

GRADE FOUR



English
Language Arts and Literature

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Pilot 2024

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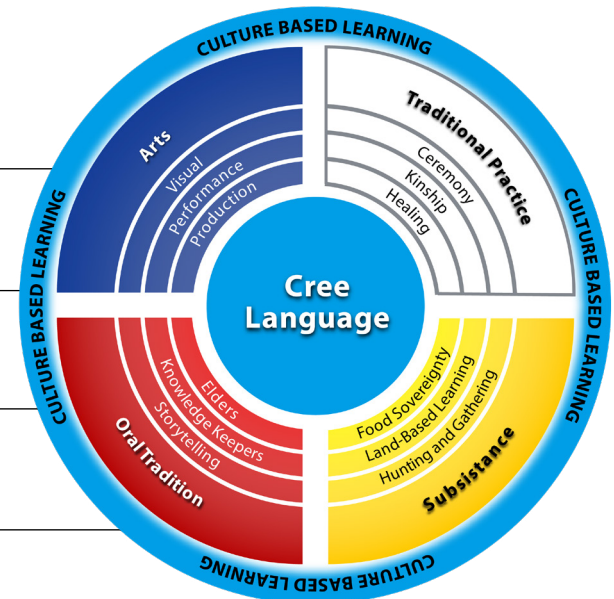
Mathematics

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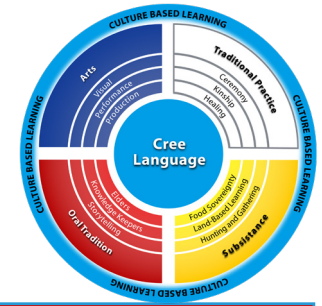







Science

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English Language Arts & Literature













Knowledge	Understanding	Skills & Procedures	ᑭᓴᑦᑎᓴᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
Text Forms and Structures: Identifying and applying text forms and structures improves understanding of content, literary style, and our rich language traditions.				
GUIDING QUESTION				
How can text organization influence communication?				
LEARNING OUTCOME				
Students examine how the form and structure of texts can support the communication of ideas and information.				
<p>Texts can be communicated for a variety of purposes, including to</p> <ul style="list-style-type: none"> • inform • persuade • provide enjoyment <p>Texts read for enjoyment can inspire, fascinate, or expand understandings.</p> <p>A genre is a category of text that has a specific content or style and includes fiction and non-fiction.</p> <p>Literary forms of fiction and non-fiction texts include</p> <ul style="list-style-type: none"> • novels • journal entries • media <p>[continued...]</p>	<p>Text Forms & Structures:</p> <p>4T1.1 Text form or structure can support the enjoyment and communication of ideas and information for a variety of purposes.</p>	<p>Confirm the author’s or text creator’s purpose based on information in the text.</p> <p>Explain how personal preferences for texts inspire, fascinate, or expand understandings.</p> <p>Examine a variety of literary forms used to communicate ideas and information.</p> <p>[continued...]</p>	<p> Storytelling Protocols</p> <p>  Creation Stories; Star Stories; Trickster Stories (One legend of each type)</p>	<p> Empowering the Spirit: Sharing through Story</p> <p> Native American Legends Organized by Theme</p>





Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Narrative texts can be fiction or non-fiction and can follow a structure, including</p> <ul style="list-style-type: none"> • beginning • problem • events • solution • ending 	<p>Text Forms & Structures:</p> <p>4T1.1 Text form or structure can support the enjoyment and communication of ideas and information for a variety of purposes.</p>	<p>[continued...]</p> <p>Examine the structure of a variety of narrative texts.</p> <p>Determine how the structure of texts can support the organization and communication of ideas or information.</p>		
<p>Text features can be digital or non-digital, including</p> <ul style="list-style-type: none"> • images and graphics • indexes 	<p>Text Forms & Structures:</p> <p>4T1.2 Text features can organize and enhance information in the main body of a text.</p>	<p>Examine a variety of text features that provide important information in a text.</p> <p>Include a variety of text features to organize, clarify, or enhance information.</p>		
<p>Fictional texts can be categorized by sub-genres, including traditional literature and fantasy.</p> <p>A fantasy is a fictional text that contains elements that are highly unreal.</p> <p>Fictional texts can have structures that include main plots with subplots and flashbacks.</p> <p>A flashback interrupts the story plot to take an audience back in time to past events in a character's life.</p> <p>Elements of fiction include</p> <ul style="list-style-type: none"> • major and minor characters • point of view <p>A minor character is a character in a story who is not the main focus and is less developed.</p> <p>Fictional texts include characters who can be known by what they say, think, or do.</p> <p>[continued...]</p>	<p>Text Forms & Structures:</p> <p>4T1.3 Fictional texts can open minds to new possibilities and ideas.</p>	<p>Differentiate between a variety of fiction sub-genres, considering content, characters, time, or place.</p> <p>Examine fictional text structures that include main plots with subplots or flashbacks.</p> <p>Examine elements within a variety of fictional texts, including point of view.</p> <p>Determine if characters in fictional texts are major or minor.</p> <p>[continued...]</p>		



 Knowledge	Understanding	Skills & Procedures	ᑭᑦᑭᑦᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Point of view is the way an author or text creator chooses to tell or narrate a story and includes first person.</p> <p>First person is where the author, text creator, or narrator relates information from their own point of view, often using the word /.</p>	<p>Text Forms & Structures:</p> <p>4T1.3 Fictional texts can open minds to new possibilities and ideas.</p>	<p>[continued...]</p> <p>Create imaginative representations or dramatizations of fictional texts that depict point of view.</p> <p>Examine the narrator’s point of view in texts.</p>		
<p>Non-fiction texts include</p> <ul style="list-style-type: none"> • autobiographies • procedural texts • land <p>Procedural texts include recipes or instruction manuals.</p> <p>Non-fiction texts can have structures that include</p> <ul style="list-style-type: none"> • introduction • main idea or topic • supporting details • conclusion • compare and contrast <p>Non-fiction texts can share opinions regarding information.</p>	<p>Text Forms & Structures:</p> <p>4T1.4 Non-fiction texts can open minds to new possibilities and ideas.</p>	<p>Investigate ways that non-fiction texts can be organized to support sharing of information.</p> <p>Discuss a variety of facts and opinions expressed in non-fiction texts.</p>		<p> “On the Trapline” by David A. Robertson, 2021. “Buffalo Days and Nights” by Peter Erasmus, 1999.</p>
<p>Poetry includes figurative language to create a desired effect.</p> <p>Poetic structures include</p> <ul style="list-style-type: none"> • verse • free verse • concrete <p>Verse is text structured with a rhythm and typically has a rhyme.</p> <p>Free verse is a type of poetry that does not rhyme or have a regular rhythm.</p> <p>A concrete poem creates an image with words or symbols that matches the topic of the poem.</p>	<p>Text Forms & Structures:</p> <p>4T1.5 Poetry engages the imagination and can encourage individuals to connect with other people, places, ideas, or emotion.</p>	<p>Investigate figurative language used in imaginative ways.</p> <p>Examine how a variety of poetic structures contribute to creative expression of ideas.</p> <p>Experiment with creating verse, free verse, or concrete poetry.</p>		<p>Examine Indigenous poets such as Marilyn Dumont, Gregory Scofield, Rita Bouvier.</p>




Knowledge	Understanding	Skills & Procedures	ᑭᐱᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA Oral Language: Listening and speaking form the foundation for literacy development and improve communication, collaboration, and respectful mutual understanding.				
GUIDING QUESTION In what ways can listening and speaking skills clarify intent and build relationships?				
LEARNING OUTCOME Students examine and demonstrate how listening and speaking support connections and clarify understandings.				
<p>Oral traditions can support connections to people</p> <ul style="list-style-type: none"> the community the natural world the constructed world <p>Stories presented in oral traditions can reflect connections to spirit, land, universe, time, and people.</p> <p>Protocols for sharing information may vary by source, context, community, or culture.</p>	<p>Oral Language: 401.1 Oral traditions can connect the speaker and listener in experiences of the past or present that help prepare for the future.</p>	<p>Describe personal connections to spirit, land, universe, time, or people revealed through oral traditions.</p> <p>Discuss protocols used to share oral traditions.</p>	<p>  Stories and Legends Series</p> <p> Elder Protocols</p>	<p>Discuss protocols of respect, attentive listening, contributions, approaching Elders.</p> <p>  Talking Together: A Discussion Guide for Walking Together: Oral Tradition: Observing Practice Activity Use the circle story technique to help Grade 3 students learn to read and write. (29:15 minutes)</p> <p>  The Gabriel Dumont Institute (GDI) Publishing Department has published or produced more than 80 Métis-specific books and educational resources since the early 1980s.</p>
<p>Respectful interactions include behaviours that consider the contributions, feelings, points of view, and needs of participants.</p> <p>Phrasing and pausing work together to</p> <ul style="list-style-type: none"> support flow of thought and speech support meaning create emphasis <p>Projection is the directing and supporting of the voice toward an intended target.</p> <p>Projection is a combination of breath, clarity, and intentionality.</p>	<p>Oral Language: 401.2 Listening and speaking skills can be applied and adapted to support respectful interactions.</p>	<p>Contribute respectfully to a variety of interactions that involve listening and speaking.</p> <p>Identify opinions or points of view shared in conversations or texts that are listened to.</p> <p>Select appropriate volume, intonation, phrasing, and pausing to create a desired effect when speaking or presenting.</p> <p>Project voice appropriately for the audience and situation.</p>	<p>  Sharing and Talking Circles</p>	


 Knowledge	Understanding	Skills & Procedures	ᑭᑦᑲᑦᑲᑦᑲᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>Listening includes restating key points or ideas and making personal connections.</p> <p>Listening to texts can expand vocabulary, understandings, and personal views.</p>	<p>Oral Language: 4O1.3 Listening involves playing an active role in understanding the speaker and supports collaboration.</p>	<p>Demonstrate active listening when engaging in collaborative work.</p> <p>Use a variety of listening strategies to support understanding.</p>		
<p>A combination of verbal and non-verbal language can be used to enhance clarity or create effects when communicating.</p>	<p>Oral Language: 4O1.4 Communication can be enhanced through adjusting verbal and non-verbal language.</p>	<p>Adjust verbal and non-verbal language to enhance clarity or create effects when communicating.</p>		
<p>Presentations can be prepared by</p> <ul style="list-style-type: none"> developing a plan using notes and speaking cards using visual aids selecting digital or non-digital tools <p>Speaking cards can be jot notes or cue cards that contain key points to support speakers.</p> <p>Visual aids can be digital or non-digital, such as</p> <ul style="list-style-type: none"> objects diagrams images text <p>Presentation delivery includes</p> <ul style="list-style-type: none"> clear enunciation appropriate tone and pace correct grammar appropriate word choice <p>Communication choices and styles differ from speaker to speaker.</p>	<p>Oral Language: 4O1.5 Presentations can be prepared and delivered to engage, inform, persuade, or entertain an audience</p>	<p>Plan ideas and details in a logical manner, including introductions and conclusions.</p> <p>Present information that engages, informs, persuades, or entertains an audience.</p> <p>Share a verse from memory, demonstrating emphasis, pausing, and phrasing that enhance the presentation.</p> <p>Integrate visual aids to enhance communication.</p> <p>Vary word choice to appeal to an audience.</p> <p>Participate in presentations as a respectful audience member.</p>		




Knowledge	Understanding	Skills & Procedures	ᑭᑦᑲᑦᑲᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
Vocabulary: Communication and comprehension are improved by understanding word meaning and structures.				
GUIDING QUESTION				
How can building vocabulary and understanding morphology strengthen communication?				
LEARNING OUTCOME				
Students expand vocabulary and analyze morphemes to communicate in multiple contexts.				
<p>Figurative language includes</p> <ul style="list-style-type: none"> • personification • analogy • idiom <p>Personification is when animals or objects are given qualities or abilities that a human can have.</p> <p>An analogy compares two things that are mostly different but have some things in common.</p> <p>An idiom is a phrase that means something different than the literal meaning of the words within it.</p>	<p>Vocabulary: 4V1.1 An extensive and varied vocabulary enhances effective communication in a variety of contexts.</p>	<p>Communicate clearly and accurately using precise alternatives for commonly used words.</p> <p>Record information about words in a variety of ways.</p> <p>Apply tier 2 words in a variety of literacy contexts.</p> <p>Use tier 3 words to describe subject content.</p> <p>Confirm word meanings, spellings, or word choices using a variety of digital or non-digital resources.</p> <p>Integrate knowledge of word study across multiple literacy contexts.</p> <p>Use analogies to compare words or clarify word meanings.</p> <p>Analyze the meanings of words or phrases expressed figuratively.</p>	<p>  Select from Creation Stories; Star Stories; Trickster Stories</p>	<p>Identify place names, features, items and animals in Cree and other Indigenous languages. For example, Muskoseepi, Nisku, Ponoka, Saskatchewan, moswa – moose; pimikan – pemmican, etc.</p>


