is used to make products such as _____, which meet people’s needs and wants because _____.”



Work Time	Meeting Students’ Needs
<p>A. Mid-Unit 2 Assessment: Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply” (45 minutes)</p> <ul style="list-style-type: none"> Focus students on the learning targets. Invite them to read the targets with you: <ul style="list-style-type: none"> * “I can explain how Canada’s available natural resources are used to meet the needs and wants of people today, by quoting accurately from the text.” * “I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.” Remind students of the guiding question: “How are Canada’s available resources used to meet people’s needs and wants today?” Distribute Mid-Unit 2 Assessment: Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply.” Take some time to orient students to the assessment without giving them any of the answers. Point out the text excerpt that they need to read and remind them to refer to the glossary for any words in bold to help them have a deeper understanding of the text. Read through the questions and show students the Frayer Model that they need to fill in, as they have done in previous lessons. Remind students to use a dictionary and thesaurus to fill out their Frayer Model. Remind the class that because this is an assessment, it is to be completed independently; however, if students need assistance, they should raise their hand to speak with a teacher. Circulate and support students as they work. During an assessment, your prompting should be minimal. If students finish the assessment early, they may begin filling out their Tracking My Progress forms. Congratulate students on their hard work during the assessment. Tell them to hold on to their assessments to refer to as they complete their Tracking My Progress forms and for a popcorn share during the debrief. 	<ul style="list-style-type: none"> If students receive accommodations for assessments, communicate with the cooperating service providers regarding the practices of instruction in use during this study, as well as the goals of the assessment.
<p>B. Tracking My Progress (5 minutes)</p> <ul style="list-style-type: none"> Distribute a Tracking My Progress, Mid-Unit 2 recording form. Remind students this form is just like the progress trackers they have completed during previous units and modules, and provide clarification as necessary. Ask students to refer to their responses on the Mid-Unit 2 Assessment as they reflect on their ability to meet each of the targets. Once students complete their trackers, collect their assessments. Ask students to hang on to their assessment text and progress trackers for a discussion during the next part of this lesson. 	<ul style="list-style-type: none"> Allow students who struggle with expressing their ideas through writing to dictate their reflections to you or another adult to scribe.



Closing and Assessment	Meeting Students’ Needs
<p>A. Synthesizing Information to Add to the Anchor Chart (3 minutes)</p> <ul style="list-style-type: none"> Ask students to refer to the text and discuss with nearby peers: <ul style="list-style-type: none"> * “According to the text, what natural resources are available in Canada?” After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: “oil and gas,” “metallic ores like iron, copper, lead, zinc, gold, and silver,” “limestone, diamonds, and uranium,” and “trees.” Ask students to refer to the text as well as their notes and discuss in groups: <ul style="list-style-type: none"> * “How are those natural resources used to meet the needs and wants of people today?” After 1 or 2 minutes, invite students to share out all at once. Listen for: “brings jobs.” <p>5. Collect students’ assessments . Use the Mid-Unit 2 Assessment: Text-Dependent and Short-Answer Questions: Excerpts from “A Limited Supply” (Answers, for Teacher Reference) and 2-Point Rubric—Short Response (for teacher reference) to score student work.</p>	<ul style="list-style-type: none"> To ensure balanced airtime and that a variety of student voices are heard, consider limiting each student to one popcorn share. Provide sentence starters for students who have difficulty expressing themselves orally.
<p>B. Sharing Reflections (2 minutes)</p> <ul style="list-style-type: none"> Direct students to quickly review their Tracking My Progress forms and then discuss with a nearby partner what they feel their level of mastery toward each target is. As time allows, invite a few students to share out reflections whole group. Collect students’ progress forms to review (they will need the assessment text for homework and the next lesson). Distribute Homework: “A Limited Supply” resource web. 	
Homework	Meeting Students’ Needs
<ul style="list-style-type: none"> Reread the text “A Limited Supply” and complete your resource web. Read your independent reading book for at least 15–20 minutes. 	<ul style="list-style-type: none"> Consider providing an audio version of the article and/or independent reading text to students who struggle reading independently.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 5

Supporting Materials



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Mid-Unit 2 Assessment:

Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply”

Name:

Date:

Long-Term Learning Targets Assessed

I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)

I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4)

I can use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. (L.5.4a)

I can consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases. (L.5.4c)

I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c)

Directions:

1. Read the excerpts from “A Limited Supply” slowly and carefully. Use the glossary to help you understand the meaning of the words in **bold**.
2. Read the text again.
3. Read the first question.
4. Look for the information in the text that will help you answer the question. Underline the information you’ve found.
5. Write your answer to the question. Use quotes from the text to support your answer.
6. Move on to the next question and repeat this process.
7. If you get stuck on a question, move on to the next one and come back to it later.
8. Complete the Frayer Models. You may use a dictionary and/or thesaurus to help you.



Mid-Unit 2 Assessment:

Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply”

A Limited Supply

Canada’s north has an **abundance** of natural resources. Until recently these resources have been largely untouched. As resources are being used up in the south, oil and gas, mining, and forestry industries are moving northward. Resource industries bring needed jobs to people in the north, but they also have **environmental consequences**. As more areas of the north are opened up for resource **extraction**, more roads are needed for transportation. Roads disturb the land and wildlife **habitats** and also act as a barrier to migrating animals.

Industry

- **Oil and Gas**—Oil and gas resources have been discovered throughout the north. Exploration for these resources and their extraction **disrupts** the land. Pipelines have to be built to transport the oil to **refineries**. Sometimes pipelines are thousands of kilometers long. Pipelines disrupt **migrating** animals such as the caribou. There is also the possibility for oil and gas extraction in the Arctic Ocean. This would lead to a disruption of the **marine** environment and the possibility of oil spills.
- **Mining**—Metallic ores including iron, copper, lead, zinc, gold, and silver are mined in the Arctic, as well as limestone, diamonds, and uranium. Mining disrupts the land and pollutes the water with lead and mercury. Mines also use a lot of energy.
- **Forestry**—In the southern part of the Arctic, forestry takes place in the Boreal forest. Trees are cut down to create pulp, paper, and wood products. Once Boreal forests are cut down, it takes a long time for them to regenerate because of the harsh growing conditions.



Mid-Unit 2 Assessment:
Text-Dependent and Short Answer Questions: Excerpts from “A Limited Supply”

Glossary

Word	Meaning
abundance	a lot
environmental consequences	negative (bad) effects on the environment
extraction	removal
habitat	natural home of an animal, plant, or other form of life
disrupts	interrupts by disturbing and causes a problem
refineries	where oil is prepared (cleaned) before it is sent out to customers
migrating	moving from one place to another according to the seasons
marine	of the ocean
regenerate	grow again



Mid-Unit 2 Assessment:

Text-Dependent and Short-Answer Questions: Excerpts from “A Limited Supply”

1. Why are some of the natural resource industries moving to the northern parts of Canada? Support your answer with a quote from the text.

2. What is good about resource industries moving north? Support your answer with a quote from the text.

3. What are the negative consequences of resource industries moving north? Support your response with a quote from the text.

4. How do the oil and gas industry and the forestry industry modify the physical environment? Use quotes from the text in your answer.

- a. Oil and gas industry:

- b. Forestry industry:



Mid-Unit 2 Assessment:

Text-Dependent and Short-Answer Questions: Excerpts from “A Limited Supply”

5. Fill out the Frayer Model below to analyze the meaning of the key word *disturb*, from the excerpt of text you just read. You may use a dictionary and/or a thesaurus to help you.
(L.5.4 a and c, L.5.5 c)

Definition	Synonyms (at least two)
<div>Disturb</div>	
Examples (at least two)	Antonyms (at least two)



Mid-Unit 2 Assessment:

Text-Dependent and Short-Answer Questions: Excerpts from “A Limited Supply”
(Answers, for Teacher Reference)

Long-Term Learning Targets Assessed

I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)

I can determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. (L.5.4)

I can use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. (L.5.4a)

I can consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases. (L.5.4c)

I can use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. (L.5.5c)

1. Why are some of the natural resource industries moving to the northern parts of Canada? Support your answer with a quote from the text. (RI.5.1)

Because resources are being used up in the south. “As resources are being used up in the south, oil and gas, mining, and forestry industries are moving northward.”

2. What is good about resource industries moving north? Support your answer with a quote from the text. (RI.5.1)

They provide jobs for people in the North. “Resource industries bring needed jobs to people in the north ...”

3. What are the negative consequences of resource industries moving north? Support your response with a quote from the text. (RI.5.1)

They require more roads, and more roads disturb wildlife. “As more areas of the north are opened up for resource extraction, more roads are needed for transportation. Roads disturb the land and wildlife habitats and also act as a barrier to migrating animals.”



Mid-Unit 2 Assessment:

Text-Dependent and Short-Answer Questions: Excerpts from “A Limited Supply”
(Answers, for Teacher Reference)

4. How do the oil and gas industry and the forestry industry modify the physical environment? Use quotes from the text in your answer.
- a. Oil and gas industry:
They need pipelines, and building pipelines affects migrating wildlife. They could also disrupt the ocean. “Pipelines disrupt migrating animals such as the caribou. There is also the possibility for oil and gas extraction in the Arctic Ocean. This would lead to a disruption of the marine environment and the possibility of oil spills.”
- b. Forestry industry:
It takes a long time for trees to grow again once they have been cut down. “Once Boreal forests are cut down, it takes a long time for them to regenerate because of the harsh growing conditions.”
5. Fill out the Frayer Model below to analyze the meaning of the key word *disturb*, from the excerpt of text you just read. You may use a dictionary and/or a thesaurus to help you.
(L.5.4 a and c, L.5.5 c)

Definition <ul style="list-style-type: none">• <i>Interrupt or interfere with</i>	Synonyms <ul style="list-style-type: none">• <i>Interrupt</i>• <i>Annoy</i>• <i>Agitate</i>
Examples <ul style="list-style-type: none">• <i>Roads that disturb animal habitats</i>• <i>Roads that act as barriers to migrating animals</i>• <i>Pipelines disrupt migrating animals</i>• <i>Oil spills could disrupt marine environments</i>	Antonyms <ul style="list-style-type: none">• <i>Help</i>• <i>Assist</i>



2-Point Rubric: Writing from Sources/Short Response
(for Teacher Reference)

Use the below rubric for determining scores on short answers in this assessment.

2-point Response	The features of a 2-point response are:
	<ul style="list-style-type: none">• Valid inferences and/or claims from the text where required by the prompt• Evidence of analysis of the text where required by the prompt• Relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Sufficient number of facts, definitions, concrete details, and/or other information from the text as required by the prompt• Complete sentences where errors do not impact readability
1-point Response	The features of a 1-point response are:
	<ul style="list-style-type: none">• A mostly literal recounting of events or details from the text as required by the prompt• Some relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Incomplete sentences or bullets
0-point Response	The features of a 0-point response are:
	<ul style="list-style-type: none">• A response that does not address any of the requirements of the prompt or is totally inaccurate• No response (blank answer)• A response that is not written in English• A response that is unintelligible or indecipherable

¹From New York State Department of Education, October 6, 2012.



Tracking My Progress, Mid-Unit 2

Name: _____

Date: _____

Learning Target: I can explain how Canada's available natural resources are used to meet the needs and wants of people today, by quoting accurately from the text.

6. 1. The target in my own words is:

7.

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:

8.



Tracking My Progress, Mid-Unit 2

Learning Target: I can determine the meaning of unfamiliar words and phrases, using context clues and other strategies.

9. 1. The target in my own words is:

10.

