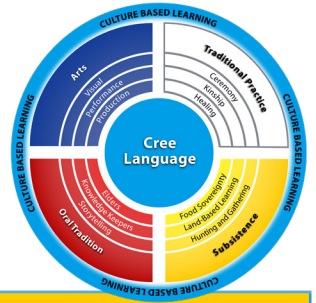
Science



Knowledge	Understanding	Skills & Procedures	ᓀᐦᐃᔭᐍᐏᐣ 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 properties of an object be distinguished from one another?**				
LEARNING OUTCOME **KM 1 Children examine properties of objects.**				
An object is anything that can be perceived using one or more of the five senses. **The five senses are** • **sight** • **touch** • **hearing** • **smell** • **taste** **Properties are distinctive characteristics.** **Properties of objects that can be perceived using one or more of the five senses include** • **colour; e.g., blue, yellow** • **size; e.g., long, short** • **shape; e.g., round, square** • **texture; e.g., rough, smooth** • **temperature; e.g., hot, cold** • **sound; e.g., loud, quiet** • **scent; e.g., fresh, rotten** • **taste; e.g., sweet, sour**	**KM 1.1 Objects have identifiable properties.** **KM 1.1 Objects may be similar in one or more properties and different in another property.**	Explore properties of various objects using one or more of the five senses. **Describe properties of various objects.** Sort various objects according to properties. Compare properties of various objects.	**Common Tree Names: Northern Boreal Series (9 videos)** **Birch Tree Tapping Series (3 videos)** **Moose, Elk, and Deer Calling Series: How to Call a Moose: Focus on sound.** **Legend of Birch Tree** **Legend of Poplar** **Dreamcatcher (Legend of Willow)** **Creation Stories: Animal Features**	**Provide for hands-on opportunities with common medicines such as rat root, laboom (mint) tea, berries, etc. (sight, touch, smell).** **Use examples from birch tree tapping to compare different syrups. For example, have a taste competition. Which one do you like best? Why?** **Make snow candy with syrup.** **Curriculum Planning & Assessment Resource: Mathematics Kindergarten – Geometry. Learn the names of 3D shapes and how they relate to the natural world. Find shapes in nature.**

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ORGANIZING IDEA **Energy (E): Understandings of the physical world are deepened through investigating matter and energy.**				
GUIDING QUESTION **How can objects, humans, and other animals move?**				
LEARNING OUTCOME **KE 1.1 Children explore movement of objects, humans, and other animals.**				
Movement is a change in position or location that happens over time. **Objects can be moved in various ways, including** • **straight lines** • **curves** • **circles** • **back and forth** • **zigzags** • **up and down** • **fast and slow** Humans and other animals can move in a variety of ways, such as • flying • crawling • hopping • swimming	**KE 1.1 Objects, humans, and other animals can move or be moved in various ways.**	**Move objects in a variety of ways.** **Identify objects that move.** **Identify objects that do not move.** Observe and imitate how animals can move. **Identify various ways that humans and other animals can move.**	**Tipi Teachings Series: Learn how tipis were transported after watching Legend of the Tipi.** **Trickster and the Tipi (Video told in Cree)** **Legend of Tipi** **Note that these videos all share the same story.** **Introduction to Fur Bearing Animals – Track Identification** **Moose, Elk, and Deer Calling Series: Moose Habitat/Mating/ Identification (Find this information in 13 Moons Teachings: September and October)** **How Rabbit Came to Be**	**Play follow the leader in the snow or other games that allow for looking at tracks and analyzing the directions.**

| Essential Learning Outcomes (ELOs) are identified in these charts in **bold**. Educational authorities from different regions of Alberta may identify different ELOs, based on their context. All outcomes in Alberta Education's Program of Studies must be taught, but what is deemed essential may look different.

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LEARNING OUTCOME **KE 1 Children explore movement of objects, humans, and other animals.**				
Reasons for human and other animal movement include • seeking food and water • exercising and playing • escaping danger	**KE 1.2 Humans and other animals move for many reasons.**	Examine the reasons why humans and other animals move.	**Powwow and Dance Series (11 videos)**	
ORGANIZING IDEA **Earth System (ES): Understandings of the living world, Earth, and space are deepened through investigating natural systems and their interactions.**				
GUIDING QUESTION **How can environments be explored?**				
LEARNING OUTCOME **KES 1 Children examine and describe surrounding environments.**				
Environment refers to physical surroundings. **Environments include plants, humans, and other animals.** **Environments include human-made structures such as buildings and roads.** **Environments include land, water, and air.** **Environments can be explored using the senses.**	KES 1.1 Environments can be explored and wondered about.	**Use the senses to make observations about environments.** **Ask questions about surrounding environments.** **Demonstrate respect while interacting with environments.** **Represent a local environment in nature.**	**Stewardship and Community – Sharing** **Orienteering Series: Trail Markings/ Landmarks/ Stars** **Protocol on Herb Gathering** **Trickster and the Ducks**	**Play "I Spy With My Little Eye..."** **First Nations, Métis, and Inuit ways of living include hunting, gathering trapping, fishing, ceremonies.** **Available on the Gabriel Dumont Institute website:** • **Mother Earth Colouring and Activity Book** • **My First Métis Lobstick (connections to land and ceremony)**