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<p>Suffixes, including the following, change the meaning of words when added to the ending of a base</p> <ul style="list-style-type: none"> • <y> • <ish> • <able/ible> • <ful> • <ant/ent> <p>The English language is made up of words derived from many origins, including</p> <ul style="list-style-type: none"> • other languages • technology • place names • trademarked products • social practices 	<p>Vocabulary: 4V1.2 Morphology involves examining words and parts of words and how they are related to each other to enhance communication.</p>	<p>Examine morphemes in words to determine meaning.</p> <p>Analyze the meaning of affixes and how they influence the meaning of bases.</p> <p>Predict meanings of unfamiliar words using morphological cues.</p> <p>Analyze word origins for meaning and spelling.</p>		<p> Geographical Names Board of Canada: Stories from the Land: Indigenous Place Names in Canada</p>
<p>ORGANIZING IDEA</p> <p>Fluency: Comprehension and literary appreciation are improved by the ability to read a range of texts accurately, automatically, and with expression.</p>				
<p>GUIDING QUESTION</p> <p>How does fluency support comprehension and proficient reading?</p>				
<p>LEARNING OUTCOME</p> <p>Students enhance fluency to refine comprehension and proficient reading.</p>				
<p>Proficient reading involves the ability to read with accuracy, automaticity, and prosody with a focus on meaning.</p>	<p>Fluency: 4F1.1 Reading with fluency allows readers to focus more attention on understanding text and supports proficient reading.</p>	<p>Demonstrate comprehension of text through appropriate stress on words, pausing, phrasing, intonation, and use of punctuation.</p> <p>Read dialogue with phrasing and expression to reflect understandings of characters and events.</p>		


Knowledge	Understanding	Skills & Procedures	ᑭᐱᑦᑭᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA Comprehension: Text comprehension is supported by applying varied strategies and processes and by considering both particular contexts and universal themes.				
GUIDING QUESTION How do comprehension processes and strategies enhance understandings of texts?				
LEARNING OUTCOME Students investigate strategies and connections that support text comprehension.				
<p>A variety of reading processes and strategies support comprehension of longer and more complex texts through independent practice.</p>	<p>Comprehension: 4CP1.1 Comprehension processes and strategies can be purposefully applied to broaden understandings of texts.</p>	<p>Independently read and demonstrate comprehension of a variety of texts that increase in length or complexity.</p> <p>Apply comprehension processes and strategies when interacting with texts.</p>	  Creation Stories; Star Stories; Trickster Stories	 “Storyteller Skye: Teachings from my Ojibway Grandfather” by Lindsay Christina King, 2023.
<p>Connections that support comprehension of text include</p> <ul style="list-style-type: none"> • text to self • text to text • text to world 	<p>Comprehension: 4CP1.2 Comprehension is enhanced when relevant connections are made to information within and between texts.</p>	<p>Examine connections between texts and self, between a text and other texts, and between texts and the world.</p> <p>Compare or contrast aspects of texts within an individual text or between multiple texts.</p> <p>Reflect on personal connections to a text that best support understandings.</p>		
<p>Significant information that is synthesized to make predictions includes</p> <ul style="list-style-type: none"> • background knowledge • personal experience • specific clues from a text • anticipation of logical outcomes or events 	<p>Comprehension: 4CP1.3 Comprehension and making predictions have a reciprocal relationship when understanding texts.</p>	<p>Revise or confirm predictions based on new or additional information in texts.</p> <p>Examine how making, modifying, or confirming predictions supports text comprehension.</p>		


 Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
<p>Inferencing involves multiple critical thinking skills, including</p> <ul style="list-style-type: none"> • considering cause and effect relationships • answering personal wonderings • combining information from various sources to draw conclusions • reading between the lines to discover the author's meaning 	<p>Comprehension: 4CP1.4 Comprehension involves inferencing and relying on multiple critical thinking skills when engaging with texts.</p>	<p>Infer cause and effect relationships in texts.</p> <p>Make inferences in texts that reach beyond personal experiences.</p> <p>Combine information from various sources to draw conclusions.</p> <p>Infer ideas that are not explicitly stated in texts.</p>		
<p>Summarizing information involves determining key ideas and specific details, logically ordering ideas, and paraphrasing.</p> <p>Synthesizing can create new understandings through a combination of background knowledge and new information from a text.</p>	<p>Comprehension: 4CP1.5 Comprehension is enhanced when information is synthesized and summarized.</p>	<p>Synthesize a variety of information when creating summaries of texts.</p> <p>Create personal responses to a variety of literature, informational texts, or other texts by synthesizing information.</p>		
<p>Strategic reading and questioning occur before, during, and after reading.</p> <p>Problem solving can occur at the word, sentence, and whole-passage level.</p> <p>Reading comprehension skills that address challenges include</p> <ul style="list-style-type: none"> • appropriate text selection • rereading parts of the text • reading ahead • visualizing • questioning • word solving <p>[continued...]</p>	<p>Comprehension: 4CP1.6 The reading comprehension process involves checking for understanding, problem solving, and metacognition.</p>	<p>Apply self-monitoring skills to self-correct when comprehension breaks down during reading.</p> <p>Evaluate skills that can be implemented to repair and strengthen reading comprehension.</p> <p>[continued...]</p>		



Knowledge	Understanding	Skills & Procedures	ᑭᓴᓴᓴᓴ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Metacognition is an awareness of thoughts and how one thinks and involves</p> <ul style="list-style-type: none"> • connecting thinking and learning • identifying problems • considering options • reflecting on strategies and skills • adjusting thinking based on information or experience 	<p>Comprehension: 4CP1.6 The reading comprehension process involves checking for understanding, problem solving, and metacognition.</p>	<p>[continued...]</p> <p>Apply metacognitive strategies that are personally effective when reading.</p>		
<p>ORGANIZING IDEA</p> <p>Writing: Ideas and information can be articulated accurately and imaginatively through the use of writing processes and an understanding of the author's craft.</p>				
<p>GUIDING QUESTION</p> <p>How can development of writing processes and expression support effective communication?</p>				
<p>LEARNING OUTCOME</p> <p>Students construct and organize text to share perspectives and develop creative expression.</p>				
<p>Writing processes used to organize and enhance messages include</p> <ul style="list-style-type: none"> • planning • drafting • revising • editing • publishing <p>Methods and tools that support planning include</p> <ul style="list-style-type: none"> • lists • visualizing <p>Interest can be created by varying sentence beginnings and length.</p> <p>Paragraphs include a topic sentence, supporting details, and a concluding sentence.</p> <p>A topic sentence describes what the paragraph is going to be about.</p> <p>[continued...]</p>	<p>Writing: 4W1.1 Writing is a vehicle for communication, creativity, and connection.</p>	<p>Create written texts for a variety of audiences and purposes.</p> <p>Create written texts using a variety of text forms and structures.</p> <p>Develop creative expression through the use of organizational processes, methods, and tools.</p> <p>Share perspectives on a topic in a clear and focused manner.</p> <p>Develop creative expression through a range of sentence beginnings, lengths, and types.</p> <p>[continued...]</p>		<p>For written work, consider selecting topics that are land-based, related to the environment, Indigenous current topics such as Orange Shirt Day and Truth and Reconciliation, treaties, etc.</p> <p> Project of Heart is an inquiry based, hands-on, collaborative, inter-generational, artistic journey of seeking truth about the history of Aboriginal people in Canada. Can also be linked to Orange Shirt Day.</p>


 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>A concluding sentence brings closure to a paragraph by identifying main ideas without adding new information.</p> <p>Fluent writing is smooth, natural, and easy to read aloud with inflection, which helps bring out meaning.</p> <p>Revising includes adding or removing words or sentences to enhance writing clarity or fluency.</p> <p>Publishing can involve consideration and selection of a variety of text features to enhance and finalize written work.</p>	<p>Writing:</p> <p>4W1.1 Writing is a vehicle for communication, creativity, and connection.</p>	<p>[continued...]</p> <p>Develop a logical order by grouping ideas into paragraphs.</p> <p>Write paragraphs with topic and concluding sentences.</p> <p>Reread written texts to identify what could be added or deleted to enhance creative expression.</p> <p>Revise texts to enhance clarity or fluency.</p> <p>Edit writing for spelling, punctuation, and grammar.</p> <p>Incorporate images, charts, graphs, or other text features when publishing selected pieces to support a purpose or connect with an audience.</p>		
<p>Creative thinking processes involve</p> <ul style="list-style-type: none"> • reviewing, revising, and enhancing ideas • considering the processes of other creators • constructing drafts or models • applying feedback to improve the creative product <p>Writing is a craft that involves creative expression of ideas through</p> <ul style="list-style-type: none"> • organization • word choice • presentation <p>[continued...]</p>	<p>Writing:</p> <p>4W1.2 Creative thinking involves intentional application of skills and processes to enhance the expression of ideas and emotions.</p>	<p>Apply creative thinking processes to enhance the expression of ideas or emotions.</p> <p>Relate how connections between audience, purpose, and text form can influence creative expression.</p> <p>Examine how effective writing provides insight into the creative expression of ideas and emotions.</p> <p>[continued...]</p>		

 Knowledge	Understanding	Skills & Procedures	ᑭᑦᑲᑦᑲᑦᑲᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Word choice can reflect the author’s voice or style through careful selection and presentation of details.</p> <p>Words selected to enhance written texts include figurative language.</p> <p>Dialogue can be used to add variety to written texts, advance the plot, or reveal a character’s thoughts or feelings.</p>	<p>Writing: 4W1.2 Creative thinking involves intentional application of skills and processes to enhance the expression of ideas and emotions.</p>	<p>[continued...]</p> <p>Experiment with ideas and word choice to create beginnings that catch the audience’s attention.</p> <p>Experiment with sensory detail or figurative language to add interest and keep audiences engaged.</p> <p>Communicate personal voice or the voice of characters in narratives through dialogue.</p> <p>Generate effects in creative expression through punctuation.</p> <p>Create thoughtful conclusions that tie up events or leave readers wondering.</p> <p>Select a variety of presentation forms or text features to critically share perspectives.</p>		

 Knowledge	Understanding	Skills & Procedures	ᑭᐱᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>Questioning can help focus research topics and processes.</p> <p>Methods and tools can be used to organize information, including</p> <ul style="list-style-type: none"> • note taking • graphic organizers • lists <p>Research findings can be shared in a variety of digital or non-digital forms, including</p> <ul style="list-style-type: none"> • reports • presentations • visual representations <p>Questioning can help focus research topics and processes.</p> <p>Methods and tools can be used to organize information, including</p> <ul style="list-style-type: none"> • note taking • graphic organizers • lists <p>Research findings can be shared in a variety of digital or non-digital forms, including</p> <ul style="list-style-type: none"> • reports • presentations • visual representations <p>Ethical use of information includes</p> <ul style="list-style-type: none"> • asking permission to use, share, or store information • acknowledging the ownership of information used to inform writing (citing) • fair and accurate representation of individuals or information 	<p>Writing:</p> <p>4W1.3 Research processes involve investigating materials or information to uncover facts and support problem solving.</p>	<p>Access information from a variety of sources to critically answer questions or expand knowledge.</p> <p>Demonstrate how information can be ethically shared using a variety of methods or tools.</p> <p>Use information ethically to create text for an intended audience.</p> <p>Choose and cite appropriate sources of information to inform research.</p> <p>Access information from a variety of sources to critically answer questions or expand knowledge.</p> <p>Demonstrate how information can be ethically shared using a variety of methods or tools.</p> <p>Use information ethically to create text for an intended audience.</p> <p>Choose and cite appropriate sources of information to inform research.</p>		




