











GRADE FOUR







All Year	Fall	Winter	Spring
English Language Arts	Teach and/or reinforce all year Integrate themes from Social Studies, Science, Math and Land Based Learning		
Social Studies	Alberta - Sense of Land	Stories, History and Peoples of Alberta	Alberta - Celebrations and Challenges
Mathematics	Number Sense Statistics and Probability	Number Sense Statistics and Probability Patterns and Relations	Number Sense Statistics and Probability Shape and Space
Science	Light and Shadows Plant Growth and Changes Building Devices and Vehicles That Move	Light and Shadows Plant Growth and Changes	Light and Shadows Plant Growth and Changes Wheels and Levers Waste in Our World




HOW TO READ THE CURRICULUM CHARTS





- Specific learning outcomes deemed as Essential Learning Outcomes (ELOs) are identified in bold
- The colours and icons on this “year-at-a-glance” are used in the curriculum charts that follow to indicate when outcomes or groups of outcomes can be taught - all year or anytime throughout the year; fall; winter; and/or spring
- ELOS with no specific season are identified with the “All Year” colour as they could be taught and reinforced at any time throughout the year






 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
GENERAL OUTCOME 1			
Students will listen, speak, read, write, view and represent to explore thoughts, ideas, feelings and experiences.			
1.1 Discover and Explore			
Express ideas and develop understanding	Compare new ideas, information and experiences to prior knowledge and experiences Ask questions, paraphrase and discuss to explore ideas and understand new concepts Share personal responses to explore and develop understanding of oral, print and other media texts		<ul style="list-style-type: none"> Ask questions, paraphrase and discuss to explore ideas and understand new concepts Journal entries, creative writing, storytelling
Experiment with language and forms	Discuss and compare the ways similar topics are developed in different forms of oral, print and other media texts		<ul style="list-style-type: none"> Hunting, berry picking, jam making
Express preferences	Select preferred forms from a variety of oral, print and other media texts		
Set goals	Identify areas of personal accomplishment and areas for enhancement in language learning and use		<ul style="list-style-type: none"> Demolition derby, horseback riding, rabbit snaring & making
1.2 Clarify and Extend			
Consider others' ideas	Identify other perspectives by exploring a variety of ideas, opinions, responses and oral, print and other media texts		
Combine ideas	Use talk, notes, personal writing and representing to record and reflect on ideas, information and experiences		<ul style="list-style-type: none"> Journal entries, book reports, letter writing, picture prompt writing(fall/wildlife/hunting/seasonal colors)
Extend understanding	Explore ways to find additional ideas and information to extend understanding		
GENERAL OUTCOME 2			
Students will listen, speak, read, write, view and represent to comprehend and respond personally and critically to oral, print and other media texts.			
2.1 Use Strategies and Cues			
Use prior knowledge	Use ideas and concepts, developed through personal interests, experiences and discussion, to understand new ideas and information		




 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
Use prior knowledge	Explain how the organizational structure of oral, print and other media texts can assist in constructing and confirming meaning		<ul style="list-style-type: none"> • Scrapbooking activities, chapter books, sentence construction, parts of speech, phonics, grammar
Use comprehension strategies	Preview sections of print texts to identify the general nature of the information and to set appropriate purpose and reading rate Comprehend new ideas and information by responding personally and discussing ideas with others Extend sight vocabulary to include words frequently used in other subject areas		
	Monitor understanding by confirming or revising inferences and predictions based on information in text		<ul style="list-style-type: none"> • Reading recipes and instructions for cooking ducks/rabbits, sacred Nehiyawin stories in winter, reading instructions for canoe making and building tipis, reading cultural songs
Use textual cues	Use text features, such as headings, subheadings and margin organizers, to enhance understanding of ideas and information Distinguish differences in the structural elements of texts, such as letters and storybooks, to access and comprehend ideas and information		<ul style="list-style-type: none"> • Chapter books, Nehiyawin story/stories
Use phonics and structural analysis	Identify and know the meaning of some frequently used prefixes and suffixes Apply knowledge of root words, compound words, syllabication, contractions and complex word families to read unfamiliar words in context Integrate knowledge of phonics and sight vocabulary with knowledge of language and context clues to read unfamiliar words in context		
Use references	Use alphabetical order by first and second letter to locate information in reference materials Use junior dictionaries, spell-check functions and electronic dictionaries to confirm the spellings or locate the meanings of unfamiliar words in oral, print and other media texts		