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LEARNING OUTCOME **KES 1 Children examine and describe surrounding environments.**				
Objects in environments can be natural or constructed by humans.	KES 1.2 Environments are shared spaces that include a variety of objects.	**Identify natural and constructed objects in surrounding environments.** Represent objects found in nature and those constructed by humans.	**Tipi Teachings Series: Explore how the materials used to build a tipi changed over time and why.** **Moose, Elk, and Deer Calling Series: Making the Moose Caller**	**Rupertsland Institute: The Red River Cart "Aen Charet" Lesson Plan**
LEARNING OUTCOME **KES 1 Children examine and describe surrounding environments.**				
Changes can be observed in environments, such as • **temperature; e.g., hot, cold** • **sunlight; e.g., cloudy, sunny, day, night** • **human-made structures; e.g., new playground in a park** • **animals growing; e.g., tadpole becoming a frog** • **plants growing; e.g., grass getting taller**	KES 1.3 **Environments change over time.**	Observe a variety of local environments over time. **Record observations of changes in environments.**	**Stewardship and Community – Sharing** **Orienteering Series: Trail Markings/ Landmarks/ Stars** **Protocol on Herb Gathering** **Trickster and the Ducks**	**Play "I Spy With My Little Eye..."**

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LEARNING OUTCOME **KES 1 Children examine and describe surrounding environments.**				
Environments can be protected in many ways, such as • **reducing waste** • **reusing** • **recycling** **Environments can be respected in many ways, such as** • **not littering** • **caring for nature**	**KES 1.4 Environments are important and should be protected and respected.**	**Discuss the importance of protecting and respecting environments.** **Identify ways to protect and respect environments.**	**Tipi Teachings Series: Show tipis made of a variety of materials including plastic, tarp, spruce boughs, etc. Which one will be better for the Earth? Why?** **Protocol on Herb Gathering**	
LEARNING OUTCOME **KES 1 Children examine and describe surrounding environments.**				
Connections can be fostered by physical locations, objects, and experiences in nature. **First Nations, Métis, and Inuit ways of living include** • **hunting** • **gathering** • **trapping** • **fishing** • **ceremonies**	**KES 1.5 Feelings of connection and appreciation can be experienced in nature.** **KES 1.5 First Nations, Métis, and Inuit ways of living connect to nature and the land.**	**Identify physical locations, objects, and experiences in nature that can lead to personal feelings of connection.** **Reflect on what is personally considered to be beautiful and appreciated in nature.** **Discuss connections First Nations, Métis, or Inuit have with nature.**	**13 Moons Teachings: Focus on common seasonal activities; seasonal round.** **Tipi Teachings Series** **Legend of Moon Cycles**	**Curriculum Planning & Assessment Resource: Mathematics Kindergarten – Time. Use the winter count activity.**

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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 instructions be used?**				
LEARNING OUTCOME **KCS 1 Children interpret instructions in various environments.**				
Instructions are directions that can be followed. **Instructions may be experienced in many different contexts, such as** • **home** • **learning environments** • **games** • **experiences in nature** **Instructions can be given in many ways and presented through** • **speaking** • **pictures** • **gestures** • **traditional teachings**	**KCS 1.1 Following instructions can help people be safe, complete a task, and know what to do.**	Recognize when actions do not correspond to instructions. **Match an action to the corresponding instruction.** **Engage in activities that involve following instructions in various contexts.** Identify instructions that help keep people safe in various contexts. **Engage in activities that involve following instructions presented in various ways.**	**Moose, Elk, and Deer Calling Series: Making the Moose Caller** **How Moose Came to Be** **Why Moose Looks the Way He Does (Told in Cree)**	**How to build a moose call from a coffee can and a hockey skate lace**
LEARNING OUTCOME **KCS 1 Children interpret instructions in various environments.**				
Instructions have one or more steps.	**KCS 1.2** The order in which instructions are followed can affect the outcome.	**Follow a sequence of two steps related to a learning experience.** Identify differences in outcomes when the order of two steps is changed. **Communicate a sequence of two steps for a given purpose.**		

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