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<p>Written messages can be created or enhanced using a variety of digital or non-digital methods or tools, such as</p> <ul style="list-style-type: none"> • printing • keyboarding • cursive handwriting <p>Messages communicated through cursive handwriting can reflect artistry through consideration of</p> <ul style="list-style-type: none"> • letter formation • size • proportion • slant <p>Keyboarding skills can be improved through practice that involves</p> <ul style="list-style-type: none"> • finger reaches • keystroking • key recognition 	<p>Writing: 4W1.4 Digital or non-digital methods or tools can enhance written works and the artistry of a message.</p>	<p>Enhance the artistry of personally written works using selected methods or tools.</p> <p>Use cursive handwriting to write texts with appropriate letter formation, size, proportion, and slant.</p> <p>Apply keyboarding skills to enhance written works.</p>		

Knowledge	Understanding	Skills & Procedures	ᑭᐱᑦᑭᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
Conventions: Understanding grammar, spelling, and punctuation makes it easier to communicate clearly, to organize thinking, and to use language for desired effects.				
GUIDING QUESTION				
How does the knowledge and application of conventions enhance written communication?				
LEARNING OUTCOME				
Students examine and apply conventions to develop effective written communication.				
<p>Capitalization is used for abbreviations.</p> <p>An abbreviation is the shortened form of a word or words (e.g., Rd., St., AB).</p> <p>Punctuation can be used to add clarity, precision, or creativity to messages.</p> <p>A comma can have a variety of uses, including</p> <ul style="list-style-type: none"> • to indicate a pause between parts of a sentence • to separate words in a list or series • to separate a transition word from the words that follow in a sentence 	<p>Conventions: 4CV1.1 Capitalization and punctuation can be used to support writing fluency.</p>	<p>Capitalize words appropriately in different contexts.</p> <p>Include a variety of punctuation at the end of sentences.</p> <p>Insert commas to indicate a pause between parts of sentences, to separate items in a list, or to follow a transition word.</p> <p>Insert quotation marks to identify the words of a speaker or to bring attention to a word that is used in a special way.</p> <p>Insert apostrophes in place of letters in contractions and to show possession.</p>		<p> “Elements of Indigenous Style: A Guide for Writing by and About Indigenous Peoples” by Gregory Younging, 2018.</p>
<p>Sentences can describe facts or actions happening in the present (present tense).</p> <p>Sentences can describe what happened in the past (past tense).</p> <p>Sentences can describe what may happen in the future (future tense).</p> <p>[continued...]</p>	<p>Conventions: 4CV1.2 Grammatical structures can support consistency in communication.</p>	<p>Distinguish between a variety of sentence types.</p> <p>Determine if text is in the present, past, or future tense.</p> <p>[continued...]</p>		

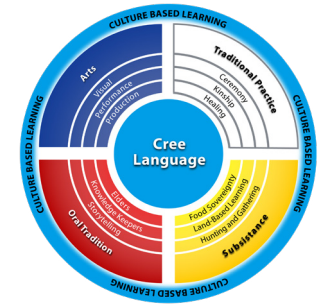















Knowledge	Understanding	Skills & Procedures	ᑭᓴᓴᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>The subject of a verb is the person or thing that performs the action.</p> <p>The object of a verb is the person or thing that receives the action.</p> <p>Both subjects and objects can be nouns or pronouns.</p> <p>Pronouns can replace a noun as the subject in a sentence (subjective) (e.g., I, you, he, she, it, we, they).</p> <p>Possessive adjectives come before a noun to show who or what owns it (e.g., my, your, his, her, its, our, their).</p> <p>Adjectives can compare two things (comparative—<er> or “more”).</p> <p>Adjectives can compare three or more things (superlative—<est> or “most”).</p>	<p>Conventions: 4CV1.2 Grammatical structures can support consistency in communication.</p>	<p>[continued...]</p> <p>Identify nouns or pronouns that are the subject of a variety of sentences.</p> <p>Identify nouns or pronouns that are the object of a variety of sentences.</p> <p>Examine possessive adjectives in a variety of sentences.</p> <p>Use adjectives to indicate comparison of two or more things (<er> or <est>).</p> <p>Use conjunctions to connect phrases in sentences.</p> <p>Apply consistent subject-verb agreement in a variety of sentences.</p>		
<p>Spelling patterns include</p> <ul style="list-style-type: none"> • vowel-vowel-consonant-consonant (VVCC) (e.g., each) • vowel-vowel-consonant-silent “e” (VVCe) (e.g., weave) • vowel-consonant-consonant-silent “e” (VCCe) (e.g., wedge) • vowel-consonant-consonant-consonant (VCCC) (e.g., trench) • vowel-vowel-consonant-consonant-silent “e” (VVCCe) (e.g., bounce) • vowel-vowel-consonant-consonant-consonant (VVCCC) (e.g., health) 	<p>Conventions: 4CV1.3 Spelling accuracy can be supported by transferring understandings of word patterns and structures.</p>	<p>Identify spelling patterns within and across words.</p> <p>Apply knowledge of known words, word parts, and word patterns to spell unfamiliar words.</p> <p>Spell a variety of prefixes and suffixes accurately in words.</p> <p>Identify words that are not spelled in predictable ways.</p>		








 Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
<p>Homophones are words that have the same pronunciation but different spellings and meanings (e.g., hear–here).</p> <p>Digital or non-digital reference tools can be used to confirm the spelling of words.</p>	<p>Conventions: 4CV1.4 Automatic transference of spelling knowledge can increase writing fluency.</p>	<p>Differentiate between the spelling and associated meaning of a variety of homophones.</p> <p>Apply a variety of spelling strategies to increase writing fluency.</p> <p>Use a variety of tools to spell or confirm the spelling of words.</p>		





Social Studies











 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᓴᓴᓴ Nehiyaw Ways of Knowing	Other Suggestions
4.1 ALBERTA: A SENSE OF THE LAND			
GENERAL OUTCOME: Students will demonstrate an understanding and appreciation of how elements of physical geography, climate, geology and paleontology are integral to the landscapes and environment			
VALUES AND ATTITUDES			
4.1.1 value Alberta's physical geography and natural environment:	<ul style="list-style-type: none"> • appreciate the diversity of elements pertaining to geography, climate, geology and paleontology in Alberta (LPP) • appreciate how Alberta's fossil heritage contributes to the province's unique character (LPP) • appreciate the variety and abundance of natural resources in Alberta (ER, LPP) • appreciate the environmental significance of national and provincial parks and protected areas in Alberta (ER, LPP) • appreciate how land sustains communities and quality of life (ER, LPP) • demonstrate care and concern for the environment through their choices and actions (LPP) 	   Common Tree Names Series: Northern Boreal (9 videos)     Harvesting Medicines Series (15 videos)   How Medicines Came to Man  Stewardship and Community – Sharing   Legend of Wolverine	


 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᐱᑦᐅᑦᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
KNOWLEDGE AND UNDERSTANDING			
4.1.2 examine, critically, the physical geography of Alberta by exploring and reflecting upon the following questions and issues:	<ul style="list-style-type: none"> • Where is Alberta located in relation to the other provinces and territories of Canada? (LPP) • What are the major geographical and natural vegetation regions, landforms and bodies of water in Alberta (e.g., prairie region, forests, rivers, hoodoos, Rocky Mountains, oil sands)? (LPP) • What are the factors that determine climate in the diverse regions of Alberta (e.g., latitude, mountains)? (LPP) • What are the significant natural resources in Alberta, and where are they located (e.g., mineral deposits, coal, natural gas and oil, forests)? (ER, LPP) • How are Alberta's provincial parks and protected areas and the national parks in Alberta important to the sustainability of Alberta's natural environment? (ER, LPP) 	 The Rolling Head	
4.1.3 examine, critically, how geology and paleontology contribute to knowledge of Alberta's physical geography by exploring and reflecting upon the following questions and issues:	<ul style="list-style-type: none"> • How did archeologists and paleontologists discover the presence of dinosaurs in Alberta? (LPP, TCC) • What geological features make Alberta unique (e.g., hoodoos, Rocky Mountains, foothills, oil sands)? (LPP, ER) 		
4.1.4 analyze how Albertans interact with their environment by exploring and reflecting upon the following questions and issues:	<ul style="list-style-type: none"> • In what ways do the physical geography and natural resources of a region determine the establishment of communities? (LPP) • How are natural resources used by Albertans (i.e., agriculture, oil and natural gas, forests, coal)? (ER, LPP) • How do Albertans deal with competing demands on land use (e.g., conservation, solar and wind power, recreation, agriculture, oil exploration, forestry)? (ER, LPP) 		



 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᑦᑭᑦᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
4.1.4 analyze how Albertans interact with their environment by exploring and reflecting upon the following questions and issues: (continued)	<ul style="list-style-type: none"> In what ways does the Royal Tyrrell Museum contribute to scientific knowledge regarding Alberta's fossil heritage? (ER, LPP, TCC) How can ownership of a discovered artifact be determined? (C, ER, PADM) Whose responsibility should it be to ensure the preservation of national parks, provincial parks and protected areas in Alberta? (C, LPP, PADM) 		
4.2 THE STORIES, HISTORIES AND PEOPLES OF ALBERTA			
GENERAL OUTCOME: Students will demonstrate an understanding and appreciation of the role of stories, history and culture in strengthening communities and contributing to identity and a sense			
VALUES AND ATTITUDES			
4.2.1 appreciate how an understanding of Alberta's history, peoples and stories contributes to their own sense of belonging and identity:	<ul style="list-style-type: none"> recognize how stories of people and events provide multiple perspectives on past and present events (I, TCC) recognize oral traditions, narratives and stories as valid sources of knowledge about the land, culture and history (CC, TCC) recognize the presence and influence of diverse Aboriginal peoples as inherent to Alberta's culture and identity (CC, I, TCC) recognize the history of the French language and the vitality of Francophone communities as integral parts of Alberta's heritage (CC, I, TCC) recognize British institutions and peoples as integral parts of Alberta's heritage (CC, I, TCC) recognize how the diversity of immigrants from Europe and other continents has enriched Alberta's rural and urban communities (CC, I, TCC) demonstrate respect for places and objects of historical significance (I, LPP, TCC) 	 Kinship and Community  The Legend of Muskrat	


 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᓴᓴᑦ Nehiyaw Ways of Knowing	Other Suggestions
KNOWLEDGE AND UNDERSTANDING			
<p>4.2.2 assess, critically, how the cultural and linguistic heritage and diversity of Alberta has evolved over time by exploring and reflecting upon the following questions and issues:</p>	<ul style="list-style-type: none"> • Which First Nations originally inhabited the different areas of the province? (CC, LPP, TCC) • How is the diversity of Aboriginal peoples reflected in the number of languages spoken? (CC, I, LPP) • What do the stories of Aboriginal peoples tell us about their beliefs regarding the relationship between people and the land? (TCC) • What movement or migration within Canada contributed to the populating of Alberta? (LPP, TCC) • In what ways did Francophones establish their roots in urban and rural Alberta (i.e., voyageurs, missionary work, founding institutions, media, politics, commerce)? (CC, I, LPP, TCC) • How did the Métis Nation and Métis settlements contribute to Alberta's identity (i.e., languages, accomplishments)? (CC, I, LPP, TCC) • How did French and English become the two languages most used in business and politics in Alberta during the 19th and early 20th centuries? (CC, I, PADM) • How did British institutions provide the structure for the settlement of newcomers in Alberta (i.e., North West Mounted Police, schools, lieutenant-governor, Assembly of the Northwest Territories)? (GC, I, PADM, TCC) • How did European immigration contribute to the establishment of communities in Alberta in the late 19th century and early 20th century? (CC, GC, I, TCC) • How did the arrival of diverse groups of people determine the establishment and continued growth of rural and urban communities? (CC, GC, LPP) • How are agriculture and the establishment of communities interconnected? (ER, LPP) 	<p> Legend of Rat Root</p> <p> Legend of Raven and Water</p>	<p> Rupertsland Resources</p>