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2.2 Respond to Texts			
Experience various texts	Experience oral, print and other media texts from a variety of cultural traditions and genres, such as personal narratives, plays, novels, video programs, adventure stories, folk tales, informational texts, mysteries, poetry and CDROM programs		<ul style="list-style-type: none"> French/Inuit/Métis & other first nations
	Identify and discuss favourite authors, topics and kinds of oral, print and other media texts		
	Discuss a variety of oral, print or other media texts by the same author, illustrator, storyteller or filmmaker		
	Retell events of stories in another form or medium		<ul style="list-style-type: none"> Puppet shows/drama/acting/google slides/flip grids
	Make general evaluative statements about oral, print and other media texts		
Construct meaning from texts	Connect the thoughts and actions of characters portrayed in oral, print and other media texts to personal and classroom experiences		<ul style="list-style-type: none"> Journal writing/art/story recount from personal viewpoint
	Identify the main events in oral, print and other media texts; explain their causes, and describe how they influence subsequent events		
	Compare similar oral, print and other media texts and express preferences, using evidence from personal experiences and the texts		
	Develop own opinions based on ideas encountered in oral, print and other media texts		
Appreciate the artistry of texts	Explain how onomatopoeia and alliteration are used to create mental images		
	Explain how language and visuals work together to communicate meaning and enhance effect		<ul style="list-style-type: none"> Art/think-pair-share/inside/outside circles
2.3 Understand Forms, Elements and Techniques			
Understand forms and genres	Describe and compare the main characteristics of a variety of oral, print and other media texts		
	Identify various ways that information can be recorded and presented visually		<ul style="list-style-type: none"> Videos, voice recordings, podcast, vlogs, google slides





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Understand techniques and elements	Identify and explain connections among events, setting and main characters in oral, print and other media texts Identify the speaker or narrator of oral, print or other media texts Identify how specific techniques are used to affect viewer perceptions in media texts		
Experiment with language	Recognize how words and word combinations, such as word play, repetition and rhyme, influence or convey meaning		
2.4 Create Original Text			
Generate ideas	Use a variety of strategies for generating and organizing ideas and experiences in oral, print and other media texts		<ul style="list-style-type: none"> • Brainstorming, mind maps, graphic organizers, story boards, research outline, imitating stories
Elaborate on the expression of ideas	Select and use visuals that enhance meaning of oral, print and other media texts		
Structure texts	Produce oral, print and other media texts that follow a logical sequence, and demonstrate clear relationships between character and plot Produce narratives that describe experiences and reflect personal responses		
GENERAL OUTCOME 3 Students will listen, speak, read, write, view and represent to manage ideas and information.			
3.1 Plan and Focus			
Focus attention	Use organizational patterns of expository texts to understand ideas and information Focus topics appropriately for particular audiences		
Determine information needs	Ask relevant questions, and respond to questions related to a particular topic		
Plan to gather information	Develop and follow a class plan for accessing and gathering ideas and information		<ul style="list-style-type: none"> • Scavenger hunts/research projects/scrapbooking

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3.2 Select and Process			
Use a variety of sources	Locate information to answer research questions, using a variety of sources, such as maps, atlases, charts, dictionaries, school libraries, video programs, elders in the community and field trips		<ul style="list-style-type: none"> • Culture camp - duck hunting/ rabbit snaring/traditional/cultural songs
Access information	Use a variety of tools, such as indices, legends, charts, glossaries, typographical features and dictionary guide words, to access information Identify information sources that inform, persuade or entertain, and use such sources appropriately		
Evaluate sources	Recall important points, and make and revise predictions regarding upcoming information		
3.3 Organize, Record and Evaluate			
Organize information	Organize ideas and information, using appropriate categories, chronological order, cause and effect, or posing and answering questions Record ideas and information that are on topic Organize oral, print and other media texts into sections that relate to and develop the topic		
Record information	Make notes of key words, phrases and images by subtopics; cite titles and authors of sources alphabetically		<ul style="list-style-type: none"> • List presenters alphabetically, list authors alphabetically, journal cultural camp experiences by sub topics
	Paraphrase information from oral, print and other media sources		
Evaluate information	Examine gathered information to identify if more information is required; review new understanding		
3.4 Share and Review			
Share ideas and information	Communicate ideas and information in a variety of oral, print and other media texts, such as short reports, talks and posters Select visuals, print and/or other media to add interest and to engage the audience		<ul style="list-style-type: none"> • Share photos/artifacts/crafts from culture camp/recording of a song, talk with elders, video conversations/activities




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Review research process	Identify strengths and areas for improvement in research process		
GENERAL OUTCOME 4 Students will listen, speak, read, write, view and represent to enhance the clarity and artistry of communication.			
4.1 Enhance and Improve			
Appraise own and others' work	Identify the general impression and main idea communicated by own and peers' oral, print and other media texts Use pre-established criteria to provide support and feedback to peers on their oral, print and other media texts		<ul style="list-style-type: none"> • Conduct surveys/peer feedback/ community feedback
Revise and edit	Revise to ensure an understandable progression of ideas and information Identify and reduce fragments and run-on sentences Edit for subject-verb agreement		<ul style="list-style-type: none"> • Editing paragraphs/handouts/ stories of Nehiyawah ways and being (7 teachings)
Enhance legibility	Write legibly, using a style that demonstrates awareness of alignment, shape and slant Use special features of software when composing, formatting and revising texts		
Expand knowledge of language	Use an increasing variety of words to express and extend understanding of concepts related to personal interests and topics of study Recognize English words and expressions that come from other cultures or languages		<ul style="list-style-type: none"> • Stories about other Nehiyawah groups such as Inuit/Métis • Dialogue about the sequence of events for Ice fishing/snow shoe making/fire making/tea making activities
Enhance artistry	Experiment with combining detail, voice-over, music and dialogue with sequence of events		
4.2 Attend to Conventions			
Attend to grammar and usage	Identify simple and compound sentence structures, and use in own writing		<ul style="list-style-type: none"> • History of Alberta/traditional stories (Wisakicak stories)





