Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold [NICE TO KNOW are italics]	Season	Nehiyaw Ways of Knowing
	SCIENCE INQUIRY		
	GENERAL LEARNER EXPECTATION 1–1 **Bring focus to investigative activities, based on their own questions and those of others.**		
	GENERAL LEARNER EXPECTATION 1–2 **Describe materials and objects that have been observed and manipulated, and identify what was done and found out.**		
Focus	• **ask questions that lead to exploration and investigation**		• **Inquiry, Cross Curricular, LBL**
	• **predict what they think will happen or what they might find**		
Explore and Investigate	• manipulate materials and make observations that are relevant to questions asked		
	• *identify materials used*		
	• **recognize and describe steps followed, based on independent activity, on directed activity and on observing the activity of others**		• **Recognize and describe steps followed, based on independent activity, on directed activity and on observing the activity of others**
Reflect and Interpret	• **describe what was observed, using pictures and oral language**		• **Observation**
	• **identify questions being investigated and identify what was learned about each question**		• **Sharing circles**
	• *identify new questions that arise from what was learned*		
	PROBLEM SOLVING THROUGH TECHNOLOGY		
	GENERAL LEARNER EXPECTATION 1–3 **Construct, with guidance, an object that achieves a given purpose, using materials that are provided.**		
Focus	• **identify the problem or task: What structure do we need to make?**		• **Observation, listening, working with others**
Explore and Investigate	• **attempt, with guidance, one or more strategies to complete the task**		• **Attempt, with guidance, one or more strategies to complete the task**

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Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold [NICE TO KNOW are italics]	Season	Nehiyaw Ways of Knowing
Explore and Investigate	• engage in all parts of the task		
	• identify materials used		
	• **recognize and describe steps followed, based on independent activity, on directed activity and on observing the activity of others**		• **Sharing circle, observation**
Reflect and Interpret	• **describe the product of the activity, using pictures and oral language**		• **Sharing circle**
	• identify processes by which the product was made		
	• identify how the product might be used.		
ATTITUDES			
GENERAL LEARNER EXPECTATION 1–4 **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:	• **curiosity**		• **Land Based Learning, nature walks, bringing exemplars and artifacts into class**
	• **confidence in personal ability to explore materials and learn by direct study**		• **Confidence**
	• **inventiveness**		• **Encourage creativity with science projects**
	• **perseverance: staying with an investigation over a sustained period of time**		• **Patience, calm, tolerance**
	• 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**		• **Respect, Stewardship, Working with others**

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	TOPIC A: CREATING COLOUR		
	GENERAL LEARNER EXPECTATION 1–5 **Identify and evaluate methods for creating colour and for applying colours to different materials.**		
	1. Identify colours in a variety of natural and manufactured objects.		
	2. Compare and contrast colours, using terms such as lighter than, darker than, more blue, brighter than.		• **Fall theme & activities, Halloween activities - role of wihcikokan (tricksters) or heyoka characters, significance of colours for nehiyawak, animals changing colours, leaves and land changing colours**
	3. Order a group of coloured objects, based on a given colour criterion.		
	4. Predict and describe changes in colour that result from the mixing of primary colours and from mixing a primary colour with white or with black.		• **Fall theme & activities, Halloween activities - role of wihcikokan (tricksters) or heyoka characters, significance of colours for nehiyawak, animals changing colours, leaves and land changing colours**
	5. Create a colour that matches a given sample, by mixing the appropriate amounts of two primary colours.		
	6. Distinguish colours that are transparent from those that are not. Students should recognize that some coloured liquids and gels can be seen through and are thus transparent and that other colours are opaque.		
	7. Compare the effect of different thicknesses of paint. Students should recognize that a very thin layer of paint, or a paint that has been watered down, may be partly transparent.		
	8. Compare the adherence of a paint to different surfaces; e.g., different forms of papers, fabrics and plastics.		
	9. Demonstrate that colour can sometimes be extracted from one material and applied to another; e.g., by extracting a vegetable dye and applying it to a cloth, by dissolving and transferring a water-soluble paint.		• **Plant uses for dyes**
	10. Demonstrate at least one way to separate sunlight into component colours.		• **Nehiyaw terms for colours and rainbow - kimowani-iyapi**