 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑕᐱᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
4.3 ALBERTA: CELEBRATIONS AND CHALLENGES			
GENERAL OUTCOME: Students will demonstrate an understanding and appreciation of how Alberta has grown and changed culturally, economically and socially since 1905.			
VALUES AND ATTITUDES			
4.3.1 appreciate the factors contributing to quality of life in Alberta:	<ul style="list-style-type: none"> • value and respect their own and other cultural identities (C, I) • demonstrate respect for the rights, opinions and perspectives of others (C, I) • demonstrate respect for the cultural and linguistic diversity in Alberta (C, I) • recognize global affiliations within the Alberta Francophonie (GC) • appreciate the influence of the natural environment and resources on the growth and development of Alberta (ER, LPP) • value and respect their relationships with the environment (C, ER, LPP) 	 Stewardship and Community – Sharing     Harvesting Medicines Series: Protocol on Herb Gathering	
KNOWLEDGE AND UNDERSTANDING			
4.3.2 assess, critically, the challenges and opportunities that Alberta has faced in its growth and development by exploring and reflecting upon the following questions and issues:	<ul style="list-style-type: none"> • What led to Alberta's joining Confederation? (TCC, PADM) • What key events have impacted the economy of Alberta (i.e., drought of the 1930s, discovery of oil)? (ER, LPP, TCC) • In what ways have occupations and commerce been affected by geography, climate and natural resources in Alberta (i.e., forestry, agriculture, aviation, seasonal activities, tourism)? (ER, LPP, TCC) 		

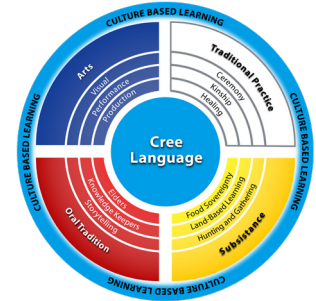
 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᑦᑭᑦᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
4.3.3 examine, critically, Alberta's changing cultural and social dynamics by exploring and reflecting upon the following questions and issues:	<ul style="list-style-type: none"> In what ways has Alberta changed demographically since 1905 (i.e., population distribution in rural and urban areas, arrival of diverse ethnic groups, languages spoken)? (CC, I, LPP, TCC) In what ways have Aboriginal peoples and communities changed over time? (CC, I, TCC) How has multiculturalism in Alberta evolved over time? (CC, I, GC, LPP) How has the Alberta Francophonie become increasingly multicultural? (CC, I, GC) How do buildings, historic sites and institutions reflect the establishment and cultural diversity of communities in Alberta (i.e., Glenbow Museum, Royal Alberta Museum, Head-Smashed-In Buffalo Jump, Writing-on-Stone Provincial Park, Father Lacombe Chapel Provincial Historic Site, Ukrainian Cultural Heritage Village)? (CC, I, LPP, TCC) How do the names of geographic places reflect the origins of the people who inhabited, discovered or developed communities in these places? (CC, I, LPP, TCC) In what ways have music, art, narratives and literature contributed to the vitality of the culture, language and identity of diverse Alberta communities over time? (I, CC, LPP, TCC) How does living in a particular community, region or province help shape individual and collective identity? (CC, I, LPP) 		
4.3.4 examine recreation and tourism in Alberta by exploring and reflecting upon the following questions and issues:	<ul style="list-style-type: none"> How do recreational sites and activities reflect Alberta's heritage and strengthen communities (e.g., festivals, fairs, celebrations, rodeos)? (C, CC, I, ER) How do physical geography and climate affect seasonal activities throughout Alberta? (ER, LPP) To what extent do recreation and tourism foster appreciation of Alberta's natural regions and environment? (ER, LPP) In what ways do interests concerning tourism and the natural environment conflict? (ER, LPP) 	 Common Seasonal Activities – Seasonal Round	




 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᑦᑭᑦᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
SKILLS AND PROCESSES FOR SOCIAL STUDIES			
Dimensions of Thinking			
4.S.1 develop skills of critical thinking and creative thinking:	<ul style="list-style-type: none"> • evaluate significant local and current affairs, distinguishing between fact and opinion • evaluate, critically, ideas, information and positions from multiple perspectives • re-evaluate opinions to broaden understanding of a topic or an issue • generate original ideas and strategies in individual and group activities - seek responses to inquiries from various authorities through electronic media 		
4.S.2 develop skills of historical thinking:	<ul style="list-style-type: none"> • use photographs and interviews to make meaning of historical information • use historical and community resources to understand and organize the sequence of local historical events • explain the historical context of key events of a given time period 		
4.S.3 develop skills of geographic thinking:	<ul style="list-style-type: none"> • use the scale on maps of Alberta to determine the distance between places • construct graphs, tables, charts and maps to interpret information • use historical maps to make meaning of historical events and issues • use cardinal and intermediate directions to locate places on maps and globes • identify the location of sources of nonrenewable resources (e.g., fossil fuels, minerals) 		
4.S.4 demonstrate skills of decision making and problem solving:	<ul style="list-style-type: none"> • contribute and apply new ideas and strategies, supported with facts and reasons, to decision making and problem solving 		









 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᐱᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
4.S.4 demonstrate skills of decision making and problem solving:	<ul style="list-style-type: none"> • identify situations where a decision needs to be made and a problem requires attention • select and use technology to assist in problem solving • use data gathered from a variety of electronic sources to address identified problems • solve problems requiring the sorting, organizing, classifying and extending of data, using such tools as calculators, spreadsheets, databases or hypertext technology • use graphic organizers, such as mind mapping/webbing, flowcharting and outlining, to present connections among ideas and information in a problem-solving environment 	 Trickster and the Ducks	
Social Participation as a Democratic Practice			
4.S.5 demonstrate skills of cooperation, conflict resolution and consensus building:	<ul style="list-style-type: none"> • demonstrate an awareness of the skills required for compromise and consensus building • demonstrate the ability to deal constructively with diversity and disagreement • consider the needs and points of view of others • work collaboratively with others to complete a group task • share information collected from electronic sources to add to a group task 		
4.S.6 develop age-appropriate behaviour for social involvement as responsible citizens contributing to their community:	<ul style="list-style-type: none"> • initiate projects that meet the particular needs or expectations of their school or community 		
Research for Deliberative Inquiry			
4.S.7 apply the research process:	<ul style="list-style-type: none"> • develop the skills of skimming and scanning to gather relevant information • organize and synthesize information gathered from a variety of sources • use graphic organizers, such as webbing or Venn diagrams, to make meaning of information • draw and support conclusions, based on information gathered, to answer a research question 		


 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes	ᑭᐱᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
4.S.7 apply the research process:	<ul style="list-style-type: none"> formulate new questions as research progresses cite references as part of research access and retrieve appropriate information from the Internet by using a specific search path or from given uniform resource locations (URLs) navigate within a document, compact disc or software application that contains links organize information gathered from the Internet or an electronic source by selecting and recording the data in logical files or categories organize information by using tools such as databases, spreadsheets or electronic webbing 		
Communication			
4.S.8 demonstrate skills of oral, written and visual literacy:	<ul style="list-style-type: none"> organize and present information, taking particular audiences and purposes into consideration respond appropriately to comments and questions, using language respectful of human diversity listen to others in order to understand their perspectives create visual images for particular audiences and purposes use selected presentation tools to demonstrate connections among various pieces of information communicate effectively through appropriate forms, such as speeches, reports and multimedia presentations, applying information technologies that serve particular audiences and purposes 		
4.S.9 develop skills of media literacy:	<ul style="list-style-type: none"> compare information on the same issue or topic from print media, television, photographs and the Internet examine diverse perspectives regarding an issue presented in the media identify and distinguish points of view expressed in electronic sources on a particular topic 		


Social Studies Pilot 2024





 Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
<p>PREAMBLE: Teachers can increase their own understandings of Indigenous ways of knowing and being and history in relation to social studies curricular outcomes through the following recommended courses:</p> <ul style="list-style-type: none"> Indigenous Administration Courses: Continuing Education: Northern Lakes College University of Alberta: Indigenous Canada 				
<p style="text-align: center;">ORGANIZING IDEA</p> <p>Time and Place: Exploring the dynamic relationships between people, place, and time supports understanding of perspectives and events to make meaning of the world.</p>				
<p style="text-align: center;">GUIDING QUESTION</p> <p style="text-align: center;">How have Canada’s boundaries shifted over time?</p>				
<p style="text-align: center;">LEARNING OUTCOME</p> <p style="text-align: center;">Students investigate changes in Canada’s political boundaries.</p>				
<p>Political boundaries between territories and countries can shift over time and are influenced by factors, including</p> <ul style="list-style-type: none"> claims on territory expansion of territory agreements and treaties historic events <p>Comparing maps at different points in time can support understanding of events.</p>	<p>Canada’s boundaries have changed over time.</p>	<p>Compare historical maps to view Canada’s changing boundaries prior to Confederation.</p>	<p> Land Acknowledgements</p> <p> Place Names</p>	






 Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
GUIDING QUESTION How did Canada become a country?				
LEARNING OUTCOME Students examine significant historical events that contributed to the formation of the country of Canada.				
<p>Explorers from Europe began to explore North America (ca. 1500) for various reasons; for example,</p> <ul style="list-style-type: none"> • pursuing new travel routes • seeking resources for home countries • satisfying curiosity • testing new technologies <p>To gain territories, resources, and prestige (expansionism), European countries sent explorers; for example,</p> <ul style="list-style-type: none"> • Jacques Cartier • Giovanni Caboto • Pierre Du Gua de Monts • Samuel de Champlain <p>First attempts by Jacques Cartier to establish settlements failed.</p> <p>France established permanent settlements on the land now known as Canada, including</p> <ul style="list-style-type: none"> • Port-Royal (1605) • Québec City (1608) • Trois-Rivières (1634) • Montreal (1642) <p>Samuel de Champlain, who established Québec City, became the governor of New France and made alliances with the First Nations of the area.</p> <p>Colonization involved European monarchs expanding empires by claiming land and establishing colonies on land already occupied by Indigenous peoples around the world, including in North America (imperialism).</p> <p>France founded the colonies of Acadia, New France, and Louisiana, and Britain founded the Thirteen Colonies.</p> <p>[continued...]</p>	<p>The establishment of New France began European colonization of Canada.</p>	<p>Compare reasons for exploration and establishing colonies around the world.</p> <p>Investigate the travels of an explorer to the land now known as Canada.</p> <p>Research French settlements in the land that is now known as the province of Quebec and explore the challenges in establishing settlements.</p> <p>Analyze the relationships between First Nations and European explorers.</p> <p>Assess the relationship between home countries and colonies.</p> <p>Hypothesize different perspectives on colonization.</p> <p>Create a historical timeline of significant milestones and events in the establishment of French colonies in Canada.</p>		<p> Orange Shirt Day/Residential Schools: Orange Shirt Day and Beyond from Empowering the Spirit</p> <p> Orange Shirt Day Society: For Teachers</p> <p> Rupertsland Institute: National Day for Truth and Reconciliation</p> <p> Empowering the Spirit: The Kairos Blanket Exercise</p> <p> The Blanket Exercise: Teaching Tool for Grades 4 to 12</p> <p> Justice for Aboriginal Peoples -- It's time</p> <p> Rupertsland Institute: Land Scrip Lesson Plan and Resources</p>



















 Knowledge	Understanding	Skills & Procedures	ᑭᓴᓴᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Colonists came to the colonies for a variety of opportunities; for example,</p> <ul style="list-style-type: none"> • access to farmland • business • religious freedom • quality of life • adventure <p>Colonists brought belief systems and ways of organizing society to the colonies, including</p> <ul style="list-style-type: none"> • religions • leadership • education • health care <p>France and Britain imported natural resources from the colonies in North America; for example,</p> <ul style="list-style-type: none"> • furs • lumber • agricultural products • minerals <p>First Nations and Europeans made treaties with each other, such as the Two Row Wampum (Gaswéñdah), to start a relationship of living side by side.</p>				
<p>Colonies were transferred from France to Britain as a result of conflicts and treaties.</p> <p>Britain gained control of Acadia (Treaty of Utrecht, 1713) and New France (Treaty of Paris, 1763) as the result of treaties signed between Britain and France.</p> <p>French colonists remained on the lands known as Acadia and New France after Britain gained control of the territories.</p> <p>Acts were passed by the British to rule and organize colonies in North America.</p> <p>[continued...]</p>	<p>Wars, rivalries, and treaties in Europe disrupted life in the colonies.</p> <p>New acts and legislation set foundations for Canada.</p>	<p>Analyze how ways of living for First Nations, French colonists, and British colonists were impacted by the Royal Proclamation and the Quebec Act.</p> <p>Create timelines of significant historic milestones and events that marked the transition of colonial control of Canada from France to Britain.</p> <p>[continued...]</p>		