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



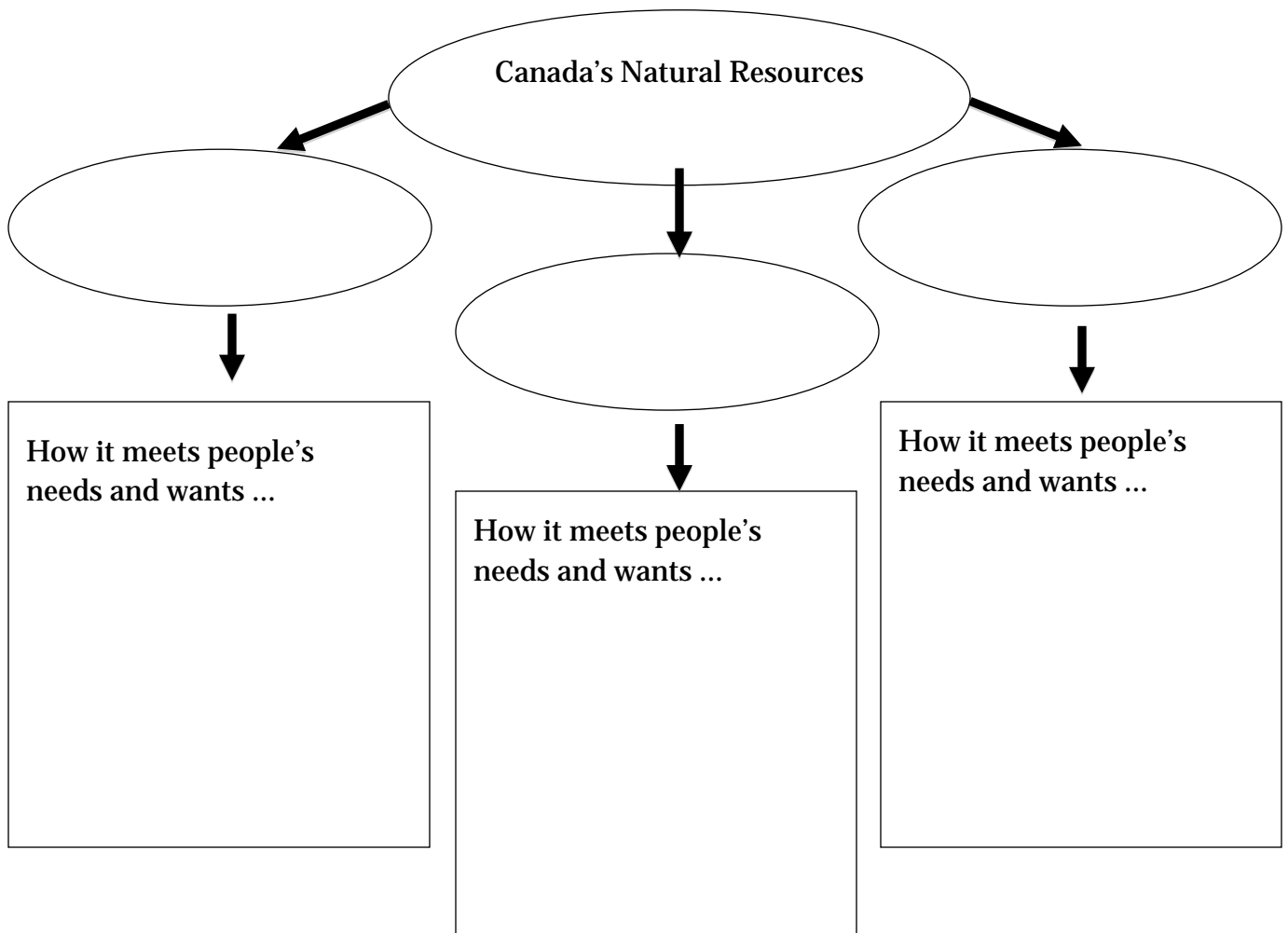
Homework:

“A Limited Supply” Resource Web

Name: _____

Date: _____

- Reread the text to locate information that helps you complete the web.
- Record the natural resources described in the text in the round boxes.
- Write a short sentence to explain how each of the natural resources meets people’s needs and wants, in the lowest box “How it meets people’s needs and wants ...”





EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 6

Research Skills, Part 1: Natural Resource Development and How it Modifies the Physical Environment



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences. (RI.5.1)
- I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3)
- I can integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (RI.5.9)
- I can conduct short research projects that use several sources to build knowledge about multiple aspects of a topic. (W.5.7)
- I can gather relevant information from print and digital sources, summarize information in notes and finished work, and provide a list of sources. (W.5.8)

Supporting Learning Targets

- I can build knowledge about how Canada's resources meet people's needs and wants and how resource industries modify the environment, by using several types of sources to conduct research.
- I can explain how Canada's resources meet people's needs and wants and how resource industries modify the environment, by quoting accurately from sources.
- I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources.

Ongoing Assessment

- "A Limited Supply" resource web (from homework)
- Research notes



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader: “A Limited Supply” Resource Web (5 minutes)2. Work Time<ol style="list-style-type: none">A. Research Mini Lesson: Finding Answers in an Excerpt of Text (15 minutes)B. Research Mini Lesson: Finding Answers on a Graph (15 minutes)C. Research Mini Lesson: Finding Answers in Images (20 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Synthesizing Information (5 minutes)4. Homework<ol style="list-style-type: none">A. Use the resources you have analyzed and interpreted in the lesson to complete your resource web.B. Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• In this lesson, students learn how to research to answer the guiding questions through a series of mini lessons that focus on collecting information from a variety of media types: a text, a graph, and an image. In the next lesson, they will be given three new resources to research in order to answer the questions more independently.• A new question is introduced that students research to answer: “How do natural resource industries modify the physical environment?” Responses to this question are added to the resources already listed on the Canada’s Natural Resources anchor chart, which students have been adding to throughout the unit.• Students reread “A Limited Supply,” the same text that that was used in Lesson 5 for the mid-unit assessment. This approach has two advantages: 1) The text is a valuable resource for helping students to answer the new question introduced in this lesson about how natural resource industries modify the physical environment; and 2) the focus of this lesson is on the research process and research skills, so using a text students are already familiar with will enable them to focus on the skills and process to effectively research rather than the content of a new text.• Because the environmental modifications that occur due to resource extraction are often portrayed as negative, it is important to educate students regarding the efforts made by resource industries to implement reclamation projects in areas that have been significantly altered because of industrial activity. Therefore, during Work Time C, students view a series of images that are meant to help them understand not only how these industries can transform areas in harmful ways, but also how companies work to restore excavation sites to conditions similar to what they were like before industrial development.• In advance:<ul style="list-style-type: none">– Prepare the Research Skills and Processes anchor chart (see supporting materials).– Review the Popcorn Read protocol (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
paraphrase; modify, pressures on the land, reclamation	<ul style="list-style-type: none"> • Canada's Natural Resources anchor chart (begun in Lesson 1) • Canada's Natural Resources anchor chart (completed, for teacher reference; see Unit 2 Overview) • Dictionary (one per group) • "A Limited Supply" (from Lesson 5; see Teaching Notes) • Research note-catcher (one per student and one for display) • Research note-catcher, Part 1 (suggested answers, for teacher reference) • Quote/Paraphrase anchor chart (from Module 2; also used in Unit 1, Lesson 3 of this module) • Research Skills and Processes anchor chart (new; teacher-created) • Research Skills and Processes anchor chart (for teacher reference) • "Freshwater Quality by Land Use in Canada, 2007–2009" (one per student and one for display) • "The Canadian Oil Boom" (one per student and one for display) • Reclamation images (one per student and one for display) • Homework: Modifying the Physical Environment resource web (one per student)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader: "A Limited Supply" Resource Web (5 minutes)</p> <ul style="list-style-type: none"> • Remind students that for homework they were to reread "A Limited Supply" and fill out a resource web for the text. • Invite students to briefly share their resource webs with their group, and to make any additions or revisions based on what they see and hear from others. • Refocus students whole group. Invite volunteers to share their responses aloud. Add appropriate student suggestions to the Canada's Natural Resources anchor chart. Refer to Canada's Natural Resources anchor chart (completed, for teacher reference) for how the anchor chart should look. 	<ul style="list-style-type: none"> • Provide sentence frames to allow all students access to the discussion: "The resource _____ is used to make products like _____, which meet people's needs and wants because _____."



Work Time	Meeting Students' Needs
<p>A. Research Mini Lesson: Finding Answers in an Excerpt of Text (15 minutes)</p> <ul style="list-style-type: none"> Focus students on the learning targets. Invite them to read the targets with you: <ul style="list-style-type: none"> * "I can build knowledge about how Canada's resources meet people's needs and wants and how resource industries modify the environment, by using several sources to conduct research." * "I can explain how Canada's resources meet people's needs and wants and how resource industries modify the environment, by quoting accurately from sources." * "I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources." Invite students to discuss in groups: <ul style="list-style-type: none"> * "What does <i>paraphrase</i> mean?" Select students to share their responses. Listen for them to explain that to paraphrase means to say something in your own words. Tell students they are going to be looking at different research resources to try to answer the guiding questions of the unit. Remind students of the guiding questions they were focused on in the first half of the unit: <ul style="list-style-type: none"> * "How are Canada's available resources used to meet people's needs and wants today?" * "How can I integrate information from a variety of texts and media to build knowledge about a topic?" Introduce the new question: "How do natural resource industries modify the physical environment?" Invite students to refer to the information they have collected so far on the Canada's Natural Resources anchor chart. Ask students to discuss in groups: <ul style="list-style-type: none"> * "What are some of the natural resource industries in Canada?" Select volunteers to share their responses. Listen for students to explain that minerals and mineral commodities, oil and gas, and forestry are some of the natural resource industries they have read about in Canada. Invite a student to look up the word <i>modify</i> in a dictionary and to share the definition with the whole group. Ask students to discuss in groups: <ul style="list-style-type: none"> * "So if 'modify' means change, what does 'modify the physical environment' mean?" Cold call students to share their responses. Listen for and guide students to understand that to modify the physical environment means to change or affect things that are part of our physical surroundings, or natural environment, such as water, air, and land. 	<ul style="list-style-type: none"> Learning targets are a research-based strategy that helps all students, especially challenged learners. Posting learning targets allows students to reference them throughout the lesson to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Make it clear to students that when they research, they will continue to think about how natural resources in Canada meet people's needs and wants, as well as the new question of how resource industries modify the physical environment.• Display and distribute the Research note-catcher. Point out that there is one research chart for each question. Invite students to read the headings in each of the columns on the charts with you.• Tell students that their first research resource will be a text that they have already looked at. Explain that they are using a text they have read already because: 1) The text contains answers to the new question, and 2) this will help them focus on research skills, rather than trying to figure out what a new text means.• Invite students to take out the text, "A Limited Supply."• Tell students they are going to work in groups to reread the text to answer the first question on their note-catcher: "How are Canada's natural resources used to meet people's needs and wants today?" Remind students that they already answered this question in their homework and on the anchor chart, so this will be good practice for them in filling out the Research note-catcher with content they are familiar with.• Invite students to fill out the first part of the note-catcher to answer the first question in groups.• Circulate to see how students are doing—notice any issues that can be used as teaching points with the whole group.• Refocus the group. Invite volunteers to share what they have recorded on their note-catcher. Refer to the Research note-catcher, Part 1 (suggested answers, for teacher reference) to guide students toward what they should have recorded on their note-catchers.• Emphasize that to paraphrase means to use your own words to write a brief version of a quote from the text in no more than a couple of sentences (refer students to the Quote/Paraphrase anchor chart as needed). Use student examples and the suggested answers for teacher reference to model this.• Ask students to discuss in groups:<ul style="list-style-type: none">* "What process did you follow to do this?"* "What did you do first? Why?"* "What next? Why?"• Cold call students to share their responses. Record a process on a new Research Skills and Processes anchor chart. See Research Skills and Processes anchor chart (for teacher reference) for guidance.	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Focus students on the second question on the Research note-catcher and invite students to follow the process recorded on the Research Skills and Processes anchor chart to answer: “How do natural resource industries modify the physical environment?” • Refocus the group. Invite volunteers to share what they have recorded on their note-catcher. Refer to the Research note-catcher, Part 1 (suggested answers, for teacher reference) to guide students in what they should have recorded. • Invite students to suggest any modifications to the process on the Research Skills and Processes anchor chart. 	
<p>B. Research Mini Lesson: Finding Answers on a Graph (15 minutes)</p> <ul style="list-style-type: none"> • Tell students that the next resource they will use to research is a graph. • Display and distribute the graph, “Freshwater Quality by Land Use in Canada, 2007–2009.” • Ask students to spend a few minutes grappling with the graph in groups. Ask students: <ul style="list-style-type: none"> * “What is this graph about? How do you know?” • Refocus the whole group. Listen for student ideas on what the graph is about. Students may or may not have figured it out at this point. Getting them to recognize the process of extracting information from a graph is more important than the answer. • Ask: <ul style="list-style-type: none"> * “How can you determine what the graph is about? What can you do first?” • Cold call students to share their responses. Listen for them to explain that they need to read the accompanying text with the graph first, as that probably explains what the graph is about. • Invite students to read the paragraph explaining the graph silently in their heads as you read it aloud. • Ask students to discuss in groups: <ul style="list-style-type: none"> * “So what do you know about the graph now?” • Select volunteers to share their responses. Listen for and guide students to understand that the graph is about freshwater quality and how it varies according to how the land is used. Point out the word “pressures” and ask students to discuss in groups: <ul style="list-style-type: none"> * “What do you think it means by ‘pressures on the land’?” • Select volunteers to share their responses. Listen for and guide students to understand that <i>pressures on the land</i> are things that disrupt the land, like the examples given of mining and agriculture. 	<ul style="list-style-type: none"> • Provide sentence starters for students who have difficulty expressing their ideas orally.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask students to discuss in groups:<ul style="list-style-type: none">* “How can you begin to interpret the data on the graph? What do you need to do first?”• Cold call students to share their responses. Listen for them to explain that they need to read the labels on the axis of the graph.• Ask students to read the labels on the axis and discuss in their groups what they mean.• Select volunteers to share their responses. Listen for them to explain that the horizontal axis is the number of water monitoring stations and the labels on the horizontal axis show the land use. Also listen for students to explain the color-coding.• Remind students of the two guiding questions on their Research note-catcher. Ask students to discuss in groups:<ul style="list-style-type: none">* “Water is a natural resource. Does this graph or caption convey any information about how water meets people’s needs and wants?”• Listen for students to say something like: “The graph does not really contain information that helps to answer the first guiding question.” Explain that not every resource will contain information that helps answer both questions. What is important is for students to understand how to identify relevant information from a variety of media types to build their understanding of each aspect of the topic.• Ask students to discuss in groups:<ul style="list-style-type: none">* “Does the graph tell you how natural resource industries modify the physical environment?”• Invite students to record their ideas on their Research note-catcher.• Cold call students to share their responses. Listen for and guide students to understand that this graph indicates that natural resource industries such as mining can pollute the water. See Research note-catcher (suggested answers, for teacher reference). Invite students to add to and revise their note-catcher based on the responses of other students.• Ask students to discuss in groups:<ul style="list-style-type: none">* “What process did you follow to do this?”* “What did you do first? Why?”* “What next? Why?”• Cold call students to share their responses. Add anything new to the Research Skills and Processes anchor chart. See the Research Skills and Processes anchor chart (for teacher reference) for guidance.	