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Attend to grammar and usage	Identify correct noun–pronoun agreement, and use in own writing		
	Identify past, present and future action		
Attend to spelling	Use phonic knowledge and skills and visual memory, systematically, to spell multisyllable words in own writing		<ul style="list-style-type: none"> Written Nehiyawin language (tipi/greetings/basic social commands)
	Identify and apply common spelling generalizations in own writing		
	Apply strategies for identifying and learning to spell problem words in own writing		
Attend to capitalization and punctuation	Use capitalization to designate organizations and to indicate the beginning of quotations in own writing		
	Use commas after introductory words in sentences and when citing addresses in own writing		
4.3 Present and Share			
Present information	Present to peers ideas and information on a topic of interest, in a well-organized form		
Enhance presentation	Add interest to presentations through the use of props, such as pictures, overheads and artifacts		
Use effective oral and visual communication	Adjust volume, tone of voice and gestures appropriately, to suit a variety of social and classroom activities		
Demonstrate attentive listening and viewing	Connect own ideas, opinions and experiences to those communicated in oral and visual presentations		<ul style="list-style-type: none"> Storytellers, relating personal experiences from culture camp
	Give constructive feedback, ask relevant questions, and express related opinions in response to oral and visual presentations		

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GENERAL OUTCOME 5 Students will listen, speak, read, write, view and represent to respect, support and collaborate with others.			
5.1 Respect Others and Strengthen Community			
Appreciate diversity	Describe similarities and differences between personal experiences and the experiences of people or characters from various cultures portrayed in oral, print and other media texts		<ul style="list-style-type: none"> • History of Alberta/Fur trade/dog sledding/ice fishing/net fishing (researching for similarities/differences)
	Appreciate that responses to some oral, print or other media texts may be different		
Relate texts to culture	Identify and discuss main characters, plots, settings and illustrations in oral, print and other media texts from diverse cultures and communities		
Celebrate accomplishments and events	Use appropriate language to acknowledge special events and to honour accomplishments in and beyond the classroom		<ul style="list-style-type: none"> • Nehiyawin language/Treaties/cultural events and stories
Use language to show respect	Identify and discuss differences in language use in a variety of school and community contexts		
5.2 Work Within a Group			
Cooperate with others	Take responsibility for collaborating with others to achieve group goals		<ul style="list-style-type: none"> • Bear safety, Traditional games, tipi making, environmental stewardship
	Ask for and provide information and assistance, as appropriate, for completing individual and group tasks		<ul style="list-style-type: none"> • Bear safety, Traditional games, tipi making, environmental stewardship
Work in groups	Share personal knowledge of a topic to develop purposes for research or investigations and possible categories of questions		
	Use brainstorming, summarizing and reporting to organize and carry out group projects		<ul style="list-style-type: none"> • Tipi making/snow shoe making/miniature canoes, lifts/rescue techniques/shelter making/identification and harvesting of traditional medicines/herbs
Evaluate group process	Assess group process, using established criteria, and determine areas for improvement		



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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 of Alberta.			
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) 		
	<ul style="list-style-type: none"> appreciate how Alberta’s fossil heritage contributes to the province’s unique character (LPP) 		
	<ul style="list-style-type: none"> appreciate the variety and abundance of natural resources in Alberta (ER, LPP) 		<ul style="list-style-type: none"> Oil, forests, animals, plants, minerals, water, look at/research the different resources from each nation, Red Earth - what is the story behind this name?
	<ul style="list-style-type: none"> appreciate the environmental significance of national and provincial parks and protected areas in Alberta (ER, LPP) 		
	<ul style="list-style-type: none"> appreciate how land sustains communities and quality of life (ER, LPP) 		<ul style="list-style-type: none"> Ecosystem, farming, wetlands, forests sustain communities and provide quality of life
	<ul style="list-style-type: none"> demonstrate care and concern for the environment through their choices and actions (LPP) 		<ul style="list-style-type: none"> Connect to waste in our world unit and environmentally friendly actions; tie in Cree natural law and world view; Peerless Lake wheel
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) 		
	<ul style="list-style-type: none"> 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) 		






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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"> 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) 		<ul style="list-style-type: none"> Mapping activities and identification of where natural resources are located; focus on KTCEA area and exploring resources within that area
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) 		<ul style="list-style-type: none"> Students research assigned areas to identify unique geological features - create a tourist guide as a result. Find man made structures on the land, as well as structures that are naturally there. Connect to Elder stories about unique features (e.g. God's Lake - what is significant and how did it get its name?)
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) 		<ul style="list-style-type: none"> Research the establishment of their own community (e.g. lakes/rivers/road access, trap lines, etc.) Learn from Elders about the history. Why were some communities missed in the signing of Treaty? Why was Lubicon forced together with Big Stone?)