 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑦᑎᑦᑎᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>The Royal Proclamation (1763) has ongoing significance for First Nations today, including</p> <ul style="list-style-type: none"> • recognition of First Nations as the original inhabitants of North America • recognition of First Nations right to self-government • establishment of nation-to-nation treaty making process • establishment of First Nations relations to the Crown <p>The Quebec Act (1774) recognized French language and religious rights in the province of Quebec and provided a foundation for bilingualism in Canada.</p> <p>The Royal Proclamation and the Quebec Act impacted ways of living for</p> <ul style="list-style-type: none"> • First Nations • French colonists • British colonists <p>The Royal Proclamation and the Quebec Act impacted ways of living, including</p> <ul style="list-style-type: none"> • size and location of territories • religious and language rights • governance structure • land sale and use 		<p>[continued...]</p> <p>Assess the significance of the Treaty of Paris, 1763.</p>		
<p>The United States of America gained independence from Great Britain, which resulted in some people from the Thirteen Colonies, known as Loyalists, moving to what is now known as Canada; for example,</p> <ul style="list-style-type: none"> • individuals who opposed the War of Independence • individuals loyal to the King of England • business owners with ties to Britain • Black Loyalists and enslaved people • First Nations <p>Loyalists brought language and traditions and established farms and communities in what is now known as Canada.</p> <p>[continued...]</p>	<p>Immigrants contributed to the foundation of Canada.</p> <p>Governments can make changes in response to the actions of the population.</p>	<p>Evaluate reasons for migration of different groups of Loyalists to Canada.</p> <p>Examine the challenges and contributions of immigrants before Confederation.</p> <p>[continued...]</p>		

 Knowledge	Understanding	Skills & Procedures	ᑭᐱᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>In response to the increase of Loyalists, the Crown divided the province of Quebec into Upper Canada and Lower Canada (Constitution Act, 1791, Canada Act).</p> <p>British colonists, French colonists, First Nations, and Métis united and fought against the Americans in a series of battles over territory and trade in North America, known as the War of 1812.</p> <p>After the War of 1812, Britain encouraged English, Scottish, Welsh, and Irish immigrants to come to the land now known as Canada, during what is called the Great Migration (1815–50).</p> <p>Many enslaved Black people from the United States escaped using the Underground Railroad after Britain abolished slavery throughout the empire.</p> <p>The Underground Railroad was formed by networks of people who provided safe houses and secret routes to support enslaved Black people in reaching the land now known as Canada.</p> <p>Immigration resulted in an increase in English-speaking people in Canada, making French a minority language, and contributed to growing dissatisfaction over the system of governance and lack of representation.</p> <p>Dissatisfaction led to rebellions in Upper and Lower Canada (1837–38), which led to changes in the structure of governance in Canada (Act of Union), including</p> <ul style="list-style-type: none"> • unification of Upper and Lower Canada to create one province of Canada • policies to assimilate Francophones • establishment of one responsible government with equal representation for Canada East and Canada West • designation of English as the official language of government 		<p>[continued...]</p> <p>Explain the impact of changing policies and practices on Francophones in Canada.</p> <p>Investigate the significance of the War of 1812 in contributing to the development of a national identity.</p> <p>Analyze the causes of the rebellions in Upper and Lower Canada.</p>		

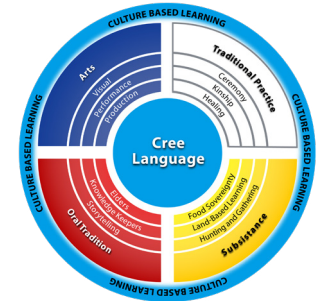
 Knowledge	Understanding	Skills & Procedures	ᑭᐱᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>Canada became a country through a series of negotiations between the British colonies and the British government that resulted in Confederation in 1867.</p> <p>External pressures and internal opportunities contributed to negotiations about Confederation; for example,</p> <ul style="list-style-type: none"> • fear of American expansionism • restrictions on trade (protectionism) • desire for a strong central government • desire to build a railroad system <p>Negotiations for a possible union between the colonies took several years and included the</p> <ul style="list-style-type: none"> • Charlottetown Conference • Quebec Conference • London Conference <p>Many politicians, known as the Fathers of Confederation, contributed to the negotiation of the British North America Act (1867), which is also known as the BNA Act or the Constitution Act of 1867.</p> <p>In 1867, the British North America Act united the province of Canada, renamed Ontario and Quebec, with New Brunswick and Nova Scotia to form the Dominion of Canada.</p>	<p>The Dominion of Canada was formed following negotiations.</p>	<p>Investigate the views of Canada and Confederation held by one of the Fathers of Confederation.</p> <p>Examine perspectives of Francophones and Anglophones on Confederation.</p> <p>Justify the importance of Confederation.</p> <p>Assess the issues debated and discussed at the London Conference.</p>		


 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑦᑎᑦᑎᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA Systems: Evaluating processes and structures of organizations builds understanding of decision making in the world.				
GUIDING QUESTION How is the government of Canada organized?				
LEARNING OUTCOME Students investigate historical influences on the federal government in Canada.				
<p>The structure of government in Canada evolved over time, was shaped by historic events and acts, and reflects British governance.</p> <p>The BNA Act established the structure and function of government in Canada; for example,</p> <ul style="list-style-type: none"> • a constitutional monarchy where the Governor General represents the Crown • a parliamentary system where the prime minister serves as the leader of government • a federal system where responsibilities are divided between federal and provincial governments • language rights (French and English) 	<p>Democratic government in Canada reflects historical influences.</p>	<p>Evaluate the significance of the British North America Act.</p> <p>Summarize how government structures in Canada evolved over time.</p> <p>Compare and contrast the roles of the Governor General and the prime minister of Canada.</p> <p>Examine how responsibilities are divided between the federal and provincial governments.</p>		
GUIDING QUESTION How did economic opportunities influence the establishment of Canada?				
LEARNING OUTCOME Students examine how the fur trade contributed to the development of Canada.				
<p>The fur trade was a system where furs and goods were exchanged within North America and between Europe and North America, and included</p> <ul style="list-style-type: none"> • shipping furs from North America to Europe, where furs were less available • shipping goods manufactured in Europe to North America, where demand was high <p>Europeans established the Hudson's Bay Company and the North West Company, which were both fur trading companies, to compete for control of the fur trade.</p> <p>[continued...]</p>	<p>Interactions through the fur trade contributed to economic growth in the land now known as Canada.</p>	<p>Model the fur trade's system of exchange.</p> <p>Analyze interactions between First Nations, Métis, and Europeans that occurred as part of the fur trade.</p> <p>[continued...]</p>	<p> Trapping Series (Introduction to Fur Bearing Animals – 6 videos; Introduction to Traps and Snares – 14 videos)</p> <p>   Trapping and Snares – Beaver Series (5 videos)</p>	







 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Competition for control of the fur trade motivated Europeans to expand farther north and west by building more trading posts and forts.</p> <p>Trading posts and forts were centres of interaction that served many functions; for example,</p> <ul style="list-style-type: none"> • warehouses for goods, supplies, and medicines • places to barter furs for manufactured goods • meeting places for diverse peoples • lodgings <p>First Nations, Métis, and Europeans interacted with each other and took on roles in the fur trade; for example,</p> <ul style="list-style-type: none"> • hunters and trappers • interpreters and guides • clerks <p>First Nations and Métis women contributed to the fur trade and carried out a variety of roles; for example,</p> <ul style="list-style-type: none"> • interpreters • fur processors • trappers • negotiators • guides <p>Interactions brought changes for Europeans, Métis, and First Nations; for example,</p> <ul style="list-style-type: none"> • shared knowledge and culture • exposure to diseases • reliance on goods • changes to ways of living 		<p>[continued...]</p> <p>Identify the contributions made by a woman, or a group of women, to the fur trade.</p> <p>Simulate diverse roles in the fur trade.</p>	<p> Trapping Series (Introduction to Fur Bearing Animals - 6 videos; Introduction to Traps and Snares - 14 videos)</p> <p>   Harvesting Medicines Series (15 videos)</p> <p>  Mixing and Measuring Common Medicines (2 videos)</p> <p> Legend of Birch Tree</p> <p>  Legend of Poplar</p> <p>  Dreamcatcher (Legend of Willow)</p> <p> Legend of Willow</p> <p>  How Medicines Came to Man</p>	<p> Orange Shirt Day/Residential Schools: Orange Shirt Day and Beyond from Empowering the Spirit</p> <p> Orange Shirt Day Society: For Teachers</p> <p> Rupert's Land Institute: National Day for Truth and Reconciliation</p>

 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA Citizenship: Understanding local, national, and global issues empowers individual and collective action toward an inclusive society.				
GUIDING QUESTION What is responsible citizenship?				
LEARNING OUTCOME Students investigate rights and responsibilities in Canada.				
<p>Citizenship involves belonging to and contributing to a society.</p> <p>Citizens in Canada have rights, freedoms, and responsibilities.</p> <p>Citizens have a responsibility to respect the rights of others.</p> <p>Rights and freedoms can be limited; for example,</p> <ul style="list-style-type: none"> the right to free speech can be limited if what is said is harmful or hateful the right to decide where to live can be limited if someone has committed a crime and is punished with a jail term <p>Rights and freedoms in Canada have changed over time to address racism.</p>	<p>Responsible citizenship involves active participation.</p>	<p>Categorize responsibilities associated with citizenship.</p> <p>Differentiate between rights and responsibilities.</p> <p>Evaluate actions that can be taken to overcome discrimination and inequality.</p> <p>Simulate active citizenship.</p>	<p> Common Tree Names Series: Northern Boreal (9 videos)</p> <p> Harvesting Medicines Series (15 videos)</p> <p> All About Powwow/Dance Series (11 videos)</p>	<p> Orange Shirt Day/Residential Schools: Orange Shirt Day and Beyond from Empowering the Spirit</p> <p> Orange Shirt Day Society: For Teachers</p> <p> Rupertsland Institute: National Day for Truth and Reconciliation</p> <p> Examine the Articles of the United Nations Declaration on the Rights of Indigenous Peoples.</p>

Math



 Knowledge	Understanding	Skills & Procedures	ᐅᐃᐅ° Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
NUMBER: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.				
GUIDING QUESTION				
How can place value facilitate interpretation of number?				
LEARNING OUTCOME				
4N1 Students apply place value to decimal number.				
<p>For numbers in base-10, each place has one-tenth the value of the place to its left.</p> <p>Multiplying or dividing a number by 10 corresponds to moving the decimal point one position to the right or left, respectively.</p> <p>The decimal separator is a point in English and a comma in French.</p> <p>Numbers, including decimal numbers, can be composed in various ways using place value.</p> <p>A zero placed to the right of the last digit in a decimal number does not change the value of the number.</p> <p>[continued...]</p>	<p>Decimal numbers are numbers between natural numbers.</p> <p>Decimal numbers are fractions with denominators of 10, 100, etc.</p> <p>The separation between wholes and parts can be represented using decimal notation.</p> <p>Patterns in place value are used to read and write numbers, including wholes and parts.</p>	<p>Identify the place value of each digit in a number, including tenths and hundredths.</p> <p>Relate the values of adjacent places, including tenths and hundredths.</p> <p>Determine the value of each digit in a number, including tenths and hundredths.</p> <p>Express numbers, including decimal numbers, using words and numerals.</p> <p>Express various compositions of a number, including decimal numbers, using place value.</p> <p>Recognize decimal notation expressed in English and in French.</p> <p>Round numbers to various places, including tenths.</p> <p>Compare and order numbers, including decimal numbers.</p> <p>[continued...]</p>		<p>Discuss how units of measurement came with Europeans. Prior to that, the Cree used skills related to estimation, trial and error, and experience.</p> <p>Use both current life and historical (e.g., fur trading) examples to explore monetary values.</p>

 Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
[continued...] The word and is used to indicate the decimal point when reading a number.		[continued...] Express the relationship between two numbers, including decimal numbers, using $<$, $>$, or $=$. Express a monetary value in cents as a monetary value in dollars using decimal.		
GUIDING QUESTION How can understanding of addition and subtraction be extended to decimal numbers?				
LEARNING OUTCOME 4N2 Students add and subtract within 10 000, including decimal numbers to hundredths.				
Standard algorithms for addition and subtraction of decimal numbers are conventional procedures based on place value. Estimation can be used to check the reasonableness of a sum or difference.	Standard algorithms for addition and subtraction may be used for any decimal number.	Add and subtract numbers, including decimal numbers, using standard algorithms. Assess the reasonableness of a sum or difference by estimation. Solve problems using addition and subtraction, including problems involving money.	  Legend of Night and Day   13 Moons  Distance – Concept of Zero	
GUIDING QUESTION How can multiplication and division characterize the composition of numbers?				
LEARNING OUTCOME 4N3 Students explain properties of prime and composite numbers using multiplication and division.				
A factor of a number is a divisor of that number. A number is a multiple of any of its factors. A prime number has factors of only itself and one. A composite number has factors other than one and itself. Zero and one are neither prime nor composite numbers	Different factors can compose the same product. Different products can share factors. A number divided by one of its factors will result in a remainder of 0.	Determine the factors of a number within 100. Describe a number as prime or composite. Determine the first five multiples of a given number within 100. Recognize the greatest common factor (greatest common divisor) of two numbers within 100.		Zero is not represented in the Cree Language. However, “no more, all gone- mukway” is represented.