Work Time (continued)	Meeting Students' Needs
<p>C. Research Mini Lesson: Finding Answers in Images (20 minutes)</p> <ul style="list-style-type: none">• Tell students that the next resources they will use to research are photographs with captions.• Display and distribute the photo titled “The Canadian Oil Boom.”• Ask students to spend a few minutes grappling with this image in groups. Ask:<ul style="list-style-type: none">* “What does this image show? How do you know?”* “What can you see?”* “What information is conveyed through the caption?”• Refocus the whole group. Listen for students' initial thinking regarding what the image shows the viewer and what information is conveyed through the caption. Answers will vary, and students may or may not be able to articulate their thinking at this point. It is more important for students to begin to recognize the process for locating information in this type of media than to try to determine a “correct” answer.• Ask students:<ul style="list-style-type: none">* “How can we work out what the image shows? What can you do first?”• Cold call students to share their responses. Listen for them to explain that, as with the graph, they need to read the title and the accompanying caption with the image, as those features probably provide clues about the content of the image.• Invite students to read the caption silently in their heads as you read it aloud.• Ask students to discuss in groups:<ul style="list-style-type: none">* “So what do you notice about the image now?”• Select volunteers to share their responses. Listen for and guide students to understand that the image shows how oil extraction damages the land.• Ask students to discuss in groups:<ul style="list-style-type: none">* “What do you think you are seeing in this photograph?”• Select volunteers to share their responses. Listen for them to explain that they are looking at an area of land in Canada where oil has been extracted.• Remind students of the two guiding questions on their Research note-catcher. Ask students to discuss in groups:<ul style="list-style-type: none">* “Thinking about the caption as well as the image, what do they tell us about how oil meets people’s needs and wants?”	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Invite students to record their ideas on their Research note-catcher. • Cold call students to share their responses. Listen for and guide students to understand that the oil extracted from the land is worth billions of dollars and therefore probably satisfies the needs and wants of many people or satisfies a very important want or need. See Research note-catcher (suggested answers, for teacher reference). Invite students to add to and revise their note-catcher based on the responses of other students. • Ask students to discuss in groups: <ul style="list-style-type: none"> * “What does the image tell you about how natural resource industries modify the physical environment?” • Invite students to record their ideas on their Research note-catcher. • Cold call students to share their responses. Listen for and guide students to understand that natural resource industries change the landscape and can make it ugly. See Research note-catcher (suggested answers, for teacher reference). Invite students to add to and revise their note-catcher based on the responses of other students. • Ask students to discuss in groups: <ul style="list-style-type: none"> * “What process did you follow to do this?” * “What did you do first? Why?” * “What next? Why?” • Cold call students to share their responses. Add anything new to the Research Skills and Processes anchor chart. See the Research Skills and Processes anchor chart (for teacher reference) for guidance. • Next, display and distribute the reclamation images of oil sands before and after. Focus students’ attention on the first set of images and underline the word <i>reclamation</i>. Ask students to notice the parts of this word that are familiar, such as “re-claim” (like claim). Then ask them to discuss in groups what this word might mean, based on their knowledge of parts of the word and the two images. • After 1 or 2 minutes, invite a few students to share their thinking aloud. Listen for: <ul style="list-style-type: none"> – “‘Reclaim’ or ‘reclamation’ probably means to make something look like it did before.” • Take a moment to explain that reclamation means to return land that has been disturbed to an improved condition. Then focus students once again on the initial images and captions and ask students if these images and captions convey any information about benefits. After 1 minute, listen for students to share out that they do not really show or explain benefits (once again, remind students that not every resource they refer to will provide information about both the benefits to people and modifications to the environment). 	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask:<ul style="list-style-type: none">* “Do the first set of images and captions here provide information about how natural resource industries can <i>modify</i> the physical environment?”• Listen for students to respond that “yes, they do” and explain their thinking aloud. Listen for and guide students to understand that natural resource industries do not always modify the environment in ways that make the landscape look ugly (as they saw in the first image); but after companies complete excavation projects, they can work to modify the environment by trying to return it to as close to its original condition as possible. See Research note-catcher (suggested answers, for teacher reference).• Ask students to consider than discuss in groups:<ul style="list-style-type: none">* “What process did you follow?”* “What did you do first? Why?”* “What next? Why?”• Cold call students to share their responses. Add anything new to the Research Skills and Processes anchor chart. See the Research Skills and Processes anchor chart (for teacher reference) for guidance.• Then, ask students to work with group members to examine and read the captions below each additional image and add relevant information to their note-catchers.• Circulate to provide support as needed.• After 5 or 6 minutes, invite students to share their thinking with the class. See Research note-catcher (suggested answers, for teacher reference).• Praise students for their ability to work collaboratively with group members to use a variety of media in order to continue building their knowledge about how resources meet people’s needs and wants as well as the new focus on ways that resource industries can modify the physical environment.	



Closing and Assessment	Meeting Students' Needs
<p>A. Synthesizing Information (5 minutes)</p> <ul style="list-style-type: none">• Ask students to refer to their resources and notes and discuss in groups:<ul style="list-style-type: none">* “How are Canada’s available resources used to meet people’s needs and wants today?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: “They provide jobs and money.”• Ask students to refer to their resources and notes and discuss in groups:<ul style="list-style-type: none">* “How do natural resource industries modify the physical environment?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for:<ul style="list-style-type: none">– “The industries disrupt wildlife, pollute water, and cut down trees that are slow to regrow.”– “Reclamation projects make land similar to what it was like before.”• Distribute Homework: Modifying the Physical Environment resource web.	<ul style="list-style-type: none">• To ensure balanced airtime and that a variety of student voices are heard, consider limiting each student to one popcorn share.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Use the resources you have analyzed and interpreted in the lesson to complete your resource web.• Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• Consider providing a partially completed resource web to students who struggle with reading multiple texts.• Consider providing an audio version of independent reading texts to support students who struggle reading independently.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 6

Supporting Materials



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Research Note-catcher

Name:

Date:

How are Canada's available resources used to meet people's needs and wants today?

Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)



Research Note-catcher

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)



Research Note-catcher, Part 1
(Suggested Answers, for Teacher Reference)

<i>How are Canada's available resources used to meet people's needs and wants today?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)
<i>Ecokids: "A Limited Supply"</i>	<i>"As resources are being used up in the south, oil and gas, mining, and forestry industries are moving northward. Resource industries bring needed jobs to people in the North..."</i>	<i>Resource industries bring jobs as they move north.</i>
<i>National Geographic: "The Canadian Oil Boom"</i>	<i>"...exploitation of Alberta's oil sands is now a gamble worth billions."</i>	<i>Oil extraction in Alberta makes a lot of money.</i>

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)
<i>Ecokids: "A Limited Supply"</i>	<i>"As more areas of the north are opened up for resource extraction, more roads are needed for transportation. Roads disturb the land and wildlife habitats and also act as a barrier to migrating animals."</i>	<i>The roads needed to transport resources disturb wildlife and migrating animals.</i>



Research Note-catcher, Part 1
(Suggested Answers, for Teacher Reference)

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)
<i>Ecokids: "A Limited Supply"</i>	<i>"Pipelines disrupt migrating animals such as the caribou. There is also the possibility for oil and gas extraction in the Arctic Ocean. This would lead to a disruption of the marine environment and the possibility of oil spills."</i>	<i>Pipelines for oil and gas disrupt migrating animals and could disrupt the oceans with a risk of oil spills.</i>
<i>Ecokids: "A Limited Supply"</i>	<i>"Mining disrupts the land and pollutes the water with lead and mercury."</i>	<i>Mining disrupts the land and pollutes the water.</i>
<i>Ecokids: "A Limited Supply"</i>	<i>"Trees are cut down to create pulp, paper, and wood products. Once Boreal forests are cut down, it takes a long time for them to regenerate because of the harsh growing conditions."</i>	<i>Lots of trees have to be cut down, and it takes a long time for them to grow again.</i>
<i>"Freshwater Quality by Land Use in Canada, 2007–2009"</i>	<i>"Over 30 water quality monitoring stations in remote areas tested the freshwater quality as good, compared to only 10 in mining areas."</i>	<i>Mining pollutes the freshwater in the area.</i>
<i>National Geographic: "The Canadian Oil Boom"</i>	<i>"Once considered too expensive, as well as too damaging to the land ..."</i>	<i>Oil extraction in Alberta, Canada is damaging to the land.</i>



Research Note-catcher, Part 1
(Suggested Answers, for Teacher Reference)

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)
<i>Earth Magazine.org: "Reclaiming Alberta's Oil Sands Mines"</i>	<i>"One of the original mine pits at Syncrude's Mildred Lake;" "The same area after reclamation;" "An area in the process of being reclaimed."</i>	<i>After resource industries mine an area they can work to make the land look like it did before mining took place. They try to restore the land as close as possible to its original condition.</i>



Research Skills and Processes Anchor Chart

Text	Graphs/Charts/Images



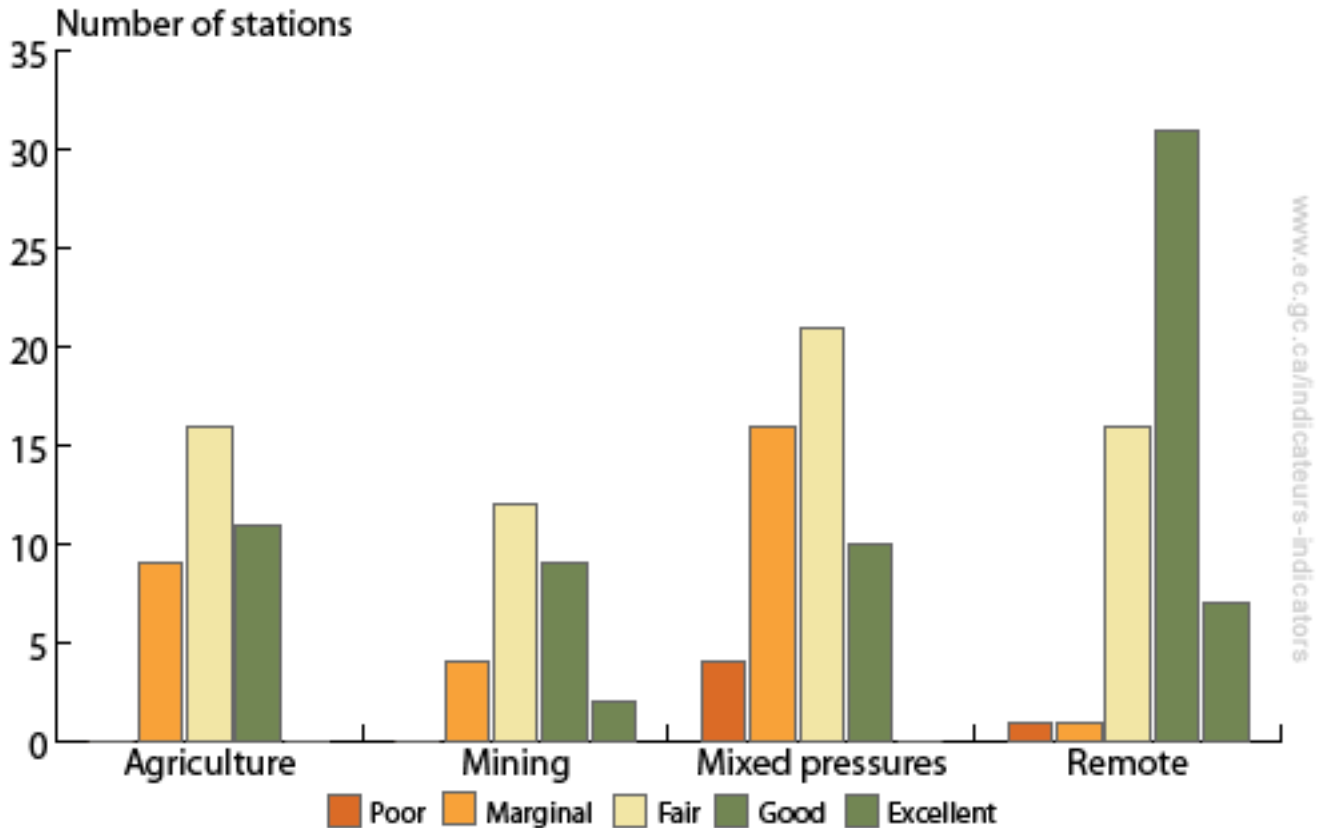
Research Skills and Processes Anchor Chart
(For Teacher Reference)

Text	Graphs/Charts/Images
<ol style="list-style-type: none">1. Read the text for gist.2. Read the text again, thinking about the question.3. Underline information that answers the question.4. Copy the information you have underlined word-for-word with quotation marks.5. Explain what this quote means in your own words in no more than a couple of sentences.	<ol style="list-style-type: none">1. Read the title.2. Read any writing that is with it.3. Read the labels on the axis.4. Analyze the information with the research question in mind.5. Then, ask yourself, “What is this graph, chart, or image showing me?”5. Determine whether any of the information you have interpreted in the writing or the image helps to answer the question.6. Record the information that answers the question.7. Write your interpretation of the information in your own words.