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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"> • How do Albertans deal with competing demands on land use (e.g., conservation, solar and wind power, recreation, agriculture, oil exploration, forestry)? (ER, LPP) • 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) 		<ul style="list-style-type: none"> • Protests, agreements with the government; reforestation; land claim settlements; understanding of duty to consult with First Nations before natural resource projects are undertaken
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 of belonging.			
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) 		<ul style="list-style-type: none"> • Elder and knowledge keeper stories; land based learning camps • Elder and knowledge keeper stories; land based learning camps




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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 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) 		
Knowledge and Understanding			
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:	<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) 		<ul style="list-style-type: none"> Look at the human movement across the province based on oral tradition or the first maps (produced by David Thompson) Dwayne Donald's sessions related to Aako'mook'i maps Looking at even within the Cree language there are different words for the same thing. Communities have their own words to describe things. Language and its connections to culture (as an integral part of culture) and connections to world views. Listen to Elder's share stories; read Neiyawiwin stories



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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:	<ul style="list-style-type: none"> • How did the Métis Nation and Métis settlements contribute to Alberta's identity (i.e., languages, accomplishments)? (CC, I, LPP, TCC) 		<ul style="list-style-type: none"> • Fur Trade between First Nations and Europeans; educational partnership with Gift Lake; connect Métis communities within Nations. The development of a new culture and language. Difficult to distinguish between the five nations.
	<ul style="list-style-type: none"> • 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) 		
	<ul style="list-style-type: none"> • 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) 		
	<ul style="list-style-type: none"> • 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) 		
	<ul style="list-style-type: none"> • How did the arrival of diverse groups of people determine the establishment and continued growth of rural and urban communities? (CC, GC, LPP) 		<ul style="list-style-type: none"> • Residential Schools
	<ul style="list-style-type: none"> • How are agriculture and the establishment of communities interconnected? (ER, LPP) 		
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) 		<ul style="list-style-type: none"> • Peerless Lake Wheel; 7 Teachings; stories; language; celebrations; ceremonies; importance of kinship/families; loss of identity





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4.3.1 appreciate the factors contributing to quality of life in Alberta:	<ul style="list-style-type: none"> demonstrate respect for the rights, opinions and perspectives of others (C, I) 		
	<ul style="list-style-type: none"> demonstrate respect for the cultural and linguistic diversity in Alberta (C, I) 		<ul style="list-style-type: none"> Looking at the different languages within the geographic area: e.g. Dene, Cree, Athapaskan, Blackfoot
	<ul style="list-style-type: none"> recognize global affiliations within the Alberta Francophonie (GC) 		
	<ul style="list-style-type: none"> appreciate the influence of the natural environment and resources on the growth and development of Alberta (ER, LPP) 		
	<ul style="list-style-type: none"> value and respect their relationships with the environment (C, ER, LPP) 		<ul style="list-style-type: none"> Connect to stewardship
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) 		
	<ul style="list-style-type: none"> What key events have impacted the economy of Alberta (i.e., drought of the 1930s, discovery of oil)? (ER, LPP, TCC) 		
	<ul style="list-style-type: none"> 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) 		
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) 		
	<ul style="list-style-type: none"> In what ways have Aboriginal peoples and communities changed over time? (CC, I, TCC) 		<ul style="list-style-type: none"> Listening to stories from Elders, students contributing to the creation of an interactive museum of the area (virtual or eventually a physical museum)
	<ul style="list-style-type: none"> How has multiculturalism in Alberta evolved over time? (CC, I, GC, LPP) 		
	<ul style="list-style-type: none"> How has the Alberta Francophonie become increasingly multicultural? (CC, I, GC) 		

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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"> 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) 		<ul style="list-style-type: none"> Communities are named after the lake or water body near them; find/research how each of the nations have their own place names that are not documented on maps
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) 		<ul style="list-style-type: none"> Relate to seasonal rounds - travelling throughout the area depending on the season. Elder stories and traditional stories that reflect seasonal rounds
	<ul style="list-style-type: none"> In what ways do interests concerning tourism and the natural environment conflict? (ER, LPP) 		

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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 ELOs are bold	Season	Nehiyaw Ways of Knowing
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 		
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 <small>ELOs are bold</small>	Season	Nehiyaw Ways of Knowing
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 		

 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
 NUMBER AT A GLANCE Add and subtract to 10 000; math facts to 9 (recall to 7); 3x1 digit multiplication with problem solving; 2-digit x 1-digit division with problem solving; fractions less than and equal to 1; decimals to the hundredths			
Quantity Operational Sense Relationships Representation Reasoning			
The Base Ten Numeration System is a scheme for recording numbers 0-9, groups of ten(s), and place value.	1. Represent and describe whole numbers to 10 000, pictorially and symbolically. [C, CN, V]		<ul style="list-style-type: none"> ● Look at animal populations within the area - get numbers from fish and wildlife; look at travelling from one point to another - track distance and time
Numbers-the set of real numbers is infinite. Each real number can be associated with a unique point on the number line. (counting numbers, whole numbers, integers, fractions/rational numbers). Estimation-approximated numerical calculations using numbers/referents that are easier to compute with mentally.	2. Compare and order numbers to 10 000. [C, CN, V]		
Properties-for a given set of numbers there are relationships that are always true. These rules govern arithmetic and algebra (properties of operations, properties of equality) Basic Facts and Algorithms-operations with rational numbers	3. Demonstrate an understanding of addition of numbers with answers to 10 000 and their corresponding subtractions (limited to 3- and 4-digit numerals) by: <ul style="list-style-type: none"> • using personal strategies for adding and subtracting • estimating sums and differences • solving problems involving addition and subtraction. [C, CN, ME, PS, R] <i>Note: Students investigate a variety of strategies, including standard/traditional algorithms, to become proficient in at least one appropriate and efficient strategy that they understand.</i> <i>Note: Through this outcome, students have the opportunity to maintain and refine previously learned addition and subtraction number facts: Grade 3, Number SO 10 – Apply mental mathematics strategies and number properties in order to understand and recall basic addition facts and related subtraction facts to 18. [C, CN, ME, PS, R, V]</i>		<ul style="list-style-type: none"> ● Use topics from SS, Sci and land-based learning to address this ELO
	4. Apply the properties of 0 and 1 for multiplication and the property of 1 for division. [C, CN, R]		