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GUIDING QUESTION

How can multiplication and division be interpreted?

LEARNING OUTCOME

4N4 Students multiply and divide natural numbers within 10 000.

Recall of multiplication and division number facts facilitates multiplication and division strategies.

Standard algorithms facilitate multiplication and division of natural numbers that have multiple digits.

Estimation can be used to check the reasonableness of a product or quotient.

Multiplication and division strategies can be chosen based on the nature of the numbers.

Recall and apply multiplication number facts, with factors to 12, and related division number facts.

Investigate patterns in multiplication and division of natural numbers by 10, 100, and 1000.

Multiply and divide 3-digit natural numbers by 1-digit natural numbers using personal strategies.

Examine standard algorithms for multiplication and division.

Multiply and divide 3-digit natural numbers by 1-digit natural numbers using standard algorithms.

Divide and express a quotient with or without a remainder.

Investigate strategies for estimation of products and quotients.

Assess the reasonableness of a product or quotient using estimation.

Solve problems using multiplication and division.



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GUIDING QUESTION

How can fractions be characterized in different ways?

LEARNING OUTCOME

4N5.1 Students apply equivalence to the interpretation of fractions.

Equivalent fractions are associated with the same point on the number line.

Equivalent fractions can be created by partitioning each equal part of a fraction in the same way.

Partitioning a fraction can be interpreted as multiplying the numerator and denominator of a fraction by the same number.

A fraction can be simplified to an equivalent form by dividing the numerator and denominator by a common factor.

The numerator and denominator of a fraction in simplest form have no common factors.

Dividing the numerator and denominator of a fraction by their greatest common factor will achieve simplest form.

There are infinitely many equivalent fractions that represent the same number.

Exactly one of infinitely many equivalent fractions is in simplest form.

Model equivalent fractions by partitioning a whole in multiple ways.

Determine fractions equivalent to a given fraction.

Relate the position of equivalent fractions on the number line.

Identify fractions in which the numerator and denominator have a common factor.

Simplify a given fraction by dividing the numerator and denominator by a common factor.


Express a fraction in simplest form.






Compare and order fractions.












Alberta Native Friendship Centres Association & Be Fit For Life Network: Move & Play Through Traditional Games (Inuit bone pull game)


For a variation, with partners, place the object between your index fingers and each other. Tug of war with a partner. "Tug-off" with others until one person is left. Use data to explore the different fractions ie: girls who have the stick/ total students, boys with the object/ total.





 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
LEARNING OUTCOME 4N5.2 Students apply equivalence to the interpretation of fractions.				
<p>Fractions and decimal numbers can represent the same number.</p> <p>Decimals can be expressed as fractions with a denominator that is equivalent to the place value of the last non-zero digit of the decimal number.</p>	<p>Decimal numbers that terminate (do not repeat) are fractions with denominators of 10, 100, etc.</p> <p>Fractions and decimal numbers that represent the same number are associated with the same point on the number line.</p>	<p>Relate fractions and equivalent decimal numbers to their positions on the number line.</p> <p>Express fractions as decimal numbers and vice versa, limited to tenths and hundredths.</p>		
GUIDING QUESTION How can percentages standardize part-whole relationships?				
LEARNING OUTCOME 4N6 Students interpret percentages.				
<p>Percentage is represented symbolically with %.</p> <p>Decimals can be expressed as percentages by multiplying by 100.</p> <p>Percentages can be expressed as decimals by dividing by 100.</p> <p>One percent represents one hundredth of a whole.</p>	<p>Fractions, decimals, and percentages can represent the same part-whole relationship.</p>	<p>Investigate percentage in familiar situations.</p> <p>Compare percentages within 100%.</p> <p>Express the fraction, decimal, and percentage representations of the same part-whole relationship.</p>		


 Knowledge	Understanding	Skills & Procedures	 Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
PATTERNS: Awareness of patterns supports problem solving in various situations.				
GUIDING QUESTION				
How can sequences provide insight into change?				
LEARNING OUTCOME				
4P1.1 Students interpret and explain arithmetic and geometric sequences.				
<p>The sequences of triangular and square numbers are examples of increasing sequences.</p> <p>The Fibonacci sequence is an increasing sequence that occurs in nature.</p>	<p>Sequences may increase or decrease.</p> <p>Different representations can provide new perspectives of the increase or decrease of a sequence.</p>	<p>Investigate increasing sequences, including the Fibonacci sequence, in multiple representations.</p> <p>Create and explain increasing or decreasing sequences, including numerical sequences.</p> <p>Express a numerical sequence to represent a concrete or pictorial sequence.</p>	<p>  Harvesting Medicines Series: Dandelion Harvest  Legend of Dandelion </p>	<p>Examine animal populations, finished bead work, diverse human populations.</p> <p>Identify sequences in games (e.g., stick game and bowl game); building activities (e.g., tipi, tripod), painting and patterning.</p>
LEARNING OUTCOME				
4P1.2 Students interpret and explain arithmetic and geometric sequences.				
<p>An arithmetic sequence progresses through addition or subtraction.</p> <p>A skip-counting sequence is an example of an arithmetic sequence.</p> <p>A geometric sequence progresses through multiplication.</p> <p>A geometric sequence begins at a number other than zero.</p>	<p>An arithmetic sequence has a constant difference between consecutive terms.</p> <p>A geometric sequence has a constant multiplicative change between consecutive terms.</p>	<p>Recognize arithmetic and geometric sequences.</p> <p>Describe the initial term and the constant change in an arithmetic sequence.</p> <p>Express the first five terms of an arithmetic sequence related to a given initial term and constant change.</p> <p>Describe the initial term and the constant change in a geometric sequence.</p> <p>Express the first five terms of a geometric sequence related to a given initial term and constant change.</p>		<p>  Gabriel Dumont Institute: Virtual Museum of Métis History and Culture: How to Fingerweave </p>







 Knowledge	Understanding	Skills & Procedures	ᐅᐃᐅ° Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
ALGEBRA: Equations express relationships between quantities.				
GUIDING QUESTION				
How can equality create opportunities to reimagine number?				
LEARNING OUTCOME				
4A1.1 Students represent and apply equality in multiple ways.				
<p>An expression can include multiple operations.</p> <p>The conventional order of operations provides a set of rules for evaluating expressions, including the following:</p> <ul style="list-style-type: none"> • Multiplication and division are performed before addition and subtraction. • Multiplication and division are performed in order from left to right. • Addition and subtraction are performed in order from left to right. 	<p>There are infinitely many expressions that represent the same number.</p> <p>The order in which operations are performed can affect the value of an expression.</p>	<p>Evaluate expressions according to the order of operations.</p> <p>Create various expressions of the same number using one or more operations.</p>		
LEARNING OUTCOME				
4A1.2 Students represent and apply equality in multiple ways.				
<p>Equations can be solved through a process of adding, subtracting, multiplying, or dividing the same number on both sides of the equation (preservation of equality).</p>	<p>An equation is solved by determining an unknown value that makes the left and right sides of the equation equal.</p>	<p>Write equations to represent a situation involving one operation.</p> <p>Investigate preservation of equality using a balance model.</p> <p>Investigate preservation of equality using an equation without an unknown value.</p> <p>Apply preservation of equality to determine the unknown value in an equation, limited to equations with one operation.</p> <p>Solve problems using equations, limited to equations with one operation.</p>	<p> Introduction to Traps and Snares Series: Rabbit Snares</p>	

 Knowledge	Understanding	Skills & Procedures	 Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
TIME: Duration is described and quantified by time.				
GUIDING QUESTION				
What might be the relevance of duration to daily living?				
LEARNING OUTCOME				
4T1 Students communicate duration with standard units of time.				
<p>Time of day can be expressed with fractions of a circle, including</p> <ul style="list-style-type: none"> • quarter past the hour • half past the hour • quarter to the hour <p>Duration can be determined by finding the difference between a start time and an end time.</p>	<p>Analog clocks can relate duration to a circle.</p>	<p>Relate durations of 15 minutes, 20 minutes, 30 minutes, 40 minutes, and 45 minutes to fractions of a circle.</p> <p>Express time of day using fractions.</p> <p>Determine duration in minutes using a clock.</p> <p>Apply addition and subtraction strategies to the calculation of duration.</p> <p>Convert between hours, minutes, and seconds.</p> <p>Compare the duration of events using standard units.</p> <p>Solve problems involving duration.</p>	<p>  Legend of Night and Day</p> <p>  13 Moons</p> <p> Distance – Concept of Zero</p>	
ORGANIZING IDEA				
MEASUREMENT: Attributes such as length, area, volume, and angle are quantified by measurement.				
GUIDING QUESTION				
How can area characterize space?				
LEARNING OUTCOME				
4M1.1 Students interpret and express area.				
<p>Tiling is the process of measuring an area with many copies of a unit, without gaps or overlaps.</p> <p>The unit can be chosen based on the area to be measured.</p> <p>[continued...]</p>	<p>Area is a measurable attribute that describes the amount of two-dimensional space contained within a region.</p> <p>[continued...]</p>	<p>Model area by dragging a length using hands-on materials or digital applications.</p> <p>Recognize the rearrangement of area in First Nations, Métis, or Inuit design.</p> <p>[continued...]</p>		<p>Star blanket patterns</p>

 Knowledge	Understanding	Skills & Procedures	ᐅᐃᐅ° Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Area can be measured with non-standard units or standard units.</p> <p>The area of a rectangle equals the product of its perpendicular side lengths.</p>	<p>[continued...]</p> <p>Area may be interpreted as the result of motion of a length.</p> <p>An area remains the same when decomposed or rearranged.</p> <p>Area is measured with equal-sized units that themselves have area and do not need to resemble the region being measured.</p> <p>The area of a rectangle can be perceived as square-shaped units structured in a two-dimensional array.</p>	<p>[continued...]</p> <p>Compare non-standard units that tile to non-standard units that do not tile.</p> <p>Measure area with non-standard units by tiling.</p> <p>Measure area with standard units by tiling with a square centimeter.</p> <p>Visualize and model the area of various rectangles as two-dimensional arrays of square-shaped units.</p> <p>Determine the area of a rectangle using multiplication.</p> <p>Solve problems involving area of rectangles.</p>		
LEARNING OUTCOME 4M1.2 Students interpret and express area.				
<p>Area can be estimated using a referent for a square centimeter.</p>	<p>Area can be estimated when less accuracy is required.</p>	<p>Identify referents for a square centimeter.</p> <p>Estimate an area by visualizing a referent for a square centimeter.</p> <p>Estimate an area by rearranging or combining partial units.</p>		

 Knowledge	Understanding	Skills & Procedures	 Nehiyaw Ways of Knowing	Other Suggestions
GUIDING QUESTION In what ways can angles be described?				
LEARNING OUTCOME 4M2 Students determine and express angles using standard units.				
<p>One degree represents 1/360 of the rotation of a full circle.</p> <p>Angles can be classified according to their measure:</p> <ul style="list-style-type: none"> • Acute angles measure less than 90°. • Right angles measure 90°. • Obtuse angles measure between 90° and 180°. • Straight angles measure 180°. <p>A benchmark is a known angle to which another angle can be compared.</p>	<p>Angles are quantified by measurement and based on the division of a circle.</p> <p>An angle is measured with equal- sized units that themselves are angles.</p>	<p>Measure an angle with degrees using a protractor.</p> <p>Describe an angle as acute, right, obtuse, or straight.</p> <p>Relate angles of 90°, 180°, 270°, and 360° to fractions of a circle.</p> <p>Estimate angles by comparing to benchmarks of 45°, 90°, 180°, 270°, and 360°.</p>	<p> Introduction to Traps and Snares Series: Rabbit Snares</p>	<p>Determine angles in:</p> <ul style="list-style-type: none"> • Medicine Wheel (fractions, angles) • Drum making (e.g., use sinew to measure and tie in angles; identify area, circumference)
ORGANIZING IDEA GEOMETRY: Shapes are defined and related by geometric attributes.				
GUIDING QUESTION In what ways can geometric properties define space?				
LEARNING OUTCOME 4G1.1 Student analyze and explain geometric properties.				
<p>Angle relationships, including supplementary and complementary, are geometric properties.</p> <p>Two angles that compose 90° are complementary angles.</p> <p>Two angles that compose 180° are supplementary angles.</p> <p>[continued...]</p>	<p>Geometric properties are measurable.</p> <p>Geometric properties define a hierarchy for classifying shapes.</p>	<p>Identify relationships between the sides of a polygon, including parallel, equal length, or perpendicular, by measuring.</p> <p>Identify relationships between angles within a polygon, including equal, supplementary, complementary, and sum of interior angles, by measuring.</p> <p>[continued...]</p>		<p> Gabriel Dumont Institute: Virtual Museum of Métis History and Culture: How to Fingerweave</p>