Freshwater Quality by Land Use in Canada, 2007–2009

From 2007 to 2009, freshwater quality differed according to how the land was used. Good and excellent freshwater quality was found more often in remote areas where few people lived and the land was undisturbed. In areas with pressures on the land—for example, industries like mining or farming—more water quality monitoring stations found water to be of a lower quality.





The Canadian Oil Boom



Scraping Bottom

Once considered too expensive, as well as too damaging to the land, exploitation of Alberta's oil sands is now a gamble worth billions of dollars.



Reclamation Images

Images from: Earth Magazine.org “Reclaiming Alberta’s Oil Sands Mines”



Left: One of the original mine pits at Syncrude’s Mildred Lake oil sands mine in Alberta, Canada
Right: The same area after reclamation



Reclamation Images



Before: One of the original mine pits at Syncrude's Mildred Lake oil sands mine



After: Syncrude's reclaimed Mildred Lake oil sands mine, in Alberta, Canada



Reclamation Images



An area in the process of being reclaimed

Photo: Courtesy of Syncrude Canada Ltd.
Caption Credit : Earth Magazine



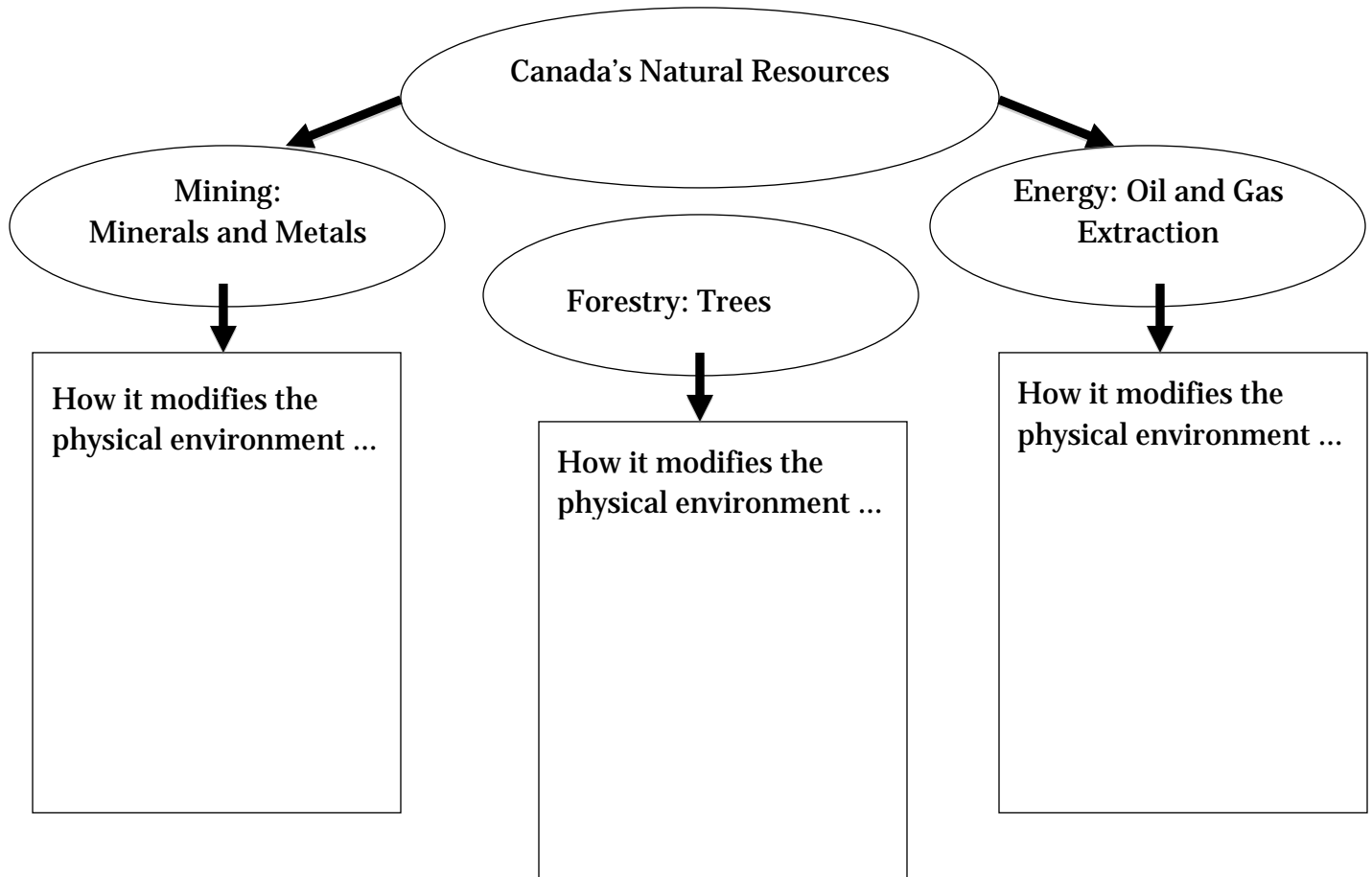
Homework:

Modifying the Physical Environment Resource Web

.....
Name:
.....

.....
Date:
.....

- Reread the resources and your Research note-catcher to locate information that helps you complete the web.
- Write a short sentence to explain how the natural resource industries modify the physical environment, in the box “How it modifies the physical environment ...”





EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 7

Research Practice, Part 2: Natural Resource Development and How it Modifies the Physical Environment



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can quote accurately from a text when explaining what the text says using explicitly and when drawing inferences. (RI.5.1)
- I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text (RI.5.3)
- I can integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (RI.5.9)
- I can conduct short research projects that use several sources to build knowledge about multiple aspects of a topic. (W.5.7)
- I can gather relevant information from print and digital sources, summarize information in notes and finished work, and provide a list of sources. (W.5.8)

Supporting Learning Targets

- I can build knowledge about how Canada's resources meet people's needs and wants and how resource industries modify the environment, by using several sources to conduct research.
- I can explain how Canada's resources meet people's needs and wants and how resource industries modify the environment, by quoting accurately from sources.
- I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources.

Ongoing Assessment

- Modifying the Physical Environment research web (from homework)
- Research notes



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader: Modifying the Physical Environment Resource Web (5 minutes)2. Work Time<ol style="list-style-type: none">A. Researching in Groups (35 minutes)B. Partner and Whole Group Share (15 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Synthesizing Information (5 minutes)4. Homework<ol style="list-style-type: none">A. Use the resources you have analyzed and interpreted in the lesson to complete your resource web.B. Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• In this lesson, students practice the research skills they were introduced to in the previous lesson with three new resources. In order to be gradually released from guided instruction in preparation for the End of Unit 2 Assessment, students work in groups with minimal teacher assistance or modeling; however, as you circulate, if you spot common issues with the research process students are following, use these issues as teaching points when you refocus the whole group toward the end of the lesson.• The graph does not provide answers to the “meeting wants and needs” question. Make sure students are aware that not all of the resources answer both of the questions.• In advance:<ul style="list-style-type: none">– Review the Popcorn Read protocol (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
paraphrasing	<ul style="list-style-type: none"> • Canada's Natural Resources anchor chart (begun in Lesson 1) • Canada's Natural Resources anchor chart (completed, for teacher reference; see Unit 2 Overview) • Research note-catcher (from Lesson 6; one new blank copy per student and one for display) • Research Skills and Processes anchor chart (from Lesson 6; one for display) • Research folders (one folder per team; one of each resource per student): <ul style="list-style-type: none"> – Text: "Deforestation in Canada" – Image: "Oil: A Promise of Wealth" – Graph: "Releases of Lead to Water by Source, Canada, 2011" • Research note-catcher, Part 2 (suggested answers, for teacher reference) • Homework: Modifying the Physical Environment: Lesson 7 resource web (one per student)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Modifying the Physical Environment Resource Web (5 minutes)</p> <ul style="list-style-type: none"> • Remind students that for homework they were to reread the research resources and fill out the Modifying the Physical Environment research web. • Invite students to share their resource webs with their group, to justify their responses on the resource web to the rest of the group, and to make any additions or revisions based on what they see and hear from others. • Refocus students whole group. Invite volunteers to share their responses aloud. Add appropriate student suggestions to the Canada's Natural Resources anchor chart. Refer to Canada's Natural Resources anchor chart (completed, for teacher reference) for how the anchor chart should look. 	<ul style="list-style-type: none"> • Provide sentence frames to allow all students access to the discussion: "The resource _____ is used to make products like _____, which meet people's needs and wants because _____."



Work Time	Meeting Students' Needs
<p>A. Researching in Groups (35 minutes)</p> <ul style="list-style-type: none"> • Focus students on the learning targets. Invite them to read them with you: <ul style="list-style-type: none"> * “I can build knowledge about how Canada’s resources meet people’s needs and wants and how resource industries modify the environment, by using several sources to conduct research.” * “I can explain how Canada’s resources meet people’s needs and wants and how resource industries modify the environment, by quoting accurately from sources.” * “I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources. • Remind students of what <i>paraphrasing</i> means and that they discussed how paraphrasing should be a brief retelling in their own words. • Remind students of the guiding questions: <ul style="list-style-type: none"> * “How are Canada’s available resources used to meet people’s needs and wants today?” * “How do natural resource industries modify the physical environment?” • Distribute a new blank Research note-catcher to each student. Remind them of what to record in each column to answer the question. • Tell students that today they are going to work in their groups to continue researching by using three new resources to answer the focus questions. Then they are going to record what they find on their note-catchers, just as they did in the previous lesson. Explain that by working in groups, they can discuss their ideas before recording information on their note-catchers. • Invite students to reread the processes recorded on the Research Skills and Processes anchor chart to remind themselves of how to use different types of media to research effectively. • Distribute research folders and orient students to each of the resources inside: <ul style="list-style-type: none"> – Text: “Deforestation in Canada” – Image: “Oil: A Promise of Wealth” – Graph: “Releases of Lead to Water by Source, Canada, 2011” • Explain to students that they will analyze and interpret the information on each of the resources, so that by the end of the lesson there should be information from three resources listed on their Research note-catchers. Make it clear that some of the resources may not answer both of the questions; those resources may provide answers on only one of the questions. 	<ul style="list-style-type: none"> • Learning targets are a research-based strategy that helps all students, especially challenged learners. • Posting learning targets allows students to reference them throughout the lesson to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Invite students to begin.• Give regular time reminders to ensure students get to each resource.• Circulate to support students in researching and to look out for any common issues that could be used as teaching points when you refocus the group. Ask guiding questions:<ul style="list-style-type: none">* "How does the resource answer the question? How do you know?"* "What does the resource show or say?" <p>"How would you say that in your own words?"</p>	
<p>B. Partner and Whole Group Share (15 minutes)</p> <ul style="list-style-type: none">• Refocus the whole group.• Invite students to pair up with someone from another group to share their research notes. Invite students to add to or revise their notes based on what they learn from their partner.• Refocus the whole group. Take one resource at a time and invite volunteers to share their notes on each resource with the whole group. Guide students with the Research note-catcher, Part 2 (suggested answers, for teacher reference).• If you noticed any issues when circulating to work with students, this is a good opportunity to discuss them with the whole group.• Invite students to discuss in groups:<ul style="list-style-type: none">* "Now that you have had an opportunity to practice researching with your group, is there anything you think needs to be revised on the Research Skills and Processes anchor chart?"• Revise the anchor chart accordingly.	<ul style="list-style-type: none">• Provide sentence starters for students who have difficulty expressing their ideas orally.



Closing and Assessment	Meeting Students' Needs
<p>A. Synthesizing Information (5 minutes)</p> <ul style="list-style-type: none">• Ask students to refer to their resources and notes and discuss in groups:<ul style="list-style-type: none">* “How are natural resources used to meet the needs and wants of people today?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: “They produce necessary commodities such as paper and wood products, and gasoline.”• Ask students to refer to their resources and notes and discuss in groups:<ul style="list-style-type: none">* “How do natural resource industries modify the physical environment?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: “They cut down trees and pollute water with lead.”• Distribute Homework: Modifying the Physical Environment: Lesson 7 resource web.	<ul style="list-style-type: none">• To ensure balanced airtime and that a variety of student voices are heard, consider limiting each student to one popcorn share.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Use the resources you have analyzed and interpreted in the lesson to complete your resource web.• Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• Consider providing a partially completed resource web to students who struggle with reading multiple texts.• Consider providing an audio version of independent reading texts to support students who struggle reading independently.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 7

Supporting Materials



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Research Folders:

Text: “Deforestation in Canada”

Annual deforestation rates are estimated using a combination of satellite and aerial images, land-use records and field inspections. The results show that deforestation is mostly driven by the **conversion** of forest land for agriculture, industrial development, resource extraction, and urban expansion.

What is deforestation?