Big Idea, Major Concepts, GLOs

Properties-for a given set of numbers there are relationships that are always true. These rules govern arithmetic and algebra. (properties of operations, properties of equality)

Basic Facts and Algorithms-operations with rational numbers.

Specific Learning Outcomes

ELOs are bold

5. Describe and apply mental mathematics strategies to determine basic multiplication facts to 9×9 and related division facts. [C, CN, ME, R]
Understand and apply strategies for multiplication and related division facts to 9×9 . Recall multiplication and related division facts to 7×7 .

6. Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) to solve problems by:

- using personal strategies for multiplication with and without concrete materials
- using arrays to represent multiplication
- connecting concrete representations to symbolic representations
- estimating products
- applying the distributive property. C, CN, ME, PS, R, V]

7. Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by:

- using personal strategies for dividing with and without concrete materials
- estimating quotients
- relating division to multiplication. [C, CN, ME, PS, R, V]

8. Demonstrate an understanding of fractions less than or equal to one by using concrete, pictorial and symbolic representations to:

- name and record fractions for the parts of a whole or a set
- compare and order fractions
- model and explain that for different wholes, two identical fractions may not represent the same quantity
- provide examples of where fractions are used. [C, CN, PS, R, V]

9. Represent and describe decimals (tenths and hundredths), concretely, pictorially and symbolically. [C, CN, R, V]

10. Relate decimals to fractions and fractions to decimals (to hundredths). [C, CN, R, V]

11. Demonstrate an understanding of addition and subtraction of decimals (limited to hundredths) by:

- using personal strategies to determine sums and differences
- estimating sums and differences
- using mental mathematics strategies to solve problems. [C, ME, PS, R, V]

Season








Nehiyaw Ways of Knowing

- **Shopping, estimating drive times, estimating weight**

- **Infuse the Cree language - follow the math terms**
- **Ask students to figure out how real life LBL camp activities: E.g. How many poles are needed to make 5 tipis?**
- **Connections to beading work**

- **Dividing up bannock equally amongst students**

 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
PATTERNS AND RELATIONS AT A GLANCE  Representing and describing patterns and relationships; identifying and explaining mathematical relationships; express a problem in an equation; solve one-step equations with a symbol			
Patterns Relationships Variables Expressions Equations			
Patterns-are relationships that can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways. (numbers, geometry)	1. Identify and describe patterns found in tables and charts.		<ul style="list-style-type: none"> Animal populations, finished bead work, diverse human populations
	2. Translate among different representations of a pattern, such as a table, a chart or concrete materials.		
Variable-mathematical structures can be translated and represented abstractly using variables, expressions and equations.	3. Represent, describe and extend patterns and relationships, using charts and tables, to solve problems.		
Variable-mathematical structures can be translated and represented abstractly using variables, expressions and equations. Equivalence/Equality-any number, measure, algebraic expression, or equation can be represented in an infinite number of ways that have the same value. (preserve the equality)	4. Identify and explain mathematical relationships, using charts and diagrams, to solve problems. 5. Express a given problem as an equation in which a symbol is used to represent an unknown number.		
Variable-mathematical structures can be translated and represented abstractly using variables, expressions and equations.	6. Solve one-step equations involving a symbol to represent an unknown number.		


Big Idea, Major Concepts, GLOs
Specific Learning Outcomes
 ELOs are bold

Season
Nehiyaw Ways of Knowing

SHAPE AND SPACE– MEASUREMENT
AT A GLANCE

Understanding digital and analog time; understanding area of 2-D shapes

Attributes Relationships Units

Measurement: Some attributes of objects are measurable and can be quantified using unit amounts. (time, length, area, mass, volume, capacity, magnitude, perimeter, angles)

1. Read and record time, using digital and analog clocks, including 24-hour clocks.
2. Read and record calendar dates in a variety of formats.
3. Demonstrate an understanding of area of regular and irregular 2-D shapes by:

- recognizing that area is measured in square units
- selecting and justifying referents for the units cm^2 or m^2
- estimating area, using referents for cm^2 or m^2
- determining and recording area (cm^2 or m^2)


SHAPE AND SPACE– 3-D OBJECTS AND 2-D SHAPES
AT A GLANCE

Understanding digital and analog time; understanding area of 2-D shapes

3-D Objects and 2-D Shapes: 2D and 3D objects can be constructed, described, classified, analyzed by their attributes.




4. Describe and construct right rectangular and right triangular prisms.





SHAPE AND SPACE – TRANSFORMATIONS
AT A GLANCE

Understand congruency; understand line or symmetry

Transformations-objects in space can be transformed in an infinite number of ways. Transformations can be described and analyzed mathematically.