 Knowledge	Understanding	Skills & Procedures	ᐅᐅᐅᐅ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Quadrilaterals include</p> <ul style="list-style-type: none"> • squares • rectangles • parallelograms • trapezoids • rhombuses <p>Side length can be used to describe triangles as</p> <ul style="list-style-type: none"> • equilateral • isosceles • Scalenes <p>Triangles can be classified according to angle as</p> <ul style="list-style-type: none"> • right • obtuse • acute 		<p>[continued...]</p> <p>Identify relationships between the faces of three-dimensional models of prisms, including parallel or perpendicular, by measuring.</p> <p>Describe triangles according to side length.</p> <p>Classify triangles as equilateral, isosceles, or neither using geometric properties related to sides.</p> <p>Classify triangles as right, acute, or obtuse using geometric properties related to angles.</p> <p>Classify quadrilaterals in a hierarchy according to geometric properties.</p>		
LEARNING OUTCOME 4G1.2 Student analyze and explain geometric properties.				
<p>Many shapes in the environment resemble polygons.</p> <p>Transformations can be used to illustrate geometric properties of a polygon.</p>	<p>A shape resembling a polygon that does not share the defining geometric properties of the polygon is a close approximation.</p>	<p>Show, using geometric properties, that a close approximation of a polygon is not the same as the polygon.</p> <p>Verify geometric properties of polygons by translating, rotating, or reflecting using hands-on materials or digital applications.</p>		

 Knowledge	Understanding	Skills & Procedures	 Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
STATISTICS: The science of collecting, analyzing, visualizing, and interpreting data can inform understanding and decision making.				
GUIDING QUESTION				
In what ways can communication be shaped by the choice of representation?				
LEARNING OUTCOME				
4ST1.1 Students evaluate the use of scale in graphical representations of data.				
<p>A statistical problem-solving process includes</p> <ul style="list-style-type: none"> • formulating statistical questions • collecting data • representing data • interpreting data 	<p>Representation is part of a statistical problem-solving process.</p>	<p>Engage in a statistical problem-solving process.</p>	<p>   7 Year Cycle  Orienteering Series: Weather Indicators </p>	<p>  Alberta Native Friendship Centres Association & Be Fit For Life Network: Move & Play Through Traditional Games (Run and Scream game) Estimate and measure the distance one student can run, the distance the whole class can run. Graph the results with a bar graph, dot plots, circle graph. </p>



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LEARNING OUTCOME

4ST1.2 Students evaluate the use of scale in graphical representations of data.

Many-to-one correspondence is the representation of many objects using one object or interval on a graph.

Graphs can include

- pictographs
- bar graphs
- dot plots

Representation can express many-to-one correspondence by defining a scale.

Different representations tell different stories about the same data.

Select an appropriate scale to represent data.

Represent data in a graph using many-to-one correspondence.

Describe the effect of scale on representation.

Justify the choice of graph used to represent certain data.

Compare different graphs of the same data.

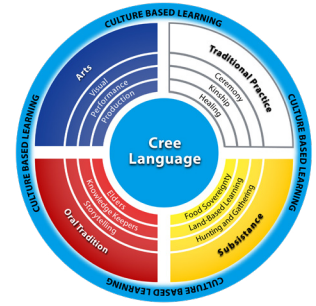
Interpret data represented in various graphs.





[Learn Alberta: Science Grade 4 Lesson Plan](#) :

Collect, display and analyze data to solve problems. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions.




Science
























Knowledge	Understanding	Skills & Procedures	ᑭᓄᓐᓂᓐ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA Matter(M) : Understandings of the physical world are deepened through investigating matter and energy.				
GUIDING QUESTION How can materials be managed safely?				
LEARNING OUTCOME 4M 1.1 Students investigate the management of waste and dangerous materials and describe environmental impact.				
<p>Methods of waste management that can negatively impact the environment include using landfills and burning.</p> <p>Methods of waste management that can reduce negative environmental impacts include</p> <ul style="list-style-type: none"> • reducing • reusing • recycling • repurposing • repairing • composting <p>Increased production and consumption of materials leads to increased production of waste materials.</p> <p>Waste materials may be solids, liquids, or gases.</p>	<p>Responsible methods of waste management can reduce negative environmental impacts.</p>	<p>Compare the different methods of waste management and discuss their environmental impacts.</p> <p>Develop a personal plan to reduce waste.</p> <p>Discuss local waste management programs.</p> <p>Represent a recycling process using diagrams.</p>	<p> Stewardship and Community – Sharing</p>	<p> Learn Alberta: Science Grade 4 Lesson Plan : Students learn about wastes produced through natural processes and human technology.</p>






















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LEARNING OUTCOME				
4M 1.2 Students investigate management of waste materials and describe potential personal and environmental impacts.				
<p>Dangerous materials include natural and processed materials that can be harmful to the health of individuals.</p> <p>Symbols are used to identify dangerous materials.</p> <p>Hazard symbols are used to identify dangerous materials, including those that are</p> <ul style="list-style-type: none"> • explosive • flammable • corrosive • poisonous 	<p>Responsible use and disposal can reduce environmental impacts of dangerous materials.</p>	<p>Identify the hazard associated with symbols on various dangerous materials at home, at school, or in the community.</p> <p>Discuss responsible use and disposal of dangerous materials.</p>		
ORGANIZING IDEA				
Energy (E): Understandings of the physical world are deepened through investigating matter and energy.				
GUIDING QUESTION				
How can forces affect objects from a distance?				
LEARNING OUTCOME				
4E 1.1 Students investigate how forces can act on objects without contact.				
<p>Non-contact forces occur between objects that are not in direct contact.</p> <p>Gravity on Earth is a non-contact force that pulls objects toward the ground.</p> <p>Magnetic force is a non-contact force that attracts or repels magnetic materials.</p> <p>Magnetic materials contain iron, cobalt, or nickel.</p> <p>The strength of non-contact forces decreases as objects get farther apart.</p> <p>Non-contact forces can act through some materials.</p>	<p>Non-contact forces are invisible forces that can affect objects, materials, and substances.</p>	<p>Describe how non-contact forces affect objects.</p> <p>Demonstrate the effect of gravity on an object.</p> <p>Conduct an investigation to demonstrate magnetic forces on objects.</p>		

 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑦᑭᐱᑦ Nehiyaw Ways of Knowing	Other Suggestions
LEARNING OUTCOME				
4E 1.2 Students investigate how forces can act on objects without contact.				
<p>Magnetic force is strongest at the magnetic poles.</p> <p>Magnets have two magnetic poles, known as north and south.</p> <p>Opposite magnetic poles attract each other and like magnetic poles repel each other.</p> <p>Both magnetic poles attract magnetic material.</p> <p>Some materials can become magnetized by interacting with a magnet.</p>	Magnets interact with each other and magnetic material.	Analyze interactions between the magnetic poles of magnets. Magnetize a material using a magnet.		
ORGANIZING IDEA				
Earth System (ES): Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.				
GUIDING QUESTION				
How does Earth sustain life?				
LEARNING OUTCOME				
4ES 1.1 Students investigate the systems of Earth and reflect on how interconnections sustain life.				
<p>Earth scientists call Earth's systems the spheres, including the</p> <ul style="list-style-type: none"> • lithosphere • atmosphere • hydrosphere • biosphere <p>The lithosphere</p> <ul style="list-style-type: none"> • is the outer layers of Earth's surface • is made of rocks • contains soils and minerals that support life <p>The atmosphere</p> <ul style="list-style-type: none"> • is a gas layer that surrounds Earth • warms Earth's surface • reduces extremes of temperature • contains oxygen, which is used for breathing <p>[...continued]</p>	Earth's systems interact with one another, resulting in environments that sustain life.	Make connections between human activity and Earth's systems. Analyze the interconnectedness of Earth's systems.	  7 Year Cycle	

 Knowledge	Understanding	Skills & Procedures	ᑭᑦᑎᑦᑎᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[...continued]</p> <p>The hydrosphere is</p> <ul style="list-style-type: none"> • all areas of Earth that are covered with water • necessary for sustaining life <p>The biosphere includes all</p> <ul style="list-style-type: none"> • life on Earth • regions of Earth where life is supported <p>First Nations, Métis, and Inuit hold understandings of Earth systems that sustain life, including that all things are interconnected.</p>			<p>   Elk Harvest Series (5 videos)</p> <p>   Moose Harvest Series (Field Harvest – 6 videos; Butchering and Cutting – 9 videos; Fire Preparation – 3 videos; Feast – 3 videos)</p>	
LEARNING OUTCOME				
4ES 1.2 Students investigate the systems of Earth and reflect on how interconnections sustain life.				
<p>Organisms require warmth and energy from the Sun to live.</p> <p>Sunlight is more direct at the equator than at the poles.</p> <p>The long-term temperature at the equator is warmer than it is at the poles.</p> <p>In Alberta, sunlight is more direct, and the length of daylight is longer, in summer than in winter.</p>	<p>Earth’s surface is warmed by the Sun, allowing for life.</p>	<p>Describe the importance of the amount of sunlight and warmth on a variety of organisms.</p>	<p> Common Seasonal Activities – Seasonal Round</p> <p>  Legend of Night and Day</p>	
LEARNING OUTCOME				
4ES 1.3 Students investigate the systems of Earth and reflect on how interconnections sustain life.				
<p>Water is a basic need for plants and animals.</p> <p>Water provides habitat for many organisms.</p> <p>First Nations, Métis, and Inuit laws of nature honour water as being sacred because water sustains life.</p> <p>Laws of nature guide First Nations, Métis, and Inuit in their responsibility to protect water and sources of water.</p> <p>First Nations, Métis, and Inuit laws of nature include</p> <ul style="list-style-type: none"> • how nature provides gifts of life • living in harmony with the land 	<p>Caring for water and water sources is a shared responsibility.</p>	<p>Discuss ways that plants and animals use water to meet their basic needs.</p> <p>Identify plants and animals that exist in various bodies of water.</p> <p>Demonstrate respect for water in the local environment.</p> <p>Discuss the importance of water to First Nations, Métis, and Inuit.</p>	<p>  Legend of Raven and Water</p>	<p>  Water: the sacred relationship - website and videos</p> <p> “Nibi’s Water Song” by Sunshine Tenasco, 2019.</p> <p>  Water Walkers</p>

 Knowledge	Understanding	Skills & Procedures	ᑭᓴᓴᑦ Nehiyaw Ways of Knowing	Other Suggestions
LEARNING OUTCOME				
4ES 1.4 Students investigate the systems of Earth and reflect on how interconnections sustain life.				
<p>Changes in one system that can impact another system include changes in</p> <ul style="list-style-type: none"> • number of organisms • food sources • habitat • water distribution and cleanliness • weather patterns <p>Governments, conservation groups, and First Nations, Métis, and Inuit communities collaborate with Parks Canada to conserve, restore, and protect Canada's natural and cultural heritages through initiatives such as</p> <ul style="list-style-type: none"> • culture camps • science camps • land management and preservation of important sites • cultural centres 	<p>Earth's systems are interconnected and can be impacted by small changes.</p>	<p>Explain how changes in one system can have impacts on other systems.</p> <p>Discuss the importance of governments, conservation groups, and First Nations, Métis, and Inuit communities working alongside Parks Canada.</p>	 7 Year Cycle	<p>Parks Canada and Métis Nation series; example of the bison treaty; bison being returned to Nations by Elk Island National Park.</p>
LEARNING OUTCOME				
4ES 1.5 Students investigate the systems of Earth and reflect on how interconnections sustain life.				
<p>Natural resources are materials from nature that are used to meet human needs, and include</p> <ul style="list-style-type: none"> • air • water • soil • minerals • metals • forests • organisms 	<p>Earth's systems include natural resources that are central to human well-being.</p>	<p>Investigate natural resources found in Alberta and how they are used to meet human needs.</p>	 Plants and Trees – Animate/ Inanimate	 “Spirit Gifting” by Elmer Ghostkeeper, 2007.

Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
LEARNING OUTCOME 4ES 1.6 Students investigate the systems of Earth and reflect on how interconnections sustain life.				
<p>Conservation is the preservation and protection of Earth's systems from pollution, depletion, or extinction.</p> <p>Conservation practices can be implemented in natural and human-made areas.</p> <p>Conservation can involve creating local, provincial, and national parks.</p> <p>First Nations, Métis, and Inuit have a long history with the land that has informed conservation practices and beliefs.</p>	<p>Conservation can impact land, natural resources, and organisms.</p> <p>Many First Nations, Métis, and Inuit practise traditional methods of conservation, including taking only what is needed.</p>	<p>Investigate conservation practices in natural and human-made areas.</p> <p>Discuss the interconnectedness between human use of parks and conservation practices.</p>	<p> Stewardship and Community – Sharing</p> <p>  Legend of Wolverine</p>	<p>  Canadian Geographic: Bison successfully reintroduced in Banff National Park</p> <p>  How Wolves Saved Yellowstone</p>
LEARNING OUTCOME 4ES 1.7 Students investigate the systems of Earth and reflect on how interconnections sustain life.				
<p>Conservation can be practised through personal actions, including</p> <ul style="list-style-type: none"> • use of electricity; e.g., turning off lights when leaving a room • use of water; e.g., taking shorter showers • reducing waste; e.g., using reusable packaging <p>Conservation can be practised through community or global actions, such as</p> <ul style="list-style-type: none"> • use of energy-efficient alternatives; e.g., solar panels • supplying water to support crops (irrigation) • community recycling or composting programs 	<p>Conservation can impact land, natural resources, and organisms.</p> <p>Many First Nations, Métis, and Inuit practise traditional methods of conservation, including taking only what is needed.</p>	<p>Describe examples of personal actions that contribute to conservation in daily life.</p> <p>Create a plan to implement a conservation practice in a local community.</p>	<p> Stewardship and Community – Sharing</p> <p>  Legend of Wolverine</p>	<p>  Canadian Geographic: Bison successfully reintroduced in Banff National Park</p> <p>  How Wolves Saved Yellowstone</p>

 Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA				
Living Systems (LS): Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.				
GUIDING QUESTION				
In what ways do the structures of organisms support survival?				
LEARNING OUTCOME				
4LS 1.1 Students analyze organisms and relate external structures to functions.				
<p>Organisms are living things that respond to stimuli and include plants, humans, and other animals.</p> <p>Organisms can be classified in various ways, including by</p> <ul style="list-style-type: none"> • appearance • habitat • structures <p>Structures, including body parts, are features of organisms that serve a purpose or function.</p> <p>Organisms have external structures that can vary; e.g.,</p> <ul style="list-style-type: none"> • plants may have roots, stems, leaves, flowers, fruit, or other structures • animals may have claws, teeth, legs, shells, skins, or other structures <p>Functions of external structures in an organism include</p> <ul style="list-style-type: none"> • eating • moving • protecting • sensing • reproducing 	<p>A variety of organisms live on Earth and have external structures that support various functions.</p>	<p>Find and classify examples of local plants and animals based on appearance, habitat, and structures.</p> <p>Demonstrate respect when interacting with plants and animals in local environments.</p> <p>Relate the external structures of plants to their functions.</p> <p>Relate the external structures of animals to their functions, excluding reproduction.</p> <p>Compare external structures of various plants and animals in relation to function.</p>	 <p>Harvesting Medicines Series: Protocol on Herb Gathering</p>  <p>Arrowhead Fingers</p>	 <p>Canadian Geographic: Indigenous Peoples Atlas of Canada: Traditional Métis Medicines</p>
LEARNING OUTCOME				
4LS 1.2 Students analyze organisms and relate external structures to functions.				
<p>Plants can detect sensory stimuli, such as light, gravity, temperature, and touch, which help them grow and survive.</p> <p>[continued...]</p>	<p>Organisms sense and respond to their environments to support growth and survival.</p>	<p>Discuss how plants respond to sensory stimuli.</p> <p>Relate sensory organs of animals to their survival.</p> <p>[continued...]</p>	 <p>The Legend of Weasel</p>	



Knowledge	Understanding	Skills & Procedures	ᑭᑦᑎᑦᑎᑦ Nehiyaw Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Sensory organs of animals include</p> <ul style="list-style-type: none"> • ears • eyes • nose • tongue • skin <p>Sensory organs in animals help them meet their needs in various ways, such as by detecting</p> <ul style="list-style-type: none"> • food • other animals • danger • temperature 		<p>[continued...]</p> <p>Conduct an investigation to determine if an organism senses and responds to changes in an environment.</p>		

ORGANIZING IDEA








Space: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.















GUIDING QUESTION

How do objects in space impact daily life?

LEARNING OUTCOME




4S 1.1 Students investigate and describe objects in space in connection to daily life.


<p>The universe includes all of space and everything in it.</p> <p>Objects in space include</p> <ul style="list-style-type: none"> • the Moon • the Sun (a star) • stars and their planets • planets and their moons <p>Most objects in space are more easily observed at night.</p> <p>Technologies for viewing objects in space include</p> <ul style="list-style-type: none"> • binoculars • telescopes • planetariums <p>Safe viewing of the Sun requires appropriate safety equipment and precautions to avoid damage to the eyes.</p>	<p>Observing objects in space helps us connect Earth to its place in the universe.</p>	<p>Investigate and discuss how plants and animals respond to stimuli in their environments in order to survive.</p>	<p>  Legend of Night and Day</p> <p> 13 Moons</p> <p> Legend of Solstice</p>	<p> Lessons from the Earth and Beyond: Bringing Indigenous Knowledge Systems into the Classroom</p> <p>  Coyote Science website and TV show</p>
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 Knowledge	Understanding	Skills & Procedures	ᑭᑭᑭᑭ Nehiyaw Ways of Knowing	Other Suggestions
LEARNING OUTCOME				
4S 1.2 Students investigate and describe objects in space in connection to daily life.				
<p>Constellations are groups of stars that appear to form a shape.</p> <p>Constellations have names that come from a variety of sources.</p> <p>Stars in the same constellation may be millions of kilometres apart.</p> <p>Earth's daily rotation and yearly revolution around the Sun causes the constellations to appear in different locations at different times.</p> <p>Polaris, the North Star, shows the approximate direction of the North Pole.</p> <p>The Orion constellation can be used to find the South Pole.</p>	<p>Stars and constellations are recognizable from Earth and can be used for navigation and tracking the passage of time.</p>	<p>Examine constellations in relation to location in the sky.</p> <p>Explain ways in which stars can be used for navigation.</p> <p>Explore the local traditional names of the North Star.</p>	<p> Little Dipper or   7 Sisters Legend</p>	<p>  Tipiskawi Kisik: Night Sky Stories, a series by Wilfred Buck</p> <p>  Coyote Science website and TV show</p>
LEARNING OUTCOME				
4S 1.3 Students investigate and describe objects in space in connection to daily life.				
<p>The Moon has been used throughout history to measure time.</p> <p>The international standard (Gregorian) calendar is based on the amount of time it takes Earth to revolve around the Sun.</p> <p>Most people follow the international standard calendar in daily life.</p> <p>Some cultures may use a lunar calendar in addition to the international standard calendar.</p> <p>Lunar calendars follow patterns of the Moon for timekeeping.</p>	<p>Many cultures connect observations of objects in space to time, place, and daily life in various ways.</p>	<p>Represent observations of objects in space as they connect to seasons, plants, and animals in a local area.</p> <p>Discuss similarities and differences between a lunar calendar and the international standard calendar.</p>	<p>  Legend of Night and Day</p> <p>  13 Moons</p>	<p>  Saskatchewan Literacy: When the Trees Crackle with Cold website and supports</p>



Knowledge	Understanding	Skills & Procedures	ᑭᐱᑭᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA Computer Science (CS): Problem solving and scientific inquiry are developed through the knowledgeable application of creativity, design, and computational thinking.				
GUIDING QUESTION How can design meet needs?				
LEARNING OUTCOME 4CS 1.1 Students examine and apply design processes to meet needs.				
<p>Design processes include</p> <ul style="list-style-type: none"> • understanding the problem • forming ideas (ideating) • planning • creating • analyzing • testing • troubleshooting <p>Feedback helps to ensure all needs are considered during the design process.</p> <p>An algorithm is a sequence of instructions.</p> <p>Artifacts are objects or products made by humans, machines, or computers through the process of design.</p> <p>Design can produce many artifacts, including</p> <ul style="list-style-type: none"> • algorithms • models • prototypes • blueprints • programs • experiments • objects <p>Design can deal with complex problems.</p> <p>Availability of materials and costs are considerations in design.</p>	<p>Design involves processes that can transform ideas into artifacts that meet needs.</p>	<p>Plan and create an artifact to meet a need.</p> <p>Provide feedback to others during the design process.</p> <p>Test an artifact to confirm that it meets intended needs.</p> <p>Collaborate to design an algorithm to solve a problem.</p> <p>Examine availability and cost of materials during design.</p>		

Knowledge	Understanding	Skills & Procedures	ᑭᑦᑎᑦᑎᑦᑎᑦ Nehiyaw Ways of Knowing	Other Suggestions
ORGANIZING IDEA Scientific Method (SM): Investigation of the physical world is enhanced through the use of scientific methods that attempt to remove human biases and increase objectivity.				
GUIDING QUESTION How can evidence advance knowledge in science?				
LEARNING OUTCOME 4SM 1.1 Students investigate evidence and reflect on its role in science.				
<p>Data can be descriptive and expressed using words (qualitative).</p> <p>Data can be measured and expressed using numbers and counts (quantitative).</p> <p>Descriptive and expressive oral narratives include numbers or counts.</p> <p>Relevant data addresses the question that is being investigated.</p> <p>Some observations and data are not relevant to the question being investigated.</p> <p>All relevant data must be considered.</p> <p>Evidence is produced through the study and interpretation of data.</p> <p>Data can be represented as evidence in multiple ways, including</p> <ul style="list-style-type: none"> • written texts • verbal presentations • oral traditions • graphs • tables • charts • diagrams • simulations • models <p>[continued...]</p>	<p>Ongoing collection of evidence provides a way to expand and adjust previous knowledge.</p>	<p>Decide whether to collect descriptive or measured data during an investigation.</p> <p>Interpret data collected from investigations.</p> <p>[continued...]</p>	<p>  7 Year Cycle (connection to observing population data)</p>	<p> There are many websites comparing western sciences to Indigenous sciences, such as Combining Two Ways of Knowing: Using Indigenous Knowledge to Enhance High School Science Courses</p>

 Knowledge	Understanding	Skills & Procedures	ᑭᐱᑦᑎᑦᑎᑦᑎᑦ Ways of Knowing	Other Suggestions
<p>[continued...]</p> <p>Système international d'unités (international system of units) is a common system of measurement used to communicate data and evidence.</p> <p>Système international d'unités can be abbreviated as SI.</p>		<p>[continued...]</p> <p>Interpret data and evidence expressed in SI units.</p> <p>Represent evidence from an investigation in a variety of ways.</p>		
LEARNING OUTCOME 4SM 1.2 Students investigate evidence and reflect on its role in science.				
<p>Reliability refers to consistency of data and evidence.</p> <p>Reliability of evidence can be affected by the amount of data collected and whether the data can be reproduced.</p> <p>Validity refers to how accurately data and evidence reflect what is supposed to be described or measured.</p> <p>Data can be measured more accurately using tools or technology.</p>	<p>Conclusions drawn during investigation must be based on reliable and valid evidence.</p>	<p>Collect reliable data during investigations.</p> <p>Draw conclusions using reliable and valid evidence from investigations.</p> <p>Collect valid data by accurately using tools or technology during investigations.</p> <p>Discuss tools or technology used to improve accuracy during investigations.</p> <p>Collaborate to evaluate the reliability and validity of a collection of data.</p>		