Deforestation is the permanent removal of forest cover from an area, and the conversion of the previously forested land to other uses. In Canada, **clear cutting** and other harvesting practices are used as part of sustainable forest management to provide timber for producing paper and wood products. This is not considered deforestation, however, because the area is replanted or allowed to regenerate naturally, renewing the forest cover.

How much deforestation occurs in Canada?

Canada’s 397.3 million **hectares** of forest, other wooded land, and other land with tree cover account for about 10% of the world’s forest cover. In 2010, an estimated 45,000 hectares were deforested in Canada. Over the past 20 years, annual deforestation rates have been decreasing. Overall, deforestation has annually affected less than 0.01% of Canada’s forest and other wooded land in recent years.

Globally, about 13 million hectares of forest are deforested each year—the area of Nova Scotia and New Brunswick combined. Canada has 10% of the world’s forests, but only contributes to 0.3% of global deforestation.

Around the world, deforestation is a major issue because it reduces **biodiversity**, affects water and soil quality, and is an important contributor to **climate change**. Although the rate of deforestation in Canada is quite low, it still makes sense to **reduce** it where possible.



Research Folders:

Text: "Deforestation in Canada"

Glossary:

Word	Meaning
conversion	a change in something in order to use it for a different purpose
clear cutting	a way of cutting trees down that means they are all cut down in the same way
hectare	an area of land that is 100 meters by 100 meters
globally	all over the world
biodiversity	the variety of life in an area
climate change	change in weather patterns
reduce	make smaller



Research Folders:

Image: “Oil: A Promise of Wealth”



Photograph by Peter Essick

Beneath a green sweep of fen and forest in northern Alberta lies a promise of wealth —vast layers of hydrocarbons that can be refined into petroleum like gasoline. Undisturbed until now, these trees may soon fall: This land has already been staked out by prospectors.

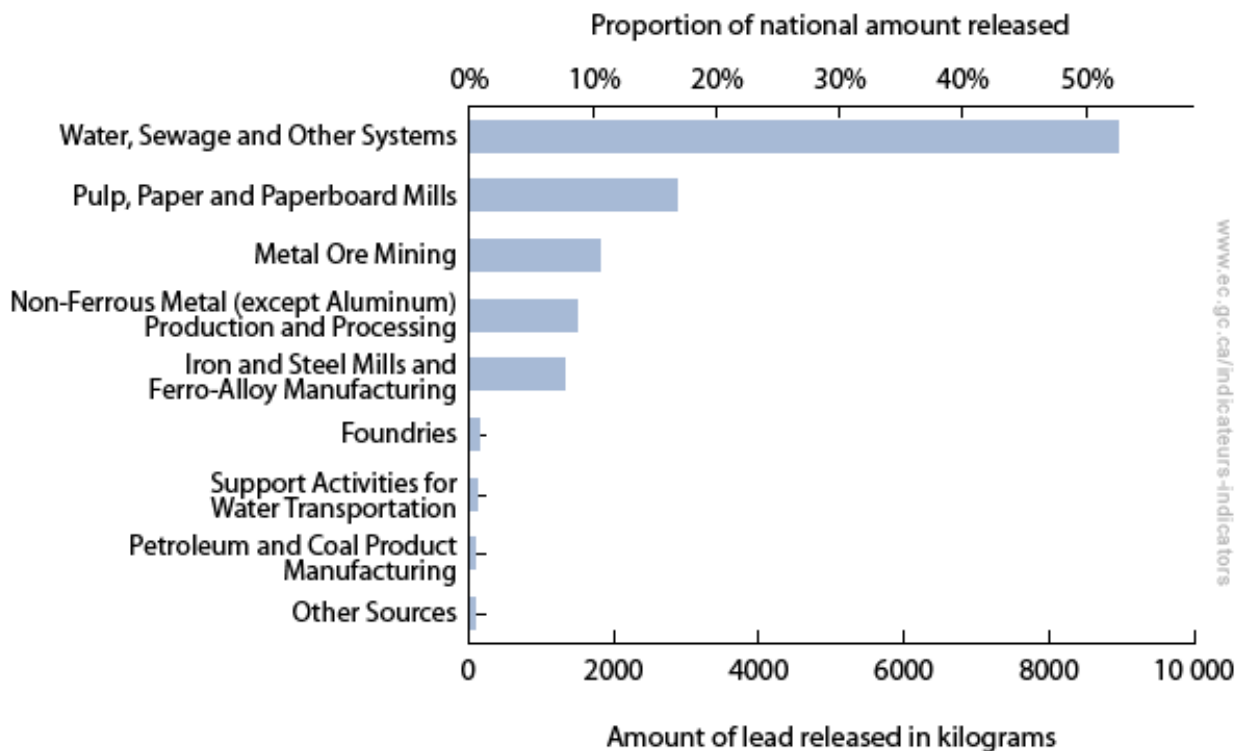


Research Folders:

Graph: “Releases of Lead to Water by Source, Canada, 2011”

When chemicals like lead are released into water, it can have a negative impact on the quality of the water and the life that lives in it. Water, sewage, and other systems account for 53% (8975 kg) of the total lead (Pb) released in water Canada in 2011. The second-largest amount of lead came from waste from pulp, paper, and paperboard mills, representing 17% (2883 kg) of the national total. The metal ore mining industry released the third-largest amount to water, with 11% (1818 kg) of the national total.

Releases of lead to water by source, Canada, 2011





Research Note-catcher, Part 2
(Suggested Answers, for Teacher Reference)

<i>How are Canada's available resources used to meet people's needs and wants today?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)
<i>"Deforestation in Canada"</i>	<i>"In Canada, clear cutting and other harvesting practices are used as part of sustainable forest management to provide timber for producing paper and wood products."</i>	<i>Trees are used to provide timber to produce paper and wood products.</i>
<i>National Geographic: "Oil: A Promise of Wealth"</i>	<i>"Beneath a green sweep of fen and forest in northern Alberta lies a promise of wealth—vast layers of hydrocarbons that can be refined into petroleum products like gasoline."</i>	<i>There are resources underground in Canada that can be used to make products people need, like gasoline.</i>



Research Note-catcher, Part 2
(Suggested Answers, for Teacher Reference)

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase Explain what this quote means in your own words (linked to answering the question)
<i>“Deforestation in Canada”</i>	<i>“Deforestation is the permanent removal of forest cover from an area, and the conversion of the previously forested land to other uses.”</i>	<i>Deforestation removes trees permanently from an area.</i>
<i>“Deforestation in Canada”</i>	<i>“... deforestation is a major issue because it reduces biodiversity, affects water and soil quality, and is an important contributor to climate change.”</i>	<i>Deforestation lessens the variety of life, affects water and soil quality, and contributes to climate change.</i>
<i>National Geographic: “Oil: A Promise of Wealth”</i>	<i>“Undisturbed until now, these trees may soon fall: This land has already been staked out by prospectors.”</i>	<i>Trees are cut down to extract natural resources like oil.</i>
<i>“Releases of Lead to Water by Source, Canada, 2011”</i>	<i>“The metal ore mining industry released the third-largest amount to water, with 11% (1818 kg) of the national total.”</i>	<i>The mining of metal ore was responsible for releasing a lot of lead into water.</i>



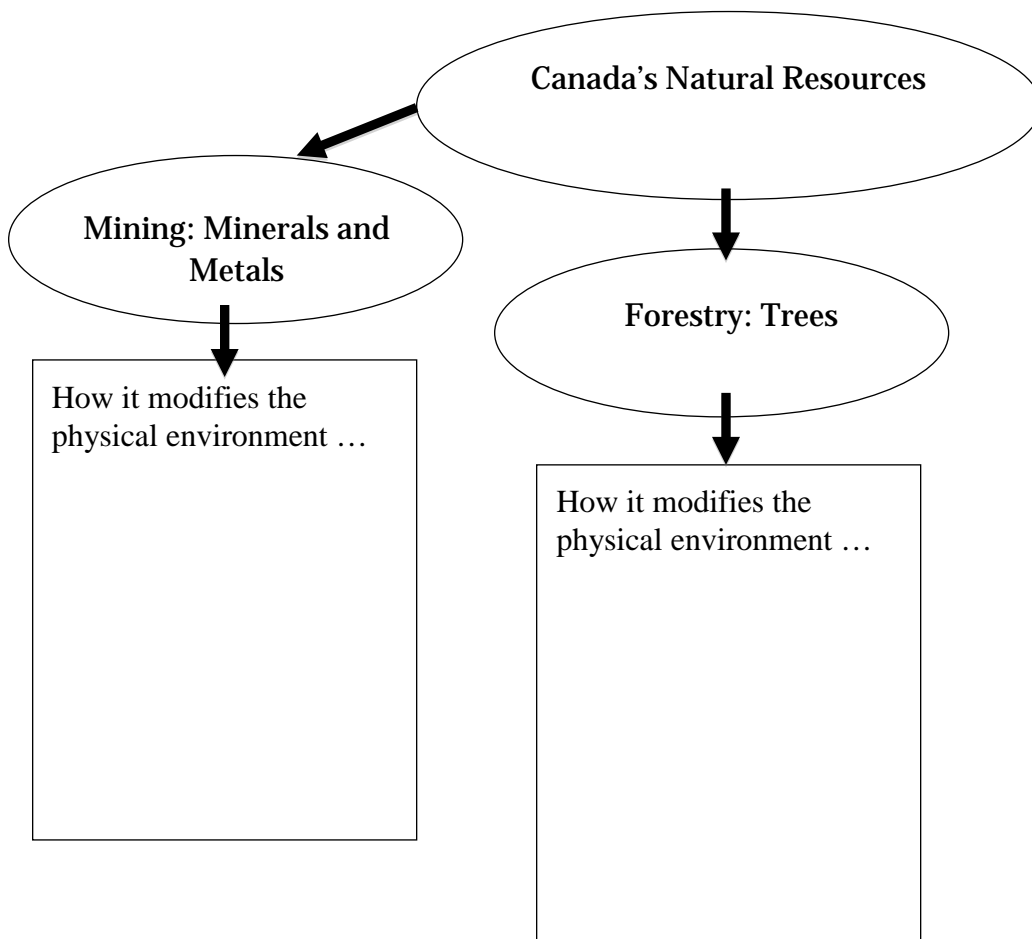
Homework:

Modifying the Physical Environment: Lesson 7 Resource Web

.....
Name:

.....
Date:

- Reread the resources and your Research note-catcher to locate information that helps you complete the web.
- Write a short sentence to explain how natural resource industries can modify the physical environment, in the box “How it modifies the physical environment ...”





EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 8

Speaking and Listening Skills: Practice



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can engage effectively in a range of collaborative discussions with diverse partners. (SL.5.1)

I can summarize information presented in diverse media and formats, including visually, quantitatively, and orally. (SL.5.2)

Supporting Learning Targets

- I can explain how Canada's natural resources are used to meet people's needs and wants and how resource industries modify the environment, by engaging in collaborative discussions with peers.
- During peer discussions, I can support my ideas by summarizing information from a variety of sources, including my notes.

Ongoing Assessment

- Modifying the Physical Environment: Lesson 7 resource web (from homework)
- Self-assessment on research and response rubric



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader: Modifying the Physical Environment: Lesson 7 Resource Web (10 minutes)2. Work Time<ol style="list-style-type: none">A. Speaking and Listening Skills (15 minutes)B. Speaking and Listening Practice: World Café (30 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Self-Assessment and Debrief (5 minutes)4. Homework<ol style="list-style-type: none">A. Read your independent reading book for at least 15–20 minutes.	<ul style="list-style-type: none">• In this lesson, students review speaking and listening skills and practice orally summarizing the research resources they have analyzed and interpreted in Lessons 6 and 7, in preparation for Part 2 of the End of Unit 2 Assessment in Lesson 10. Students participate in collaborative discussions with peers to express their thinking about the focus questions, using the World Café protocol. World Café allows students to orally process and practice sharing information within a group setting, and gives students an opportunity to develop leadership skills as the role of “group leader” is rotated.• In advance:<ul style="list-style-type: none">– Review and post directions for the World Café protocol in Work Time B and in Appendix 1; predetermine group leaders.– Create a Focus Questions chart for each group (see example in supporting materials).• Post: Learning targets; World Café directions; key terms from the learning targets.• Review: Fist to Five in Checking for Understanding techniques (see Appendix).



Lesson Vocabulary	Materials
summarize	<ul style="list-style-type: none">• Canada's Natural Resources anchor chart (begun in Lesson 1)• Canada's Natural Resources anchor chart (completed, for teacher reference; see Unit 2 Overview)• Lined paper (one piece per group)• Research and Response Criteria (one per student and one for display)• Research note-catchers (completed by students in Lesson 6)• Research note-catchers (completed by students in Lesson 7)• Resources from Lessons 5-7:<ul style="list-style-type: none">– “Freshwater Quality by Land Use in Canada, 2007–2009” (from Lesson 6)– “The Canadian Oil Boom” (from Lesson 6)– Reclamation images (from Lesson 6)– Text: “Deforestation in Canada” (from Lesson 7)– Image: “Oil: A Promise of Wealth” (from Lesson 7)– Graph: “Releases of Lead to Water by Source, Canada, 2011” (from Lesson 7)– “A Limited Supply” (from Lesson 5)• Research note-catcher, Part 1 (suggested answers for teacher reference; from Lesson 6)• Research note-catcher, Part 2 (suggested answers for teacher reference; from Lesson 7)• World Café directions (one to display; see Appendix)• Focus Questions charts (one per group; new, teacher-created; see example in supporting materials)• Markers (one per group)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Modifying the Physical Environment: Lesson 7 Resource Web (10 minutes)</p> <ul style="list-style-type: none">• Remind students that for homework they were to reread the research resources and fill out a Modifying the Physical Environment: Lesson 7 resource web.• Invite students to share their resource webs with their group, to justify their responses on the resource web to the rest of the group, and to make any additions or revisions based on what they see and hear from others.• Refocus students whole group. Invite volunteers to share their responses aloud. Add appropriate student suggestions to the Canada's Natural Resources anchor chart. Refer to Canada's Natural Resources anchor chart (completed, for teacher reference) for how the anchor chart should look.	<ul style="list-style-type: none">• Provide sentence frames to allow all students access to the discussion: "The resource _____ is used to make products like _____, which meet people's needs and wants because _____."