5. Demonstrate an understanding of congruency, concretely and pictorially.
6. Demonstrate an understanding of line symmetry by: identifying symmetrical 2-D shapes, creating symmetrical 2-D shapes, drawing one or more lines of symmetry in a 2-D shape.


 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
 STATISTICS AND PROBABILITY AT A GLANCE Many-to-one correspondence: Construct and interpret picto and bar graphs			
Data Collection-the question to be answered determines the data that needs to be collected and how best to collect it.	1. Demonstrate an understanding of many-to-one correspondence.		
Data Representation-data can be represented and interpreted visually using tables, charts, and graphs.	2. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions.		





 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes <small>ELOs are bold</small>	Season	Nehiyaw Ways of Knowing
SCIENCE INQUIRY			
GENERAL LEARNER EXPECTATION 4-1			
 Investigate the nature of things, demonstrating purposeful action that leads to inferences supported by observations.			
GENERAL LEARNER EXPECTATION 4-2			
 Identify patterns and order in objects and events studied; and record observations, using pictures, words and charts, with guidance in the construction of charts; and make predictions and generalizations, based on observations.			
Focus	<ul style="list-style-type: none"> ask questions that lead to exploration and investigation 		
Explore and Investigate	<ul style="list-style-type: none"> identify one or more possible answers to questions by stating a prediction or a hypothesis identify, with guidance, ways of finding answers to given questions carry out, with guidance, procedures that comprise a fair test identify materials and how they are used work independently or with others to carry out the identified procedures identify, with guidance, sources of information and ideas and access information and ideas from those sources. Sources may include library, classroom, community and computer-based resources 		
Reflect and Interpret	<ul style="list-style-type: none"> communicate with group members, showing ability to contribute and receive ideas record observations and measurements accurately, using captioned pictures and charts, with guidance in the construction of charts. Computer resources may be used for record keeping and for display and interpretation of data state an inference, based on observations identify possible applications of what was learned identify new questions that arise from what was learned. 		


**Big Idea, Major
Concepts, GLOs**
Specific Learning Outcomes
 ELOs are bold

Season
**Nehiyaw Ways of
Knowing**
PROBLEM SOLVING THROUGH TECHNOLOGY

GENERAL LEARNER EXPECTATION 4–3
Investigate a practical problem, and develop a possible solution.

Focus	<ul style="list-style-type: none"> identify the purpose of problem-solving and construction activities: What problem do we need to solve? What needs must be met? 		
Explore and Investigate	<ul style="list-style-type: none"> identify steps followed in completing the task and in testing the product 		
	<ul style="list-style-type: none"> identify materials and how they are used 		
	<ul style="list-style-type: none"> attempt a variety of strategies and modify procedures, as needed (troubleshoot problems) 		
	<ul style="list-style-type: none"> engage in all parts of the task and support the efforts of others 		
Reflect and Interpret	<ul style="list-style-type: none"> identify, with guidance, sources of information and ideas and access information and ideas from those sources. Sources may include library, classroom, community and computer-based resources 		
	<ul style="list-style-type: none"> communicate with group members, showing ability to contribute and receive ideas 		
	<ul style="list-style-type: none"> evaluate a product, based on a given set of questions or criteria. The criteria/questions may be provided by the teacher or developed by the students. Example criteria include: <ul style="list-style-type: none"> – effectiveness—Does it work? – reliability—Does it work every time? – durability—Does it stand up to repeated use? – effort—Is it easy to construct? Is it easy to use? – safety—Are there any risks of hurting oneself in making it or using it? – use of materials—Can it be made cheaply with available materials? Does it use recycled materials, and can the materials be used again? 		
	<ul style="list-style-type: none"> identify possible improvements to the product 		
	<ul style="list-style-type: none"> identify new applications for the design or method of construction. 		

 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes <small>ELOs are bold</small>	Season	Nehiyaw Ways of Knowing
ATTITUDES			
 GENERAL LEARNER EXPECTATION 4-4 Demonstrate positive attitudes for the study of science and for the application of science in responsible ways.			
	Students will show growth in acquiring and applying the following traits: <ul style="list-style-type: none"> • curiosity • confidence in personal ability to explore materials and learn by direct study • inventiveness • perseverance: staying with an investigation over a sustained period of time • appreciation of the value of experience and careful observation • a willingness to work with others and to consider their ideas • a sense of responsibility for actions taken • respect for living things and environments, and commitment for their care 		
TOPIC A: WASTE AND OUR WORLD (MAY-JUNE)			
GENERAL LEARNER EXPECTATION 4-5 Recognize that human activity can lead to the production of wastes, and identify alternatives for the responsible use and disposal of materials.			<ul style="list-style-type: none"> • Activities around the practice of good stewardships (environmental/recycling/conservation/waste management) (Peerless Lake Elders' Wheel)
	<ol style="list-style-type: none"> 1. Identify plant and animal wastes, and describe how they are recycled in nature. For example, plant leaves serve as a source of food for soil insects, worms and other creatures. The wastes of these animals may then be further broken down by molds, fungi and bacteria. 2. Identify and classify wastes that result from human activity. 3. Describe alternative methods of disposal, and identify possible advantages and disadvantages of each. 4. Distinguish between wastes that are readily biodegradable and those that are not. 		<ul style="list-style-type: none"> • Activities around the practice of good stewardships (environmental/recycling/conservation/waste management) (Peerless Lake Elders' Wheel)



Big Idea, Major Concepts, GLOs

Specific Learning Outcomes ELOs are bold

Season

Nehiyaw Ways of Knowing

5. Compare different kinds of packaging, and infer the relative advantages and disadvantages of that packaging. In evaluating different forms of packaging, students should demonstrate the ability to consider a consumer perspective as well as an environmental perspective

6. Identify methods of waste disposal currently used within the local community.

7. Identify kinds of wastes that may be toxic to people and to the environment.

8. Identify alternative materials and processes that may decrease the amount of waste produced; e.g., reducing wastage of food, using both sides of a sheet of paper.