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	TOPIC B: SEASONAL CHANGES		
	GENERAL LEARNER EXPECTATION 1–6 **Describe seasonal changes, and interpret the effects of seasonal changes on living things.**		• **Learn nehiyaw terms for seasons, types of weather words, refer to KTCEA app**
	1. Describe the regular and predictable cycle of seasonal changes: • *changes in sunlight* • *changes in weather.*		
	2. Identify and describe examples of plant and animal changes that occur on a seasonal basis: • *changes in form and appearance* • *changes in location of living things* • *changes in activity; e.g., students should recognize that many living things go into a dormant period during winter and survive under a blanket of snow as a seed, egg or hibernating animal* • *production of young on a seasonal basis.*		
	3. Identify human preparations for seasonal change and identify activities that are done on a seasonal basis.		• **nehiyaw terms for clothing as you get ready for winter**
	4. Record observable seasonal changes over a period of time.		• **Learn nehiyaw season names**
	TOPIC C: BUILDING THINGS		
	**GENERAL LEARNER EXPECTATION 1–7** **Identify the purpose of different components in a personally constructed object or model, and identify corresponding components in a related object or model.**		
	1. Select appropriate materials, such as papers, plastics, woods; and design and build objects, based on the following kinds of construction tasks:		• **Birch bark for moose calls**
	• **construct model buildings; e.g., homes (human, animal, from other cultures), garages, schools**		• **Create (pakowayani-kamik) tents and other outdoor structure**
	• **construct model objects; e.g., furniture, equipment, boats, vehicles**		• **Create (akawan) dry meat rack or other**
	• *construct toys; e.g., pop-ups, figures*		
	• *create wind- and water-related artifacts; e.g., dams, water wheels, boats.*		

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	2. Identify component parts of personally constructed objects, and describe the purpose of each part.		
	3. Compare two objects that have been constructed for the same purpose, identify parts in one object that correspond to parts in another, and identify similarities and differences between these parts.		
	4. Recognize that products are often developed for specific purposes, and identify the overall purpose for each model and artifact constructed.		
	TOPIC D: SENSES		
	GENERAL LEARNER EXPECTATION 1–9 **Use the senses to make general and specific observations, and communicate observations orally and by producing captioned pictures.**		
	GENERAL LEARNER EXPECTATION 1–10 **Describe the role of the human senses and the senses of other living things, in enabling perception and action.**		
	1. Identify each of the senses, and explain how we use our senses in interpreting the world.		• **Sight, touch, taste, sound and smell through nature walks**
	2. Identify ways that our senses contribute to our safety and quality of life.		• **Distinguish the scent of various plants or medicines or animals (bear scent)**
	3. Apply particular senses to identify and describe objects or materials provided and to describe living things and environments. Students meeting this expectation will be able to describe characteristics, such as colour, shape, size, texture, smell and sound.		• **See above and expand to include colour of plants and animals, textures of animal parts i.e.: bone, fur, quill**
	4. Recognize the limitations of our senses, and identify situations where our senses can mislead us; e.g., feeling hot or cold, optical illusions, tasting with a plugged nose.		• **Distinguish potential harmful plants from healthy plants i.e.: Labrador tea has a poisonous identical twin**
	5. Recognize that other living things have senses, and identify ways that various animals use their senses; e.g., sensing danger, finding food, recognizing their own young, recognizing a potential mate.		• **Animals have heightened senses and will hear and smell us before we smell them.**
	6. Describe ways that people adapt to limited sensory abilities or to the loss of a particular sense; e.g., colour blindness, inability to see objects at close range.		

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	7. Describe ways to take care of our sensory organs, in particular, our eyes and ears.		
	TOPIC E: NEEDS OF ANIMALS AND PLANTS		
	GENERAL LEARNER EXPECTATION 1–11 **Describe some common living things, and identify needs of those living things.**		
	1. Observe, describe and compare living things.		• **Nature walk**
	2. Contrast living and nonliving things.		• **Relationality - wahkotowin - Everything is related and alive**
	3. Identify ways in which living things are valued; e.g., as part of a community of living things; as sources of food, clothing or shelter.		
	4. Classify some common local plants and animals into groups on the basis of visible characteristics; e.g., adaptations for survival, such as claws, beaks, prickles.		• **Using Cree names for animal parts and plant names**
	5. Identify examples of plants and animals that are normally under human care (domesticated) and those that are normally independent of human care (wild).		
	6. Identify the requirements of animals to maintain life; i.e., air, food, water, shelter, space; and recognize that we must provide these for animals in our care.		• **Using Cree names for elements, stewardship**
	7. Identify the requirements of plants to maintain life; i.e., air, light, suitable temperature, water, growing medium, space; and recognize that we must provide these for plants in our care.		• **Using Cree names for elements, stewardship**
	8. Identify ways that land plants depend on soil.		• **Using Cree names for elements, stewardship**
	9. Recognize that some plants and animals must adapt to extreme conditions to meet their basic needs; e.g., arctic and desert plants and animals.		• **Bears hibernating, rabbits change colours, birds migrate**
	10. Give examples of ways in which animals depend on plants and ways in which plants depend on animals; e.g., particular plants may serve as a source of food and shelter, animals may help spread pollen and seeds.		• **Bears eat plants i.e.: observed bears eating dandelions (ask local elder why animals eat certain plants)**

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