Work Time	Meeting Students' Needs
<p>A. Speaking and Listening Skills (15 minutes)</p> <ul style="list-style-type: none">• Focus students on the learning targets. Invite them to read them with you:<ul style="list-style-type: none">* “I can explain how Canada’s natural resources are used to meet people’s needs and wants and how resource industries modify the environment, by engaging in collaborative discussions with peers.”* “During peer discussions, I can support my ideas by summarizing information from a variety of sources, including my notes.”• Invite students to discuss in groups:<ul style="list-style-type: none">* “What does it mean to <i>summarize</i>?”• Cold call students to share their responses. Listen for students to explain that to summarize means to make a short statement about the main ideas.• Tell students that today they are going to orally summarize the information they found from each research resource they have analyzed and interpreted over the past couple of lessons, and also provide relevant supporting quotes, in order to answer the two guiding questions. Explain that they are going to do this in a group discussion in preparation for the second part of the end of unit assessment, which is a speaking and listening assessment.• Distribute lined paper to each group. Ask students to discuss in groups and to record their answers on their lined paper:<ul style="list-style-type: none">* “During group discussions, what speaking and listening skills do we need to be mindful of to ensure that the group discussion is effective?”* “Which speaking and listening skills have we practiced before?”• Cold call students to share their responses with the whole group.• Display and distribute Research and Response Criteria. Tell students that the criteria in the box are those they will be assessed on in the end of unit assessment. Point out any skills that students missed in the whole group discussion.• Invite students to read the directions at the top of the Research and Response Criteria and invite students to ask any clarifying questions.• Invite students to take out their Research note-catchers and the following resources from Lessons 5-7:<ul style="list-style-type: none">– “Freshwater Quality by Land Use in Canada, 2007–2009”– “The Canadian Oil Boom”	<ul style="list-style-type: none">• Learning targets are a research-based strategy that helps all students, especially challenged learners.• Posting learning targets allows students to reference them throughout the lesson to check their understanding. The learning targets also provide a reminder to students and teachers about the intended learning behind a given lesson or activity.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">– Reclamation images– Text: “Deforestation in Canada”– Image: “Oil: A Promise of Wealth”– Graph: “Releases of Lead to Water by Source, Canada, 2011”– “A Limited Supply” <ul style="list-style-type: none">• Tell students that you are going to give them some time to spend independently reviewing the resources and all of the information they have collected to answer the two guiding questions.• Model how to do this for the first question about meeting people’s wants and needs with “A Limited Supply” and the Lesson 6 Research note-catcher, Part 1 (suggested answers for teacher reference). Before you do so, remind students that the learning target asks them to summarize. Invite students to refer to their texts and their Research note-catchers for this text as you model.• Say something like:<ul style="list-style-type: none">* “In ‘A Limited Supply,’ I found out that Canada’s natural resources meet people’s needs and wants by providing jobs. It says, ‘As resources are being used up in the south, oil and gas, mining, and forestry industries are moving northward. Resource industries bring needed jobs to people in the north.’”• Explain that you would then continue answering that same question by summarizing the other resources before moving on to answer the next question.• Give students time to reread their note-catchers and to review the research resources from Lessons 6 and 7 in order to prepare for the group discussion. Remind students to refer to the sections they have underlined on the texts, as those were sections they identified as answering the questions.	



Work Time (continued)	Meeting Students' Needs
<p>B. Speaking and Listening Practice: World Café (30 minutes)</p> <ul style="list-style-type: none">• Focus students' attention on the posted World Café directions and invite students to read them with you.• Clarify any directions as needed. Explain that during the World Café, groups will rotate four times. During each rotation students will discuss the focus questions:<ul style="list-style-type: none">* "How are Canada's available resources used to meet people's needs and wants today?"* "How do natural resource industries modify the physical environment?"• Point out the Focus Questions charts posted around the room; the leader of each discussion will record notes on them.• Remind students of the Research and Response Criteria and invite them to reread the criteria so that the criteria are fresh in their minds before they begin.• Assign one member of each group as the "leader," and then distribute one marker to each leader to record ideas from group discussions on their Focus Questions chart.• Direct students to begin the World Café by discussing Focus Question 1 and then 2. Remind students to support their ideas with quotes, paraphrased ideas, and specific evidence from the texts.• As students work, move throughout the room to identify any speaking and listening issues that you can use as teaching points later in the lesson.• Give students 5 or 6 minutes to work in each World Café group before changing to meet with a new discussion group.• After 15–20 minutes, or four group rotations, refocus students' attention whole class.• Ask the leader from each of the final World Café tables to share their discussion notes whole class. Student responses will vary, but listen for students to cite specific examples from texts, as well as the ideas recorded on their note-catchers, that support their understanding of how Canada's resources are used to meet people's needs and wants and how natural resource industries modify the environment.• Use the remaining time to address any speaking and listening issues that you identified as you were circulating.	<ul style="list-style-type: none">• Consider previewing the World Café protocol with students who find it difficult to navigate multistep protocols.



Closing and Assessment	Meeting Students' Needs
<p>A. Self-Assessment and Debrief (5 minutes)</p> <ul style="list-style-type: none">• Invite students to place a check mark next to the criteria they think they achieved on the Research and Response Criteria. Ask them to circle the criteria they think they need to work to be successful in the assessment.• Fist to Five: Invite students to revisit the learning targets and to respond to each learning target by showing a number of fingers for how confident they feel about meeting the target.• Take note of students who show a low number of fingers in order to discuss any issues they have before Part 2 of the End of Unit 2 Assessment.	<ul style="list-style-type: none">• The debrief can help build a culture of achievement in your classroom.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read your independent reading book for at least 15–20 minutes.	<p>Consider providing an audio version of independent reading texts to support students who struggle reading independently.</p>



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 8

Supporting Materials



Research and Response Criteria

I can explain how Canada's natural resources are used to meet people's needs and wants and how resource industries modify the environment, by engaging in collaborative discussions with peers.

During peer discussions, I can support my ideas by summarizing information from a variety of sources, including my notes.

Directions

In groups you are going to discuss the answers to the two questions:

1. How are Canada's available resources used to meet people's needs and wants today?
2. How do natural resource industries modify the physical environment?

To answer the question, you are going to:

- a. **Summarize** the information in at least two of the resources you used to research
- b. Include quotes from the text or information from the charts/graphs or images to **support** your answer

Criteria:

- Contributes to discussion
- Stays on topic
- Takes turns speaking
- Asks follow-up or clarifying questions
- Points to specific details/lines from multiple texts, as well as notes from graphic organizers, to explain ideas clearly
- Asks questions to encourage participation of others
- Shows respect for diverse perspectives in the group
- Listens actively by making eye contact with the speaker, providing others with time to speak, and building on partners' ideas



Focus Questions Chart
(Example, for Teacher Reference)

How are Canada's available resources used to meet people's needs and wants today?

How do natural resource industries modify the physical environment?



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 9

End of Unit Assessment, Part 1: Research and Response



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (RI.5.1)
- I can explain the relationships between two or more individuals, events, ideas, or concepts in a technical text based on specific information in the text. (RI.5.3)
- I can integrate information from several texts on the same topic in order to speak about the subject knowledgeably. (RI.5.9)
- I can conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (W.5.7)
- I can gather relevant information from print and digital sources. (W.5.8)
- I can paraphrase information in notes and finished work, and provide a list of sources. (W.5.8)

Supporting Learning Targets

- I can explain how Canada's natural resources meet people's needs and wants and how resource industries modify the environment, by quoting accurately from a variety of sources.
- I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources.
- I can prepare to speak knowledgeably about how Canada's natural resources meet people's needs and wants and how resource industries modify the environment, by integrating information from a variety of sources.

Ongoing Assessment

- End of Unit 2 Assessment, Part 1: Research and Response



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader: Independent Reading (5 minutes)Work Time<ol style="list-style-type: none">End of Unit 2 Assessment, Part 1 (45 minutes)Closing and Assessment<ol style="list-style-type: none">Synthesizing Information (10 minutes)Homework<ol style="list-style-type: none">Use the resources you have analyzed and interpreted in the lesson to complete your resource web.Read independently for at least 30 minutes.	<ul style="list-style-type: none">In this lesson, students take Part 1 of the End of Unit 2 Assessment. Students use the same note-catcher format they have used during the second half of this unit, to collect quotes and paraphrase information from two of three different resources to explain how Canada's available resources meet the needs and wants of people today, as well as how natural resource industries modify the physical environment.Part 1 of the assessment prepares students for Part 2 (Lesson 10), during which they will refer to their notes and resources from Part 1 (research) to participate in a World Café discussion with peers (response). Capturing and sharing ideas in the form of quotes and paraphrased information, supported by reliable sources, will allow for more fluid discussions among students. Note the intentional decision to have students record quotes, paraphrase, and cite sources rather than write summary paragraphs as they have frequently done in past units and modules.Be aware that one of the three sources students may choose from is an Internet link. This is a viable option only if adequate technology is available to students. If technology is not available, ask students to disregard Source 3 of the assessment and use the two non-digital sources provided.Post: Learning targets.



Lesson Vocabulary	Materials
industries, modify, synthesize, research, variety, sources, prepare, knowledgeably	<ul style="list-style-type: none">• Independent reading books (various; students' own)• Canada's Natural Resources anchor chart (begun in Lesson 1)• End of Unit 2 Assessment, Part 1: Research and Response (one per student)• Computers (one per student, if available; see Teaching Notes)• Homework: Modifying the Physical Environment: Lesson 9 resource web (one per student)• End of Unit 2 Assessment, Part 1 (sample answers, for teacher reference)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Independent Reading (5 minutes)</p> <ul style="list-style-type: none">• Ask students to collect their independent reading books. Then bring students together whole group. Ask them to turn to a nearby partner, show their partner the book they are reading then point to a specific page or section in the book related to an interesting detail or new piece of information they learned from reading independently for homework.• After 1 minute, invite a few students to share out with the class.	<ul style="list-style-type: none">• Provide sentence frames to allow all students access to the discussion: "The resource _____ is used to make products like _____, which meet people's needs and wants because _____."



Work Time	Meeting Students' Needs
<p>A. End of Unit 2 Assessment, Part 1 (45 minutes)</p> <ul style="list-style-type: none">• Focus students on the learning targets. Invite them to read the targets with you:<ul style="list-style-type: none">* “I can explain how Canada’s natural resources meet people’s needs and wants and how resource industries modify the environment, by quoting accurately from a variety of sources.”* “I can synthesize my research by paraphrasing information from a variety of texts and providing a list of sources.”* “I can prepare to speak knowledgeably about how Canada’s natural resources meet people’s needs and wants and how resource industries modify the environment, by integrating information from a variety of sources.”• Underline key terms from the targets that students are familiar with from previous lessons: <i>industries, modify, synthesize, research, variety, and sources.</i>• Ask students to think about and then discuss with nearby peers how they could restate the first two targets in their own words, based on their understanding of key words. Cold call a few students to share out whole group.• Then draw students’ attention to the third target and circle the terms <i>prepare</i> and <i>knowledgeably</i>. Ask students to think about and discuss with classmates: “What does it mean to prepare to speak knowledgeably about something?”• After 1 or 2 minutes, invite a few students to share their ideas aloud. Listen for:<ul style="list-style-type: none">– “Preparing means to get ready for something and knowledgeably means you understand something, so preparing to speak knowledgeably, in the context of this target, probably means to gather research and notes so you can speak with others about how Canada’s natural resources meet people’s needs and wants and how resource industries modify the environment.”• Explain to students that they will take Part 1 of the end of unit assessment today, during which they will read and record information from a variety of sources to prepare for Part 2 of the assessment, a discussion with peers about the questions students have focused on during the second half of this unit:<ul style="list-style-type: none">– “How are Canada’s available resources used to meet people’s needs and wants today?”– “How do natural resource industries modify the physical environment?”• Distribute End of Unit 2 Assessment, Part 1: Research and Response.	<ul style="list-style-type: none">• If students receive accommodations for assessment, communicate with the cooperating service providers regarding the practices of instruction in use during this study, as well as the goals of the assessment.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Take some time to orient students to the assessment without giving them any of the answers. Point out the variety of sources they may choose from and remind them to refer to the glossary for any words in bold to help them gain a deeper understanding of the text. Read the directions and show students the graphic organizers that they need to fill in, as they have in previous lessons. Answer any clarifying questions students have.• Remind the class that because this is an assessment, it is to be completed independently; however, if students need assistance, they should raise their hand to speak with a teacher.• Circulate and support students as they work. During an assessment, your prompting should be minimal.• If students finish early, they may read independently.• When students have completed the assessment, ask them to hold onto them for reference during a synthesizing activity later in the lesson.	