9. Identify ways in which materials can be reused or recycled, including examples of things that the student has done.



- **Use boxes for art/making cars/crafts. Classroom waste and bottles collected for recycling) Composting etc.**




10. Develop a flow chart for a consumer product that indicates the source materials, final product, its use and method of disposal.

11. Identify actions that individuals and groups can take to minimize the production of wastes, to recycle or reuse wastes and to ensure the safe handling and disposal of wastes.

12. Develop and implement a plan to reduce waste, and monitor what happens over a period of time.



- **Place recycle bins in classrooms and have classroom rules on the disposal of waste. Teach that there is savings from recycling. Students take leadership role in these activities. Reference the dangers to the environment and the positives of the reuse/recycle initiatives.**

 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
TOPIC B: WHEELS AND LEVERS (SPRING: MARCH-MAY)			
	GENERAL LEARNER EXPECTATION 4-6 Demonstrate a practical understanding of wheels, gears and levers by constructing devices in which energy is transferred to produce motion.		<ul style="list-style-type: none"> • Wagon and hoist for lifting animals when lifting them. Pulley systems
	1. Explain how rollers can be used to move an object, and demonstrate the use of rollers in a practical situation. 2. Compare the wheel and the roller, and identify examples where each are used.		
	3. Construct devices that use wheels and axles, and demonstrate and describe their use in: <ul style="list-style-type: none"> • model vehicles • pulley systems • gear systems. 		<ul style="list-style-type: none"> • Wagon and hoist for lifting animals when lifting them. Pulley systems (Knowledge Keepers information on sewing machines etc.)
	4. Construct and explain the operation of a drive system that uses one or more of the following: <ul style="list-style-type: none"> • wheel-to-wheel contact • a belt or elastic • a chain • cogs or gears. 		<ul style="list-style-type: none"> • Wagon and hoist for lifting animals when lifting them. Pulley systems (Knowledge Keepers information on sewing machines etc.)/Snow mobiles
	5. Construct and explain the operation of a drive system that transfers motion from one shaft to a second shaft, where the second shaft is: <ul style="list-style-type: none"> • parallel to the first • at a 90° angle to the first. <i>Students who have achieved this expectation will be aware of changes in speed and direction that result from different ways of linking components. Introduction of gear ratios, however, is not recommended at this grade level. Students will have an opportunity to develop the concept of ratio as part of their junior high mathematics program.</i>		
	6. Demonstrate ways to use a lever that: <ul style="list-style-type: none"> • applies a small force to create a large force • applies a small movement to create a large movement. 		
	7. Predict how changes in the size of a lever or the position of the fulcrum will affect the forces and movements involved.		



Big Idea, Major Concepts, GLOs

Specific Learning Outcomes ELOs are bold

Season

Nehiyaw Ways of Knowing

8. Construct models of levers; and explain how levers are involved in such devices as: teetertotters, scissors, pliers, pry bars, tongs, nutcrackers, fishing rods, wheelbarrows.



- **Construct Wagons, make fishing rods, wheelbarrows, pliers and making Muskrat/Beaver traps. Pulley systems (Knowledge Keepers information on sewing machines etc.) Doing Robotic constructions**

TOPIC C: BUILDING DEVICES AND VEHICLES THAT MOVE (FALL-OCTOBER)

GENERAL LEARNER EXPECTATION 4-7
Construct a mechanical device for a designated purpose, using materials and design suggestions provided.



- **Constructing miniature horse drawn wagon/Red River Carts**

GENERAL LEARNER EXPECTATION 4-8
Explore and evaluate variations to the design of a mechanical device, demonstrating that control is an important element in the design and construction of that device.

- **Constructing miniature horse drawn wagon/Red River Carts/ sledge (demonstrating use)**

1. Design and construct devices and vehicles that move or have moving parts—linkages, wheels and axles.



- **Constructing miniature horse drawn wagon/Red River Carts/ Sledge**

2. Use simple forces to power or propel a device; e.g., direct pushes, pulls, cranking mechanisms, moving air, moving water and downhill motion.

3. Design and construct devices and vehicles that employ energy-storing or energy-consuming components that will cause motion; e.g., elastic bands, springs, gravity, wind, moving water.



- **Constructing miniature canoes/ motor boats/sling shots/bow & arrow/archery**






4. Recognize the need for control in mechanical devices, and apply control mechanisms where necessary.






5. Compare two designs, identifying the relative strengths and weaknesses of each.




6. Identify steps to be used in constructing a device or vehicle, and work cooperatively with other students to construct the device or vehicle.

7. Design and construct several different models of a device and evaluate each model, working cooperatively with other students.

Suggested evaluation criteria are identified under the Specific Learner Expectations, Reflect and Interpret, page B.18.

 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
TOPIC D: LIGHT AND SHADOWS (SEPTEMBER/OCTOBER/JANUARY-MID-MARCH)			
GENERAL LEARNER EXPECTATION 4–9 Identify sources of light, describe the interaction of light with different materials, and infer the pathway of a light beam.			<ul style="list-style-type: none"> • Sun/Moon/Fire/Stars/Light bulbs/Lanterns/Fire flies/Northern Lights
	1. Recognize that eyes can be damaged by bright lights and that one should not look at the Sun—either directly or with binoculars or telescopes.		
	2. Identify a wide range of sources of light, including the Sun, various forms of electric lights, flames, and materials that glow (luminescent materials).		<ul style="list-style-type: none"> • Sun/Moon/Fire/Stars/Light bulbs/Lanterns/Fire flies/Northern Lights
	3. Distinguish objects that emit their own light from those that require an external source of light in order to be seen.		
	4. Demonstrate that light travels outward from a source and continues unless blocked by an opaque material.		
	5. Describe changes in the size and location of Sun shadows during the day—early morning, to midday, to late afternoon.		<ul style="list-style-type: none"> • Tracking Sun from season to season as well as throughout each day
	6. Recognize that opaque materials cast shadows, and predict changes in the size and location of shadows resulting from the movement of a light source or from the movement of a shade-casting object.		
	7. Distinguish transparent materials from opaque materials by determining if light passes through them and by examining their shadows.		<ul style="list-style-type: none"> • Demonstration of various objects to show those that are transparent/opaque and relate them to traditional stories about the sun.
	8. Classify materials as transparent, partly transparent (translucent) or opaque.		<ul style="list-style-type: none"> • Demonstration of various objects to show those that are transparent/opaque and relate them to traditional stories about the sun.

Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
	<p>9. Recognize that light can be reflected and that shiny surfaces, such as polished metals and mirrors, are good reflectors.</p>		<ul style="list-style-type: none"> Demonstrations that show how these objects reflect and how mirrors can be used to start fires. Fire/Ice demonstrations.
	<p>10. Recognize that light can be bent (refracted) and that such objects as aquaria, prisms and lenses can be used to show that light beams can be bent.</p>		
	<p>11. Recognize that light can be broken into colours and that different colours of light can be combined to form a new colour.</p>		
	<p>12. Demonstrate the ability to use a variety of optical devices, describe how they are used, and describe their general structure. Suggested examples include: hand lens, telescope, microscope, pinhole camera, light sensitive paper, camera, kaleidoscope. Students meeting this expectation will be able to provide practical descriptions of the operation of such devices, but are not required to provide theoretical explanations of how the devices work.</p>		<ul style="list-style-type: none"> Classrooms activities infusing traditional thoughts and ideas around these instruments. Landbase connections e.g. hunting should be explored.
TOPIC E: PLANT GROWTH AND CHANGES (FALL SEPTEMBER-OCTOBER, WINTER/SPRING: MARCH-MAY)			
GENERAL LEARNER EXPECTATION 4-10 Demonstrate knowledge and skills for the study, interpretation, propagation and enhancement of plant growth.			
	<p>1. Describe the importance of plants to humans and their importance to the natural environment. Students who meet this expectation should be able to give examples of plants being used as a source of food or shelter, and be aware of the role plants play in the environment; e.g., preventing erosion, maintaining oxygen.</p>		<ul style="list-style-type: none"> Connect to herbal LBL, plants as medicine and for food (survival skills)
	<p>2. Identify and describe the general purpose of plant roots, stems, leaves and flowers.</p>		
	<p>3. Describe common plants, and classify them on the basis of their characteristics and uses.</p>		<ul style="list-style-type: none"> LBL camps - bush walk; plants, trees and herbs. Identify if the plant is a source of food, shelter or medicine
	<p>4. Recognize that plant requirements for growth; i.e., air, light energy, water, nutrients and space; vary from plant to plant and that other conditions; e.g., temperature and humidity; may also be important to the growth of particular plants.</p>		

 Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
	5. Identify examples of plants that have special needs.		
	6. Recognize that a variety of plant communities can be found within the local area and that differences in plant communities are related to variations in the amount of light, water and other conditions.		<ul style="list-style-type: none"> • Connect to animal habitats as animals prefer specific plant communities; Go on a community walk to identify plants. Plant a community garden
	7. Recognize that plants of the same kind have a common life cycle and produce new plants that are similar, but not identical, to the parent		
	8. Describe ways that various flowering plants can be propagated, including from seed, from cuttings, from bulbs and by runners.		
	9. Nurture a plant through one complete life cycle—from seed to seed.		
	10. Describe the care and growth of a plant that students have nurtured, in particular: <ul style="list-style-type: none"> • identify the light, temperature, water and growing medium requirements of the plant • identify the life stages of the plant • identify the reproductive structures of the plant. 		<ul style="list-style-type: none"> • Plant a school garden; hydroponic gardens
	11. Describe different ways that seeds are distributed; e.g., by wind, by animals; and recognize seed adaptations for different methods of distribution.		