Closing and Assessment	Meeting Students' Needs
<p>A. Synthesizing Information (10 minutes)</p> <ul style="list-style-type: none">• Ask students to refer to their resources and notes and discuss in groups:<ul style="list-style-type: none">* “How are natural resources used to meet the needs and wants of people today?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for:<ul style="list-style-type: none">– “Electricity, heating, cooling, transportation; they provide energy to make things.”• Ask students to refer to their resources and notes and discuss in groups:<ul style="list-style-type: none">* “How do natural resource industries modify the physical environment?”• After 1 or 2 minutes, ask students to popcorn share their ideas. Listen for: “They cause greenhouse gases and air pollution.”• Distribute Homework: Modifying the Physical Environment: Lesson 9 resource web.• Collect students' assessments to review.	<ul style="list-style-type: none">• To ensure balanced airtime and that a variety of student voices are heard, consider limiting each student to one popcorn share.• Provide sentence starters for students who have difficulty expressing themselves orally.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Use the resources you have analyzed and interpreted in the lesson to complete your resource web.• Read independently for at least 30 minutes. <p><i>Note: Score students' assessments based on the End of Unit 2 Assessment, Part 1 (sample answers, for teacher reference). Be prepared to return students' assessments for the End of Unit 2 Assessment, Part 2, in the next lesson.</i></p>	<ul style="list-style-type: none">• Consider providing an audio version of independent reading texts to support students who struggle reading independently.



EXPEDITIONARY
LEARNING

Grade 5: Module 3B: Unit 2: Lesson 9

Supporting Materials



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End of Unit 2 Assessment, Part 1:
Research and Response

Name: _____

Date: _____

Part 1:

In the second half of this unit, you have been researching to answer the questions:

How are Canada's available resources used to meet people's needs and wants today?

How do natural resource industries modify the physical environment?

In Part 1 of this assessment, you are going to continue to research answers to those questions, using some new research sources. Then you will record the information you find on the same graphic organizer you have used in previous lessons. In Part 2 of the assessment, you will summarize and discuss the information you found through research, with a small group of your peers.

Directions:

1. Choose at least **two** sources.
2. Record the title and the author or Web site name of each source in the first column of each graphic organizer (under "Source 1" and "Source 2").
3. View and/or read the sources carefully.
4. Reread the sources, considering the focus questions:

How are Canada's available resources used to meet people's needs and wants today?

How do natural resource industries modify the physical environment?

*If you are using a text or a resource printed on paper, underline any information that helps you answer each question.

5. Record relevant information from each source in the middle column of your graphic organizers. Make sure to include at least **two** quotes in each graphic organizer, from the sources you chose.
6. In the final column of your graphic organizers, paraphrase the information you recorded in the center columns, to write responses to the focus question at the top of each organizer.



End of Unit 2 Assessment, Part 1:
Research and Response

Source 1: “**Get Energy Wise**,” from ecokids.ca

We all use energy every day of our lives.

Energy is all around us. We see it as movement, heat, light, sound, and more.

Energy makes electricity so that we can turn on lights, watch TV, listen to the radio, and run fridges, stoves, other appliances, and electrical gadgets.



Energy can heat or cool our homes and schools. Energy moves our cars, buses, motorcycles, trucks, planes, and trains. Energy lets us make all kinds of things like shoes, CDs, books, computers, and scooters.



Today, **fossil fuels** supply more than 90% of the world’s energy.

There are two big problems with using fossil fuels for energy:

1. Fossil fuels take millions of years to form, which means they are non-renewable resources. We are using them 100,000 times faster than they are being made.
2. When we use fossil fuels to get energy, we get more than just energy. Greenhouse gases and air pollution are made, too.

The three main fossil fuels are coal, oil, and natural gas.



In 1997, about 90% of greenhouse gases produced in Canada were from energy use.



End of Unit 2 Assessment, Part 1:
Research and Response

Carbon dioxide from burning fossil fuels is the largest source of **greenhouse gases** from human activities.

Greenhouse gases in the atmosphere make the earth warm enough for people, other animals, and plants to live. Extra greenhouse gases we are putting into the atmosphere are causing global warming and climate change. Many scientists believe that these changes to the climate will happen faster and be bigger than any in the last 1,000 years.

Climate change is the biggest environmental issue in the world today!

Glossary

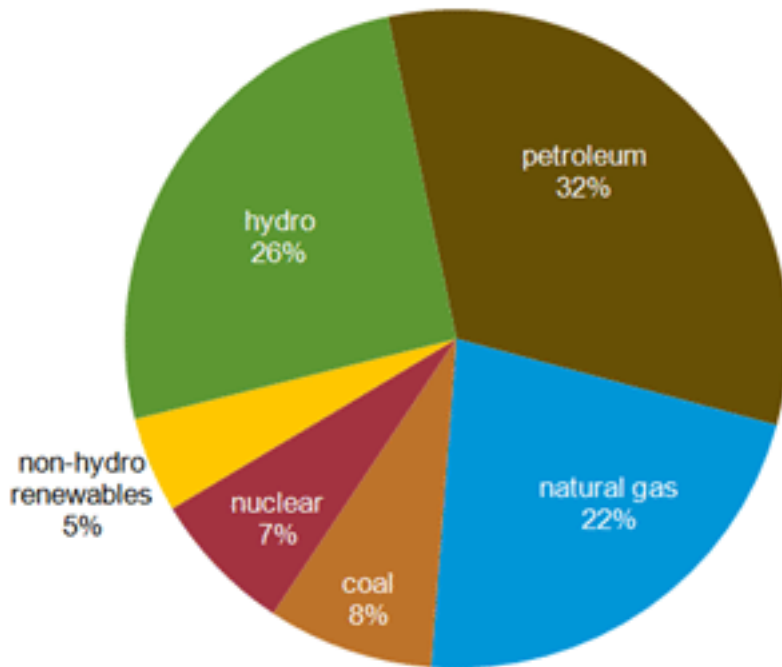
Word/phrase	Meaning
greenhouse gases	gases that are produced by burning fossil fuels (carbon dioxide, CO ₂)
climate change	changes in the earth's weather—including changes in temperature, wind patterns, and rainfall—especially the rise in the temperature of the earth's atmosphere that is caused by the increase of particular gases, especially carbon dioxide
fossil fuels	natural resources found in the earth, such as coal, oil, and gas, that took millions of years to form



End of Unit 2 Assessment, Part 1:
Research and Response

Source 2: **Energy Use Graph and Caption**, from the U.S. Energy Administration and Kids Corner

Canada's total energy consumption by type, 2010



eia Source: U.S. Energy Information Administration

We use energy every single day. We use it to heat the buildings we live and work in when it is cold outside, and to keep them cool when it is hot. We also use it to light our homes and businesses, and for appliances like fridges and dishwashers. Vehicles like cars, planes and trains also use energy to move.

The different kinds of energy we use, for example gasoline in cars, releases greenhouse gases including carbon dioxide, methane and water vapor. These gases are building up in our atmosphere, trapping heat and making the earth's temperature gradually rise.



End of Unit 2 Assessment, Part 1:
Research and Response

Source 3: **10 Facts About Canada's Oil Industry**, from the Huffington Post

http://www.huffingtonpost.ca/2012/09/04/canada-natural-resources-economy__n_1854560.html

Scofield, Heather. "Canada Natural Resources: Economy Gets A Fifth Of Its Heft From Them, Says Minister." Huffington Post Canada. Web. 6 June. 2014.



End of Unit 2 Assessment, Part 1:
Research and Response

How are Canada's available resources used to meet people's needs and wants today?

Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase: Explain what these quotes mean in your own words



End of Unit 2 Assessment, Part 1:
Research and Response

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase: Explain what these quotes mean in your own words.



Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase: Explain what this quote means in your own words
<p>“Get Energy Wise,” from ecokids.ca</p>	<p>“Energy makes electricity so that we can turn on lights, watch TV, listen to the radio, and run fridges, stoves, other appliances, and electrical gadgets.”</p> <p>“Energy can heat or cool our homes and schools.”</p> <p>Energy moves our cars, buses, motorcycles, trucks, planes, and trains.”</p> <p>“Energy lets us make all kinds of things like shoes, CDs, books, computers, and scooters.”</p> <p>“Today, fossil fuels supply more than 90% of the world’s energy.”</p> <p>“Energy is an essential part of our daily lives; 32% petroleum; 22% natural gas; 8% coal.”</p> <p>“We use energy to heat and cool our homes, schools, and businesses.”</p>	<p>We use energy from natural resources every day. Energy that comes from fossil fuels such as oil, gas, and coal is used for electricity, heating, cooling, transportation, and to make other things we use like shoes, CDs, books, computers, and scooters.</p>
<p>Energy Use Graph and Caption, from the U.S. Energy Administration and Kids Corner</p>		



End of Unit 2 Assessment, Part 1:
Research and Response
(Sample Answers, for Teacher Reference)

<i>How are Canada's available resources used to meet people's needs and wants today?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase: Explain what this quote means in your own words
"10 Facts About Canada's Oil Industry," by Heather Scoffield	<p>"We use energy for lights and appliances."</p> <p>"Energy makes our vehicles go, planes fly, boats sail, and machines run."</p> <p>*If technology is available for students to view the slide show, review the provided link to assess students' responses.</p>	



End of Unit 2 Assessment, Part 1:
Research and Response
(Sample Answers, for Teacher Reference)

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase: Explain what this quote means in your own words.
“Get Energy Wise,” from ecokids.ca	<p>“When we use fossil fuels to get energy ... greenhouse gases and air pollution are made, too.”</p> <p>“Carbon dioxide from burning fossil fuels is the largest source of greenhouse gases from human activities.”</p> <p>“Extra greenhouse gases we are putting into the atmosphere are causing global warming and climate change.”</p> <p>“Many scientists believe that these changes to the climate will happen faster and be bigger than any in the last 1,000 years.”</p> <p>“Climate change is the biggest environmental issue in the world today!”</p>	<p>The problem with using fossil fuels for energy is that they cause greenhouse gases and air pollution. The extra greenhouse gases we make change the environment by putting carbon dioxide into the air, which is causing global warming and faster and bigger climate changes than any in the past 1,000 years.</p>
Energy Use Graph and Caption, from the U.S. Energy Administration and Kids Corner	<p>“Using gasoline to fuel our cars and burning gas, coal, oil, and other materials to make our homes comfortable releases greenhouse gases.”</p>	



End of Unit 2 Assessment, Part 1:
Research and Response
(Sample Answers, for Teacher Reference)

<i>How do natural resource industries modify the physical environment?</i>		
Source (title and author)	Information/Quotes (copy quotes word for word in quotation marks)	Paraphrase: Explain what this quote means in your own words.
“10 Facts About Canada’s Oil Industry,” by Heather Scoffield	<p>“As the gases build up in our atmosphere, more heat is trapped, and the earth’s temperature gradually rises.”</p> <p>*If technology is available for students to view the slide show, review the provided link to score student responses.</p>	



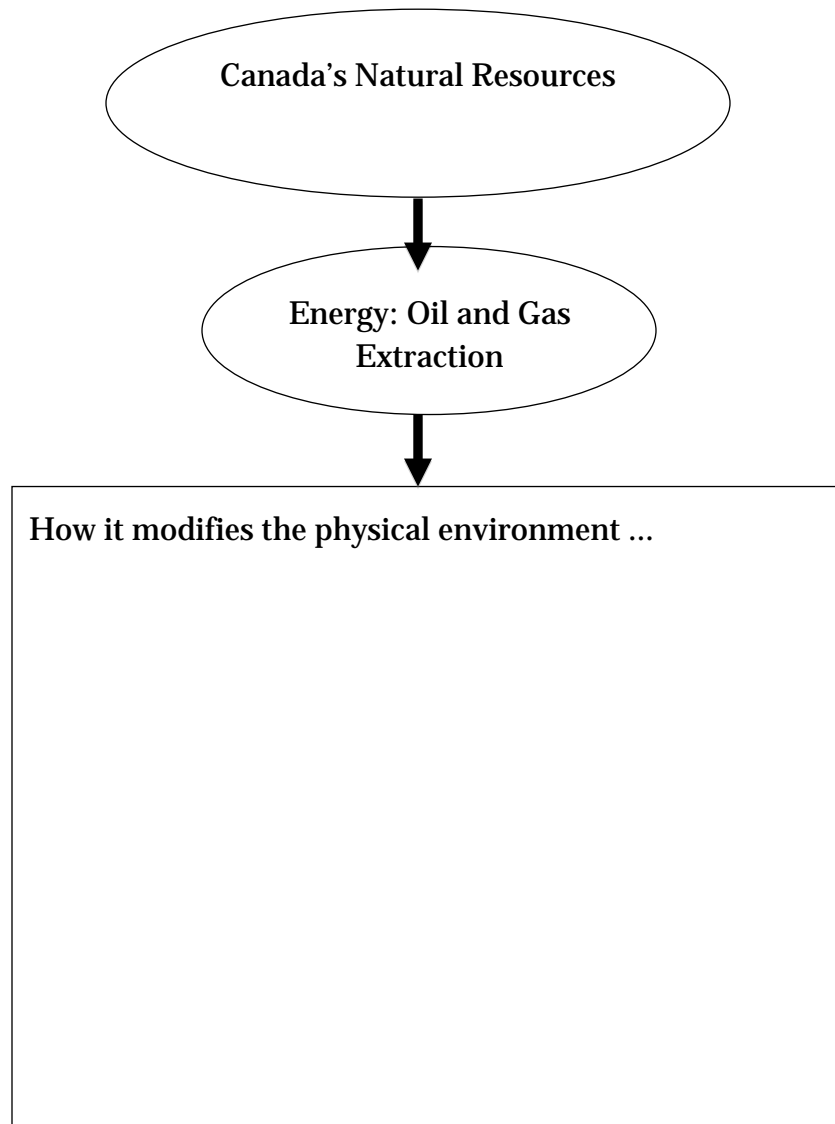
Homework:

Modifying the Physical Environment: Lesson 9 Resource Web

.....
Name:
.....

.....
Date:
.....

- Reread the resources and your Research note-catcher to locate information that helps you complete the web.
- Write a short sentence to explain how the natural resource industries modify the physical environment, in the box “How it modifies the physical environment ...”





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Grade 5: Module 3B: Unit 2: Lesson 10

End of Unit Assessment, Part 2: Research and Response



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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can engage effectively in a range of collaborative discussions with diverse partners. (SL.5.1)

I can summarize information presented in diverse media and formats, including visually, quantitatively, and orally. (SL.5.2)

Supporting Learning Targets

- I can explain how Canada's natural resources are used to meet people's needs and wants today and how resource industries modify the environment, by engaging in collaborative discussions with peers.
- I can support my ideas by summarizing information from a variety of sources.

Ongoing Assessment

- Modifying the Physical Environment: Lesson 9 resource web (from homework)
- End of Unit 2 Assessment, Part 2: Research and Response
- Tracking My Progress, End of Unit 2 recording form



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader: Modifying the Physical Environment: Lesson 9 Resource Web (5 minutes)Work Time<ol style="list-style-type: none">Reviewing Learning Targets and Engaging the Speaker (5 minutes)End of Unit 2 Assessment, Part 2: World Café (35 minutes)Tracking My Progress (10 minutes)Closing and Assessment<ol style="list-style-type: none">Debrief and Sharing Reflections (5 minutes)Homework<ol style="list-style-type: none">Read independently for at least 30 minutes.	<ul style="list-style-type: none">In this lesson, students complete Part 2 of the End of Unit 2 Assessment by referring to the texts and their notes from Part 1 of the assessment. Students participate in collaborative discussions with peers using the World Café protocol to express their thinking about the focus questions.This lesson is patterned after Lesson 8, when students participated in the World Café.Speaking and listening targets will be assessed using an observational checklist. Research skills will be assessed using the students' written preparation for discussion, as well as observation during discussion.In advance:<ul style="list-style-type: none">Review and post directions for the World Café protocol (see Lesson 8 and Appendix 1); predetermine group leaders.Create an End of Unit 2 Focus Questions chart for each group (see example in supporting materials).Post: Learning targets; World Café directions; key terms from the learning targets.



Lesson Vocabulary	Materials
resources, industries, modify, environment, collaborative, discussions, support, summarizing, variety, sources	<ul style="list-style-type: none">• Canada's Natural Resources anchor chart (begun in Lesson 1)• Canada's Natural Resources anchor chart (completed, for teacher reference; see Unit 2 Overview)• Students' completed End of Unit 2 Assessment, Part 1 (from Lesson 9)• World Café directions (one to display; also used in Lesson 8; see Appendix)• End of Unit 2 Focus Questions charts (one per group; new, teacher-created; see example in supporting materials)• Document camera• End of Unit 2 Assessment, Part 2: Research and Response Criteria (one to display)• Markers (one for each group leader)• Tracking My Progress, End of Unit 2 recording form (one per student)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Modifying the Physical Environment Lesson 9: Resource Web (5 minutes)</p> <ul style="list-style-type: none">• Remind students that for homework they were to reread the research resources and fill out a Modifying the Physical Environment: Lesson 9 resource web.• Invite students to share their resource webs with their group, to justify their responses on the resource web to the rest of the group, and to make any additions or revisions based on what they see and hear from others.• Refocus students whole group. Invite volunteers to share their responses aloud. Add appropriate student suggestions to the Canada's Natural Resources anchor chart. Refer to Canada's Natural Resources anchor chart (completed, for teacher reference) for how the anchor chart should look.	



Work Time	Meeting Students' Needs
<p>A. Reviewing Learning Targets and Engaging the Speaker (5 minutes)</p> <ul style="list-style-type: none">• Bring students together whole group. Then, ask them to turn to a nearby partner and share an interesting detail or new piece of information they learned from reading their independent reading book for homework.• After 1 minute, invite a few students to share out with the class.• Next, draw students' attention to the posted learning targets:<ul style="list-style-type: none">* "I can explain how Canada's natural resources are used to meet people's needs and wants today and how resource industries modify the environment, by engaging in collaborative discussions with peers."* "I can support my ideas by summarizing information from a variety of sources."• Underline key words from the targets: <i>resources, industries, modify, environment, collaborative, discussions, support, summarizing, variety, and sources.</i>• Ask students to discuss with peers what they think they will be doing for Part 2 of the assessment today, based on their understanding of these terms from previous lessons and units.• After 2 minutes, invite a few students to share their thinking aloud. Listen for students to suggest they will use their notes and text from Part 1 of the assessment to discuss with peers how Canada's natural resources are used to meet people's needs and wants, and ways that resource industries modify the physical environment.• Explain that in this lesson, they will refer to the quotes and paraphrased evidence recorded on their graphic organizers during Part 1 of the assessment, as well as the texts they read and viewed, in order to share their thinking about the guiding questions for the second half of this unit, using the World Café protocol.• Ask students to join their regular groups and prepare for group discussions.	<ul style="list-style-type: none">• Consider displaying a student-paraphrased version of both learning targets to support all students, especially during the Tracking My Progress portion at the end of this assessment.



Work Time (continued)	Meeting Students' Needs
<p>B. End of Unit 2 Assessment, Part 2: World Café (35 minutes)</p> <ul style="list-style-type: none"> • Return students' completed End of Unit 2 Assessment, Part 1. • Draw students' attention to the posted World Café directions and clarify as needed. Explain that during the World Café, groups will rotate four times. During each rotation, students will discuss the focus questions from their Part 1 graphic organizers: <ul style="list-style-type: none"> * "How are Canada's available resources used to meet people's needs and wants today?" * "How do natural resource industries modify the physical environment?" • Point out the End of Unit 2 Focus Questions charts posted around the room, which is where the leader of each discussion will record notes. • Using a document camera, display the End of Unit 2 Assessment, Part 2: Research and Response Criteria. Explain to students that these are the criteria you will use to evaluate students' level of mastery toward the learning targets as they discuss each question with peers. Review all rubric criteria and answer any clarifying questions. • Assign one member of each group as the "leader," and then distribute one marker to each leader to record ideas from group discussions on their End of Unit 2 Focus Questions chart. • Direct students to begin the World Café by discussing Focus Question 1 and then 2. Remind students to support their ideas with quotes, paraphrased ideas, and specific evidence from the texts. • As students work, move throughout the room and use the End of Unit 2 Assessment, Part 2: Research and Response rubric to assess individual students' level of mastery toward each of the targets. • Give students 5 or 6 minutes to work in each World Café group before changing to meet with a new discussion group. • Continue to circulate and evaluate students' mastery of learning targets. • After 15–20 minutes, or four group rotations, refocus students' attention whole class. • Ask the leader from each of the final World Café tables to share their discussion notes whole class. Student responses will vary, but listen for students to cite specific examples from End of Unit 2 Assessment texts, as well as the notes on their graphic organizers, that support their understanding of how Canada's natural resources are used to meet people's needs and wants and how resource industries modify the environment. • Collect students' End of Unit 2 Assessments, Part 1. Use these to provide more detailed assessment information on students' research skills (see sample responses in Lesson 9). Then ask students to prepare to reflect on their learning using a Tracking My Progress form, which they are familiar with from previous lessons and units. 	<ul style="list-style-type: none"> • Consider previewing the World Café protocol with students who find it difficult to navigate multistep protocols. • If students receive accommodations for assessment, communicate with the cooperating service providers regarding appropriate accommodations that can be used during group discussions, to meet individualized goals for the assessment.



Work Time (continued)	Meeting Students' Needs
<p>C. Tracking My Progress (10 minutes)</p> <ul style="list-style-type: none">• Distribute a Tracking My Progress, End of Unit 2 recording form to each student. Ask students to refer to their Part 1 graphic organizers and World Café chart responses as they reflect on their ability to meet each of the targets.• Point out to students that there are targets on the tracker from both Part 1 of the assessment (which students completed in Lesson 9) and Part 2 (which students just finished in this lesson). Explain that the targets listed reflect the learning students have been most focused on during the second half of this unit.• Tell students to hold on to their progress forms to share with a partner during the debrief.	<ul style="list-style-type: none">• Consider allowing students who struggle with written language to dictate their reflections to a partner or the teacher. This allows all students to participate in the self-reflection in a meaningful way.
Closing and Assessment	Meeting Students' Needs
<p>A. Debrief and Sharing Reflections (5 minutes)</p> <ul style="list-style-type: none">• Ask students to join a partner who is <i>not</i> a part of their regular small group to share reflections from their progress trackers.• After 2 or 3 minutes, focus students whole group and pose the following questions:<ul style="list-style-type: none">* “Which target(s) have you mastered? Explain your thinking.”* “Which target(s) are you struggling with? Explain.”* “How can you move toward mastery of the targets you are struggling with? What strategies might help you?”• Invite several students to share their thinking aloud.• Collect students' progress trackers to review.• Congratulate students on their ability to demonstrate an understanding of how resources available in Canada today are used to meet people's needs and wants, as well as the ways that resource industries modify the physical environment.	<ul style="list-style-type: none">• Provide sentence starters for students who have difficulty expressing themselves orally.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Read independently for at least 30 minutes.	<ul style="list-style-type: none">• Consider providing an audio version of independent reading texts to support students who struggle reading independently.



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Grade 5: Module 3B: Unit 2: Lesson 10

Supporting Materials



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End of Unit 2 Focus Questions Chart
(Example, for Teacher Reference)

How are Canada's available resources used to meet people's needs and wants today?

How do natural resource industries modify the physical environment?



End of Unit 2 Assessment, Part 2: Research and Response Criteria
(For Teacher Reference)

I can engage effectively in a range of collaborative discussions with diverse partners. (SL.5.1)

I can summarize information presented in diverse media and formats, including visually, quantitatively, and orally. (SL.5.2)

Record each student's name and the date of evaluation. Mark the criteria you are able to evaluate with a check (meeting criteria) or a minus (not meeting criteria.) Use the "Notes/Comments" area to record any additional observations.

<p>Student Name and Date:</p> <p>Notes/Comments:</p>	<p>Criteria:</p> <ul style="list-style-type: none">– Contributes to discussion– Stays on topic– Takes turns speaking– Asks follow-up or clarifying questions– Points to specific details/lines from multiple texts, as well as notes from graphic organizers, to explain ideas clearly– Asks questions to encourage participation of others– Shows respect for diverse perspectives in the group– Listens actively by making eye contact with the speaker, providing others with time to speak, and building on partners' ideas
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End of Unit 2 Assessment, Part 2: Research and Response Criteria
(For Teacher Reference)

<p>Student Name and Date:</p> <p>Notes/Comments:</p>	<p>Criteria:</p> <ul style="list-style-type: none">– Contributes to discussion– Stays on topic– Takes turns speaking– Asks follow-up or clarifying questions– Points to specific details/lines from multiple texts, as well as notes from graphic organizers, to explain ideas clearly– Asks questions to encourage participation of others– Shows respect for diverse perspectives in the group– Listens actively by making eye contact with the speaker, providing others with time to speak, and building on partners' ideas
<p>Student Name and Date:</p> <p>Notes/Comments:</p>	<p>Criteria:</p> <ul style="list-style-type: none">– Contributes to discussion– Stays on topic– Takes turns speaking– Asks follow-up or clarifying questions– Points to specific details/lines from multiple texts, as well as notes from graphic organizers, to explain ideas clearly– Asks questions to encourage participation of others– Shows respect for diverse perspectives in the group– Listens actively by making eye contact with the speaker, providing others with time to speak, and building on partners' ideas



Tracking My Progress, End of Unit 2

Name:

Date:

Learning Target: I can prepare to speak knowledgeably about how Canada's natural resources meet people's needs and wants and how resource industries modify the environment, by integrating information from a variety of sources.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, End of Unit 2

Learning Target: I can explain how Canada's natural resources are used to meet people's needs and wants and how resource industries modify the environment, by engaging in collaborative discussions with peers.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, End of Unit 2

Learning Target: I can support my ideas by summarizing information from a variety of sources.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:
