

**SOUTHERN LAKES
CARIBOU
IN THE SCHOOLS:
A COMMUNITY-BASED LEARNING RESOURCE**



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ACKNOWLEDGMENTS

The redesigned Yukon curriculum creates space to explore local understanding of place with students. The Southern Lakes Caribou provide numerous unique learning opportunities, curriculum connections and competency exploration for Educators to use in their respective communities. The Southern Lakes Caribou ranges overlap with the Traditional Territory of six First Nations: the Taku River Tlingit First Nation, Teslin Tlingit Council, Carcross/Tagish First Nation, Ta'an Kwäch'än Council, Kwanlin Dün First Nation, and Champagne and Aishihik First Nation. With a focus on Yukon First Nations ways of Knowing, Doing and Being, you can incorporate an understanding, appreciation for and respect for the Southern Lakes Caribou into your classroom. This learning resource contains a range of comprehensive activity plans designed to address the learning standards and core competencies outlined in the new Yukon curriculum.

This learning resource is the work of many individuals. It was developed by Rivers to Ridges in partnership with Taku River Tlingit First Nation, Teslin Tlingit Council, Carcross/Tagish First Nation, Ta'an Kwäch'än Council, Kwanlin Dün First Nation, Champagne and Aishihik First Nations, and Government of Yukon (Department of Environment and Department of Education).

SHÄW NITHÄN - GUNAŁCHISH - MAHSI

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RATIONALE FOR THE LEARNING RESOURCE

This learning resource supports K-12 Yukon Educators to guide students to learn about and develop an understanding and respect for the Southern Lakes Caribou. The Southern Lakes Caribou have a unique story and history, and their range overlaps with the Traditional Territories of six Yukon and Northern BC First Nations: the Taku River Tlingit First Nation, Teslin Tlingit Council, Carcross/Tagish First Nation, Ta'an Kwäch'än Council, Kwanlin Dün First Nation, and Champagne and Aishihik First Nation. Educators using this learning resource will find current teaching and learning standards that also work to honour Yukon First Nations ways of Knowing, Doing and Being.

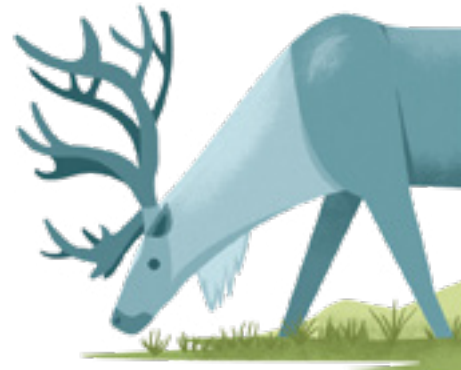
Engaging students in learning in collaboration with Elders and Traditional Knowledge Keepers through relevant stories and engaging activities encourages students to learn about the land, the water, the wildlife, and the value of Caribou both traditionally and currently for Yukon First Nations. This relational approach provides insight into ways Caribou have been managed, both before and since colonization in Yukon. Listening and sharing different perspectives encourages students to learn more about Caribou and become stewards in their own lives.

At this time, many students have not had a chance to learn about and build relationships with Southern Lakes Caribou. Southern Lakes people used to be heavily reliant on the Southern Lakes herd, much more than they are able to be today. In an effort to revitalize this community-level knowledge, this learning resource aims to reweave the ties between young people and the caribou that share land and water.

The learning resource includes opportunities for locally tailored, experiential learning, investigating these five themes:

- **Ecological Integrity: Caribou within the Ecosystem**
- **Take Care of the Land and the Water: Sustainable Resource Management**
- **Land as Essential to Identity: Stewardship and Respect for Land and Water**
- **Indigenous Worldviews: Yukon First Nations ways of Knowing, Doing and Being**
- **Cultural Landscapes: Impact of Change**

A variety of activity plans, experiential lessons and resources are included in this learning resource on the Southern Lakes Caribou so that you can tailor, locally adapt, or modify learning experiences for your students based on their ages, abilities and needs.



FIRST NATIONS CULTURAL GUIDELINES

Supporting local Elder and Traditional Knowledge Holder participation in educational programs is a priority for Educators in the Yukon curriculum. Educators should note that terminology may differ from community to community. For example, Traditional Knowledge Holder may be known as Knowledge Keeper or Knowledge Bearer, and educators are encouraged to use the terminology based on the local First Nations community. The cultural guidelines for this learning resource are provided for Educators working with and within Yukon First Nations communities. Both the guidelines and resources were developed and collected with the assistance and support of Erin (Kothetty) Pauls (Champagne and Aishihik First Nations, Tahltan First Nation) and Juniper Redvers (Dënesųłiné).

PREPARING STUDENTS

- Reorient the students or group to sit in a circle for opening, and closing circles, as well as group discussions. Circle discussions offer a space of sharing knowledge and opinions in a respectful way. Educators should be prepared to facilitate discussions that may be controversial, therefore creating guidelines with the class beforehand will allow for every voice to be heard.
[Teacher's Guide YFN 5- Revised Second Edition, 2014. PG. 30.](#)
- Encourage the use of local language(s) by students and visitors whenever possible. Acknowledge that language and culture are intertwined and we cannot learn about one of these without having an understanding about the other.
- If there are no local Traditional Knowledge Holders available, reach out to students as bearers of knowledge. Students are a source of knowledge (and may not know that they have it). Create space for them to share their experiences with a practice or subject you are referencing.
- If you are talking about other living beings, they can be seen as fellow living spiritual beings. Consider discussing the importance of local Traditional Knowledge and Traditional Laws.
- Help students understand that Yukon First Nations have different ways of Knowing, Doing and Being, and depending on their own personal experiences, cultural ceremonies may be different to what they have experienced.

CLASSROOM AND CURRICULUM APPROACH

- If available, have Yukon First Nations created content, posters/books/references on display.
- Include a map of Yukon First Nations Traditional Territories, a map of language areas, and community maps between Alaska and Yukon and Northern BC. They are great to have on the wall for reference throughout all activities.
- Ensure that local culture and language is infused within each module, and acknowledge cultural differences as well as similarities. Get permission to use/adapt resources designed by other Yukon First Nations.
- Ensure there is not a value judgment being placed on certain knowledge. Yukon First Nations knowledge should come across as equally important to scientific knowledge.
- Reference language and culture in the present tense, unless it is a practice that is not done anymore.
- Use language consistently (e.g., Yukon First Nations, Indigenous).
- Be mindful of terminology such as “modern” and “traditional.” Traditional does not mean static in the past (i.e., using different modern harvesting technologies does not mean that the practice is not based in traditional concepts. Harvesting can adapt and be dynamic). Note that long ago, ancient and traditional are interchangeable.
- Where appropriate, acknowledge that many types of harvesting had been restricted in the past (e.g., Yukon First Nations not being allowed to fish on their lands and not being able to gather for ceremonies). Students should know that historically, harvesting rights have been specifically taken away from many Yukon First Nations. Additionally, some Yukon First Nations have voluntarily given

up certain types of harvesting in order to support sustainable ecosystems (e.g., Southern Lakes Caribou). There were also impacts from the Fur Trade, the Gold Rush, the Indian Act, and Residential Schools which took away the rights of Yukon First Nations.

- When using art or resources involving animals, know or ask if there are local clans connected to those animals and what the significance is for speaking about these animals.
- Avoid stereotypes (e.g., subsistence vs. commercial hunting).
- Avoid role-playing First Nations in games and activities.

LOCAL FIRST NATIONS CONNECTIONS

- Educators are encouraged to welcome local Native language teachers and Elders into the classroom, and offer Elders the time they need.
 - Ensure they know what is expected of them, and leave enough time for them to speak about what they think is most appropriate.
 - Ask them what their priorities are and what specific skills or knowledge they have and are willing to share.
- Contact your local First Nations office for support and guidance in connecting with appropriate community resource people for the topics you are exploring in your classroom. You can also contact your local Community Education Liaison or Education Support Worker using the links under the Essential Resources below.
- Be prepared to recognize Elders and Traditional Knowledge Holders for their time by offering an honorarium and/or a gift (e.g., a small homemade gift, a card, traditional foods or a gift card). Consider asking a student to present the gift. Work with your local First Nations and school administration to ensure Elders and Traditional Knowledge Holders are recognized appropriately and compensated for any related expenses they may have.
- Be prepared to act as an ally by practicing and modeling compassion and self-reflection. First Nation communities have painful memories. An ally can learn to support through listening and respecting reactions that may come up during a class visit related to Residential Schools and other colonial legacies.
- Acknowledge local traditional and spiritual laws that impact practices around your topic of discussion.
- Prioritize Yukon First Nations content (specific to the First Nation) where possible. Ask specific First Nations to use their information or reference correctly from print sources.

ESSENTIAL RESOURCES

- [Yukon First Nations Resources for Teachers 2018/2019](#) Includes Elder in the Classroom Checklist and Contact List for Community Education Liaison Coordinators
- [Partners in Education](#) Yukon Department of Education
- [Programs and Support](#) Yukon Department of Education
- [Pedagogy of Consequence](#) Culturally responsive teaching for Yukon First Nation citizens
- [Yukon Education: Elder Protocols](#) Cultural Orientation and Protocols
- [First Nations Education Steering Committee](#) Offers Educators information and guidance about how to incorporate authentic Yukon First Nations materials into their instruction and assessment
- [ECHO: Ethnographic, Cultural and Historical Overview of Yukon's First Peoples](#)
- [Kwanlin Dun First Nation- Our Story, Our Words](#)
- [Teacher's Guide YFN 5- Revised Second Edition, 2014](#)

Local resources can also include Yukon First Nations Heritage Departments, archaeologists (Ice Patches), hunters and outfitters, biologists and technicians (Government of Yukon), tourism professionals, local game guardians, wildlife monitors and environmental stewards.

GUIDING PRINCIPLES

YUKON FIRST NATIONS WAYS OF KNOWING, DOING AND BEING

Align with Yukon First Nations values, and follow principles of Truth and Reconciliation: within ourselves, with each other and with other species. For example, Haa Kusteeyi means 'Our way of life', and can define how Tlingit people are connected to the environment, language, art, history and knowledge.

INQUIRY-BASED LEARNING

What do students wonder about? What sustains their curiosity beyond the concepts and information shared by educators? Make time and space for students to do their own 'research', and find ways to share their learning.

STEWARDSHIP

Taking responsibility for one's actions and impacts on the land and water.

SHARING CIRCLES

Circle discussions help students better understand Yukon First Nations through the sharing of feelings, ideas and experiences. Often, sharing circles use an object that will be passed around the circle in a clockwise direction (following the sun), which the speaker will hold as they share. The expectations are that there is mutual respect, attentive listening, the right to pass and appreciation for everyone involved. There are steps for Educators to follow for setting up a circle, opening the circle, facilitating the circle, closing the circle and completing reflections or follow ups. More details can be found in the Teacher's Guide: YFN Five. (Revised Second Edition. 2014. pg. 30.)

HOLISTIC

Supports a big picture view of understanding.

STORYTELLING

Stories help teach life lessons and are important to share. Storytelling occurs in every culture and at every age. There are differences between Western Storytelling and Yukon First Nations Storytelling that should be recognized. Western Storytelling is often told from one individual's perspective with choices and actions that bring the story to a conclusion. Yukon First Nations Storytelling does not always have clear endings and invites the listener to be engaged while the story is being told and afterwards. The learning grows and knowledge is gained over time. It is a living story told by ancestors and is continually passed down through generations.

LEGITIMACY

Aligns with the revised Yukon Department of Education approved curriculum.

PERSONAL

Each student can have a personal connection with Caribou, whether urban or rural, First Nation or non-First Nation.

WAY OF LIFE

Yukon First Nations ways of living incorporate hunting, trapping and fishing. These cultural activities are linked with language, land and waters and blending together old and new experiences which create approaches of thinking and living. Behaviour is modeled on balance and moderation, living in harmony with the land and animals, generosity, respect and the sharing of resources.

[An Introduction to Yukon First Nations Heritage Along the Yukon River](#) pg. 32

LANGUAGES

Language is one way that people connect through communication, building relationships, and creating a sense of community. Language and culture come together to create a shared identity. The six First Nations involved in this project each have a Traditional Language that is woven into the learning resource. Educators are encouraged to learn these languages and use the vocabulary alongside students to respectfully acknowledge the Yukon and Northern BC First Nations languages. With the use of the terminology table, Educators and students alike can learn the pronunciation and connect these terms with the lessons, as each language is embedded in the learning resource's activities.

LOCATION	FIRST NATION	LANGUAGE	DIALECT	VOCABULARY
Äshèyi (Aishihik)	Champagne and Aishihik First Nations	Dän'ke (Southern Tutchone)	Dákwänjē	kwädāy / olden days nàkwät'à / potlatch tat'adinch'e / connections
Tàa'an Män (Lake Lebarge)	Ta'an Kwächän Council	Dän'ke (Southern Tutchone)	Tàa'an Män	Nakhū Chù/ Takhini River Mezi / Caribou yūk'è / winter nuchū / fall ímbe / summer ädata / spring mezi dēsia / caribou calf shūr shāw / grizzly bear
Deisleen (Teslin)	Teslin Tlingit Council	Lingít (Tlingit)	Teslin	katkaakú / wilderness gwéinli /hoof dzaas / babiche
Naataas'e Héen (Carcross)	Carcross and Tagish First Nations	Lingít (Tlingit)	Carcross	jishagóon / tool(s) watsix / caribou
Kwanlin (Whitehorse)	Kwalin Dün First Nation	Dän'ke (Southern Tutchone)	Kwanlin Dün	udzí njī / lichen yúk'e / winter ägay /wolf átsi shāw / grizzly bear thay / golden eagle nàday / lynx tth'j / mosquito tán mày / ice patch nän / land Dän / person or people
Atlin	Taku River Tlingit First Nation	Lingít (Tlingit)	Taku River	chéx'i / shade or shadow jaakúx / canoe of caribou skins

RESOURCES

Edwards, 2009, Dictionary of Tlingit, Sea Alaska heritage,

https://www.sealaskaheritage.org/sites/default/files/Tlingit_dictionary_web.pdf

Champagne Aishihik first nations, 2022, Dän'ke (our ways)

<https://cafn.ca/about/our-ways/>

Yukon native language centre, 2019, Dákeyi (our country), Southern Tutchone place names

<http://ynlc.ca/dakeyi/index.html>

Yukon native language centre, 2019, Online southern Tutchone dictionary

<http://ynlcdictionary.ca/odp/>

Bunbury, 2009, Southern Tutchone Phrase Book. Tà'an Män (Lake Lebarge) Dialect.

First Voices, 2022, Learn our language: Tagish words,

<https://www.firstvoices.com/explore/FV/Workspaces/Data/Yukon/Tagish/Tagish/learn/words>

PEDAGOGICAL APPROACH

Activity plans in the next section are designed to align with the revised Yukon curriculum. Learning targets are set for each activity based on learning standards. While activity plans are designed with an identified grade in mind, they may be used as an exemplar and adapted to specific grades and subject areas as needed. Many activities are experiential and students are encouraged to use movement to help facilitate learning. The guided questions offer open-ended support that call upon attention to detail, allow students to apply their knowledge and take in new information. These questions will foster observation, conversation and wonder moments that can be built upon as a class unit as well as individually.

Each activity is also aligned with the curriculum core competencies for communication, thinking and personal and social development.

CORE COMPETENCIES

Communication

- Communication
 - Connecting and engaging with others
 - Acquiring and presenting information
- Collaborating
 - Determining common purposes
 - Working collectively
 - Supporting group interactions

Thinking

- Critical and Reflective
 - Analyzing and critiquing
 - Designing and developing
 - Reflecting and assessing
 - Questioning and investigating
- Creative
 - Evaluating and developing
 - Creating and innovating
 - Generating and incubating

Personal and Social

- Awareness and Responsibility
 - Well-being
 - Self-advocating
 - Self-regulating
- Positive Personal and Cultural Identity
 - Identifying personal strengths and abilities
 - Understanding relationships and cultural concepts
 - Recognizing personal values and choices
- Social Awareness and Responsibility
 - Contributing to community and caring for the environment
 - Building relationships
 - Resolving problems
 - Valuing diversity

KEY ACTIVITIES

While these components may not be included in each activity, taking time to include these practices will deepen and complement the learning experience.

ELDERS AND CULTURAL PRACTICES

- **Elder Stories** - If Elders are available and keen to share their stories, create time so that this is a priority for all learners.
- **Sharing Food** - The program could be extended into a community lunch or dinner with a focus on Caribou as a source of food and nutrition, and an opportunity to share community stories over food.
- **Language Lessons** - Invite language speakers from your community and hold space so that they can share language teachings related to Caribou, hunting and respect for Caribou.

ON THE LAND

- **Junior Game Guardians** - If possible, work with local game guardians to bring students onto the land being stewarded. This provides valuable lessons and career shadowing, as well as highlighting the importance of this role for Caribou.
- **Traditional Trails** - Take time to hike traditional trail routes around the community. Are there trails where the class is able to respectfully view Caribou? Find out where appropriate outdoor trail systems are and bring your learning onto the land and near bodies of water.
- **Bush Skills** - Depending on weather, numbers, access to transportation and available equipment, consider extending learning to include bush skills such as tracking, Sit Spots, and dressing meat. Invite local Traditional Knowledge Holders to facilitate.
- **Personal Photography** - You may include in depth discussions about our relationship to Caribou through photos. Students may take photos of objects and areas that represent their connection to Caribou. These photos could be featured in a project or displayed in the classroom space with an accompanying story, poem or phrase. To respect Traditional Law, we do not share photos of a hunt, including photos of a dead Caribou. Be mindful of asking for permission from the owner of images being shared.
- **Caribou Preparation** - Students could work with Elders or Traditional Knowledge Holders to learn about Caribou handling and care. This could also include learning ways of cooking and preserving Caribou, and preparing a few recipes. Consult with local Elders and communities about opportunities.

ACTIVITY PLANS



GRADE K ART:

CONNECTING TO CARIBOU THROUGH CREATIVITY

BIG IDEAS

- People create art to express who they are as individuals and community
- Engagement in the arts creates opportunities for inquiry through purposeful play
- Dance, drama, music, and visual arts express meaning in unique ways
- People connect to others and share ideas through the arts

CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • Visual arts: elements of design (line, shape, texture, colour); principles of design (pattern, repetition) • Processes, materials, movements, technologies, tools and techniques to support arts activities • Variety of local works of art and artistic traditions • Personal and collective responsibility associated with creating, experiencing, or sharing in a safe learning environment 	<ul style="list-style-type: none"> • Develop processes and technical skills in a variety of art forms to nurture motivation, development, and imagination • Reflect on creative processes and make connections to other experiences • Express feelings, ideas, stories, observations, and experiences through the arts
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I am able to make connections to the Southern Lakes Caribou through reflection of creative processes. 2. I can use a variety of art forms to express my knowledge of the Southern Lakes Caribou. 3. I can develop an understanding of how seasonal events can impact food sources for the Southern Lakes Caribou. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator’s Guide to Wild Caribou of North America](#)
- Sharing Circle Protocols - [Teacher’s Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND “A CARIBOU’S MEAL”

LEARNING TARGET:

I can develop an understanding of how seasonal events can impact food sources for the Southern Lakes Caribou (SLC).

MATERIALS

- **Caribou artifact: lichen (can be gathered in the forest)**
- **Pictures of Caribou seasonal homes (Appendix 1A) printed**

TIME: 30 MINUTES

OPENING: CONNECTING TO CARIBOU

Gather in a circle (outside, if weather permits) and pass the lichen/udzi nji (Dän’ke, Kwanlin Dün First Nation dialect) around, allowing every student a chance to hold it. Observe its texture and brainstorm where it came from. Give hints/prompts, for example, natural or grows on the forest floor. Talk about the four seasonal homes of the Caribou and observe the differences in each picture.

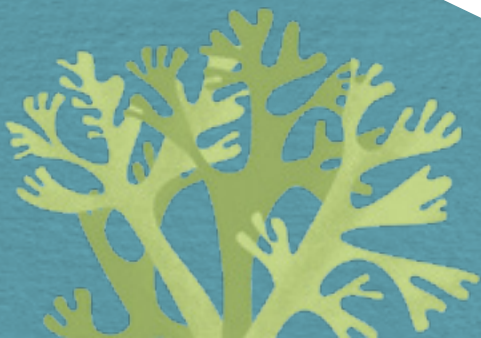
ASK STUDENTS

- Where do you think lichen/udzi nji grows?
- How do you think Caribou find the lichen/udzi nji?
- Would it be hard to get in the current season?

Share ideas.

1. Caribou can eat as much as two garbage bags full of food.
2. Lichen/udzi nji is the primary food source for Caribou.
3. There are over 2,000 kinds of lichen.
4. In the summer, Caribou feed on small shrubs and other plants.
5. In the winter, Caribou rely on the lichen/udzi nji buried beneath the snow which they dig up with their hollow hooves (gwéinli/hoof in Tlingit, Teslin Tlingit Council dialect).

Brainstorm what Caribou might do in the current season, where they might go and record ideas of whether/how this might change with the seasons (e.g., food and food shortage or predators).



ACTIVITY 1: "A CARIBOU'S MEAL"

This is a circle story that is meant to be created together as a group. By taking turns around the circle, each student will be able to add their own thoughts and ideas for the story. Take turns by passing the sample of lichen around, much like how a "Talking Feather" would be used as a visual for students to focus on who is speaking while others listen respectfully. The idea for the story will be around the feeding habits of the Caribou and the changing seasons. It is important to note that a Western style of Storytelling emphasizes stories having an ending whereas Yukon First Nations Storytelling does not emphasize having an ending. This is because stories are fluid and the knowledge learned from a story can continue on past the story itself.

To begin the story, recite the following line to start:

"It was a (current weather) day in (location), I was walking home from school when I came across a Caribou!! I stopped to watch. They were eating a meal of lichen and noticed that..."

Pass the lichen piece to the student on your left and prompt the student to continue the story, taking turns each time to tell a small part of the story until the lichen returns to you. If students are unsure what to add on or need reminders for staying on topic, suggest points from the conversation about Caribou and their diet. When the story has completed the circle, the teacher can end the activity with a question to highlight that they could continue thinking about Caribou and their diet even after this activity is completed; their inquiries do not have to end here.

EXTENSIONS

- Each time the piece of lichen is passed to a student, add in a character or an item they have to use in their section of the story.
- After the story is complete and the group is inside, ask the students to draw or paint their interpretation of what happened during the story. Encourage them to dive into the details of the Caribou's "meal."

CLOSING: COMPLETING THE STORY

Encourage students to reflect on the story and discuss this with their peers.

ASK STUDENTS

- What was your favourite part of the story?
- Which part of the story do you think could happen in reality? Which parts are imaginative?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Input information they reflected on during the opening circle into the story?
- Keep within the same storyline for the Caribou and stay on topic?

Invite the students to self-assess their sharing by asking students to put their thumb up, down or horizontal to show how much they enjoyed sharing their parts of the story.

PART 2: THE PAINTED CARIBOU IN ITS NATURAL HABITAT

LEARNING TARGET:

I can use a variety of art forms to express my knowledge of the Southern Lakes Caribou (SLC).

MATERIALS

- **Caribou artifact: sewing materials, Caribou tufting, snare, clothing, lichen sample or swatch of Caribou hide printed (Appendix 1B)**
- **Pictures of Caribou seasonal homes printed (Appendix 1A)**
- **Picture of a SLC printed**
- **Buckets, baskets or bags to store naturally foraged materials**
- **Large pieces of construction paper**
- **Pieces of sponge cut into the following:**
 - **1 triangle (head)**
 - **1 rectangle (body)**
 - **4 slim rectangles (legs)**
- **Any variety of art materials to add colour (paint or crayons)**
- **Glue**

TIME: ~60 MINUTES

OPENING: CONNECTING WITH CARIBOU

Gather in a circle outside. Pass the Caribou artifacts around the circle, one at a time, and invite the students to share what they know and remember about Caribou. Encourage students to share a personal story that they might have about Caribou.

ASK STUDENTS

- Have you seen a Caribou before?
- Where do you think they live? Do you think that they always stay in the same place or do they move around?
- Do you think that they prefer warm or cold weather? Why?

Share ideas.

1. Some areas are more important to the Caribou than others.
2. Caribou are herbivores.
3. Their diet is very versatile, adapting to their environment.
4. The different areas that Caribou inhabit are called “Ranges”. For example, summer range versus winter range.

After everyone has had a chance to share, hand a basket to each student and take a walk into the forest. Have students gather natural objects from the forest that they think they would find in the same areas of the Caribou’s natural habitat. Once everyone has filled their vessels with natural items from the environment, gather back in a circle to discuss. **Note:** this experience offers an opportunity to talk about ethical harvesting, only taking what you need, offering a prayer and thanksgiving and gratitude for any harvested items.

ASK STUDENTS

- What were you thinking about when you were finding your items?
- Do you think you picked up items that would not be found in a Caribou habitat? What are they?
- What is your favourite item that you found? Why?
- What items do you think a Caribou would eat?
- Was there anything that surprised you when you were looking for materials?

ACTIVITY: THE PAINTED CARIBOU IN ITS NATURAL HABITAT

Prep: Cut the sponges into triangles and rectangles - these will be the painted body of the Caribou. Set out bowls for the students to put their foraged items into so that they can easily search for the pieces that are needed for their artwork. Have each of the students' spots set up with their piece of construction paper and keep the various art materials accessible for the class. Be prepared to create a version of this alongside the students to support them through the process.

Tell students that they are going to paint a Caribou in its natural habitat:

1. Use the sponges to paint the body of their Caribou; the triangle piece for the head, the large rectangle for the body and the small rectangle for each leg.
2. The different art materials are to add to the background scene. For example, use paints to colour the sky, crayons to colour the ground and markers for bold details.
3. The natural foraged items from their baskets will be used last to enhance their picture in whichever way they choose by gluing them onto the scene.

With step 3, encourage their creativity. For example, the Caribou will need antlers—what foraged items in their baskets do they have that could be adequate antlers for their Caribou? How big do you think they are? What do you think they feel like? What about their hooves (gwéinli/h hoof in Tlingit, Teslin Tlingit Council dialect)? Explore these thoughts with the group, describe the textures—are they smooth? Rough? Remind them of the Caribou artifacts they handled during the opening circle and the textures that they had.

EXTENSION

Invite an Elder or Traditional Knowledge Holder to visit the class and share their stories about Caribou in their natural environment.

Leave space for students to ask questions and to share a thank you card in gratitude for their time visiting.

CLOSING

When the group has completed their “Caribou in its Natural Habitat” scene, gather in a circle. Ask students to share something special about their own piece and/or share what they notice in the pieces created by their classmates.

ASK STUDENTS

- What have you learned about Caribou that you did not know before?
- What materials did you use to create the art you made?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Express curiosity about Caribou by asking questions?
- Connect their knowledge of habitat in their artwork?



PART 3: CARIBOU ANTLERS

LEARNING TARGET:

I am able to make connections to the Southern Lakes Caribou (SLC) through reflection of creative processes.

MATERIALS

- **Caribou artifact: section, or a piece of Caribou antler**
- **Photos of Caribous at different ages with antlers at different stages printed (Appendix 1C)**
- **Photo of cow antlers, bull antlers and calf antlers printed (Appendix 1C)**
- **Construction paper (natural colours)**
- **Glue, pencils, scissors**
- **Small wooden sticks**
- **Pieces of soft fabrics (optional)**
- **Stapler, strong tape**

TIME: ~25 MINUTES

OPENING: DRAWING ON OUR STORIES

Gather in a circle. Pass a Caribou artifact around and invite students to describe the piece of antler and observe the texture and other attributes of the artifact. Encourage students to share a thought or a question that they have about the artifact.

ASK STUDENTS

- Have you/do you know someone who has seen Caribou before?
- Do you know someone who uses Caribou in their crafts?
- What do you think Caribou use their antlers for?
- How do you think you can tell the age of a Caribou?

Share ideas.

- Female Caribou sometimes grow antlers.
- Caribou shed their antlers every year and they are made of bone that grows faster than any other bone in their body, growing up to an inch every day.
- Antlers on both males and females will have grown to full size and hardened fully by fall time.
- When antlers are in their growth periods they are covered with 'velvet'—this protects them as they are very sensitive and fragile during this time.
- No two antlers are the same, even on the same animal.
- The further that they branch out, the older the Caribou is; you cannot tell how old a Caribou is by the amount of points that they have.



ACTIVITY: CARIBOU ANTLERS

Prep: Have the art materials set up in an accessible way for the group. Hand out the pictures of Caribou antlers to each section of students, or ensure that they are in view for everyone to see. Have large strips of construction paper assembled for the headband pieces, then create a slit near the end of the strip to secure them, being sure that they fit the students' heads.

To begin, students will make their own Caribou antlers headbands out of construction paper. They can design them however they like, but try to remember what you talked about during the circle: no two are the same, the further they branch out the older the Caribou is, and they start growing at different times of the year.

Share these steps:

1. Draw out a pair of antlers on two pieces of construction paper. Students may need support with this step.
2. Cut out the antlers. Model holding scissors and keeping your elbow tight against the body for control.
3. Think about your antlers and consider what stage they are in, and whether they have velvet or not.
4. Choose the materials that are available to design and decorate your antlers.
5. Once the antlers are decorated, tape wooden sticks to the back to keep them sturdy and standing up.
6. Mount the antlers onto the headband strip with tape, or a stapler if tape does not hold.
7. Close the headband with tape so that each headband is secured.

CLOSING: CELEBRATING CARIBOU

Plan a celebration to share and celebrate the stories, experiences and knowledge about the SLC that is gathered. Consider inviting family and community members who shared their stories with students.

EXTENSIONS

- After the headbands are complete, have a herd move together around the classroom, mimicking the movements a Caribou might make with their antlers. Practice 'moving seasonally' as a herd.
- Gather in a circle and share stories of Caribou experiences or memories.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Identify the importance of antlers to Caribou?
- Connect to the Caribou through their art with information that they were given?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to make connections to the SLC through reflection of creative processes	Is not able to connect to Caribou through reflection. Little to no curiosity demonstrated through the creative process	Partial connections are made to Caribou through reflection. Some curiosity is demonstrated through the creative process	Is able to make connections to Caribou through reflection. Demonstrates curiosity about Caribou through creative process	Is able to make connections and share stories about Caribou through reflection. Highly curious about Caribou through the creative process
PART 2: I can use a variety of art forms to express my knowledge of the SLC	Not yet able to use a variety of art forms. Little knowledge of the SLC	Can use some variety of art forms. Is able to express some knowledge of the SLC	Is able to use a variety of art forms. Is able to express adequate knowledge of the SLC	Very creative with a variety of art forms. Is able to express a lot of knowledge of the SLC
PART 3: I can develop an understanding of how seasonal events can impact food sources for the SLC	Has little to no understanding of seasonal impacts on food sources for SLC. Unable to form a question or express curiosity	Has a little understanding of seasonal impacts of food sources for SLC. Can form a question with guidance	Has an understanding of seasonal impacts of food sources for SLC. Can form a question and express curiosity	Has a great understanding of the seasonal impacts of food sources for SLC. Is easily able to form a question and expresses a lot of curiosity

GRADE K/1 SCIENCE AND SOCIAL STUDIES:

CONNECTING SOUTHERN LAKES CARIBOU THROUGH SEASONS

BIG IDEAS

- Grade K - Social Studies: Stories and traditions about ourselves and our families reflect who we are and where we are from
- Grade K - Science: Daily and seasonal changes affect all living things
- Grade 1 - Social Studies: We shape the local environment and the local environment shapes who we are and how we live
- Grade 1 - Science: Living things have features and behaviours that help them survive in their environment

CONTENT	CURRICULAR COMPETENCIES
<p>Social Studies</p> <ul style="list-style-type: none"> • People, places and events in the local community, and in local First Nations communities • Relationships between a community and its environment <p>Science</p> <ul style="list-style-type: none"> • Living things make changes to accommodate daily and seasonal cycles • First Nations knowledge of seasonal changes • Names of local plants and animals • Behavioural adaptations of animals in the local environment • The knowledge of First Nations: local knowledge of the local landscape, plants and animals, local understanding and use of seasonal rounds 	<p>Social Studies</p> <ul style="list-style-type: none"> • Sequence objects, images or events, and distinguish between what has changed and what has stayed the same (continuity and change) <p>Science</p> <ul style="list-style-type: none"> • Demonstrate curiosity and a sense of wonder about the world • Experience and interpret the local environment • Recognize First Nations stories (including oral and written narratives), songs and art, as ways to share knowledge • Identify simple patterns and connections
<h3>LEARNING TARGETS</h3>	
<ol style="list-style-type: none"> 1. I am able to demonstrate curiosity about how Caribou are connected to Southern Lakes communities. 2. I am able to reflect on my experience of place as it connects to local First Nations knowledge and stories. 3. I am able to explore animals and culture through ordered seasonal events. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND EXPLORING SEASONAL ROUNDS

LEARNING TARGET:

I am able to explore animals and culture through ordered seasonal events.

MATERIALS

- **Caribou artifact: sewing materials, Caribou tufting, snare, clothing, lichen sample, swatch of Caribou hide or Pictures of artifacts printed (Appendix 1b)**
- **Visual calendar representation (e.g., seasonal round or year-long calendar) (optional)**
- **Pictures of four Caribou seasonal homes printed (Appendix 1a)**
- **Large paper, with four separate “slices” of seasonal round (¼ of the full, large circle)**
- **Collage/tissue paper/ paint materials/gathered natural items**
- **Extension: warm clothes/ layer**

TIME: 45 MINUTES

OPENING: CONNECTING TO CARIBOU

Gather outside in a circle, and pass the Caribou artifact (swatch of hide) around, allowing every student a chance to hold it. Observe texture. Brainstorm where it came from. Give hints/prompts, e.g., natural, animal sources, it is from something living. It has four legs, hooves and antlers. Tell students that a Caribou's coat is unique - very special.

ASK STUDENTS

- Do you know what is special about a Caribou's coat?
- How did the Caribou hide feel when you held it? Rough, smooth?
- Why do you think it feels like that?

Share ideas.

1. Caribou have two layers of fur covering their bodies, ears and muzzles to keep their body heat in.
2. Caribou have fine, crinkly underfur and a thick coat of guard hairs on top. Guard hairs are hollow and full of air. This acts as insulation (like in the walls of a house, to keep the heat in), keeping in the Caribou's body heat.
3. The hair that covers the body of the Caribou is called the **pelage**. The **pelage** changes colour throughout the year and is darkest in the summer (Madsen, 2018).

Invite students to look around. What season is it? Imagine you are a Caribou.

ASK STUDENTS

- What would help keep a Caribou warm or cool depending on the season? (hint: pelage) Would they be warm enough? Too warm?
- What do Caribou eat? Where can they find food? Can they always find it? How does that change with the seasons?

Brainstorm what the Southern Lakes Caribou (SLC) might do in the current season and where they might go. Record ideas of whether/how this might change with the seasons (e.g., food and food shortages, shedding coats, and colour changes to aid camouflage).

ACTIVITY 1: 'ROUND IN THE SEASONAL ROUND

In preparation, print out pictures representing each of the four habitats that make up the SLC seasonal movement: spring alpine calving areas, high-country summer range, fall rutting grounds, lowland winter ranges **Seasonal/weather indicators will be helpful**.

Hang a picture of each in four corners of the space, designating each as a separate habitat of the seasonal round. Pictures should be ordered in seasonal order in a clockwise (sunwise) direction.

Tell students that they are going to travel like the Caribou: every year, Caribou travel between four different homes, depending on the season—this is called their seasonal round. Show a visual example of the seasonal round (e.g., a circle segmented into seasons/months with reference to local language and culture, content to represent seasonal change for Caribou), highlighting the difference in seasons.

Draw attention to the four pictures around the room. Each of these images represents one of the four homes in the SLC's seasonal round. Invite students to imagine they are travelling with a herd of Caribou.

Read the following “clues” to students, asking them to move to the picture or part of the room that matches the home described. The seasons are in Dän'ke, Tà'an Män dialect.

- The snow is starting to melt! The first new growth and delicious vegetation are starting to poke out of the ground on the mountain sides. There is lots of food to feed the hungry cows so they can look after the newborn calves.
- **ädatal/spring** » alpine calving areas
- It is starting to get hot, and there are lots of mosquitoes buzzing around. Where on the mountain will it be cooler, with fewer insects since there is a good breeze?
- **imbè/summer** » high-country summer range
- The weather is changing, with colder winds blowing in and the start of snow. Where is there shelter from the cold?
- **nuchü/fall** » rutting grounds - valley bottoms
- Snow is falling and settling on the ground. Where will the snow be easiest to dig into, finding food?
- **yük'è/winter** » lowland winter ranges

Repeat clues, adding details about Caribou diet and life cycle, emphasizing the repetition each year of these rounds.

EXTENSIONS

- Mix up the order of the four Caribou habitats, keeping the order of clues the same and challenge students to find the right home to travel to.
- Add a predator to the mix - invite a student to be a wolf, grizzly bear or wolverine. Caribou have to watch out for predators while moving with the season!
- Add in roads to cross safely all together.
- Invite students to layer up with outside clothes (coats, hats and boots) and shed layers as they travel through the seasonal round, mimicking Caribou adaptation to seasons.

ACTIVITY 2: CREATE A CARIBOU'S SEASONAL ROUND

In small groups or working together as a class, share highlights of the class' Caribou travel, and imagine where Caribou might feel most comfortable.

ASK STUDENTS

- How could you show this in a picture or painting?

Students will be creating a piece of art exploring the Caribou journey, and will get to share what they know about the seasonal round through this art piece, sharing it with family and community.

Decide as a group where to display the art piece once it is finished.

Divide the students into groups, giving each a "slice" of the seasonal round.

Using a variety of supplies (e.g., gathered natural elements, tissue paper, paint or collage material), students will fill their seasonal slice with representations of the Caribou home in that season.

CLOSING: COMPLETING THE ROUND

Encourage students to reflect on the seasonal wheel they have created together:

- Once the art pieces are complete, gather back in a circle, and bring four homes/seasonal round slices together, organizing them in seasonal order as a class.
- Invite students to share (and record) what they chose to display about each slice of the seasonal round.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Explain why Caribou travel in seasonal rounds each year?
- Identify ways in which weather changes impact Caribou?

Invite the students to self-assess their sharing by asking:

- On a scale of 1 to 5, how well do you feel you shared? (Raise 1-5 fingers in the air).
- Are you able to add more to your answer?



PART 2: STORY OF THE SOUTHERN LAKES CARIBOU RECOVERY PROGRAM (SLCRP)

LEARNING TARGET:

I am able to reflect on my experience of place as it connects to local First Nations knowledge and stories.

MATERIALS

- **Caribou artifact: sewing materials, Caribou tufting, snare, clothing, lichen sample, or swatch of Caribou hide or photos printed (Appendix 1b)**
- **Caribou Cards printed and cut out (Appendix 1d)**

TIME: ~60 MINUTES

OPENING: CONNECTING WITH CARIBOU

Gather in a circle. Pass a Caribou artifact around the circle, and invite the students to share what they know and remember about Caribou: how Caribou adapt and where Caribou travel throughout the seasons. Encourage students to share any stories or personal connections they have with Caribou.

ASK STUDENTS

- Are there more SLC today than there were hundreds of years ago (before colonization)?
- How many Caribou do you think there are in the whole herd?

Talk about numbers and make predictions together of the health of the SLC herd today.

ASK STUDENTS

- What might affect the population, or change the number of Caribou in the whole group, or the total number of SLC?

Share ideas.

Students are going to have a guest, someone who knows a lot about the special story of the SLC.

- Prepare a small homemade gift or card to present to the Elder or visitor in gratitude.
- Request permission in advance to photograph or record any visitors.
- Set group agreement of how to receive and respect the visiting Elder, visitor or special guest.

Brainstorm and record questions as a group to ask the special guest. Possible topics of Caribou conversation or inquiry could be:

- Is there a way to hunt Caribou in a healthy way that allows numbers to recover? (Sustainable harvesting practices—hunting in a respectful way, taking only what is needed, allowing hunting to continue)
- What/are there any safety measures for Caribou at busy road crossings, especially during Caribou seasonal movement/seasonal rounds?
- Are the homes of Caribou still being affected by humans? If so, how?
- If the Caribou could ask us to pause and pay attention, what would they say?

Note: The special visitor may also be connected through a video or recording of an Elder or specialist sharing their story and experience of working with the SLCRP.

ACTIVITY: SPENDING TIME WITH ELDERS

Gather in a circle. Invite the students to acknowledge the Yukon First Nations Traditional Territory that the activity is taking place on. If they are present, introduce and welcome the visiting Elder or visitor. Go around the circle and have students introduce themselves.

Invite the visiting Elder or visitor to share their story about the SLC and the SLCRP. Ensure time for students to ask questions.

One or more students can present the guest with a homemade card and gift (e.g., a craft made by students, or wild-harvested flowers or items) to show gratitude for the time and/or teachings shared with the students.

If an Elder is not present, ask the students if they know of any Elders in their communities or lives that are important to them. Invite students to share any teachings that they have learned about how to treat Caribou, how to act when out on the land, and near water related to Yukon First Nations ways of Knowing, Doing and Being (e.g., sustainable or respectful harvesting practices, respect for the land and waters and seasonal activities).

CLOSING: VISUALIZING HUMAN IMPACTS

- Gather in a circle. Pass the Caribou cards around so that each student is holding one. Invite the students to stand up, holding their cards for everyone to see. Imagine that this is the SLC herd.
- Recap with students that the SLC have a very special story. Not too long ago, the SLC were in danger. Their numbers were getting smaller and smaller. Why? (Unsustainable hunting practices, highways and vehicle traffic)
- Invite students to turn their Caribou cards over and notice the colour on the back. Each colour has a different meaning: green = healthy/sustainable hunting practices; brown = overhunting; grey = highways
- Invite students with grey on their cards to place these face down in the circle. Discuss how highways affect Caribou numbers (collisions and interrupted seasonal

movement routes). These students can sit down. These Caribou are gone.

- Take a look around the circle. How many Caribou are left?
- Invite students with green on their cards to hold their cards up in the air, and find another green card in the circle to change places with. Share how Yukon First Nations have been harvesting Caribou sustainably since time immemorial.
- Take a look around the circle. How does traditional, sustainable hunting affect the population (total number) of SLC?
- Invite students with brown on their cards to place these face down in the circle. Discuss why overhunting affects Caribou numbers differently than sustainable harvesting. These students can sit down. These Caribou are also gone.
- Take a look around the circle. How many Caribou are left?
- Consider the story shared by the Elder or specialist. What did the SLCRP do to address the shrinking number of Caribou? (Voluntarily stopping hunting, educating the public about the Caribou and giving Caribou space)
- SLCRP Connection: talk about how a ban on all Caribou hunting allowed numbers to recover. Invite students with brown cards to turn these back over, rejoining the herd. Take a look around and notice numbers.
- Brainstorm ideas of how to reduce human impact on Caribou. As ideas are shared, invite two or more students with grey cards to turn these back over, rejoining the herd.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Retell the story of the formation of the SLCRP, in their own words?
- Share reasons why the SLCRP was needed to protect the Caribou?
- Ask questions about the SLCRP?

PART 3: CARIBOU STORIES FROM HOME AND COMMUNITY

LEARNING TARGET:

I am able to demonstrate curiosity about how Caribou are connected to Southern Lakes communities.

MATERIALS

- **Caribou artifact: sewing materials, Caribou tufting, snare, clothing, lichen sample, or swatch of Caribou hide or pictures printed (Appendix 1b)**
- **Letter home—template printed (Appendix 1e)**

TIME: ~60 MINUTES

OPENING: DRAWING ON OUR STORIES

Gather in a circle. Pass a Caribou artifact around and invite students to share what they remember from the story shared by the Elder or visitor about the SLCRP. Invite students to share stories of personal ɫat'adinch'e/connections (Dänk'e, Dákwänjē dialect) to Caribou as well.

Invite students to think about others in their family or community who may have stories to share.

ASK STUDENTS

- Have you/do you know someone who has seen Caribou before?
- Have you/do you know someone who has been on a Caribou hunt?
- Have you eaten Caribou before? Do you know someone in the community with a delicious Caribou recipe?
- Do you know someone who uses Caribou in their crafts?
- Who could you visit with and ask about their Caribou stories?



ACTIVITY: CONNECTING WITH FAMILIES ABOUT CARIBOU

Brainstorm ideas together of who in families or in the community students could approach and ask about SLC.

Create a list of initial questions to send home with each student. Include a letter home to families (Appendix 1e), describing the class project about SLC, and how important family and community input is for the class's understanding. The letter should also encourage families to help students record the information through, for example, audio recordings, writing or drawing their responses.

Decide on a timeline as a group for when they would like to share the family and community stories together.

Create a plan for sharing the stories and recipes with the class, and with the school.

Display the content in a creative way. Some examples of this could be:

- Create Caribou story books illustrated by the class
- Fill a giant Caribou silhouette with the images, quotes and highlights gathered by students
- Share audio recordings as part of assemblies or daily announcements

CLOSING: CELEBRATING CARIBOU

Plan a celebration to share and celebrate the stories, experiences and knowledge about the SLC that is gathered. Consider inviting family and community members who shared their stories with students.

EXTENSIONS

- In collaboration with other classes working on the caribou curriculum, consider organizing a community celebration to share and celebrate stories about the SLC.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Identify the importance of Caribou in their community?
- Identify ways Yukon First Nations and/or they themselves are interconnected within the environment?

ADDITIONAL ACTIVITY: RUN CARIBOU, RUN! - SEASONAL ENERGY AND HUMAN IMPACT

- All students are part of a Caribou herd. Choose a part of the yard where Caribou are safe (this could be called their calving area). Encourage students to mill around, searching for food and grazing.
- Choose two students to be predators—they can choose between most common predators: wolves, wolverines, grizzly bears, or humans.
- Predators observe Caribou grazing, and then call out, “Run, Caribou, run!” while running out to try to catch them. Caribou try to make it back safely to their calving area without being caught.
- Students who have been tagged turn from Caribou into predators.

EXTENSIONS:

Humans

- Try this game with humans as the predators, and have students observe what happens when there are too many hunters trying to bring Caribou home to their families. Experiment with different numbers of humans as predators, or have humans decide together how many Caribou can be harvested to allow enough to remain for the following year. Discuss together how this connects to the human impacts game explored together.

Seasonal Energy Cost

- Try this game while exploring seasons and energy output. Introduce energy tokens (cards/cubes/popsicle sticks). Start students in the summer season, with each Caribou full of energy (6 tokens). If caught by a predator, students can give three of their energy tokens to the predator for an extra “burst of speed” to escape.
- Shift students into winter. Ask what food is available to Caribou in the winter months—how can they get to it? (Often digging through hard packed snow to get to lichen). What do Caribou need energy for in winter? (keeping warm!) Each Caribou starts with only three energy tokens. Give students time to play and explore in these seasons, and then gather in a circle to discuss what the students observed, as Caribou and predators, how it felt to have fewer energy tokens, and how it felt when there were.

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to demonstrate curiosity about how Caribou are connected to Southern Lakes communities	Is not aware of Elders or shows little respect. No questions are formed or little to no curiosity demonstrated	Is aware of and listens to Elders. Can partially form a question about Yukon First Nations & connection to Caribou	Listens to Elders attentively and respectfully. Forms a well constructed question about Yukon First Nations & connection to Caribou	Highly respectful of Elders' teachings. Forms multiple well-constructed questions about Yukon First Nations & Caribou
PART 2: I am able to explore animals and culture through ordered seasonal events	Not yet able to communicate aspects of seasonal events affecting Caribou	Some verbal or visual representation of one stage of the seasonal round of Caribou are provided	Verbal, visual or oral representation of one stage of Caribou seasonal rounds are provided	Verbal, visual and oral representation of at least one stage of Caribou seasonal rounds with additional details or stories
PART 3: I am able to reflect on my personal experience of place as it connects to local First Nations knowledge and stories	May have little to no reflections on personal reflection of connection to Caribou, Yukon First Nations stories & place	Some evidence of personal reflection of connection to Caribou, Yukon First Nations stories & place provided	Verbal, visual or oral evidence is provided of a reflective process about personal connection to place, Yukon First Nations stories & Caribou	Verbal, visual and oral evidence is provided of a significant reflective process about personal connection to place, Yukon First Nations stories & Caribou

GRADE 2/3 ARTS:

SOUTHERN LAKES CARIBOU CONNECTIONS IN ARTS EDUCATION

BIG IDEAS

- Grade 2: Creative expression develops our unique identity and voice
- Grade 2/3: Dance, drama, music and visual arts are each unique languages for creating and communicating
- Grade 3: Creative experiences involve an interplay between exploration, inquiry and purposeful choice

CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • Elements of design (line, shape, texture, colour, form, design); design(pattern, repetition, rhythm, contrast) • Dramatic forms: improvisation, tableau, role-play, mime, theatre • Symbolism: colour, image, movement, sound with materials, tools and techniques • Variety of local works of art and artistic traditions from diverse cultures, communities, times and places • Personal and collective responsibility associated with creating, experiencing, or sharing in a safe learning environment 	<ul style="list-style-type: none"> • Grade 3: Build creative work as an individual and in a group through purposeful play • Grade 2/3: Develop processes and technical skills to refine artistic abilities • Grade 2/3: Reflect on creative processes and make connections to other experiences • Grade 2/3: Document creative works to share: drawing, painting, journaling, pictures, video clips, audio • Grade 3: Collect knowledge and skills from other areas: science, social studies
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I am able to explore the world of storytelling through natural curiosity of the Southern Lakes Caribou. 2. I am able to make connections with animals and seasonal movement patterns through dramatic forms. 3. I am able to express feelings, ideas and observations about habitat and seasonal changes through creative works. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- [Southern Lakes Caribou Recovery Plan](#) (SLCRP)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND STORYTELLING

LEARNING TARGET:

I am able to explore the world of Storytelling through natural curiosity of the Southern Lakes Caribou (SLC)

SOURCES FOR CARIBOU ARTIFACTS:

Family or community members

MATERIALS

- **Caribou artifacts:** fur, antlers, hooves, lichen, willow branches, mushroom or pictures of artifacts printed (Appendix 2A)
- **Pictures of Caribou in warmer months vs colder months to see the difference in body colour printed (Appendix 1A)**
- **Storyline ball of yarn or cord**
- **Gathered natural items**

TIME: 60 MINUTES

OPENING: CONNECTING TO CARIBOU

Gather in a circle (outside, if weather permits) and pass the Caribou artifacts (body parts) around one at a time, allowing every student a chance to hold it. Observe texture. Brainstorm where it came from. Give hints/prompts: natural, animal sources, - it is from something living, it has four legs, hooves, and antlers. Tell students that a Caribou's coat is unique—very special. Caribou have different sized antlers and shed them at different times of the year.

Make space for inviting an Elder or Traditional Knowledge Holder to share stories and to honour the cultural ways of Knowing, Doing and Being of Yukon First Nations.

ASK STUDENTS

- What makes the Caribou's coat unique?
- What do Caribou eat? Can they find it in every season?
- Do both male and female Caribou shed their antlers?
- How did the antlers feel? Why?
- What do you notice about the Caribou in warmer months vs colder months?

Share ideas.

1. Caribou have two layers of fur covering their bodies, ears and muzzles to keep their body heat in.
2. Caribou have fine, crinkly underfur and a thick coat of guard hairs on top. Guard hairs are hollow and full of air. This acts as insulation (like in the walls of a house, to keep the heat in), keeping in the Caribou's body heat.
3. The hair that covers the body of the Caribou is called the pelage. The pelage changes colour throughout the year and is darkest in the summer.
4. Caribou antlers are covered in a soft fuzz called velvet.
5. Only the male (buck) will shed their antlers in late fall while the female (cow) Caribou, who have smaller antlers will keep them- especially if she is pregnant so she can defend herself for food. The buck will regrow their antlers through the spring and into the summer months, weighing up to twenty pounds.
6. Hooves are hollow and broad with sharp edges to dig through ice and snow or to give traction when traveling over ice. They dig for lichen to feed on through the winter months. If there has been any deforestation in the area, they will have less food to eat and survive. If there is a large amount of snowfall, they will have a harder time accessing their food source.

INTRODUCTION TO STORYLINE

Gather outside and unravel the ball of yarn/cord on the ground creating a storyline. Begin at one end of the storyline and share a short story of your own making in relation to caribou. Place gathered nature items along the storyline to represent parts of the story (e.g., a group of rocks to show that Caribou live in herds, a plant to represent that Caribou are herbivores, sticks to represent the wooded habitat).

ACTIVITY 1: CARIBOU STORYLINE

Tell students that they are going to be creating a storyline of their own with the use of a cord using gathered nature items, as you modeled before. Tell them that they must have a beginning, middle and end to their stories which will guide them in using their storyline (beginning, middle and end of cord). Be sure to also highlight that this way of Storytelling is from Western cultures where an ending is often the way to complete a story. Yukon First Nations offer stories that do not necessarily have an ending and students could explore this concept by using the end of the string to represent a question or a moment of wonder, food for thought, where the listener can be invited to continue engaging even after the activity is completed.

EXTENSIONS

- History of Storytelling and how Yukon First Nations have not always been able to speak their language or share their stories. Students could delve further into pre-contact and post-contact, how that affected oral traditions and other cultural practices.
- Hold space for an Elder or Traditional Knowledge Holder to share their stories.
- Invite students to be in small groups and create storylines together.
- Encourage students to place their cord in areas that reflect the actions in their story. (wooded area vs. open area)

CLOSING: COMPLETING THE STORYLINES

Once the storylines are complete, invite students to share their storylines one at a time for everyone to hear.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Incorporate the parts of a story (beginning, middle, end or an open ended storyline that invites the listener to continue the learnings or teachings beyond the story)?
- Incorporate details related to habitat, adaptations and diet into their story?

Invite the students to self-assess their sharing by asking:

- On a scale of 1 to 5, how well do you feel you shared (Raise 1-5 fingers in the air);
- Are you able to add more to your answer?

PART 2: CARIBOU CONNECTIONS THROUGH DRAMATIC PLAY

LEARNING TARGET:

I am able to make connections with animals and seasonal movement patterns through dramatic forms.

MATERIALS

- Pictures of Caribou habitat based on the warmer seasons (subalpine areas above the tree lines) versus colder seasons (boreal forest) printed (optional, Appendix 1a)
- Pictures of predators printed (Appendix 2b) in Dän'ke, Kwanlin Dün dialect:
 - ägay/ wolf
 - átsi shāw/ grizzly bear
 - thay/ golden eagle
 - nàday/ lynx
 - tth'j/ mosquito

TIME: ~60 MINUTES

OPENING: CONNECTING WITH CARIBOU

Gather in a circle. Pass around the predator pictures and invite the students to share what they know and remember about Caribou. Encourage students to share any stories or personal connections they have with Caribou.

ASK STUDENTS

- Who feeds on Caribou?
- Do each of these predators hunt Caribou during every season?
- Which of these predators might feed on a calf? Why?
- How do the changing seasons affect how and when Caribou travel?

Share ideas.

Tell students that bears hunt and eat Caribou during the months of the year that they are not in hibernation. Lynx will hunt for Caribou in the colder, winter months as the Caribou move towards coniferous trees where they will forage for lichens. Golden eagles feed on calves in late spring only as they are a prey that the eagle can obtain due to their smaller size. When mosquitoes and other harassing insects emerge, Caribou move to windier areas above the tree line to get some respite.

Share the pictures of their habitats.

ASK STUDENTS

- How is seasonal movement linked to predator-prey relationships?
- How might Caribou protect themselves from a predator?
- How do the seasons affect their seasonal movement patterns?

Share ideas.

If there are more predators at any given time, that will affect how many Caribou will survive. If more female Caribou are caught by predators, there will be less Caribou born in the next generation.

Caribou have antlers which they can use as a way to defend themselves against predators. Also, at their ankles, they have sensory glands which allow them to sense when there is trouble or danger. They will rear their front hooves up into the air to release a scent which will warn other Caribou nearby of the threat. They also travel in herds for protection.

ACTIVITY 1: DRAMATIC FORMS

Head outside and break the students into small groups for this activity. There will be a “stage space” and an “audience space”—identify these to the whole class. Students will be creating images with their bodies, as a group, depending on what you call out. Each person in the group must be included in the image created and each group will have two minutes to put their image together. One group at a time will create their image while the audience observes. Each group will create one image, then sit in the audience and a new group will come onto the stage. Repeat as many times as you would like.

ASK STUDENTS

- How did it feel in your body to be creating animal forms as a group?
- What made the seasonal movement game challenging for Caribou?

EXTENSIONS

- Each group could make their dramatic forms at the same time rather than having an audience.

ACTIVITY 2: CARIBOU SEASONAL MOVEMENT GAME

Students will all be acting as Caribou and there will be one predator. It is important to note that if there is a predator which is a clan name in the area where you are located, students should be made aware that this animal is not an option for portraying in the game, for example, eagle. All Caribou will begin at one end of the play space and the predator will be at the opposite end, with their back to the herd. The goal is for the Caribou to arrive safely to their destination: they are moving from winter ranges to the calving area. As they move quietly, the predator will count (in their head) to ten and then turn. If the predator sees any Caribou moving, they have to go back to the beginning and start over. The game continues until all Caribou have made it safely to the calving area.

EXTENSIONS

- End the round when the first Caribou makes it to safety and choose a new predator for the next round.
- Shorten or lengthen the play area, consider using a wooded area and an open area as end zones.
- Introduce an elimination round: Caribou that are caught by the predator (spotted moving) must step out of the game and can only rejoin, one at a time, when a Caribou makes it safely to the calving area.
- Add a habitat haven into the middle of the play space. Each Caribou must make it there

before continuing on their journey. Only one Caribou can be safe at a time.

- Introduce food into the game. The Caribou must pick up one piece of plant matter along their journey without being caught moving. If they are caught while picking up the food, they must leave the food there and start over.
- If using food, in a new round only put out a few pieces—not all Caribou will make it if they must eat along the way.

CLOSING THE LOOP

Review the concepts of predators, seasonal movement, and diet.

- What did you learn about the seasonal movement that SLC go through in different seasons?
- How might predation affect the survival of SLC?
- Do you think that the SLC are a species at risk? Why?

ASSESSMENT OPPORTUNITIES

Invite students to raise their hand if they answer “yes.”

- Did I learn something new about the SLC?
- Did I learn something new about myself?
- Did I learn something new about a classmate?
- Was I able to control my body movements?

PART 3: CARIBOU COLLAGE

LEARNING TARGET:

I am able to express feelings, ideas and observations about habitat and seasonal changes through creative works.

TIME: ~60 MINUTES

OPENING: DRAWING ON OUR STORIES

Gather in a circle. Review what the students recall from previous activities in relation to habitat, seasonal movement and parts of a Watsix/Caribou (Tlingit, Carcross and Tagish First Nation dialect). Watsix are creatures that move from place to place depending on the seasons and they are always foraging for food. Watsix can eat up to fifteen pounds of plant matter in a day. They live and travel in herds for protection.

Pass around the artifacts and discuss their use/purpose.

MATERIALS

- **Artifacts or photos printed (Appendix 2C)**
 - **Hides: clothing, boots, jewelry**
 - **Bone/antler: tools**
 - **Hair, sinew, babiche: snowshoes, fishing tools**
- **Caribou silhouettes printed on cardstock for tracing (Appendix 2D)**
- **Coloured tissue paper**
- **Construction paper**
- **Watercolour paints**
- **White paper**
- **Paint brushes**
- **Wax crayons or oil pastels**
- **Water cups**
- **Glue**
- **Paper towels**

ACTIVITY: CARIBOU COLLAGE

Prep: Be prepared with all of the supplies ready to go, and for you to create the same piece of work alongside the students to model the steps.

In a circle, show the students photos of landscape paintings (e.g.,: Ted Harrison's Caribou antlers) and any visual art pieces that will highlight the same criteria. Compare these photos to your example piece. Consider inviting Yukon First Nations artists who work on landscapes.

ASK STUDENTS

- What colours do you see in the fall/winter/spring/summer? What do you notice about my example work?
- What do you notice about the layer of land?
- What do you notice about the shapes, lines and colour of the lichen?

TAKE IT OUTSIDE

Head out to a nearby view of a landscape to look at these features in person. Note the layers, the colours, lines, shape and form.

Share ideas.

Foreground: lichen and plants growing on the ground; they seem bigger because they are closer

Middle ground: not many details here

Background: the details are darker in colour because they are further away and seem smaller in size.

Share the steps in creating the Caribou collage:

A. The 3 Layers:

- Glue the white paper onto a piece of construction paper- it will make a border.
- Using oil pastels or crayon, draw the foreground line (lower $\frac{1}{3}$ of the paper).
- Draw the horizon line- flatlands, marshes, mountain range) ($\frac{2}{3}$ from the top of the paper). Use a shaky hand to create an uneven ground.
- Note that the middleground will be the space in between these two lines.

Adding details:

- Foreground: Draw the many shades, shapes and lines of the lichen in bright colours. Keep the colours lighter shades as this creates a view from nearby. Pressing hard will cover the page enough to resist the watercolour paints.
- Middle ground: This area will have dull colours and if you draw with a lighter hand, using wavy lines, it will look more blurry and further away.
- Background: Less details, solid and darker in blues and greys. Use the side of the pastel to create a texture.

B. Water on Water Painting: Can be added to each layer.

- Paint an area with water and add watercolour paint.
- Foreground: Use bright colours.
- Middleground: muted or dull colours.
- Background: blue/grey.

C. Texture with tissue paper: Less is better as it can become overwhelming

- Mix a small amount of water and glue together.
- Paint the water/glue mixture onto the sky section.
Lay the torn tissue gently to add a cloud effect and paint over it with the same mixture.
- Lift this paper and put it down in another place. Repeat this process and either leave the paper there or remove it.
- Repeat this process for the landscape.
-

CLOSING REFLECTIONS

- How can you connect Caribou with your life?
- If Caribou could talk, what would they say about their lives? What would they want us to say about their stories?
- How can we show respect for Caribou? Their habitat?
- What colours did you use or create in your art piece? What type of lines did you use? Did you use any artistic techniques for visual impact? Did you use complementary colours? If so, which ones?

If present, create space for final words from the visiting Elder or Traditional Knowledge Holder.

ASSESSMENT OPPORTUNITIES

Ask Students to reflect on the elements and skills used in this visual art activity.

- Did you use elements of design (line, shape, texture, colour or form); design (pattern, repetition, rhythm or contrast) in your piece?



ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to explore the world of storytelling through the natural curiosity of the SLC	May have little to no reflections with connection to Caribou, Yukon First Nations stories & place	Some evidence of reflections with connection to Caribou, Yukon First Nations stories & place provided	Verbal, visual or oral evidence is provided of a reflective process about personal connection to place, Yukon First Nations stories & Caribou	Verbal, visual and oral evidence is provided of a significant reflective process about personal connection to place, Yukon First Nations stories & Caribou
PART 2: I am able to make connections with animals and seasonal movement patterns through dramatic forms	Not yet able to create links between animal forms and patterns through dramatic forms in a group setting	Some visual representations of animal forms are created in a group	Visual representations of animal forms are provided in a group with some confidence	Visual representations of animal forms are provided as a group with confidence
PART 3: I am able to express feelings, ideas, and observations about habitat and seasonal changes through creative works	Not yet able to reflect on creative processes with little focus on elements of design including line, shape, texture, colour and form	Some reflections on creative processes are present with a focus on several design elements including line, shape, texture, colour and form	Numerous reflections are made of the creative processes focused on particular aspects of design elements including line, shape, texture, colour, form and pattern	Several reflections are constructed in relation to the creative processes based on precise design elements such as line, shape, texture, colour, form, pattern and contrast

GRADE 3/4 SOCIAL STUDIES: HUMAN MOVEMENT AND THE SOUTHERN LAKES CARIBOU CONNECTIONS

BIG IDEAS

- Grade 3: Learning about First Nations people nurtures multicultural awareness and respect for diversity
- Grade 3: First Nations knowledge is passed down through oral history, traditions and collective memory
- Grade 4: The pursuit of valuable natural resources has played a key role in changing the land, people and communities of Canada
- Grade 4: Demographic changes in North America created shifts in economic and political power

CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • Grade 3: aspects of life shared by and common to peoples and cultures • Grade 3: relationship between humans and their environment • Grade 3: oral history, traditional stories and artifacts as evidence about past Yukon First Nations cultures • Grade 4: the impact of colonization on Yukon First Nations societies in British Columbia and Canada 	<ul style="list-style-type: none"> • Grade 3: Ask questions, make inferences and draw conclusions about the content and features of different types of sources (evidence) • Grade 3/4: Use Social Studies inquiry processes and skills to ask questions; gather, interpret and analyze ideas; and communicate findings and decisions • Grade 4: Make ethical judgments about events, decisions or actions that consider the conditions of a particular time and place
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I am able to demonstrate curiosity about the connection of Southern Lakes Caribou and local First Nations. 2. I am able to reflect on my knowledge of Southern Lakes Caribou. 3. I am able to explore Southern Lakes Caribou and culture through dramatic play. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)

[Southern Lakes Caribou Recovery Program](#)

Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)

[Southern Lakes Caribou Relationship Planning - here, for caribou](#)

Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND CARIBOU STALK

LEARNING TARGET:

I am able to demonstrate curiosity about the connection of the Southern Lakes Caribou (SLC) and local First Nations.

MATERIALS

- **Caribou artifact: sewing materials, Caribou tufting, clothing, Caribou hide or Pictures of artifacts printed (specifically hunting tools) (Appendix 1B and 2C)**
- **Two large branches**

TIME: 90 MINUTES

OPENING: CONNECTING TO CARIBOU

Gather outside in a circle (weather permitting) and pass the Caribou artifact items around one at a time. Be sure to highlight the way in which students should be handling the artifact: with respect and gentle hands. Observe the texture of each item and brainstorm where they could have come from. Tell students that the artifacts are from a SLC. Talk to the students about how the SLC are very special to Yukon First Nations. Go around the circle and invite the students to share a connection or a story that they might have.

ASK STUDENTS

- How do you think Yukon First Nations used to hunt for Caribou?
- What kind of hunting tools do you think they used?
- When would be a good time to hunt for Caribou?
- How or where would you hunt for a Caribou?

Share ideas.

1. During seasonal movements, Yukon First Nations hunters could build enclosures (i.e., corrals or impoundments) in clearings or on frozen lakes to entrap moving Caribou.
2. Hunters might also wear Caribou skins and hold antlers over their heads to disguise themselves until they were within bow and arrow range.
3. During mating season (the rut period) hunters could strike antlers together to simulate the sounds of two bull Caribou fighting. This could draw in curious Caribou making it easier for hunters to seek out Caribou.

Invite an Elder or a Traditional Knowledge Holder to the circle to share stories and honour Yukon First Nations ways of Knowing, Doing and Being. Share knowledge about traditional hunting practices and stories about Caribou in the Southern Lakes regions. If possible, encourage the Traditional Knowledge Holder to share specific stories or knowledge about how to **bush walk**: the act of walking, or being very quiet while hunting for Caribou.



ACTIVITY: CARIBOU STALK

To prepare for this game you will need to have two large branches to represent the “antlers” of the Caribou. One student will need to be selected to be “it” or the “hunter” for the first round of the game.

The hunter will be at one end of the field, or the forest, while the rest of the students are at the other end at a pre-decided distance that feels safe, as the hunter will be blindfolded.

To signify the start of the game, the hunter will bang the branches together, to mimic Caribou antlers banging together, as hunters would do if they were hunting Caribou during rutting season. The “curious Caribou” will cautiously stalk towards the banging as quietly as possible using their bush walk. The hunter will continue to bang the branches together until they think they can hear the Caribou around them, then they can remove the blindfold and try to tag a Caribou.

The Caribou that was harvested/ tagged will become the hunter for the next round.

EXTENSION

- When a Caribou gets caught by the hunter, that Caribou becomes a hunter. This can continue until all the Caribou are caught and have become hunters.

CLOSING

Gather back in a circle. As a group, discuss the game. How did it feel to be a hunter? Was it difficult to assess when they thought the Caribou were near them? How did it feel to be the Caribou? Did they come up with an effective strategy that helped them bush walk quietly around the hunter?

Note: There is extensive oral history surrounding caribou that have been passed down through generations. These stories are shared to teach each generation respect for Caribou on the land and during a hunt (Madsen, 2018).

ASSESSMENT OPPORTUNITIES

Are students able to:

- Make connections with SLC and Yukon First Nations ways of Knowing, Doing and Being?
- Control their body movements while blindfolded?
- Listen intently and locate sounds around them?

PART 2: HUNTING SOUTHERN LAKES CARIBOU

LEARNING TARGET:

I am able to reflect on my experience of place as it connects to local First Nations knowledge and stories.

MATERIALS

- **Caribou artifact: sewing materials, Caribou tufting, snare, clothing, lichen sample, or swatch of Caribou hide (Appendix 1B and 2C)**
- **Dzaas/ babiche in Tlingit for Teslin First Nation (optional)**

TIME: ~2 HOURS 30 MINUTES

OPENING: CARIBOU HUNTING TOOLS

Gather in a circle outside and pass pictures of Yukon First Nations hunting tools around the circle with a focus on gentle handling. Observe the images closely and share wonder moments about them. Invite the students to share any thoughts or stories they have about hunting Caribou.

ASK STUDENTS

- Do you know anyone who has hunted a Caribou?
- Have you ever seen or handled a real artifact before? How can we handle it with care?
- How do you think Yukon First Nations used to make tools to hunt with?
- What types of materials do you think they made tools out of?
- Observe these tools and consider their texture, smell and colours.

Share ideas.

1. A new study, led by Kate Helwig and Jennifer Poulin at the Canadian Conservation Institute, has identified beaver castoreum as a component of the design and construction of a 6,000-year-old Yukon atlatl-throwing dart.
2. Studies of Yukon Ice Patch artifacts have previously identified a mix of spruce resin and red ochre applied as an adhesive.
3. Throwing darts or atlatl, which were thrown using a lever-like handle, were the preferred hunting projectile used by Yukon First Nations before the 7th century AD.
4. Atlatls were locally replaced as a hunting weapon by bows and arrows around 847 AD.
5. Some weapons would miss their marks and disappear in the snow and ice, over time building a treasure trove of artifacts now revealed by the melting ice. Archaeologists have found ancient hunting tools made of wood, antler bone and now copper.
6. For thousands of years, Caribou took refuge in the summer up high on the alpine ice patches to escape the heat and swarms of harassing insects. That made those ice patches good areas for ancient hunters to get close to the Caribou.

Begin this activity outside and have students consider:

- How they would create their own atlatl.
- Whether they would like to create another tool.
- Creating wonder about kwädāy/olden days (Dänk'e, Dákwänjē dialect) Yukon First Nations hunters and why they used beaver castoreum.

Each student will consider these reflections as they create their own hunting tool. When all of the tools have been created, gather back in a circle to share their creations.

ASK STUDENTS

- What did you think about when you were looking for materials for your hunting tools?
- Did you use anything that you felt would help make a Caribou hunt successful?
- What is your favourite part of your tool?
- What were the challenges you encountered when making your hunting tool?

EXTENSIONS

- Create targets to test out your hunting skills with your handmade hunting tools.
- Consider offering more time for students to alter their tools for maximum hunting success.

CLOSING: CONNECTING TO ANCIENT FIRST NATIONS HUNTERS AND SOUTHERN LAKES CARIBOU

Encourage students to reflect on their experiences and share stories or connections they may have. Yukon First Nations have ancient history with Southern Lakes Caribou (SLC) and for quite some time that relationship had to be put on hold. Now that the Caribou are slowly returning, it is more important than ever to understand the history and respect for the land, the water systems and the animals.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Identify the different tools that ancient First Nations hunters would use to hunt Caribou?
- Form age appropriate questions and exhibit knowledge on Yukon First Nations hunters and their relationship to the SLC and communities?

Invite the students to self-assess their sharing by asking:

- On a scale of 1 to 5, how well do you feel you participated (Raise 1-5 fingers in the air)?
- Are you able to add more to your answer?

PART 3: INTERVIEW WITH ARTIFACTS

LEARNING TARGET:

I am able to reflect on my knowledge of Southern Lakes Caribou through dramatic play.

MATERIALS

- **Caribou artifact:** Caribou hide, Caribou tufting, Caribou antler sample or photos printed (Appendix 1a)
- **Hunting artifacts:** Caribou hunting tools from community or family members or pictures of ancient tools, printed (Appendix 1B and 2C)
- **Pictures/Maps of Ice Patches in the Yukon,** printed (Appendix 2C)
- **Clipboards/Paper/Pencils**

TIME: ~2 HOURS 30 MINUTES

OPENING: CARIBOU CONNECTIONS

Gather in a circle outside (weather permitting). Pass the Caribou artifact around the circle. Have the students examine it and take turns sharing connections to Caribou. Hand out the hunting artifact and pictures for the students to examine. Encourage the students to share any stories or curiosities that they may have about hunting Caribou. Lastly, share the pictures of the Yukon ice patches with the students. Have them share any stories or thoughts that they have about the ice patches.

ASK STUDENTS

- What is unique about the hunting artifacts?
- Where do they think the Caribou artifacts came from?
- What is significant about the ice patches?

Tell students that for this activity they will be interviewing three different artifacts, two of which have names in Southern Tutchone. Use the online dictionary for pronunciation:

1. **Mezi/ Caribou** (Dän'ke, Tàa'an Män dialect)
2. **tän mày/ An ice patch or edge** (Dän'ke, Kwanlin Dün First Nation dialect)
3. **jishagóon/ tool(s)** (Tlingit, Carcross and Tagish First Nations)

Each student will have to ask each artifact one question, a total of 3 questions per student. Encourage them to keep this task in mind while listening to the guest speaker who has been invited to the class to tell traditional stories. Pass out a clipboard, paper and a pencil to each student so that they can keep notes of any interesting information or curiosities they encounter during the Elder or Traditional Knowledge Holder's presentation. Invite the Elder or Traditional Knowledge Holder to share their Southern Lake Caribou (SLC) hunting stories and knowledge about the Yukon ice patches with the students.

Share ideas.

1. For thousands of years, Caribou took refuge in the summer up high on the alpine ice patches to escape the heat and swarms of harassing insects. That made those ice patches good areas for ancient hunters to get close to the Caribou.
2. Some weapons would miss their marks and disappear in the snow and ice, over time building a treasure trove of artifacts now revealed by the melting ice.
3. Ice patches have been fertile hunting ground for First Nation people, as woodland Caribou tend to congregate in such areas. They are scattered throughout Yukon.
4. Caribou have been dated as far back as 1.6 million years ago at Fort Selkirk, Yukon
5. Caribou are medium-sized members of the deer family, and can be found in many areas across North America in boreal, montane and arctic environments.
6. Caribou need to be able to move freely in order to move from their higher summer areas to lower winter areas.
7. Although Caribou population ranges are the most common unit for management or recovery activities, the SLC belong to the 'Northern Mountain' ecotype of Woodland Caribou.
8. During mating season (the rut period) hunters could strike antlers together to simulate the sounds of two bull Caribou fighting.
9. Throwing darts or atlatl, which were thrown using a lever-like handle, were the preferred hunting projectile used by First Nations people in Yukon before the 7th century AD.

When the students have confidently come up with three questions, you can choose the first three students to choose their artifact and to be interviewed by the class. Each student will choose which artifact they would like to represent, and the rest of the class will take turns asking them their three questions.

Examples of questions for the three different artifacts could look like this:

- Caribou: what did it feel like when your antlers started to grow?
- Ice Patch: what was it like when the Caribou used to visit you?
- Atlatl: how did it feel when you were thrown in the air?

EXTENSIONS

- The students who are chosen to be interviewed will not reveal which artifact they chose to be. The class will have to guess which artifact they are by asking their questions. When an artifact is guessed correctly, another student will have a turn.
- Students could create a written representation of what they learned through this activity and share it with the community or other classes that are studying the Southern Lakes Caribou Recovery Program.

CLOSING: CONSIDERATIONS OF THE PAST

Gather back in a circle and take time to consider the extensive history that the SLC have with the First Nations people of the Yukon. What thoughts or ideas do you have about the SLC now? Invite the Elder/ Traditional Knowledge Holder to share any closing thoughts, stories or closing remarks and make space to offer gratitude and a gift for their time and shared knowledge.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Identify the importance of Caribou in their community?
- Form and ask three appropriate questions about the different artifacts?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to demonstrate curiosity about the connection of Southern Lakes Caribou and local First Nations	Is not yet able to communicate curiosity about the connection of SLC and local First Nations, forming few questions to form their thoughts	Is able to reflect on the connection of SLC and local First Nations by asking questions related to the topic	Is able to demonstrate curiosity about the connection of SLC and local First Nations and communicate these clearly	Is able to demonstrate curiosity and knowledge about the connection of SLC and local First Nations and ask in depth questions to help form their opinions
PART 2: I am able to reflect on my knowledge of SLC	Is able to express my thoughts on SLC and Yukon First Nations culture	Is able to explore SLC and Yukon First Nations culture with little visual representation	Is able to explore SLC and Yukon First Nations culture through hands-on creativity	Is able to express knowledge of SLC and Yukon First Nations culture extended through an accurate representation of an ancient tool
PART 3: I am able to explore SLC and culture through dramatic play	Is not able to represent my reflections about SLC through dramatic play	Is able to engage in reflecting my knowledge of SLC through dramatic play	Is able to reflect on my knowledge of SLC through dramatic play and engage in a group activity to share this	Is able to show deep reflections on my knowledge and make connections to the SLC through dramatic play

GRADE 5 SCIENCE AND SOCIAL STUDIES:

EXPLORING SUSTAINABLE MANAGEMENT OF SOUTHERN LAKES CARIBOU

BIG IDEAS

- Social Studies: natural resources continue to shape the economy and identity of different regions of Canada
- Science: multicellular organisms have organ systems that enable them to survive and interact within their environment

CONTENT	CURRICULAR COMPETENCIES
<p>Social Studies</p> <ul style="list-style-type: none"> • First Nations land ownership and use <ul style="list-style-type: none"> • housing • hunting and fishing • land claims disputes <p>Science</p> <ul style="list-style-type: none"> • First Nations concepts of interconnectedness in the environment 	<p>Social Studies</p> <ul style="list-style-type: none"> • Sequence objects, images and events, and recognize the positive and negative aspects of continuities and changes in the past and present <p>Science</p> <ul style="list-style-type: none"> • Identify some of the social, ethical and environmental implications of the findings from their own and others' investigations • Express and reflect on personal, shared or others' experiences of place • Make observations in familiar or unfamiliar contexts
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I am able to demonstrate understanding of the ways in which Caribou and people are interconnected with the surrounding environment. 2. I am able to identify human impacts on the Southern Lakes Caribou seasonal movement and how the Southern Lakes Caribou Recovery Plan has mitigated negative impacts over time. 3. I am able to explain how First Nations and non-First Nations people continue to protect the wellbeing of the Southern Lakes Caribou through joint management. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Caribou and their life cycle, diet and seasonal movement patterns. Some helpful resources to teaching the life cycle of Caribou are listed below:

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- WWF on [Caribou](#)
- [Woodland Caribou | Government of Yukon](#)
- [Life Cycles of Caribou - Inhabit Media](#)
- [Southern Lakes Caribou arcGIS maps](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5 - Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND EXPLORING INTERCONNECTION

LEARNING TARGET:

I am able to demonstrate understanding of the ways in which Caribou and people are interconnected with the surrounding environment.

MATERIALS

- **Ball of string**
- **Caribou Web of Life cards printed and cut out (Appendix 2E)**

TIME: ~45 MIN

OPENING: WHAT DO CARIBOU EAT? WHO EATS CARIBOU?

Gather in a circle. Invite students to share what they know about Caribou life cycle, diet and Caribou dependence on—and contributions to—the surrounding environment. Who has tasted Caribou?

- Caribou are herbivores, and eat at least three kilograms of vegetation every day, the equivalent of about two garbage bags of food!
- Caribou eat different types of plants, depending on the season. Lichen is the most important part of the Caribou diet.
- During the winter months, Caribou depend on the lichens found under the snow.
- In the summer there is a lot more food available for Caribou: grasses, sedges and dwarf willow or birch leaves.
- In the fall, Caribou return to eating lichens, as well as mushrooms (if available)

(Madsen, 2018)

ACTIVITY: WEB OF LIFE

Gather in a circle.

ASK STUDENTS

- What does interconnectedness mean to you?

Share ideas.

Distribute Caribou web of life cards, one to each student. Each student will have a turn to connect their card (their part of the Caribou ecosystem) to another classmate's card. Use the names in Southern Tutchone, referencing the online dictionary for pronunciation. Components of Caribou web of life could include: sun, lichen/udzí njī, willow/k'ày, nose bot fly, raven/ts'úr'k'i, Caribou/Udzí, mosquito/Tth'j, wolf/ägay and grizzly bear/Átsi shāw.

- Caribou share their habitats with an astonishing variety of creatures. They are all part of the ecosystem, and support and sustain themselves to mutual benefit. A naturally functioning ecosystem is more than a food chain. Predators chase Caribou, and so do tiny insects, whose larvae grow inside a Caribou host. Caribou scour the tundra and forest floors to devour lichen, but their travelling hooves help other plants spread and take root elsewhere. Their fecal pellets return nutrients to feed such things as mosquito larvae in wet areas and plants. (Madsen, 2018, p. 9)
- One student starts the web, holding one end of the ball of string in their hand, and passes the string to a classmate with a card they feel is connected to their own.

- Each student describes their connection to the student they pass to on their turn
- (e.g., student with “sun” card passing to student with “plant” card could say “The sun provides energy to plants”)
- Students continue to pass the string to someone they are connected to, holding their portion of it, and describing why these two parts of the Caribou ecosystem are connected.
- Repeat until everyone in the circle has received the string. Students may receive the yarn more than once, highlighting the importance of their part of the ecosystem.
- Invite students to reflect on what their web represents (a Caribou Web of Life).

ASK STUDENTS

- Can you predict what would happen if one component was removed from the ecosystem?
- How might this happen? (Hunting, highways and high predatory populations)

Share ideas.

- Invite students to lift the string, all together, over their heads. Observe the web from underneath. Discuss how this web highlights the tight, interconnected nature of the ecosystem. What happens to one part of the web happens to the whole thing.
- Choose one card to remove from the web. Discuss what might remove this from the web (human activity). On the count of three, with the web pulled taut, have that student drop their string(s).

ASK STUDENTS

- Who felt their string(s) go slack as a result?

CLOSING: CONNECTING THE WEB

Continue until the web has fallen apart. Reflect together on connections and shared impacts of the web of life. Encourage students to share something that they noticed during the activity.

ASK STUDENTS

- What connections surprised you most from the web?

- In what ways is your life connected with Caribou? Does this change with seasons?
- How does a change in one part of the web affect the rest of the ecosystem?

EXTENSIONS: ZOOM IN

Invite students to choose one element of the Caribou Web of Life. Students, in pairs or independently, can create a “profile” for their focus element of the web. In focusing in, encourage students to imagine what would happen to that element if there were very low numbers of Southern Lakes Caribou (SLC). Encourage them to expand that further, and create hypotheses of the larger reaching impact.

For example, lichen are slow-growing and sensitive to change. If a forest fire wiped out a large amount of lichen, it could take many years for it to grow back. Caribou may have to move to new locations in order to find enough food to eat.

Create a display for the Caribou Web of Life, featuring each of the “zoomed in” elements. Together, decide on a way to highlight the interwoven, intertwined connections of the web.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Identify ways in which Caribou are connected with the land/water around them?
- Identify ways that the local First Nations and/or they themselves are connected with the SLC?



PART 2: WALKING IN THEIR HOOVES: SEASONAL MOVEMENT AND HUMAN IMPACTS ON SOUTHERN LAKES CARIBOU (SLC)

LEARNING TARGET:

I am able to identify human impacts on the seasonal movement of the SLC, and how the Southern Lakes Caribou Recovery Plan (SLCRP) has mitigated negative impacts over time.

MATERIALS

- Hula hoops/ropes/pylons—as “habitat havens”
- Soft foam balls/bandanas tied in knots—tossed as “seasonal dangers”
- Seasonal Movement Cards, sharing facts about Caribou seasonal movement, printed and cut out (Appendix 3A)
- On the journey cards, added challenges facing Caribou during seasonal movement (e.g., highways cutting across movement corridors, and overhunting), printed and cut out (Appendix 3A)
- Caribou commitment sheet, printed (Appendix 3B)

TIME: ~60 MINUTES

OPENING: SHARING WHAT WE KNOW

Gather in a circle. Invite students to share what they know about seasonal movement, and more specifically about the seasonal movement of the SLC. **Note:** The SLC do not migrate like other Caribou herds.

ASK STUDENTS

- Where do Caribou travel?
- Why do Caribou travel throughout the seasons?
- What might affect Caribou seasonal movement paths?

FACTS ABOUT CARIBOU

- Caribou are wary of unusual linear structures. Northern hunters used to use antler fences, or rows of stone piles to guide Caribou for hunting.
- Roads, high-use hunting and recreation trails and human development (structures and houses) have several major effects on Caribou:
 - Increased access for hunters, where previously herds were only available to small groups of hunters travelling on the land who depend on caribou as nourishment.
 - Creating hunting corridors for wolves, who use the cleared surface to travel, surveying prey from the road
 - Disruption from and possible collisions with vehicles and people travelling along the roads (Madsen, 2018).
- Human disturbance from machines and from non-motorized activities have a negative impact on the wellbeing of Caribou. They may avoid or abandon areas in response to human disturbance.

ACTIVITY: SEASONAL MOVEMENT EXPLORATION

Students will be undertaking the SLC Seasonal Movement (adapted from [Migration mishaps](#)); this is not an easy journey.

- In a large, open space, designate a space as the spring calving area, the other as the lowland winter ranges. **Note:** Mountain Caribou do not have identifiable calving grounds. Rather, they spread out on the landscape to avoid predation

- Spread “habitat havens” (hula hoops) throughout the space, extras in the spring calving area and winter ranges.
- Set a timer for five to ten minutes per round.
- Gather all students to begin in the winter ranges. To remain safe from dangers, students must gather around a habitat haven—only three students per haven. When they hear “Time to move!”, students are to attempt crossing the space, moving to the calving area across the space and finding a habitat haven.
- For each round, share a Seasonal Movement card, adding or removing habitat havens according to the card. For example, **mining exploration starts up in the calving area of the SLC. Remove two habitat havens from the calving area.**
- Remind students there are only three students per habitat haven. Students who cannot find a safe space become Caribou who do not make it on the seasonal journey. These students move to the side of the calving area temporarily, waiting as unborn calves until cards call them back into the game. Highlight how Caribou who die cycle back to the Earth, feeding into the web of life.
- Students on the side of the calving area will return to the game as calves when a seasonal movement card describing favourable conditions are read. For example, **hunting restrictions put in place, add two habitat havens to winter ranges. The number of calves born to the herd increases significantly!**
- After a few rounds moving between spring and winter habitats, add on the journey cards to the mix. These add extra dangers that Caribou experience during their seasonal journey.
- For example, highway development cuts directly across the SLC movement route. Many Caribou are killed by collisions with vehicles.
- Students on the sidelines take turns tossing the knotted bandanas at the students moving. Any students hit with a human hazard join the sidelines until conditions are favourable for a surge in Caribou numbers.
- Play until the timer is up. Students can repeat the game from the top, reintroducing all students back into the seasonal movement.

Gather in a circle again. Discuss how it felt to attempt the seasonal movement with so many uncertain factors.

ASK STUDENTS

- What impact do humans have on Caribou’s seasonal movement? What changes made a difference to the safety and numbers of Caribou?

CLOSING: CARIBOU COMMITMENT

- Discuss what impact human actions can have on the seasonal movement of Caribou (Udži in Southern Tutchone). How can human actions have a positive impact? Brainstorm how, as an individual and as a class, students can carry out these commitments. Record ideas shared. Examples could include: encouraging people to drive slowly through caribou winter range to reduce vehicle collisions, staying on the trail in the bush and not creating new trails.
- Using the Caribou commitment sheet provided, or through a medium chosen by the students, each student will create an individual pledge, a Caribou commitment.
 - In their caribou commitment, students will outline steps they can take as an individual, and as a community member, to protect the SLC.
- Draw a large Caribou silhouette on the wall with chart paper. Every student can write down their pledge, and stick it onto the Caribou. This makes the commitment visible for the duration of the lesson or unit. Consider creating a class commitment to add in as well.
- Encourage students to express this commitment creatively, creating a poem, a short story or designing a poster.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Share a closing reflection or insight about their experience of Caribou’s seasonal movement that demonstrates active listening?
- Identify concrete ways in which they can help protect and respect Caribou in their community?

PART 3: MONITORING THE SOUTHERN LAKES CARIBOU HERD

LEARNING TARGET:

I am able to explain how First Nations and non-First Nations people continue to protect the wellbeing of the SLC through joint management.

MATERIALS

- iPads, class computers or projector to share [arcGIS SOUTHERN LAKES Caribou](#)
- Paper, pencils, coloured pencils for reflections/ drawings of No Voice perspective

TIME: ~60 MINUTES

OPENING: KEEPING TRACK OF CARIBOU

Invite students to share stories and own experiences with Caribou on the land and/or near water.

ASK STUDENTS

- Have you ever seen Caribou on the land with your family?
- Have you seen any Caribou near our community? What about signs they have been here?

Recap why Caribou may not be easily spotted close to community centres (human activity, traffic and roads)

Invite students to think how the SLC might be tracked without this ease of proximity. Introduce arcGIS Story Map of SLC: Recent herd activity ([SOUTHERN LAKES Caribou](#)).

Explore arcGIS Story Map, looking at how Caribou are captured, collared and released, and how this process allows Caribou to be tracked, numbers recorded and information to be gathered. Highlight how this type of data can be enhanced by local knowledge.

ASK STUDENTS

- Do you think this program is important for Yukon communities? If so, why?

Share quote from SLC Story Map:

“Ongoing monitoring of these herds is important to understand how they are responding to recovery efforts, their population numbers and health, and how human disturbances such as development, harvest, and other activities impact the herds and their range.”

Inform students that they will get to speak with an Elder or specialist with direct connection to the Southern Lakes Caribou Recovery Program (SLCRP).

Brainstorm and record questions to ask the visiting Elder or visitor. Topics for questions could include:

- Involvement in SLCRP
- How the work is being continued today
- What students and community members can do to become stewards of Caribou habitat
- How to share important information about Caribou populations with community members

Note: the special visitor may also be connected through a video or recording of an Elder or visitor sharing their story and experience of working with the SLCRP.

ACTIVITY: SPENDING TIME WITH ELDERS

Gather in a circle. Invite the students to acknowledge the Yukon First Nations Traditional Territory that the activity is taking place on. If they are present, introduce and welcome the visiting Elder or visitor. Go around the circle and have students introduce themselves.

Invite the visiting Elder or visitor to share their story about and connection to the SLCRP. Ensure time for students to ask questions.

One or more students can present the guest with a homemade card and gift (craft made by students or wild-harvested flowers) to show gratitude for the time and/or teachings shared with the students.

If an Elder is not present, ask the students if they know of any Elders in their communities or lives that are important to them. Invite students to share any teachings they have learned about how to treat Caribou and how to act when out on the land in relation to Yukon First Nations ways of Knowing, Doing and Being (e.g., sustainable or respectful harvesting practices, respect for the land and waters and seasonal activities).

CLOSING: NO VOICE PERSPECTIVE

Gather in a circle, outdoors if possible, once more. Use something (e.g., a mat, chair or small table with Caribou artifact or something to represent Caribou) to show that a space is being held in the circle for a non-human ‘voice’.

Tell students that the **No Voice** perspective is a way for humans to give a “voice” to the entity being talked about—in this case, Caribou. This is done by leaving an open seat for Caribou to “sit at the table” with those making decisions. This helps foster a sense of cooperation and unity between stakeholders at the table, reminding everyone that the common goal is to make the best decisions on behalf of the Caribou in our care.

Give students a piece of paper on which to draw or write. Invite students to consider what the Caribou might want to share with the group at this time. Some questions to pose to

students to answer on behalf of Caribou could include:

- We share the land with the SLC. What messages might they want to share with our community?
- What do the SLC need in order to stay healthy in the years to come?
- What questions would the SLC ask us if they could speak?

EXTENSIONS

Together as a class, decide how to share these **No Voice** reflections within the school and with the wider community. This could take the form of:

- A letter to your local government official, highlighting the importance of including the voice and perspective of Caribou in decision making
- An artistic representation (mural, poem or photo exhibit)
- A news article written from the voice of the Caribou

ASSESSMENT OPPORTUNITIES

Are students able to:

- Show their perspective on the SLCRP through small-group discussion, drawing and writing?
- Ask questions about the history and achievements of the SLCRP?
- Share a closing reflection (in small groups, in writing or creatively) about their experience with the **No Voice** perspective that demonstrates active listening?
- Acknowledge differing viewpoints respectfully?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to demonstrate understanding of the ways in which Caribou and people are interconnected with the surrounding environment	Is not yet able to demonstrate ways in which Caribou and people are interconnected with the surrounding environment	Demonstrates initial/partial understanding of the ways in which Caribou and people are interconnected with the surrounding environment	Demonstrates good understanding of the ways in which Caribou and people are interconnected with the surrounding environment. Can identify several connections in the Web of Life	Demonstrates deep understanding of the ways in which Caribou and people are interconnected with the surrounding environment. Can identify multiple connections in the Web of Life
PART 2: I am able to identify human impacts on the seasonal movement of SLC and how the SLCRP has reduced negative impacts over time	Not yet able to communicate any human impacts on the seasonal movement of SLC and how the SLCRP has reduced negative impacts over time	Can identify some human impacts on the seasonal movement of SLC and how the SLCRP has reduced negative impacts over time	Can identify several human impacts on the seasonal movement of SLC. Is able to identify several ways that the SLCRP has reduced negative impacts over time	Can identify multiple human impacts on the seasonal movement of SLC. Is able to identify many ways that the SLCRP has reduced negative impacts over time
PART 3: I am able to explain how First Nations and non-First Nations people continue to protect the wellbeing of SLC through joint management	Is not yet able to explain how First Nations and non-First Nations people continue to protect the wellbeing of the SLC through joint management	Demonstrates initial/partial understanding how First Nations and non-First Nations people continue to protect the wellbeing of the SLC through joint management	Demonstrates an understanding of how First Nations and non-First Nations people continue to protect the wellbeing of the SLC through joint management. Has a concrete idea of how to take on the role of steward for SLC	Demonstrates a clear understanding of how First Nations and non-First Nations people continue to protect the wellbeing of the SLC through joint management. Has multiple or complex ideas of how to take on the role of steward for SLC

GRADE 6 SOCIAL STUDIES:

DRAWING CONCLUSIONS THROUGH SOCIAL STUDIES

BIG IDEAS

- Systems of government vary in their respect for human rights and freedoms
- Media sources can both positively and negatively affect our understanding of important events and issues
- Economic self-interest can be a significant cause of conflict among peoples and governments

CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • Know the urbanization and migration of people (land use, access to water, pollution, population density and transportation) • Inequality issues (treatment of First Nations people, e.g., residential school and loss of language) • Roles of organizations representing First Nations People • Different systems of government (First Nations Governance) • Resource Management (deforestation, mining, oil and gas, infrastructure development and relocation of communities) • Globalization and economic interdependence • Global responses to issues (environmental and resource management) • Media technologies/coverage 	<ul style="list-style-type: none"> • Use social studies inquiry processes and skills to ask questions; gather, interpret and analyze ideas; and communicate findings and decisions • Develop a plan of action to address a problem or issue • Construct arguments defending the significance of individuals/groups, places, events or developments • As questions, corroborate inferences, and draw conclusions about the content and origins of a variety of sources, including mass media • Differentiate between short and long-term causes and intended and unintended consequences or events, decisions or developments • Make ethical judgments about events, decisions or actions of a particular time and place
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I can make connections between living organisms and Southern Lakes Caribou. 2. I am able to reflect on my experience of place as it relates to local First Nations knowledge connecting power and meaning with the land. 3. I can use guiding principles to verify the reliability of a source's information while forming an opinion about the Southern Lakes Caribou Recovery Program. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou (SLC) habitat, and an introductory overview of Southern Lakes First Nations and their involvement in the Southern Lakes Caribou Recovery Program. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Council of Yukon First Nations - [History of language, natural history and land claims](#)
- Southern Lakes Region Communities - [First Nations Communities of SLR](#)
- Council of Yukon First Nations - [Self-Governance Agreements](#)
- Government of Canada - [Indigenous Self-Governance](#)
- [Council of Yukon First Nations: Language Map](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning- here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND EXPLORING INTERCONNECTIONS

LEARNING TARGET:

I can demonstrate curiosity about how Caribou are connected to Southern Lakes communities.

MATERIALS

- **Bandanas:**
green (herbivores), brown (omnivores) and red (carnivores)
 - **Alternative:** coloured pinnies
- **Life cards:** coloured bristol board/cardstock cut into circles or squares, hole punched near the top
 - **Green:** 10 cards
 - **Brown:** 5 cards
 - **Red:** 2 cards
- **Pylons (or cutout cardstock cards) with markers tied to them:**
 - **5 Orange Food source**
 - **5 Blue Water source**
- **Designated play area:** large and wooded with a clearly marked area for yúk'e/winter (Dän'ke, Kwanlin Dün First Nation)
- **Pipe cleaners (to attach the life cards)**
- **[Yukon Wildlife by species](#) (optional resources to show animal pictures and facts)**

TIME: ~ 90 MIN

OPENING: CONNECTING TO CARIBOU

Gather in a circle and discuss the importance of food and water for all living organisms in order for them to survive. When we eat, our bodies use energy through digestion which causes a rise in body temperature. Caribou are similar in this way and need to eat a lot of plant matter to create body heat.

Note that there are other factors keeping Caribou warm such as their thick fur.

Brainstorm some example definitions of herbivore, omnivore and carnivore.

Discuss possible animal adaptations to survive in nature.

Share some ideas around Caribou and what they eat; also discuss predators to Caribou.

ASK STUDENTS

- What are the basic fundamental needs of any animal, including humans?
- Do you know what is special about a Caribou's coat?
- What do Caribou feed on?
- What feeds on Caribou? Is it the same in every season?
- What are the three types of animals, based on their diet? What do they eat?
- Which of these three types of animals does the Caribou classify as?

Share ideas.

1. All living organisms need food and water to survive, shelter as well. Without these fundamental needs, they will not survive.
2. Caribou have two layers of fur covering their bodies, ears and muzzles to keep their body heat in.
3. Caribou have fine, crinkly underfur and a thick coat of guard hairs on top. Guard hairs are hollow, and full of air. This acts as insulation (like in the walls of a house, to keep the heat in), keeping in the Caribou's body heat.
4. The hair that covers the body of the Caribou is called the **pelage**. The **pelage** changes colour throughout the year and is darkest in the summer.
5. The three types of animals are omnivore (plant and animal diet), carnivore (meat diet) and herbivore (plant diet).

- Caribou are herbivores. They work hard through the winter months, living amongst the trees that provide food such as witch's hair or old man's beard. They also dig through the deep snow and ice with their large hooves to find lichen and dried sedges to feed on. They need to eat about six pounds per time period (equivalent to two garbage bags full). Lichen can take 50-100 years to grow back after they have been foraged; they grow rather slowly. Lichen are also an indicator species, meaning that they are a plant that will die when there are air pollutants. Observing this plant can tell a lot about an environment or animal patterns. Caribou eat other plants such as sedges, and small shrubs (blueberry bushes).

ASK STUDENTS

- What would help keep a Caribou warm or cool depending on the season? (Hint: antlers as they grow offer a cooling system for Caribou- as warm blood rushes to the antlers, the outside air cools it down!)
- How do Caribou adapt to their surroundings to survive extreme temperatures or changes within the environment or local predators? (pelage, seasonal movement, genetics—larger or smaller antlers, eating without chewing to hide from predators while digesting)

ACTIVITY 1: GAME OF LIFE

Prep:

- Cut out and write out the food and water cards/gather pylons and attach the two markers (five orange and five blue). Hide these really well around the play area.
- Cut out the life cards, hole punch them and put them on pipe cleaner (green: ten cards, brown: five cards, red: two cards). Each player will receive a collection of life cards depending on what they eat. You will need many of these sets for all players.
- Mark off an area for winter.

Gather outside in the area designated as yúk'e. The goal of the game is for the players/animals to survive. Put on the coloured bandanas or pinnies while sharing the rules of the game.

- The herbivores (Caribou) will start the game first and must collect markings on their hand from all food and water sources.
- The omnivores will be introduced two minutes later and must collect markings on

their hand from all food and water sources. They also must catch (tag) two herbivores (changes numbers based on group size).

- The carnivores will be introduced last and must collect markings on their hand from all food and water sources. They also must catch four other animals in the game (change numbers based on group size)

When an animal is tagged, they must go to yúk'e and wait for the spring thaw when newborns are welcomed into the world. You have the role of releasing the newborn into the wild to continue the game. The students will stay the same animal and have the same diet.

Brainstorm with the students which animals would be in the three groups and practice using their names in Dän'ke (Kwanlin Dün First Nation). Only Caribou will be herbivores and be sure to have a fair amount of Caribou to show the effects (ägay/wolf, ñtthe/fox, nàday/lynx, tt'h'j/mosquito, nàghay/wolverine).

EXTENSIONS

- There will be five unmarked players who will help in winter until they are introduced into the game (change numbers based on group size). These students will represent players such as: human overhunting Caribou, disease from deer that kills Caribou, natural effect of huge amounts of snowfall, air pollution, deforestation and mining. If Caribou are tagged by one of these players, the Caribou are no longer in the round and must wait in winter until a new round begins. Introduce these characters after the game has been played for some time as it will affect the game immensely.
- Introduce a wildlife management agent who can give the human hunter regulations to follow.

CLOSING: COMPLETING THE ROUND

Encourage students to reflect on the game and the many rounds they played:

- What do you know about Caribou now, that you did not know before playing?
- How did it feel to be a Caribou? An omnivore? A carnivore? An unmarked player?
- What does interconnectedness mean?
- How are all of these organisms connected?

- What happens when one component of an ecosystem is removed? Added?
- How can human impacts affect the Caribou's way of life? What happened when...

ASSESSMENT OPPORTUNITIES

Are students able to:

- Explain the key terms used?
- Make connections between all living organisms?
- Share the importance of Caribou in the ecosystem and to the First Nations of this land?



PART 2: HISTORY OF SOUTHERN LAKES CARIBOU RECOVERY PROGRAM AND PLACE NAMES

LEARNING TARGET:

I am able to reflect on my experience of place as it relates to local First Nations knowledge connecting power and meaning with the land.

MATERIALS

- [SLCRP Story Maps](#)
- [Yukon Geographical Place Names](#)
- **Caribou artifacts or photos printed (Appendix 1B and 2C):**
 - **Hides:** sled, shelter, clothing, footwear
 - **Bone/antler:** weapons and tools, jewelry
 - **Hair, sinew, babiche:** snowshoes, fishing
- **3 long ropes**

TIME: 45 MINUTES

OPENING: CONNECTING WITH CARIBOU

Gather in a circle. Pass a Caribou artifact around the circle, and invite the students to share what they know and remember about Caribou: how Caribou adapt and where Caribou travel throughout the seasons. Encourage students to share any stories or personal connections they have with Caribou.

Share details about the Southern Lakes Caribou (SLC) Relationship Plan: the recovery program started in 1993 because of a decline of Caribou on territorial ranges. The main focus was to stop Caribou from being harvested and local First Nations voluntarily stopped their harvest all together to help make an impact. Caribou numbers have been increasing due to the program and a return of Caribou in these ranges has begun.

ASK STUDENTS

- Do you think that the SLC has a healthy population today?
- What might affect the population, or change the number of Caribou in the whole group, the total number of SLC?
- Why do you think that SLC are important to the First Nations of the area? (Carcross/Tagish First Nation, Ta'an Kwäch'än Council, Kwanlin Dün First Nation)

Share ideas.

There are many factors that contribute to the decline of Caribou numbers, including: global warming, land use, pollution, highways and transportation, population density, predation and lack of food.

Yukon First Nations have a deep connection with Caribou and have for thousands of years. It is a historical connection but it is also a present-day connection. Yukon First Nations have relied on SLC for food, clothing, tools, jewelry and more. When they harvest a Caribou they use all of its parts.

EXTENSIONS

- Invite an Elder or Traditional Knowledge Holder to share stories about loss of language and culture, importance of Caribou to their culture, traditional harvest, systems of governance and the SLCRP.

ACTIVITY 1: SEASONAL MOVEMENT OBSTACLE COURSE: CONNECTING YUKON PLACE NAMES TO SLC HABITAT

Gather in a circle and discuss the importance of language, the importance of place names in local First Nations languages and their direct link with culture. Acknowledge the land on which you are teaching and learning, including the students in this process while also incorporating the importance of bodies of water. The rich history and culture that exists among Yukon First Nations is being preserved through place names.

Look at the Map of Tàa'an Män/Lake Laberge area. There are recordings for working on pronunciation of the local place names. Go through these place names and practice saying them with the students.

Prep: Set up the ropes for Nakhū Chù/ Takhini River, being sure to create wider sections and narrow sections. Also place a large rope in a circle to represent Tàa'an Män feeding grounds, which will be at one end of the river.

Gather outside with the students in the play area to describe the game. All Caribou will begin on one side of the river. They will need to decide how to cross the river safely and continue towards Tàa'an Män feeding ground.

- Introduce a landslide which can change the safe spot for crossing the river or the riverbed has changed shape due to trees falling or deforestation which changes the strength of the soil, creating a challenge for crossing.
- Should some Caribou choose to cross at a wider section, there will be students representing the fast current. If any Caribou are tagged when crossing in this area, they are no longer in this round as they did not survive.
- Once any Caribou have made it to the feeding ground, they must then begin feeding on lichen to fuel their system.
- Introduce predators in the feeding ground who can tag the Caribou, ending that round for them.
- Put some safe havens in the feeding ground where Caribou can take a moment for five seconds before continuing to forage.

Note: All students must shout out the name Nakhū Chù/Takhini River in Dän'ke, Tàa'an Män

dialect, before and after they cross the river. They also must shout out the name of Tàa'an Män when they get there.

EXTENSIONS

- Consider including human impacts into the game (e.g., noise pollution, building of a bridge over the river and overhunting). Students will represent these impacts and tag Caribou, ending their lives.

Show students the interactive map of the twenty-seven herds of SLC, shown in green. Tell students that you can click on each herd to learn more about when they were surveyed, the trend and what the population is of the woodland Caribou.

Break the class into small groups and give each group of students a specific SLC herd (Ibex, Laberge and Carcross). Each group will be tasked to collect data from the story map. They can create their own map with the data and graph the data to compare with the information from other classmates.

CLOSING: MAPPING AND COLLECTING DATA ON SLC

Review the game with the students and find out their feelings related to who or what they represented in the game.

ASK STUDENTS

- How can human impacts affect Caribou? Positive and/or negative effects.
- What changes could be made to create support for the recovery of the SLC?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Retell the story of the formation of the SLCRP, in their own words?
- Share reasons why the SLCRP was needed to protect the Caribou?
- Ask questions about the SLCRP?
- Use Southern Tutchone names for the Nakhū Chù and Tàa'an Män?

PART 3: PERSPECTIVES AND FORMING OPINIONS

LEARNING TARGET:

I can use guiding principles to verify the reliability of a source's information while forming an opinion on the SLCRP.

MATERIALS

- **Online resources- articles or newspapers of a different variety**
 - [Champagne and Aishihik First Nations: Southern Lakes Caribou Steering Committee](#)
 - [CBC News: First Nations Work Together to Monitor Caribou](#)
 - [2019 On the Land Gathering: Carcross/Tagish Renewable Resources Council](#) (Cover page visual)
 - [Yukon Department of Education: Southern Lakes Caribou Video](#)
 - [Awesome Poetry is All Over: Caribou, Indigenous Winter Poetry](#)
- **Writing tools and paper**

TIME: ~60 MINUTES

OPENING: DRAWING ON OUR STORIES

In a circle, invite students to share their knowledge on Southern Lakes Caribou (SLC) in relation to their ecosystem, reviewing any concepts previously learned.

Invite students to think about others in their family or community who may have stories to share.

ASK STUDENTS

- What information related to SLC can you share with the group?
- Who might you know in your community who could speak about their connection with the SLC?
- Why are SLC important to the ecosystem and how do they give back to other living organisms?
- How are Caribou important to your life?



ACTIVITY 1: EVALUATING CREDIBILITY OF A SOURCE

Tell students about the concept of credibility of content. Briefly go over the strategies they can use in identifying the relevance, bias, accuracy and reliability of content in relation to the SLC. Example topic: what does respect look like for Caribou, the land and local First Nations?

ASK STUDENTS

- What does credibility mean to you?
 - What is the meaning of content? Bias? Relevance?
 - Are some sources more trustworthy than others? How can you tell?
 - Why is it important to be an informed citizen on any topic? Topic of SLCRP?
1. Check the basics:
 - Is this an article, video, website, media literacy?
 2. Ask questions:
 - Is this site relevant to my needs and purpose? (relevance)
 - When was this information updated? (recency)
 - Why did this person or group put this information together? (intent)
 - Does this source present one side of the issue or more than one perspective? (bias)
 - How can I check the accuracy of this source? (accuracy and reliability)

Break the students into small groups. Each group will receive two online articles written about the SLC (factual, scholarly journal, blog, wiki and newspaper). Students will read both articles and decide whether the source is credible by answering the above questions. They can record their findings and put together their own perspective on the topic covered. Once these steps have been completed, they will present their inquiry project to the whole class for further reflections.

ASK STUDENTS

- Do you agree or disagree with the opinion held by the author?
- In these articles (video/website) are any of the local First Nations voices and perspectives represented?

EXTENSIONS

- Each group could break into two smaller groups, each taking the standpoint of the content from one source. They must then debate these opinions, creating well thought out arguments while also questioning the other group's stance.
- Consider organizing a community celebration to share and celebrate stories about the SLC.

CLOSING: CELEBRATING CARIBOU

Plan a time to celebrate the stories, knowledge and experiences shared through these activities. Collect reputable sources and share them among other classrooms, encouraging them to learn more about the SLCRP.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Identify the importance of Caribou in their community?
- Identify ways Yukon First Nations and/or they themselves are interconnected within the environment?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I can make connections between living organisms and SLC	Is not aware of the importance of Caribou in the ecosystem and does not form questions about Yukon First Nations & connection to the land	Is aware of the importance of Caribou in the ecosystem and can partially form a question about Yukon First Nations & connection to the land	Listens to Elders attentively and respectfully. Forms a well built question about Yukon First Nations & connection to Caribou's habitat in relation to other living organisms	Highly respectful of Elders' teachings. Creates multiple well-thought out questions about Yukon First Nations, Caribou and the larger ecosystem
PART 2: I am able to reflect on my experience of place as it relates to local First Nations knowledge connecting power and meaning with the land	Not yet able to form questions about the SLCRP. Not yet showing confidence orally in Southern Tutchone the vocabulary to be modeled	Some verbal representation of the vocabulary in Southern Tutchone is being modelled. Able to form a question about the SLCRP with support and guidance	Verbal representation of Southern Tutchone words is used in at least one stage of the activity. Creating questions about the SLCRP with little support	Verbal representation of the vocabulary in Southern Tutchone is presented more than once within the activity. Posing questions about the SLCRP flows more naturally with little support
PART 3: I can use guiding principles to verify the reliability of a source's information while forming an opinion about the SLCRP	May have little to no reflections on the credibility of a source. No connections made in forming an opinion about the SLCRP	Some evidence of questions being formed on the topic of SLCRP and credibility of sources. A few statements formed on a perspective about the SLCRP with some support	Verbal, visual or oral evidence is provided of a reflective process about the credibility of sources and a clear statement is made in relation to the importance of the SLCRP	Verbal, visual and oral evidence is provided of a significant reflective process about personal connection to the SLCRP while proving the credibility of a source through clear research

GRADE 7 SCIENCE:

FIRST NATIONS KNOWLEDGE OF BIODIVERSITY AND CLIMATE CHANGE

BIG IDEAS

- Evolution by natural selection provides an explanation for the diversity and survival of living things
- Earth and its climate have changed over geological time

CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • Organisms have evolved over time • Survival needs • Natural selection • Yukon First Nations knowledge of changes in biodiversity over time • Evidence of climate change over • Geological time and the recent impacts of humans (physical records and local Yukon First Nations knowledge of climate change) 	<p>Processing and analyzing data and information</p> <ul style="list-style-type: none"> • Experience and interpret the local environment • Apply First Nations perspectives and knowledge, other ways of knowing and local knowledge as sources of information <p>Applying and innovating</p> <ul style="list-style-type: none"> • Contribute to care for self, others, community and world through personal or collaborative approaches
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I am able to experience the local environment, and interpret how survival needs impact Southern Lakes Caribou populations. 2. I am able to utilize First Nations knowledge sources to understand changes in biodiversity over time. 3. I am able to contribute to care for self, others, community and world through collaborative approaches to understanding and reducing the effects of climate change. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Video: [Yukon and BC First Nations Initiatives Tackle Climate Change: Chu Cho First Nation](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning- here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND KNOWLEDGE WEB

LEARNING TARGET:

I am able to experience the local environment and interpret how survival needs impact Southern Lakes Caribou populations.

MATERIALS

- Chalkboard/whiteboard or large paper and writing tools
- Two ropes or four cones
- Climate change cards printed and cut out (Appendix 3C):

Red cards (increase in temperature):

- Plant growth: more food
- Early blooming: less food
- Melting permafrost: lack of shelter
- Shift in vegetation zones: less space available

Blue cards (increase of precipitation):

- Plant growth: more food
- Heavy snowfall/deep snow: lack of access to food
- Heavy rainfall: higher water levels
- Spring and summer snowmelt: flooding

TIME: ~60 MINUTES

OPENING: KNOWLEDGE WEB

Gather in a circle (outside, if weather permits) and begin by discussing changes in the seasons that students have observed in their environment/surroundings. Record their observations and reasons behind their statements to create a knowledge web. On a large piece of paper or a white/chalkboard with the title “Climatic Changes”, write down subtitles where comments will be organized by categories (food, water, shelter and space). Highlight the important connections between all organisms in a natural environment in relation to Caribou and how the fluctuation or changes in climate affect their survival.

ASK STUDENTS

- Have you noticed any changes in the seasons in recent years?

Share ideas.

Give students a chance to reflect and share their observations before giving guidance. Be more specific with ideas such as the change in temperature, difference in the amount of precipitation and how there have been more forest fires or flooding due to higher temperatures.

ASK STUDENTS

- Why are we seeing higher temperatures than ever before?
- What factors are at play?
- What is climate change?
- Why is the impact of climate change important to discuss and understand?

Share ideas.

Discuss the concept of climate change and how the environment is showing significant changes worldwide due to a rise in greenhouse gases and a higher concentration of heat within the earth’s atmosphere. Compare the greenhouse gas effect to an actual greenhouse which holds in the heat from the sun’s rays to keep plants warm. The earth’s atmosphere has an outer ring of greenhouse gases which creates the same effect- it traps solar heat. Human activity is increasing greenhouse gases at an alarming rate through the oil and gas industry, power in automobiles and in our homes, gases produced through sewage treatment plants and chemicals used in products such as aerosols. These are just a few examples of how humans are releasing more carbon dioxide into the atmosphere. All living organisms on our planet are affected by climate change, including the SLC. The SLC are at risk due to the higher temperatures which have affected precipitation levels and, in turn, affected their habitat, seasonal movement patterns, reproduction levels and much more.

Highlight the web of knowledge recorded by blue (precipitation) and red (temperature) and share with students the Climate Change Cards that will be used in the outdoor game.

ACTIVITY 1: OH DEER

Prep: Cut Climate change cards for extended rounds.

Head outside with the group into a large open play area with few obstacles. Place two ropes or cones parallel, ten to twenty feet apart, marking the play area. Students will all line up side by side and will be numbered from one to five (repeated until reaching the end of the line of students).

Share the numbered system and gestures as follows:

1. Woodland Caribou: they will choose which component they will look for
2. Food (shrubs/ lichen): hand over their belly
3. Water (rain and snow): hand over mouth
4. Shelter (esker or tree line): hands above head as a roof
5. Space (mountains, forests, grasslands): arms out to the side

Each player that represents number 1/Caribou will go to the opposite parallel line while all other players will stay where they are to represent two to five/food, water, shelter and space.

Round 1: All players will begin on their line with their backs facing inward so as not to see which gesture the opposite players are holding. Give the Caribou a moment to make the gesture they would like to be in search of during this round while the other players will make the gesture that represents their component. On the count of three, each player will turn their body inward and reveal their gesture.

The Caribou will begin to move towards the opposite players who will stay on their line. Whatever gesture a Caribou has made, they will hold that while they head towards a player showing that same gesture. The first Caribou to get to the corresponding player will succeed in getting that component and take that player with them to become a Caribou. Any players left from two to five who were not matched with a Caribou will stay on their line to continue the next round.

Record the data from this round: how many players became Caribou and what component they represented beforehand.

EXTENSIONS

- Introduce the habitat impact cards due to Climate change. Mix up the cards and choose one at random for the following round. For example, more food due to warmer temperatures—the players representing food will stay as that while players three to five can choose to change their component to food to represent an increase. Less food due to deep snow—players who were food will have a chance to change to one of the other components to show the effects of climate change.
- Continue rounds of the game while using different impacts due to climate change and be sure to record the data for students to discuss after or to graph as a visual representation of the effects on Caribou.

CLOSING

Discuss the rounds of the game and how they represent one year of a Caribou's life. Go over the collected data and shared thoughts from the group.

ASK STUDENTS

- What do animals need to survive?
- What impacts affected the survival rates of Caribou during the game?
- Do these factors also affect other wildlife and plantlife?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Reflect on the effects of climate change in relation to the SLC?
- Group the effects of climate change based on the types of impacts they have?
- Describe what an animal's fundamental needs are for survival?

PART 2: CHANGES IN BIODIVERSITY

LEARNING TARGET:

I am able to utilize First Nations knowledge sources to understand changes in biodiversity over time.

MATERIALS

- Four large pieces of paper or poster board with the questions written on them
- Paper and writing tools (optional)
- Collected nature pieces or other art supplies (optional)

TIME: ~60 MINUTES

OPENING: DRAWING ON OUR STORIES

Gather in a circle. Invite an Elder or Traditional Knowledge Holder to share stories about Yukon First Nations ways of Knowing, Doing and Being related to culture, language and nature. Invite students to share their connections with nature as well and leave space for questions and further discussions with the guest as needed.

ASK STUDENTS

- What is biodiversity?
- How is biodiversity measured?
- How are Caribou affected by climate change?
- What is being done to protect biodiversity?

Share ideas.

Biodiversity comes from the Greek word 'bio' meaning life and the Latin word 'diversitas' meaning variety or difference. The whole word together means a variety of life. All species are linked in a phylogeny, a historical way of being grouped together depending on their relationships. This can also be seen through a tree of life through respect for all organisms, care for the land, waters and each other and the sharing of knowledge.

ACTIVITY 1: FOUR CORNERS

Take students outside if the weather permits; alternatively this activity could be done in the classroom or gymnasium. Students will be a part of a group activity where they will be deepening their understanding of conservation by recognizing the role that Yukon First Nations have in caring for plants and animals as well as their role as stewards for the land and waterways. Highlight that historically, Yukon First Nations were not consulted when their traditional land was used for new purposes. It is of high importance that we as a society acknowledge their connections to the land as a step in Truth and Reconciliation.

There will be four questions posted on a big paper/poster board, one in each of the

four corners of the space being used for this activity. Read through the four questions and share that students will be choosing which corner they would like to focus on answering.

1. Why are weather patterns becoming less predictable?
2. Why and how are Caribou adapting to the changes in climate?
3. How are traditional seasonal practices affected by climate change?
4. How can we best prepare for continuous changes in the framework of biodiversity?

Each student will then go to the corner that represents the question that speaks to them either because they want to know more about

its answer or perhaps because they know information related to that question already. Once each student has found their corner, they will pair up or as a whole group they will discuss the reasons for choosing that question. Students will spend time listening to each other and responding to what they heard while attempting to answer the question at hand.

CLOSING

After ten to fifteen minutes, have each group share with the rest of the class what they heard and how they feel about the particular question.

EXTENSIONS

- Have students consider their role in the effects of climate change and create a

commitment to changing behaviour that can make a difference in relation to the SLC population. Consider sharing these commitments with the broader school community through audio (shared at announcements/assemblies) or visuals (posters in the school or community/postcards or stickers).

- Students could create a gathering around sharing their commitments and invite other students or classes to do the same.

ACTIVITY 2: CAMOUFLAGE

Invite students outside to a play area that has obstacles for hiding behind, for example, trees, boulders and small hills. Discuss the benefits of animal adaptations which will allow them to survive by looking like their surroundings/environment. Camouflage empowers animals to hide from predators or to sneak up on prey.

ASK STUDENTS

- What adaptations do Caribou have?
- How do Caribou protect themselves?
- How do the Caribou seasonal movement and changes through the seasons help them survive?

Share ideas.

Caribou have fur that is darker or lighter in colour depending on the season, helping them stay hidden from predators while they eat or during calving season. They have large hooves that allow them to walk across frozen water or dig deep in the snow to find food. They are very good at hiding from predators, especially when they are digesting their food, by laying low in wooded or shrubbed areas. Their seasonal movement patterns also help them find food or find habitat havens depending on the time of the year. For example, Caribou travel to higher elevations in the warmer months to avoid nagging insect bites.

ASK STUDENTS

- What do our surroundings look like for this game: what do you observe?
- How might this area be beneficial for a Caribou to hide and camouflage from a predator?

Share ideas.

To begin the game, students will be the Caribou while one person is the predator. The predator's role is to stay in one spot, not moving their feet, but they can turn around and look high or low. The predator will have their eyes closed and the Caribou will begin by gently tapping the predator on

the shoulder before running to find a hiding spot. The Caribou will have twenty-five seconds to find a good place where they will not be seen by the predator. Once the predator has counted to twenty-five, they will open their eyes and begin to carefully look for any signs of Caribou in the area. If the predator spots a Caribou, they call out that Caribou/student's name: "I see... behind the..." Any Caribou that are spotted must join the predator without giving away any details of where the others are hiding.

The game continues like this, each round giving the Caribou less time to hide (five seconds less per round). The Caribou must come out of their hiding to find food and water before finding a new hiding spot. When the predator(s) close their eyes and shout, "food and water in, 1, 2..." the hiding Caribou know that they are safe to run out and gently tap the predator on the shoulder before quickly finding their habitat haven.

Notes:

- A tree or a rock could be the spot that the Caribou tag, versus tagging a person as it can be overwhelming to have many people tap your shoulder while your eyes are closed.
- The Caribou who become predators are allowed to help look for Caribou from the same location as the main predator but they must also close their eyes for the counting moments, to give the Caribou a fair chance in searching for food and water.
- When the predator(s) have had a chance to look for one to two minutes, they should close their eyes and continue counting. Encourage them to call for food and water reminding them that this will tire the Caribou out and they may not be able to find another hiding spot in time so ultimately it is in the predator's best interest to not leave the looking for too long.

When all of the Caribou have been spotted or they run out of time to hide, the game ends.

EXTENSIONS

- Consider the season/surroundings in which you are playing and use seasonal camouflage (white suits for snow, camo for spring).
- Consider using coloured clothing that will match the environment or have students dress similar in colour to the Caribou to help them better camouflage.
- Include adaptations to the game. For example, introduce a flood which closes off an entire area for the Caribou to hide. Consider using flagging tape to mark off the areas that are not available due to effects of climate change.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Connect changing weather patterns to climate change?
- Reflect on traditional practices in relation to SLC?
- Notice seasonal adaptations that Caribou use for survival in the face of climate change?

PART 3: INVESTIGATING CARIBOU COLLARS

LEARNING TARGET:

I am able to contribute to care for self, others, community and world through collaborative approaches to understanding and reducing the effects of climate change.

MATERIALS

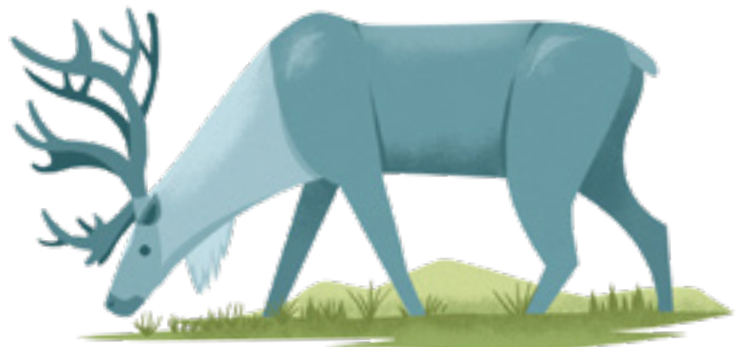
- Ropes (optional)
- Found nature items to be collected during the activity
- Flagging tape (optional)
- Coloured blocks and/or cones (optional)
- Pictures of the collars used printed (Appendix 3D)
- Tokens printed and cut out (Appendix 3E)
 - Harvest: to be placed where you would harvest Caribou
 - Protection: to be placed where Caribou need protecting
- Six cards/pages outlining the perspectives (colours in Dän'ke, Kwanlin Dün First Nation) [The De Bono Group- Six Thinking Hats](#) (Appendix 4A):
 - **däk'äl/white:** information that is known or needed (facts)
 - **dätthäw/yellow:** bright optimism (positive outlook for benefits and values)
 - **jänäch'ür/black:** risk management (difficulties to overcome, problems at hand)
 - **dät'äl/red:** feelings and hunches (emotions, feelings, likes, dislikes)
 - **jänntl'är/green:** creativity and possibilities (new ideas, alternatives)
 - **jänntl'ärq/blue:** thinking process (the process of observing these six perspectives)

TIME: ~60 MINUTES

PART 1: SIX THINKING HATS

Place students into small groups to represent each of the six perspectives. Allow groups to read or listen to the information provided about their perspective, and encourage students to start to think of themselves within the role.

Once each group member has an understanding of the perspective they are representing (through one-on-one, small or large group discussion and research) have groups draw or design a symbol, logo, prop or icon to represent their group. This symbol should communicate the group's values and interests to other groups. **Note:** This could be a simple five minute activity, or a longer process to design a polished final symbol. Have each group display their symbol for the rest of the groups to see (e.g., on the board).



PART 2: INTRO TO COLLARING AND MAPPING

Give a short introduction to the process of collaring the Woodland Mezi (Dän'ke, Tàa'an Män dialect) and why this is an important step in the recovery process.

ASK STUDENTS

- What is the process of collaring a wild animal?
- How is this done and why?
- How can data about the SLC be collected with the use of collaring?

Share ideas.

Collars can track animal activity—their interactions within geological features of the land—and can also take photos and videos. The collars are designed to fall off after gathering data; usually this happens in the winter months. Collaring is done with the use of a net gun and a helicopter. The Caribou are monitored from the helicopter, cornered safely, then the helicopter will land so that the crew can gently tie their legs and cover their eyes to reduce stress before attaching the collar. This is a quick process—ten to twenty minutes—and it is of high priority to do the work in silence with respect to the Caribou and staff safety.

Introduce the map of the Southern Lakes District. Review the map inside by giving each group a copy of the map or by projecting the map on a whiteboard or wall. Have students identify the features that they see (roads, community, river, creeks, hiking route and wildlife habitat). Continue outside to complete the activity, or complete the next steps inside.

Head outdoors to a preselected forested area with space to build a larger scale (~ 5 feet x 15 feet) version of the map. Start by reviewing the features of the map by giving each group a copy of the map to look at. Ask students to identify the features that they see (roads, river, creeks and hiking route).

Next, facilitate the building of the map on the forest floor. Place four cones or markers on the ground to give students a map boundary. Focusing on one feature at a time, give students the materials needed to build the map in large scale on the ground (e.g., two students can use one rope to create the map border, three students can use another colour of rope for the river/creeks, four students can use blocks or another rope for the roads and hiking trails, and individual students can use coloured blocks or figures to mark the nests/dens).

Once the map is built, give students time (10-15 minutes) to look at the map, and decide where they will place their groups' three harvest tokens and three protection tokens. During this time you, Elders or Traditional Knowledge Holders and other visitors/resource people move from group to group to ask guiding/clarifying questions, and provide feedback on the decisions being made. After the time has elapsed, each group receives their tokens and is given ten plus minutes to place their tokens on the map.

CLOSING: REVIEWING PERSPECTIVES

When each of the groups have placed their tokens, then you and/or any visitors may now take on the role of a Yukon forester reflecting on the input from each perspective group. Foresters receive input from many perspective groups, work to understand the values and concerns of each group and aim to make forest management decisions that benefit the local community.

ACTIVITY: SPENDING TIME WITH ELDERS

Gather in a circle. Invite the students to acknowledge the Yukon First Nations Traditional Territory that the activity is taking place on. If they are present, introduce and welcome the visiting Elder or visitor. Go around the circle and have students introduce themselves.

Invite the visiting Elder or visitor to share their story about the SLC and the SLCRP. Ensure time for students to ask questions.

One or more students can present the guest with a homemade card and gift (craft made by students or wild-harvested flowers) to show gratitude for the time and/or teachings shared with the students.

If an Elder is not present, ask the students if they know of any Elders in their communities or lives that are important to them. Invite students to share any teachings they have learned about how to treat Caribou and how to act when out on the land related to Yukon First Nations ways of Knowing, Doing and Being (e.g., sustainable or respectful harvesting practices, respect for the land, waters and seasonal activities).

ASK GROUPS

- Why did you choose to place your harvest token(s) where you did?
- Why did you choose to place your protect token(s) where you did?
- What changes (if any) would your group make after seeing the placement of tokens by other groups?
- If you could move any token(s) from another group, which would you move and why?

ASK STUDENTS

- Are there any patterns/commonalities in the placement of the tokens?
- Are there any conflicting areas (where harvest and protect tokens have been placed together)? If so, what could be done to find a common solution or compromise?

EXTENSIONS

- Before dismantling the map, you may choose to photograph the final map and/or have groups draw the placement of their group's tokens on their copy of the map for use in extension or follow-up activities (below).
- Create mixed groups of six students (each from a different perspective group). These mixed groups work to come to a decision on the final area to be opened for timber harvest. The groups present their final plan to the class, and hear the plans made by the other mixed groups.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Make inferences on the beliefs, values and motivations of other local perspectives?
- State a reason for the placement of a harvest token? A protection token?
- Ask a question about the token placement of another group?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to experience the local environment, and interpret how survival needs impact SLC populations	Is not aware of the effects of Climate Change and shows little awareness of how this affects the SLC in relation to habitat and their needs	Is aware of the effects of Climate Change and can show some links between how this affects the SLC, their habitat and needs for survival	Forms well constructed reflections about Climate Change including clear examples or the effects on the SLC's habitat and survival needs	Forms detailed reflections about Climate Change and the effects on the SLC with clear ideas and connections made to their habitat and fundamental needs for survival
PART 2: I am able to utilize Yukon First Nations knowledge sources to understand changes in biodiversity over time	Not yet able to communicate aspects of biodiversity and the role of the SLC. Not showing an understanding of Yukon First Nations knowledge in relation to the land	Some communication is provided about biodiversity and links to the SLC. Showing some understanding of Yukon First Nations knowledge with some guidance	Provided clear ideas in reflecting on the concept of biodiversity and how it links to Yukon First Nations thoughts in relation to the SLC	Clearly assimilated the concept of biodiversity, the important role that the SLC have in relation to the land and Yukon First Nations sources of information
PART 3: I am able to contribute to care for self, others, community and world through collaborative approaches to understanding and reducing the effects of climate change	May have little to no reflections about their role in understanding the effects of Climate Change. No questions were formed in relation to the Elder/Traditional Knowledge Holder	Some evidence of personal reflection in connecting the SLCRP's collaring to the effects of climate change. Some questions were formed and asked with support in relation to the Elder/Traditional Knowledge Holder	Provided reflections on the collaring process of SLC while creating appropriate questions for Elders/Traditional Knowledge Holders	Significant links have been made to the collaring of the SLC and climate change. Respectfully asks detailed questions in relation to Yukon First Nations ideologies to the Elder/Traditional Knowledge Holder

GRADE 9 SCIENCE:

CARIBOU AND THE IMPACTS OF CLIMATE CHANGE

BIG IDEAS

- The biosphere, geosphere, hydrosphere, and atmosphere are interconnected, as matter cycles and energy flows through them

LEARNING STANDARDS:	
CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • Matter cycles (water, human impacts) • Sustainability of systems (matter and energy as interconnection in equilibrium) • Yukon First Nations knowledge of interconnectedness and sustainability 	<ul style="list-style-type: none"> • Experience and interpret the local environment • Apply First Peoples perspectives and knowledge, other ways of knowing and local knowledge as sources of information • Analyze cause and effect relationships • Consider social, ethical and environmental implications of the findings from their own and others' investigations
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I am able to consider the social, ethical and environmental implications of including Yukon First Nations knowledge of interconnectedness and sustainability as sources of information on the Southern Lakes Caribou. 2. I am able to experience and interpret the local environment to understand how matter and energy systems are interconnected sustainably. 3. I am able to analyze cause and effect relationships of human impacts on the Southern Lakes Caribou (water cycle). 	

PRIOR LEARNINGS

- Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.
- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning- here, for caribou](#)
- Caribou in the Schools: Community Booklet

MAKING IT HAPPEN

PART 1: FIRST NATIONS ENVIRONMENTAL INTERCONNECTEDNESS

LEARNING TARGET:

I am able to consider the social, ethical and environmental implications of including Yukon First Nations knowledge of interconnectedness and sustainability as sources of information on the Southern Lakes Caribou.

MATERIALS

- **Caribou artifact: sewing materials, Caribou tufting, snare, clothing, lichen sample, or swatch of Caribou hide (Appendix 1A)**
- **Pictures of artifacts (Appendix 1B)**
- **The Blind Man and the Loon told December 6, 1950 by Carcross Elder Jimmy Scotty James (Appendix 6A)**
- **Bandanas**
- **Rocks/pine cones**
- **Targets made out of natural materials**

TIME: 60 MINUTES

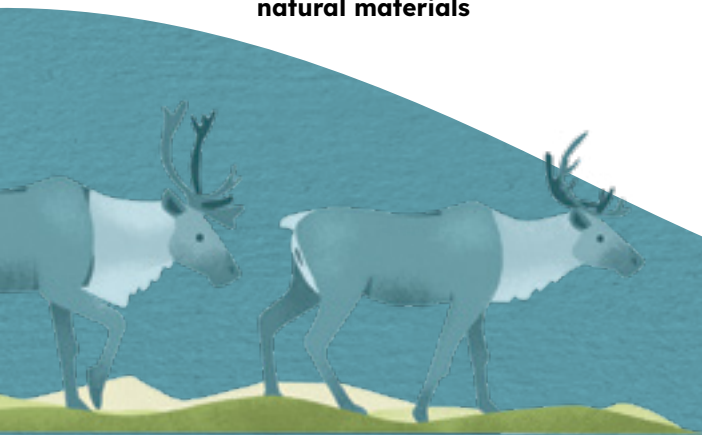
OPENING: CONNECTING TO CARIBOU

Gather in a circle (outside, if weather permits) and pass the Caribou artifact around, allowing each student to have a moment to closely examine it. Invite the students to share any stories or connections they have during this time. The Southern Lakes Caribou (SLC) have an extensive and intimate history with the First Nations people of the Yukon and there are many stories to share that highlight this relationship. Invite the Elder or Traditional Knowledge Holder to speak on the importance of learning through stories and sharing knowledge passed down through generations.

ASK STUDENTS:

- Are there any thoughts or feelings that come to mind as you are holding the artifact?
- Do you have any connections to the First Nations people of the Southern Lakes?
- Do you know any stories about Caribou?
- Do you have anyone in your family that they can ask about the history of First Nations and Caribou?
- What do you know about the importance of storytelling in Indigenous communities?

Share ideas.



ACTIVITY: THE BLIND MAN AND THE LOON

Share the story **The Blind Man and the Loon** told December 6, 1950 by Carcross Elder Jimmy Scotty James (Appendix 6A)

You can begin this activity in an open area outside. The students will need to be paired up and each set of partners will create a Caribou target out of natural materials that they will need to hunt “blindly.” They also will collect five hunting “tools” found in nature.

One partner will be blindfolded, relying on their senses and familiarity of the environment around them, along with guidance from their partner, to hunt their Caribou target. The partner of the blindfolded student will be instructing them in which direction to step (left, right and how many steps to take) and when to throw their chosen hunting tool (rock/sticks) at their Caribou target. Each blindfolded hunter will start with five hunting tools to attempt their hunt. When they have used up their five hunting items, the partners can switch and take turns to hunt their target.

EXTENSIONS

Ask the Elder or Traditional Knowledge Holder to share stories and/or knowledge about the seasonal movement of Caribou, and how the changes in the evolving environment have affected the ranges. Create obstacles in the open area that could mimic different challenges that might occur while hunting Caribou by:

- Putting the Caribou targets into a forested area.
- Hiding targets in shrubs where Caribou might take refuge from predators.

CLOSING

Gather in a circle with the Elder or Traditional Knowledge Holder and share reflections from this activity.

The environmental implications of climate change have had a massive impact on the Southern Lakes Caribou herd and the connection that First Nations people have with them. A lot of work has been done to mitigate the damage, but there is still a long way to go. We can always look back to history (especially to traditional stories like the Blind Man and the Loon) to teach us these connections, to bring us back to the core of Yukon First Nations ways of Knowing, Doing and Being that can help us strengthen our knowledge, understanding and respect for the land and water that we share together with the SLC.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Create a connection between the story “The Blind Man and the Loon” and Yukon First Nations Knowledge of interconnectedness and sustainability as sources of information of the SLC?
- Consider social, ethical and environmental implications of the findings from their own and others’ investigations?
- Clearly reflect and respect the importance of Traditional Storytelling as a way of sharing knowledge and teaching in Indigenous communities?
- Recognize the impact of cause and effect relationships?

PART 2: CLIMATE CHANGE AND SOUTHERN LAKES CARIBOU (SLC) POPULATION DYNAMICS

LEARNING TARGET:

I am able to experience and interpret the local environment to understand how matter and energy systems are interconnected sustainably.

MATERIALS

- **Caribou artifact(s) or examples (Appendix 1B)**
- **Energy and matter flows within the ecosystem (Appendix 7A)**
- **Web of life cards (Appendix 2E)**
- **Chart paper and writing tools**
- **Titles written on large chart paper, a whiteboard or chalkboard:**
 - climate change impacts
 - human impacts
 - predator impacts
- **Cones (optional)**
- **Pinnies**

TIME: ~90 MINUTES

OPENING: ADAPTATIONS WITHIN THE WEB OF LIFE

Review the Energy and Matter Flows Within the Ecosystem diagram (Appendix 7A) as a class.

ASK STUDENTS

- What does interconnectedness mean to you?
- How are matter and energy interconnected within the ecosystem of the Southern Lakes?
- Which parts of the ecosystem are Caribou connected to?

Share ideas.

Gather in a circle.

Distribute Web of Life cards, one to each student. Each student will have a turn to connect their card (their part of the Caribou ecosystem) to another classmate's card. Use the names in Dän'ke, Kwanlin Dün dialect. Components of Web of Life could include: sun, udzi njī/lichen, k'ày/willow, nose bot fly, ts'úr'k'i/raven, Udzi/Caribou, tth'j/mosquito, ägay/wolf and átsi shāw/grizzly bear.

“Caribou share their habitats with an astonishing variety of creatures. They are all part of the ecosystem, and support and sustain themselves to mutual benefit. A naturally functioning ecosystem is more than a food chain. Predators chase Caribou, and so do tiny insects, whose larvae grow inside a Caribou host. Caribou scour the tundra and forest floors to devour lichen, but their traveling hooves help other plants spread and take root elsewhere. Their fecal pellets return nutrients to feed such things as mosquito larvae in wet areas and plants”.

(Kirsten Madsen. (2018). Project Caribou. An Educator's Guide to Wild Caribou of the North, p. 9)

- One student starts the web, holding one end of the ball of string in their hand, and passes the string to a classmate with a card they feel is connected to their own.
- Each student describes their connection to the student they pass to on their turn
- (e.g., student with “sun” card passing to student with “plant” card could say “the sun provides energy to plants”).

- Students continue to pass the string to someone they are connected to, holding their portion of it, and describing why these two parts of the Caribou ecosystem are connected.
- Repeat until everyone in the circle has received the string. Students may receive the yarn more than once, highlighting the importance of their part of the ecosystem.
- Invite students to reflect on what their web represents.

ASK STUDENTS

- Can you predict what would happen if one component was removed from the ecosystem?
- How might this happen? (Matter: hunting, highways and high predatory populations; energy: changing climate affecting sunlight)

Share ideas.

- Invite students to lift the string, all together, over their heads. Observe the web from underneath. Discuss how this web highlights the tight, interconnected nature of the ecosystem. What happens to one part of the web happens to the whole thing.
- Choose one card to remove from the web. Discuss what might remove this from the web (human activity). On the count of three, with the web pulled taut, have that student drop their string(s).

ASK STUDENTS

- Who felt their string(s) go slack as a result?

CLOSING: CONNECTING THE WEB

Continue until the web has fallen apart. Reflect together on connections and shared impacts of the web of life. Encourage students to share something they noticed during the activity.

ASK STUDENTS

- In what ways are matter and energy interconnected through the web of life?
- What connections surprised you most from the web?
- How does a change in one part of the web affect the rest of the ecosystem?

Begin discussing the relationship between the SLC and climate change in relation to other living organisms. Invite an Elder or Traditional Knowledge Holder to be a part of the discussion and share their personal experiences or stories. Display the titles highlighting impacts on Caribou for students to use while answering these questions and for further reflections.

Climate change is a leading factor affecting the SLC. For example, the warmer the atmosphere, the more greenhouse gases are trapped in the atmosphere creating higher temperatures than normal. This affects the quality of life for all living organisms, including Caribou. A changing climate means there could be a higher chance of forest fires affecting habitats, and higher water levels than usual creating a challenge for Caribou as they move seasonally. It might also mean a reduction in ice patches for Caribou to find refuge from insects in the hotter months.

ASK STUDENTS

- How might climate change impact the SLC?
- How might other animals impact the survival or decline of the SLC?
- How might animals like Caribou need to adapt due to climate change?

Share ideas.

Record this conversation and web of knowledge in a visual representation for students to further reflect on at a later date. Use the subtitles for climate change impacts, human impacts and predator impacts.

ACTIVITY: ICE PATCH TAG

Prep: Set up a clear play area with boundaries (natural boundaries with tree lines or plants/rocks, or use cones).

Gather in a circle outdoors, weather permitting. Focusing on impacts from climate change, share ideas around how animals have had to adapt. In a recent study, there was evidence of polar bears hunting Caribou. This is rather unusual, as polar bears' main food source in the Arctic is seals. With the warmer temperatures, ice is melting and this is a problem for polar bears because they depend on ice patches to hunt for seals, who rely on ice to take care of their young. Polar bears have had to adapt to the change in their environment and seem to be looking for new sources of food: Caribou.

Choose one student to represent a polar bear predator while all other students will be Caribou. The Caribou will all be wearing a pinnie so it is clear who is who in the game. All Caribou will line up along one end of the play area. Their goal is to cross the frozen waterway safely without being caught by the polar bear. When a Caribou is caught, they take off their pinnie and become a polar bear predator. This round of the game ends when there are Caribou who have made it across the ice patch successfully and no more Caribou are moving. Gather data from this round to see how many Caribou survived and how many did not. This information can be graphed later on, especially in comparison to following rounds as seen below.

EXTENSIONS

Introduce the effects of climate change and put out safe zones/ice patches around the waterway. Now, for Caribou to cross safely, they must swim in the water without being caught by the polar bear. Caribou must stop on at least one ice patch where they can take a moment of safety (five seconds) before continuing on to their calving areas.

Introduce more polar bears from the beginning of a round to see how this affects the population on Caribou.

Introduce a heat wave and higher temperatures which means that some ice patches/safe zones will be removed during this round, making it harder for the Caribou to find a safe zone and affecting their survival. Ice patches may not be thick enough to hold their body weight and will crack under the pressure!

CLOSING

Gather in a circle.

ASK STUDENTS

- What kinds of changes (in energy, matter, human life or wildlife) do you predict the Southern Lakes will experience in ten years? One hundred years? One thousand years?
- How might the effects of global warming create animal adaptations that may affect the SLC population?
- How might flooding due to an excess of snowfall affect the SLC's seasonal movement?
- What might happen to Caribou or other living things when ice patches disappear?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Reflect on the effects of climate change on the environment in relation to the SLC?
- Share ideas about the web of life between animals and plants?
- Grasp how animals adapt to their environment?
- Create a clear statement of commitment in becoming stewards for the SLC?

PART 3: CARIBOU WITHIN THE WATER CYCLE

LEARNING TARGET:

I am able to analyze cause and effect relationships of human impacts on the Southern Lakes Caribou (water cycle).

MATERIALS

- [The Weather Network: Flooding Extremes in Northern Canada Are Becoming the New Norm \(video\)](#)
- [Water Survey of Canada: Real-Time Hydrometric Data Graph for Marsh Lake Near Whitehorse \(09AB004\) \[YT\]](#)
- [Yukon state of the environment interim report 2021](#)

Climate Change

- Long-term precipitation and temperature variation (pg. 16)

Water

- Snow accumulation (pg. 31)
- Extreme high and low water in lakes and rivers (pg. 33)
- Water quality (pg. 38)
- Yukon River ice breakup at Dawson City (pg. 42)

TIME: ~60 MINUTES - 2 HOURS

OPENING: FIRE IN THE FOREST

Gather in a circle outdoors. Bring the focus to discussing the water cycle, including concepts such as water vapor, clouds, precipitation and streamflow patterns.

ASK STUDENTS

- How might Caribou find drinking water in the freezing winter months?
- Where could Caribou access drinking water in the warmer months?
- How might climate change affect the level of drinking water for the SLC?
- How might climate change impact humans by impacting the water cycle?
- Are we seeing more or less precipitation in the Yukon in recent years?
- How might a rise in average temperature be linked to forest fires?
- How might forest fires affect the waterways of the Yukon?

Share ideas.

Water on the earth evaporates and will return to the earth as rain or snow (precipitation). The amount of precipitation is dependent on the rising temperatures due to climate change. As hot air rises, it collects and carries water vapor, so the hotter the temperature, the more vapor is carried up into the atmosphere before it returns as precipitation. This is because warmer air can hold more vapor than colder air, yielding intense storms and high amounts of rainfall or snowfall. On the flip side, some areas are experiencing dryer seasons due to the rise in temperature and have little precipitation, creating droughts as the moisture in the soil evaporates with the hot air.

Invite students to line up in an open play area or a wooded area, side by side. One student will be in the middle to represent a “flame” that sparked from a drought and hot weather. Everyone else will be Caribou (cow, bull or calf) who need to make it to the other side of the forest fire in order to survive.

The Caribou will have a moment to quietly decide which of the Caribou they will represent in this round of the game (cow, bull or calf). Next, the flame will call only one of the names, and those Caribou will attempt to make it across without getting caught by the flame. If tagged, the Caribou must stop and join as a flame for the following round, however they will only be able to move their arms while their feet stay stationary.

When all Caribou names have been called and there are no remaining Caribou at the starting point, the first flame will continue calling out Caribou names as before but now there are more flames, the fire has grown. If the flame calls out “Fire in the Forest”, all Caribou must run to safety on the opposite side. The game ends when all Caribou have been caught in the fire or when one Caribou remains.

EXTENSIONS:

- Add in “watering holes” as safe-zones or stopping points where Caribou cannot be tagged by the flame. Caribou can remain at the watering hole for only one round of calling, and must move on as soon as it is safe.
- Add in “flooded zones” where the watering holes have overflowed, and are now a dangerous hazard where Caribou cannot cross (making the playing field more challenging)

ASK STUDENTS

- How might Caribou respond to a previously safe watering hole becoming a dangerous flood zone?
- What might Caribou need to do to move from habitat to habitat when water or fire blocks their traditional pathways?
- What could humans do to support Caribou through the hazards of climate change-induced fire and water events?

ACTIVITY: STORYTELLING THROUGH DATA

Review how climate change has affected both the amount of precipitation and likelihood of wildfire in the North, and how these may be affecting the Southern Lakes water levels. Watch the short video from The Weather Network and follow up with a group discussion on key messages from the video.

Assign the class into small groups to review a set of data:

Group 1: Review the most recent year of data collected in the **Real-Time Hydrometric Data Graph for Marsh Lake Near Whitehorse (09AB004) [YT]**

Group 2: Review **Yukon state of the environment interim report 2021: Climate Change: Long-term precipitation and temperature variation** (pg. 16)

Group 3: Review **Yukon state of the environment interim report 2021: Water: Snow accumulation** (pg. 31); **Extreme high and low water in lakes and rivers** (pg. 33)

Group 4: Review **Yukon state of the environment interim report 2021: Water: Water quality** (pg. 38); **Yukon River ice breakup at Dawson City** (pg. 42)

Ask each group to come up with a summary of their group’s research. This could be a poster, short visual presentation, podcast, art piece highlighting key data or research paper. After listening to each of the summaries, ask students to identify trends, similarities, differences or other relevant insights.

ASK STUDENTS

- Can any trends in Yukon water levels be seen in the reviewed data?
- Are there other sources of data we could seek out? Elders, Traditional Knowledge Holders, community members and Game Guardians
- How might water trends affect the SLC population?
- How might the SLC adapt to the rising water levels? What actions will they have to take?

CLOSING: NO VOICE PERSPECTIVE

Gather in a circle, outdoors if possible. Use something (e.g., a mat, chair or small table with Caribou artifact or something to represent Caribou) to show that a space is being held in the circle for a non-human ‘voice’.

Tell students that the **No Voice** perspective is a way for humans to give a “voice” to the entity being talked about—in this case, Caribou. This is done by leaving an open seat for Caribou to “sit at the table” with those making decisions. This helps foster a sense of cooperation and unity between stakeholders at the table, reminding everyone that the common goal is to make the best decisions on behalf of the Caribou in our care.

Invite students to consider what the Caribou might want to share with the group at this time.

Some questions to pose to students to answer on behalf of Caribou could include:

- If Caribou have existed for over one million years, what does this mean about their resilience and ability to adapt to change?
- What knowledge and experience (data) do you think Caribou carry from living on the land?
- How do you think Caribou take the data they have collected to make decisions about seasonal movement, food and calving?
- We know Caribou are skilled at adaptation. With so many humans now living in the areas where Caribou have always lived, how can your own actions, or the actions of your community, positively impact the SLC as they adapt to the changing climate?

EXTENSIONS

- If possible, welcome local Game Guardians, Elders or community members in-person or online who can share their own experiences as a source of data.
- Email water.resources@yukon.ca for updated flow data for active sites.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Ask questions about how Caribou are affected by changes in the water systems within their habitats?
- Use their research on a set of data to show their understanding of how climate change is affecting water systems in Yukon?
- Share a closing reflection (in small groups, in writing or creatively) about their experience with the **No Voice** perspective that demonstrates active listening?
- Acknowledge differing viewpoints respectfully?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
I am able to consider the social, ethical and environmental implications of including Yukon First Nations (YFN) knowledge of interconnectedness and sustainability as sources of information on the Southern Lakes Caribou	Is not able to consider the social, ethical and environmental implications of including YFN knowledge as sources of information. No questions are formed or little to no curiosity demonstrated	Shows some understanding of the social, ethical and environmental implications of including YFN knowledge as sources of information. A basic question is formed, and some curiosity demonstrated	Shows understanding of the social, ethical and environmental implications of including YFN knowledge as sources of information. Forms thoughtful questions, and demonstrates curiosity	Shows deep understanding of the social, ethical and environmental implications of including YFN knowledge as sources of information. Forms many thoughtful questions, and demonstrates deep curiosity
I am able to experience and interpret the local environment to understand how matter and energy systems are interconnected sustainably	Not yet able to experience and interpret the local environment to understand how matter and energy systems are interconnected sustainably	Shows some ability to experience and interpret the local environment to understand how matter and energy systems are interconnected sustainably	Shows an ability to experience and interpret the local environment to understand how matter and energy systems are interconnected sustainably	Shows a strong ability to experience and interpret the local environment to understand how matter and energy systems are interconnected sustainably
I am able to analyze cause and effect relationships of human impacts on the SLC (water cycle)	May have little to no ability to analyze cause and effect relationships of human impacts on the SLC (water cycle)	Some ability to analyze cause and effect relationships of human impacts on the SLC (water cycle)	Shows an ability to analyze cause and effect relationships of human impacts on the SLC (water cycle)	Shows a strong ability to analyze cause and effect relationships of human impacts on the SLC (water cycle)

GRADE 9 SOCIAL STUDIES:

COLLECTIVE CARIBOU IDENTITY: THE POWER OF THE ENVIRONMENT AND IDENTITY

BIG IDEAS

- Emerging ideas and ideologies profoundly influence societies and events
- Physical environment influences the nature of political, social and economic change
- Disparities in power alter the balance of relationships
- Collective identity is constructed and can change over time

GRADE 9 - LEARNING STANDARDS:

CONTENT

- Political, social, economic and technological revolutions (transportation including highways, railway and waterway)
- Continuing effects of colonialism on First Nations peoples in Canada
- Patterns of migration (seasonal movement) and population growth
- Discriminatory policies, attitudes and historical wrongs
- Physiographic features of Canada and geological processes

CURRICULAR COMPETENCIES

- Use Social Studies inquiry processes and skills to ask questions; gather, interpret and analyze ideas; and communicate findings and decisions
- Explain and infer different perspectives on past or present people, places, issues or events (perspective)
- Recognize implicit and explicit ethical judgments in a variety of sources (ethical judgment)
- Make reasoned ethical judgments about actions in the past and present, and determine appropriate ways to remember and respond (ethical judgment)
- Assess the justification for competing historical accounts after investigating points of contention, reliability of sources and adequacy of evidence (evidence)

LEARNING TARGETS

1. I am able to demonstrate an understanding of historical inequalities and how they have impacted First Nations people and the Southern Lakes Caribou (SLC) population over time.
2. I am able to explore the effects of colonialism and reflect on perspectives related to people, place and culture.
3. I am able to recognize how the arrival of new groups affected natural and human characteristics of the physical environment.

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

Prior teaching related to Yukon First Nations would be helpful for having a basic understanding of topics such as Treaties, discriminatory policies (ex: banned potlatches) and the history of Residential Schools as well as the concept of Truth and Reconciliation. Holding space for an Elder or Traditional Knowledge Holder to share their experiences and stories with the group is also important.

- Council of Yukon First Nations [History](#)
- Council of Yukon First Nations [Self-Governance Agreements](#)
- Council of Yukon First Nations [Natural History](#)

PART 1: OPENING CIRCLE AND NO VOICE PERSPECTIVE

LEARNING TARGET:

I am able to demonstrate an understanding of historical inequalities and how they have impacted First Nations people as well as the SLC population over time.

MATERIALS

- A chair (for guests and No Voice Perspective)
- Caribou artifact or photo printed (Appendix 1B and 2C)
- Paper and writing tools

TIME: ~90 MINUTES

OPENING: CONNECTING TO CARIBOU

Gather in a circle and begin with introducing guests, Elders or Traditional Knowledge Holders, staff and students. Acknowledge the Traditional Territories on which you are presently teaching and where these activities will be taking place. Pass around a Caribou artifact and invite students to share their personal connection with Caribou.

ASK STUDENTS

- What is interconnectedness?
- How are you connected to Caribou?
- Why are Caribou a keystone species for Yukon First Nations?
- What role do Caribou play in the ecosystem?
- Can you think of some ways that humans have impacted Caribou's survival?

Share ideas.

SHARE

Observing the land, waterways and the animals that live on it offers many teachings. All living organisms, including lichen, need air to survive and flourish. Lichen are known to be a quality indicator, meaning that their growth is affected by air pollution and can teach a lot about air quality in a region. If the lichen are not able to flourish, then Caribou will be affected as this is a staple food source for this creature. If Caribou cannot source the food they need to survive the winter months, that too will affect the predators who prey on Caribou for their survival. Every living organism in an ecosystem is interdependent and when one part of the web is out of place, it is a crisis for nature but also for the First Nations who have a profound connection with the land.

If possible, invite an Elder or Traditional Knowledge Holder to share stories related to Traditional Laws, which have different names. If this is not possible, there are resources available to introduce this concept.

In some Yukon First Nations Traditional Law is embedded in a system of respectful behaviour of all life. It is often subdivided into behaviour towards plants and animals and humans.” At the core is respect for the land, animals and plants. “Respect determines how one harvests and treats resources... (Jody Beaumont and Michael Edwards, 2014, p. 35)

Breaking Traditional Laws could result in illness, injury or bring hard times to a community, an imbalance to the interconnectedness of all things. Yukon First Nations depend on traditional hunting to supply their community with nourishment. By gathering and hunting what they need, but never taking more than what is needed and always using every part of an animal that is being harvested, nothing is wasted. Survival, respect and balance are key components to Yukon First Nations ways of Knowing, Doing and Being.

ASK STUDENTS

- How have Caribou been affected by humans? Why?
- What would Caribou want us to say if we were to tell their stories?

Brainstorm ideas around human impacts and how they relate directly or indirectly to Caribou. Consider discussing: railways, mining, hunting and overhunting, road collision and highways, deforestation and habitat removal and sensory disturbances of noise, smell or unfamiliar sights.

Introduce the idea of the **No Voice** perspective. Place a chair in the middle of the group and on it a Caribou artifact which will represent a non-human voice— that of the Caribou. This perspective gives a voice to an entity which would normally not have a voice. This will offer unity and remind us that the goal is to make good decisions on behalf of non-human beings on Earth.

ACTIVITY 1: ROLE PLAY NEGOTIATIONS

Tell students that they will be analyzing negotiations, making decisions that are in the best interest of the SLC and anticipate their counterparts' arguments. Break the students into two groups:

Group 1: **No Voice** Perspective of Caribou

Group 2: Stakeholders in a construction company who build highways

ASK STUDENTS

- What are the technological revolutions that have allowed people to move humans and goods? How have these affected the life quality of SLC?
- What reasons might stakeholders have for creating a new highway?
- What perspectives might local First Nations have on the use of natural resources?

Allow time for students to write down their ideas, thoughts and arguments for and against the construction of a new highway in the Southern Lakes communities. Encourage them to also come up with questions they can ask the opposing 'team'. Allow the role-play to start and once they have had a chance to share and ask their questions, follow up with a conclusion.

EXTENSIONS

- Break the students into smaller groups where one student will represent the **No Voice** perspective of the Caribou and the others will represent the construction company. Have each group share their findings in the closing circle.
- Consider a blindfold activity where the students will pair up and one student will be blindfolded while the other student shares their point of view. This will enhance the practice of listening and speaking clearly. The students can then swap roles and follow up with a reflection on how it felt in both roles.

CLOSING

Bring all students back to the circle and find out how this activity affected:

- Their opinions on protecting the Southern Lakes Caribou (SLC).
- Their opinions on construction and human impacts on the land/animals.
- Their view of First Nations relationships to the land and living organisms.

ASK STUDENTS

- What do SLC need to stay healthy?
- How can we have a positive impact on Caribou?
- What does respect for SLC look like?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Express why SLC are an important part of the ecosystem?
- Share their own perspectives clearly with supporting examples?

Invite the students to self-assess their sharing by:

Using your thumb, show it in a downward position, middle position (horizontal) or upwards position based on how you feel you shared. Invite students to add more to their answer.

PART 2: PEOPLE, PLACE AND CULTURE

LEARNING TARGET:

I am able to explore the effects of colonialism and reflect on perspectives related to people, place and culture.

MATERIALS

- Large paper, whiteboard or chalkboard
- Paper and writing tools

TIME: ~1 HOUR 45 MIN

OPENING: INTRO TO ECONOMY

Gather in a circle. Brainstorm ideas and a definition for economy.

ASK STUDENTS

- What are some goods and services that are offered to people living in the Yukon?
- Who are these goods made for? Who benefits from them?
- Who controls the creation of these goods and services?

Share ideas.

Oxford English Dictionary, retrieved 2022: Economy- noun- “the wealth and resources of a country or region, especially in terms of the production and consumption of goods and services.”

SHARE

Share with students the three areas that make up an economy: resources (using nature), industry (making things) and services (helping people).

OVERVIEW

Ask students to brainstorm examples of these three areas, what types of jobs exist in the Yukon that could be categorized by resources (forestry and mining jobs), industry (building of houses) and services (medical professions or educational professions). Write these jobs down under each title or invite students to write their ideas down, creating a list as a class that describes how Yukon’s economy is built.

ASK STUDENTS

- How do these jobs contribute to Yukon’s economy?
- How might the creation of these jobs affect the SLC?
- Are there ways that these jobs can exist today without affecting the SLC?
- How might Colonialism play a role in the creation and future of Yukon’s economy?
- What are some positive and negative impacts of the economy for the SLC and local First Nations?

Share ideas.

- Oxford English Dictionary, retrieved 2022: Colonialism- noun- “The policy or practice of acquiring full or partial political control over another country, occupying it with settlers, and exploiting it economically.”
- Our economy is heavily dependent on human interaction and the interdependence of each other in our roles within our society. Each decision we make has consequences, whether positive or negative. Building of roads has impacted the SLC, removing vital parts of their habitat and creating opportunities for collisions with cars.

- First Nations had their own form of government and law within their own communities before settlers came to what is now known as Canada. It is pertinent that Canada recognizes that First Nations people have a right to self-determination and how Traditional Knowledge is connected to the healthy state of all living organisms, including SLC.
- The **Indian Act**, the ban on nàkwät'à/potlatches (Dän'ke, Dàkwänjē dialect), residential schools and internments can all be linked to the three areas that make up an economy.
- Settlers, over time, developed their own sense of society, identity and sovereignty. In doing so, Yukon First Nations people had many of their rights taken away. For example, speaking First Nations languages was illegal, making it intentionally difficult to focus on cultural practices. How could Haa Kusteeyi (a set of values and beliefs on respect for nature, animals and each other) be passed on through generations if Yukon First Nations were to give up their identity, culture and language?

ACTIVITY: COMPARE PERSPECTIVES

Tell the class that they will be put in small groups for this next activity. Each group will be given a specific role or job based on the three areas of an economy. Once each group has received their role, they will draw a visual representation of what this job entails, what equipment or materials are used and they can also write a sentence or more to describe how this job impacts the lives of others (humans, land, water, air, animals including the SLC and future generations).

On three separate pieces of paper, place the titles:

- Before settlers arrive
- After settlers arrive (~1870 - 1898)
- After the Yukon becomes a territory (1898 - present day)

Invite each group, one at a time, to share with the class their job and the visual work that they created together. Then invite the group who is sharing to choose into which category they should place their job description. They can place it in more than one category if they feel that there are overlapping connections.

CLOSING: LINKS TO CARIBOU

Discuss the importance of the survival, revitalization of Caribou and SLCRP in relation to resilience and Yukon First Nations ways of Knowing, Doing and Being. Find out their opinions about how colonization might have affected/still be affecting the SLC population.

ASK STUDENTS

- When do you think the SLC population was the healthiest and most abundant?
- How might economic activities on the land have affected the SLC?
- Are there ways to mitigate any negative impacts from the jobs being explored?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Reflect on the impacts of colonization?
- Retell the story of the formation of the SLCRP in their own words?
- Share reasons why the SLCRP was needed to protect the Caribou?
- Express the inequalities that colonialism brought to First Nations communities and their long lasting effects?

PART 3: HUMAN IMPACTS AND NATURAL IMPACTS

LEARNING TARGET:

I am able to recognize how the arrival of new groups affected natural and human characteristics of the physical environment.

MATERIALS

- **Caribou artifact or photos printed (lichen, hooves, antlers, fur, pelt, tufting, or bone) (Appendix 1B and 2C)**
- **Four cones or markers**
- **Three long ropes**
- **Bandanas or face paint in two colours**
- **Fabric ties as food (optional)**

TIME: ~1 HOUR 30 MINUTES

OPENING: DRAWING ON OUR KNOWLEDGE

Gather in a circle. Pass a Caribou artifact around and invite students to share what they remember from the story shared by the Elder or specialist about Traditional Laws and the impact of treaties for Yukon First Nations. This is a great moment for students to share stories of personal connections to Caribou as well.

ASK STUDENTS

- Do you know someone who has seen Caribou before? Have you?
- Do you know someone who has harvested Caribou?
- Have you eaten Caribou before or know someone in the area who has a Caribou recipe?

Review the definition of settler colonialism in Canada and the Yukon with the aim of dismantling First Nations societies to replace them with settler societies.

- What do you think were the primary reasons for colonial expansion?
- What challenges do Yukon First Nations face today? Is this different or the same as when the first European settlers arrived in the Yukon?
- What policies did the Crown and Government of Canada put into place that forced First Nations people to be displaced?
- In being displaced, what were Yukon First Nations disconnected from?
- How did the Government gain access to the land?

Share ideas.

Yukon First Nations have hunted and gathered food, fishing in one area in the summer and then hunting in another area in the winter for thousands of years. When Europeans arrived in the North, the local First Nations were forced to relocate. Many First Nations people, such as Chief Kohklux, offered to help the Europeans as they were unfamiliar with the new environment. Despite providing this support, First Nations were faced with the removal of identity, governance and sustenance. They were unable to hunt and harvest animals, like Caribou, as had been their traditional and cultural practices, following animal herds as they moved seasonally. The impacts from contact with the Europeans has affected First Nations people all over the world, including the Yukon's 14 First Nations. They were disconnected from their language, the land and water, their traditional practices, their spirituality and songs, values and all that is at the core of their identity as a nation within their culture. The first treaties were put in place to gain access to their land and take away their rights.



ACTIVITY: MOVING ACROSS THE LAND

Make connections between European contact and changes in how humans interact with the land, the waterways, the ecosystem and the animals in their habitats.

ASK STUDENTS

- What impacts have humans had on the physical environment?
- What impacts on the land have been natural?
- How have these impacts affected the Southern Lakes Caribou (SLC) and their survival?

Share ideas.

Human Impacts:

- Overhunting (less Caribou for mating and survival of species)
- Technological revolutions including building roads, highways and railways (road collisions, habitat removal)
- Mining (sensory disturbance)
- Anthropogenic hazards (environmental pollutants by human activity)

Natural Impacts:

- Climate change (more forest fires remove habitat and also the growing lichen)
- Seasonal changes (more snow could slow down seasonal movement before calving season)
- Hereditary changes (change in size of antlers)
- Natural selection (body posture, length of legs and stride)

Prep: Set up the large play area with the four seasons in four corners starting with fall in the far left hand side. Create zones for the seasons with ropes as circles to give boundaries. Place four cones in the middle of the play space.

Gather outside with the group and share that you will be playing a game of survival with indirect and direct impacts. For the first round, all students will be Caribou going from season to season learning and reviewing what Caribou do during that season. Practice the terms for the seasons in Dän k'è, Tàa'an Män dialect with students. All Caribou will be safe and will survive this first round before human impacts and gender will be introduced. All Caribou will start in fall and will act out the actions while there, waiting to hear the next season called by you. Use the online dictionary for pronunciation.

- **nuchü/fall:** this is rutting season where the male Caribou, the buck, will make vocalized airy grunt noises to win over a female cow. They are known to use their large antlers in fighting for the win and are also known to mate with more than one cow.
- **yük'è/winter:** Caribou will move to lowlands where they will find lodgepole pines and black spruce. There they will dig under the snow for lichen growing below and hide from predators as their food digests.
- **ädatal/spring:** Caribou move towards higher elevations as mosquitoes and other insects arrive.
- **imbè/summer:** Caribou continue moving for calving season and look to find sub-alpine ridges far away from predators to protect their young. They do a lot of foraging to fuel up for continued energy needs in the coming weeks.
- **Back to nuchü/ fall:** Caribou will continue moving only weeks after the calves are born. They will head back to valleys where rutting season approaches yet again.

EXTENSIONS

- Inform the students that they will be tracking data on how many Caribou, broken down by sex, survive or do not survive during the next rounds and will be asked to graph this data later on.
- Round two: introducing human impacts and sex of the Caribou will depend on the group size. Divide the Caribou players into male and female, marking them with face paint or bandanas. If a Caribou is tagged by any of these players while moving, they are dead and must go to the marked zone in the middle of the play area. They can only be brought back into the game during summer if and when a female Caribou makes it safely to that season for calving and must start in summer.
 - Between fall and winter, there will be players who will be humans hunting Caribou.
 - Between winter and spring, there will be players as dog teams and mushers who will disturb the Caribou with their noises.
 - Between spring and summer, there will be players as a forest fire wiping out their habitat and food source.
 - Between spring and fall, there will be players acting as a highway and construction reducing the chance of survival.

Note: If there are no females who safely make it to summer, then there will be no calves. If there are no males who make it safely to summer, there will be no calves and no players will be brought back into the round.

- Round three: consider changing up how many female or male Caribou are in the game. Consider including a predator who lives in a specific season and can also tag Caribou.
- When students are gathering data during the game, ask them to focus on how the Caribou died and take data in relation to implicit and explicit impacts on their survival to later graph.

CLOSING: CELEBRATING CARIBOU

Circle up and allow students to share their reflections. Make space for the sentiments around ethical judgments and historical wrongdoings. Plan a moment where students can share their data collected and encourage them to make connections with inequalities throughout history and the present-day situation with First Nation relationships to SLC.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Reflect on human and natural impacts on SLC's habitat?
- Show an understanding of seasonal movement patterns based on adaptations Caribou have learned post-contact?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to demonstrate an understanding of historical inequalities and how they have impacted Yukon First Nations people and the SLC population over time	Is not aware of Elders or shows little respect. No questions are formed or little to no curiosity demonstrated	Is aware of and listens to Elders. Can partially form a question about Yukon First Nations & connection to Caribou	Listens to Elders attentively and respectfully. Forms a well constructed question about Yukon First Nations & connection to Caribou	Highly respectful of Elders' teachings. Forms multiple well-constructed questions about Yukon First Nations & Caribou
PART 2: I am able to explore the effects of Colonialism and reflect on perspectives related to people, place and culture	Not yet able to communicate opinions related to how economy structures impact SLC & Yukon First Nations	Some verbal or visual representation of opinions are shared about the impacts of economy of SLC & Yukon First Nations	Opinions are shared verbally, visually or orally on how Yukon's economy has impacted Yukon First Nations and the SLC	Verbal, visual and oral representations are presented with connection to economy and its effects on Yukon First Nations as well as SLC
PART 3: I am able to recognize how the arrival of new groups affected natural and human characteristics of the physical environment	May have little to no reflections on personal reflection of connection to Caribou, local First Nations stories & place	Some evidence of personal reflection of connection to Caribou, local First Nations stories & place provided	Verbal, visual or oral evidence is provided of a reflective process about personal connection to place, local First Nations stories & Caribou	Verbal, visual and oral evidence is provided of a significant reflective process about personal connection to place, local First Nations stories & Caribou

GRADE 10 SOCIAL STUDIES: SEEING CARIBOU THROUGH SOCIAL MEDIA

BIG IDEAS

- The development of political institutions is influenced by economic, social, ideological and geographic factors
- Worldviews lead to different perspectives and ideas about developments in Canadian society
- Historical and contemporary injustices challenge the narrative and identity of Canada as an inclusive, multicultural society

CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • Government, Yukon First Nations governance, political institutions and ideologies • Environmental, political and economic policies • Cultural, societal, spiritual, land use, environmental policies missing word • Canadian identities (manifestations or representations of Yukon First Nations arts, traditions, languages) • Media and art: Canadian content • Advocacy for human rights, including findings and recommendations of the Truth and Reconciliation Commission 	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret and analyze ideas and data; and communicate findings and decisions • Assess how underlying conditions and the actions of individuals or groups influence events, decisions or developments, and analyze multiple consequences • Explain and infer different perspectives on past or present people, places, issues or events • Make reasoned ethical judgments about actions in the past and present, and assess appropriate ways to remember and respond
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I can explore the Southern Lakes Recovery Project (SLCRP) through media and public messaging to form a shared identity. 2. I am able to reflect on forms of relationship models to create strength in interconnection with a First Nations framework lens. 3. I can inquire about the SLCRP with community leaders in relation to Canadian identities and Yukon First Nations traditions. 4. I can examine messaging through new media about stewardship and sustainability for the Southern Lakes Caribou (SLC). 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou movement patterns and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Government of Canada [Charter of Rights and Freedoms](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: OPENING CIRCLE AND EXAMINING WORLDVIEWS

LEARNING TARGET:

I can explore the Southern Lakes Caribou Recovery Program (SLCRP) through media and public messaging to form a shared identity.

MATERIALS

- [NFB of Canada Short Film: The Egg \(1 min\)](#)
- [NFB of Canada: Dancing Around the Table Part 1 \(34:50-39:00\)](#)
- [Science-Based Guidelines for Management of Northern Mountain Caribou in Yukon: Summary](#)
- Writing tools and paper
- Art supplies (clay, plasticine or wood)
- Caribou artifact or photos printed (tufting, fur, antlers, hooves, hunting tools) (Appendix 1B and 2C)

TIME: 90 MINUTES

OPENING: CONNECTING TO COMMUNITY IDENTITY

Gather in a circle (outside, if weather permits) and introduce an Elder or Traditional Knowledge Holder who can speak to the SLCRP. Once there has been space carved out for the guest to share, follow up with the importance of perspective. Pass around a Caribou artifact and ask each student to tell you something about it through their senses.

ASK STUDENTS

- What does this artifact mean to you? How does it make you feel? What does it feel like, smell like?
- How does this artifact connect with Caribou?
- Where do the Southern Lakes Caribou (SLC) live? Whose Traditional Land do the SLC live on?
- What is the relationship plan for the SLC and which nations have come together to support the recovery of the SLC?
- What are some of the recommendations and guidelines put in place by the SLCRP?
- How can community knowledge positively affect the number of SLC?
- What can we learn from Traditional Knowledge about biodiversity and the interconnection of all living organisms?

Share ideas.

Highlight that everyone has their own opinion and although some perspectives are similar, they each bring a different view or belief about the artifact. Everyone's opinion matters and has value. The Yukon's communities have a close connection with Caribou dating back 4,000 years or more. Caribou are an important food source for Yukon First Nations but they are also an indicator of the state of the environment and are deeply connected to their relationships with the land and water. Have students read over the summary of the Relationship Plans guidelines for long term sustainability.

ACTIVITY 1: PARTICIPATION AND POWER IN NEGOTIATIONS

Share the video clips for students that highlight topics of First Nations Self-Governance, the concept of equality, a framework for the future, colonization, human's fundamental rights and collective or individual rights.

ASK STUDENTS

- What are the challenges in building a nation?
- Do you agree that societies in evolution are often in danger of self-destruction?
- How do art, media and innovation inform a shared collective identity? What is identity?
- What system of negotiation has been used between First Nations people and Western Societies? What perspective does this system highlight and support? Does it include all ideologies or practices?
- What human errors are highlighted in these video clips and how do they relate to human rights?
- What is a colonized view? How might the view of superiority over another identity hold negative repercussions for Caribou and their environment?

Share ideas.

Discuss the perspectives from the past and ruminate on how these perspectives have changed, are changing, could change or how worldviews and beliefs today are potentially still deeply rooted in a colonized viewpoint. Support the conversation with respect, peace and harmony in contrast to the discussions in the video.

Create a **Circle-Circle Intersection** visual representation of the discussion between classmates. Consider adding a circle to represent the voice of the Caribou or of Mother Nature. Create a section made only for questions for which the students would like answers. Highlight the fact that the students are creating one "product" but that they each have their own identity, history and experience which plays a role in negotiating where to place certain concepts. They will negotiate which ideas belong where and which ideas overlap.

EXTENSIONS

- Students could create a 3D drawing as their completed piece or use a draft drawing to create their idea which will then be represented through a sculpture out of sculpting clay.
- Consider inviting a representative from the Northern Cultural Expressions Society in Whitehorse to host a workshop on carving.
- Invite a local First Nations Artist to discuss their work, their knowledge about tradition and how 3D art can bring about the concept of perspective. Give examples of different styles of 3D art such as carvings, modeling out of stone, metal or wood. Introduce the concept of Anamorphic Art and show some examples of how this style of art creates an image that can only be understood from a specific angle.
- Have students reflect on the video clips and the concept of a shared identity in creating a nation. Ask them to represent their ideas through perspective drawings.
- Students may want to explore the art of totem animals and include this in their piece, working in the meaning of Caribou to their personal identity.

CLOSING

Have a showcase for their artwork either for the class only or invite other classrooms studying the SLCRP to travel through the curated art exhibit. Be sure to invite any guests to this event and show your gratitude for their knowledge shared and how it affected their work.

Be sure to leave space for students to ask questions to the visitor and to offer gratitude for their time and knowledge shared.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Express an opinion about what identity means?
- Highlight the importance of having different viewpoints at the table when discussing an important topic?

PART 2: MAKING CONNECTIONS: RELATIONSHIP MODELS

LEARNING TARGET:

I am able to reflect on forms of relationship models to create strength in interconnection with a First Nations framework lens.

MATERIALS

- **Labrador leaves: in an open vessel or printed (Appendix 4B)**
- **Three tik tl'el/ropes (Dän'ke, Kwanlin Dün First Nations dialect)**
- **Tokens in three colours printed and cut out (Appendix 4C):**
 - Respect for all
 - Care for the land
 - Sharing knowledge

TIME: ~60 MINUTES

OPENING: CONNECTING WITH LAND AND PEOPLE

Gather in a circle. Pass around the opened vessel of labrador tea leaves and invite students to smell them, touch them and describe their shape and/or colour when it is their turn, highlighting that the student holding the vessel is the person who is speaking while the others are listening respectfully.

ASK STUDENTS

- What is this plant? Have you seen it before in nature?
- Who might eat this plant? Have you tried it before?
- Where do you think this plant can be found?

Share ideas.

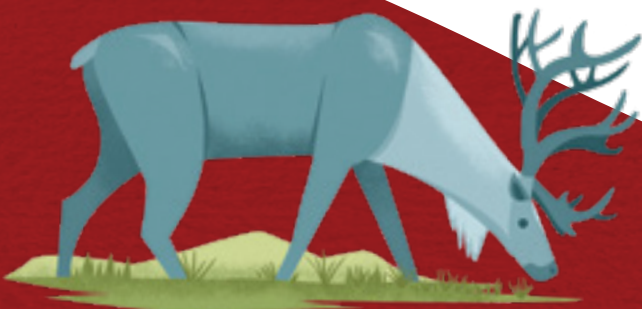
Labrador grows in the wild and is an edible plant. Humans enjoy harvesting this oblong leaf that can be dark green to rusty brown. It is found in low dry places and rocky places in the mountains. This plant grows white flowers in the summer months but the leaves are used for making tea for its flavour and also for medicinal uses. Caribou eat this plant as it is a low growing shrub which they can find on mountain ranges and dig up under the snow.

ASK STUDENTS

- Did you notice whether every person in our circle had the same opinion or feeling about this plant?
- How were some opinions similar or different?
- How did we express our ideas and thoughts about this plant with each other?
- How can humans develop compassion when in discussions that may bring about different opinions?

Share ideas.

Highlight the similarities between students' opinions and whether any students changed their view based on something they heard another classmate share. Human beings are unique in the ways that they communicate with each other. For instance, in this circle, ideas were shared orally through talking, taking turns listening and showing patience. When we have a difference of opinion,



it is a chance to consider another person's perspective. When discussing topics that are of high importance, it can be challenging to find a middle ground or a way to find commonalities that would allow for action to take place. In considering the SLC and their recovery, many discussions were had between different parties before making an action plan in relation to the land and waters.

When we consider different ways of thinking, we notice that the Western ways of thinking are deeply rooted in politics, amalgamation of different cultures and individualism. Long-ago people used a holistic approach linked to family, community, the land, waters, plants and animals with a focus on respect and shared knowledge.

ACTIVITY: CROSSING THE RIVER TO CONNECT

Prep: set up two tik tl'el to represent the river. At one end, show two tributaries that come together to become one stream (use a third rope for this representation). In the middle of the river have the ropes closer together and at the opposite end of the tributaries, have the ropes further apart.

Take the group outside for this activity, a process which brings together perspectives to come to a decision that is based on respect and similarities.

There are three key focus points including respect for all, care for the land and for each other, and the sharing of knowledge. These three key points allow for both parties to focus on respect and finding ways to work collaboratively in reaching a decision.

Students will reflect on statements based on natural hazards and human hazards which affect the survival of SLC. Students will start as a group on one side of the river at the end of a tributary and will be asked the overarching question:

“What is the best way to ensure the SLC herds remain healthy over the next 100 years?”

Pair up students and hand out statement cards for them to read together in their pairs. Give students time to reflect and discuss with each other before deciding whether the statement belongs in the stream of Traditional Knowledge, Western science, or in the middle to represent that statements could hold true for either stream of knowledge:

- All living organisms need to exist in relation to each other- when one organism is not flourishing, all other organisms will be out of balance as well.
- Building a highway through the natural landscape will allow for humans access to new areas.
- Respect for Caribou is shown through pausing harvesting to allow them to recover.
- Constructing a new neighbourhood outside of Carcross will allow for a growing population to have shelter and a sense of belonging. This neighbourhood will be large and require many plants to be removed from the area.
- Animals deserve to have a voice at the decision-making table.
- In planning, it is more important to arrive quickly at the result, rather than carefully design a process.
- Corridors (pathways) must be maintained so that animals can move between habitats.

Once each pair of students has come to a decision, invite each pair to read it aloud and share how they came to the conclusion. Leave space for students to ask questions and share reflections as they learn from each other.

EXTENSIONS

- Have tokens representing the three key elements (respect for all, care for the land, sharing of knowledge) pre-cut. Have students walk through this activity a second time and place a coloured token with the statement to show which element it highlights. Notice if there are statements that do not fall within these 3 elements.
- Do this same activity indoors with a large drawing of the river. Students could be a part of creating the drawing and make their own statements to include in the activity.

CLOSING: VISUALIZING COMMONALITIES

Gather the group and discuss how their dialogues played out. Were they able to find commonalities between their ways of thinking? Did they end up crossing the river? Find out if their outcomes highlighted First Nations Knowledge, collaborative planning, creating a respectful relationship, and considering the importance of Caribou. They should be able to find common ground on topics related to sustainability, stewardship, land-use, water conservation, overconsumption, climate and environment.

ASK STUDENTS

- What happens when we can connect through nature individually and as humankind?
- How is the concept of sustainability used through this model?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Share an opinion related to the recovery of SLC in relation to the land/environment?
- Find commonalities between perspectives?
- Listen intently and respectfully to another classmate's opinion?

PART 3: PERSPECTIVES ON IDENTITY

LEARNING TARGET:

I can inquire about the SLCRP with community leaders in relation to Canadian identities and Yukon First Nations traditions.

MATERIALS

- Writing tools and paper
- Art supplies (optional)
- [CBC: Where are you from?](#)

TIME: ~60 MINUTES

OPENING: CONNECTING TO COMMUNITY IDENTITY

Gather in a circle (outside, if weather permits) and introduce the concept of the Canadian identity. Make space for local Elders, Game Guardians, and/or community leaders to visit the class and share their knowledge about the SLCRP and to represent First Nations art, language, culture and traditions.

ASK STUDENTS

- How has the recovery program positively impacted Caribou?
- How can the power of storytelling change how we see the past?
- What does the word identity mean to you?
- If Caribou wanted to share their perspective, what might they say? What is their identity linked to?
- What is Canada's Identity? How has it evolved and changed over time?

Share ideas.

The well-being of self, family, community, land and spirits and ancestors is of high importance within First Nations culture. This encompasses the SLC, their environment, the concept of conservation and recovery. Canada's identity is based on unique culture and characteristics of being Canadian, including the concept of multiculturalism.

In 1988, Brian Mulroney created the **Canadian Multiculturalism Act** which was meant to encourage cultural understanding and highlight the understanding of unity. Often cultural differences become the focus or topic of conversation rather than spending the time to notice similarities. **The Charter of Rights and Freedoms** focuses on the rights and freedoms of Canadians in a democratic society. It is a part of the Canadian Constitution, which states basic rules of how a country should operate. Show the short video that talks about identity.

ASK STUDENTS

- How has the digital world changed the view of Canadian identity? Has it?
- How has the digital world influenced human connection around a shared identity?

Share ideas.

ACTIVITY: YOUR PERSONAL IDENTITY

Go outside and invite students to reflect on what the word identity means to them. They will have five to ten minutes to sit quietly in a chosen spot that calls to them. While they are seated they will listen to their surroundings and use nature to help them create a list of terms that they would use to identify themselves. After the sit spot, students will be asked to walk around in a small area and be sure to avoid walking into each other. You will hold up two sticks and tap them together to signal for students to find a partner who is close by. Then students will be asked to answer a question by discussing with their partner for two to three minutes. When the sticks are taped together again, students will continue walking quietly and wait for the next pairing and questions to come up. Continue until students have had a chance to answer a few questions in different pairings to hear different opinions.

EXTENSIONS

- Students could interview a community leader, Elder or Traditional Knowledge Holder and write a piece on perspectives related to identity.
- They could write a poem or a song to express their ideas about identity.

CLOSING

Gather in a circle and have students pinpoint the main arguments towards the idea of Canadian identity in their eyes and begin finding similarities in what students have shared. Consider making space for students to celebrate their differences as well as highlighting the moments of overlapping ideologies.

Be sure to leave space for students to ask questions to the community leader/visitor and to offer gratitude for their time and knowledge shared.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Explain what an identity is?
- Share specific details about Canada's identity?
- Consider how a shared identity could affect the SLC?

Invite the students to self-assess their sharing by asking:

- On a scale of 1 to 5, how well do you feel you shared? (Raise 1-5 fingers in the air).
- Can you add more to your answer?

PART 4: COMMITMENT AND STEWARDSHIP

LEARNING TARGET:

I can examine messaging through new media about stewardship and sustainability for the SLC.

MATERIALS

- [CBC Kids: What is Reconciliation?](#)
- Paper and writing tools
- Video camera or other recording device for audio

TIME: ~60 MINUTES

OPENING: CONNECTING RECONCILIATION WITH STEWARDSHIP

In a circle, make space for acknowledging the Traditional Land you are on and introduce the languages spoken by these First Nations including any major waterways, all of which are deeply rooted in cultural practices. Continue on to present the students with the concept of Truth and Reconciliation. Have a discussion about what this word means: to the students, to First Nations people and to the future generations of Southern Lakes Caribou (SLC). Play the short video describing this concept for students to get a better understanding of how they can play a part in decolonization.

ASK STUDENTS

- What is Truth and Reconciliation? Does it mean the same thing to everyone?
- What is reciprocity? What is respect? What is an agreement?
- How is your role as a human being important to making positive change for the future?

Share ideas.

ASK STUDENTS

- How is your role important in the recovery of the SLC?
- What is your connection with Caribou?
- How are you able to commit to becoming a steward for the SLC?

Share ideas.

ACTIVITY: CREATING NEW MEDIA

Take students outside and go for a short walk in nature without speaking. While on this nature walk ask students to reflect on their understanding of local First Nations, the concept of Truth and Reconciliation, sustainability and stewardship in relation to the SLC.

After the walk, students will have a chance to create new media based on their personal reflections.

They will have a choice between different types of media including:

- Audio recording or video of them reading a poem they have written.
- Audio recording or video of them telling a story.
- Animation
- Video recording of non-verbal communication (miming, tableaux or movement including dance)

Students can choose to work in small groups or complete this activity individually. The topics they can incorporate are:

- Goals to maintain air, land, water and biodiversity in relation to the SLC.
- Protecting Caribou landscapes (woods, ponds, streams, grasslands, marshes, mountains and hills) by keeping dogs on a leash and snowmobiles on the trails.
- Promoting healthy eco cycles of water, energy or nutrients.

CLOSING

Create an event for students to showcase their media work. This could be a community event or an online showcase. Consider inviting guests to the event/showcase

ASSESSMENT OPPORTUNITIES

Are students able to:

- Reflect on the importance of the SLC to all organisms and to local First Nations?
- Share ideas about Truth and Reconciliation and how they play a role in it?
- Share ideas about their own commitments in becoming stewards for the SLC?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I can explore the SLCRP through media and public messaging to form a shared identity	Is not aware of Elders or shows little respect. No questions are formed or little to no curiosity demonstrated	Is aware of and listens to Elders. Can partially form a question about Yukon First Nations & connection to Caribou	Listens to Elders attentively and respectfully. Forms a well constructed question about Yukon First Nations & connection to Caribou	Highly respectful of Elders' teachings. Forms multiple well-constructed questions about Yukon First Nations & Caribou
PART 2: I am able to reflect on forms of relationship models to create strength in interconnection with a First Nations framework lens	Not yet able to communicate aspects of relationship models	Some verbal representation of relationship models is shown in relation to SLC recovery	Verbal representation of respectful dialogue related to the conservation of SLC is provided	Verbal representation of finding commonalities and respect between different opinions is provided through the LPRM
PART 3: I can inquire about the SLCRP with community leaders in relation to Canadian Identities and Yukon First Nations traditions	May have little to no questions related to Caribou, First Nations or Canada's Identity	Some evidence of personal reflection of connection to Caribou, local First Nations stories & identity are provided	Verbal, visual or oral evidence is provided of a reflective process about personal connection to place, local First Nations stories & Caribou, and identity	Verbal, visual and oral evidence is provided of a significant reflective process about personal connection to place, local First Nations stories & Caribou and identity
PART 4: I can examine messaging through new media about stewardship and sustainability for the SLC	May have little ideas on the concept of stewardship for SLC and unable to represent this as new media	Some evidence of stewardship for the SLC is present and they are able to show interest in expressing this through new media	Much reflection about their role as a steward for SLC is present and provided in media format	Significant reflection has gone into stewardship for SLC through the creation of new media

GRADE 11 LIFE SCIENCES:

CARIBOU WITHIN THE ECOSYSTEM

BIG IDEAS

- Evolution occurs at the population level

CONTENT	CURRICULAR COMPETENCIES
<ul style="list-style-type: none"> • First Nations understandings of interrelationships between organisms • Microevolution (change within a species that occurs over time in a population) <ul style="list-style-type: none"> • Adaptation to changing environments 	<ul style="list-style-type: none"> • Experience and interpret the local environment • Apply First Nations perspectives and knowledges, other ways of knowing and local knowledge as sources of information • Communicate scientific ideas and information, and perhaps a suggested course of action for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions and representations • Express and reflect on a variety of experiences, perspectives and worldviews through place
LEARNING TARGETS	
<ol style="list-style-type: none"> 1. I am able to integrate Yukon First Nations and Western scientific understandings of interrelationships between Caribou and the Southern Lakes ecosystem. 2. I am able to describe how microevolution and natural selection impact Caribou in the Southern Lakes. 3. I am able to investigate and reflect on a variety of experiences, perspectives and worldviews regarding SLC monitoring. 4. I am able to use evidence-based arguments and scientific language to communicate a suggested course of action for the monitoring of the Southern Lakes Caribou. 	

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

MICROEVOLUTION AND PREDATOR/PREY DYNAMICS

From Density dependence and microevolution interactively determine effects of phenology mismatch on population dynamics :

- Life cycle events in plants and animals are typically adaptively tuned to anticipate predictable seasonal changes in environmental conditions or resources. Climate change is expected to affect the temporal component of species' interactions, e.g. by creating a mismatch between a predator's breeding time (when ample food supply is critical) and the time when prey abundance is high. (Reed, Gienapp, & Visser, 2014, p.1)
- There are also many other predicted impacts of climate change to consider.

WOLF MANAGEMENT AND PREDATOR CONTROL

Wolf harvest may be used as a community-based management tool to reduce local predation on Caribou, but it is subject to a number of criteria, including verifiable harvest reporting for Caribou and wolves, a harvest relationship plan for all users, and an agreed upon, collaborative approach to program design, implementation and evaluation. (Environment Yukon, 2012, p. 12)

- Large-scale predator control is one other management tool that has been used in the past in Yukon. [T]here is strong public opposition from Yukoners to using this approach as an ungulate management tool; moreover, this type of program is costly, has only short term impacts unless it is intensive and maintained indefinitely, and lacks community involvement. Any predator control program specific to wolves must respect the Yukon Wolf Conservation Management Plan.
- Sources of mortality for adult Caribou include harvest and natural sources of mortality including predation. In their assessment of the effects of wolf control, Hayes et al. (2003) detected no difference between adult female survival in their "treatment" and three neighbouring "control" herds, suggesting wolf predation did not have a significant effect on this vital rate in an area where wolves had alternate prey (Dall's sheep and moose). However, Hayes et al. (2003) did report an increase in recruitment for the Aishihik herd following wolf removal.

IMPORTANT NOTES

- One of the key factors to monitor with Caribou populations is *mezi dēsia*/caribou calf (Dän'ke, Tàa'an Män dialect) numbers, especially if herds numbers are to grow. If *mezi dēsia* numbers are low, some targeted wolf trapping may be effective if maintained over many years, but many other factors can affect the survival of calves, including weather and predation from other carnivores (mostly bears).
- **Predation is completely natural and these animals have evolved in dynamic multi-predator, multi-prey systems.** The factor that often leads to herd declines is people. In some cases, if a herd is to recover, wolf control can be used, but the Southern Lakes herds recovered without the use of predator control, mostly by limiting human harvest.

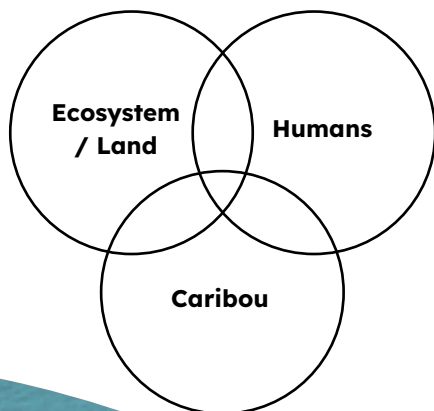
PART 1: OPENING CIRCLE AND CARIBOU INTERCONNECTIONS WITHIN THE ECOSYSTEM

LEARNING TARGET:

I am able to integrate Yukon First Nations and Western scientific understandings of interrelationships between Caribou and the Southern Lakes ecosystem.

MATERIALS

- **Caribou artifact:** sewing materials, Caribou tufting, snare, clothing, lichen sample, or swatch of Caribou hide or photos printed (Appendix 1B and 2C)
- **No Voice perspective Venn diagram framework (below)**



TIME: 30 MINUTES - 1 HOUR

OPENING: CONNECTING WHAT WE KNOW

Gather in a circle. Ask the students how they would define 'interconnection or interrelationships between organisms' (e.g., plants as indicators of timing for corresponding events, decaying animals as plant nutrients and predators consuming prey).

Share ideas.

Tell the students they are going to have a guest (Activity: Spending time with Elders), someone who knows a lot about the special story of the Southern Lakes Caribou (SLC) and their connection to the ecosystem.

- Prepare a small homemade gift or card to present to the Elder or visitor in gratitude.
- Ask in advance for permission to photograph or record any visitors.
- Set a group agreement of how to receive and respect the visiting Elder, specialist or guest speaker.

In advance of the special guest, students will reflect on the collective Caribou knowledge and questions. Pass a Caribou artifact around the circle, and invite the students to share something they know about Caribou or a question they have about Caribou. Encourage students to share any stories or personal connections they have with Caribou. Have one or more students document the knowledge and questions on a chart paper, or smart board, using the Venn diagram framework below. Nän/land, Udzí/Caribou and Hän/person or people (Dän'ke, Kwanlin Dün First Nations Dialect) are terms to use as you work on the Venn diagram. Use the online dictionary for pronunciation.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Contribute a question, fact or story related to Caribou?

Note: The guest speaker may also be connected through a video or recording of an Elder or specialist sharing their story and experience of working with the SLCRP.

ACTIVITY: SPENDING TIME WITH ELDERS

Gather in a circle. Invite the students to acknowledge the Yukon First Nations Traditional Territory that the activity is taking place on. If they are present, introduce and welcome the visiting Elder or visitor. Go around in the circle, and have students introduce themselves.

Invite the visiting Elder or visitor to share their story about the SLC and the SLCRP. Ensure time for students to ask questions.

One or more students can present the guest with a homemade card and gift (craft made by students or wild-harvested flowers) to show gratitude for the time and/or teachings shared with the students.

If an Elder is not present, ask the students if they know of any Elders or Traditional Knowledge Holder in their communities or lives that are important to them. Invite students to share any teachings they have learned about how to treat Caribou or how to act when out on the land related to Yukon First Nations ways of Knowing, Doing and Being (e.g., sustainable or respectful harvesting practices, respect for the land, waters and seasonal activities).

ASSESSMENT OPPORTUNITIES

Are students able to:

- Identify ways First Nations, they themselves, and/or wolves are interconnected with Caribou in the environment?

CLOSING: NO VOICE PERSPECTIVE

Gather in a circle, outdoors if possible, once more. Use something (e.g., a mat, chair or small table with Caribou artifact or something to represent Caribou) to show that a space is being held in the circle for a non-human 'voice'.

Tell students that the **No Voice** perspective is a way for humans to give a 'voice' to the entity being talked about, in this case Caribou. The **No Voice** perspective involves leaving an open seat for the entity to 'sit at the table' with those making decisions. This helps foster a sense of cooperation and unity between stakeholders at the table, because everyone is reminded that

the common goal is to make the best decisions on behalf of the non-human beings in our care.

Give students a piece of paper on which to draw or write. Invite students to consider what the **No Voice** perspective would share with the group at this time.

ASK STUDENTS

- We share the land with the SLC. What messages might they want to share with our community?
- What do the SLC need in order to stay healthy in the years to come?
- What questions would the SLC ask us if they could speak?
- If the Caribou could ask us to pause and pay attention, what would they say?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Share a closing reflection from the **No Voice** perspective?

ADDITIONAL ACTIVITY: PORTRAITS OF CONNECTION

Reflecting on the connections raised through conversation as a class and with the visiting Elder, as well as the interconnections between humans, the land, water and Caribou, invite students to examine their own lives and how they are connected to Caribou. Encourage students to consider who in their family and community could have Caribou stories to share.

Students will be invited to interview and create a detailed portrait of two or three people in their lives, sharing the Caribou story from their perspective.

***Consider providing a list of community organizations students could approach to interview, keeping in mind that not all students may have (or be aware of) their own connections to Caribou.**

Some starting points for interview questions could be:

- Were you/your family impacted by the SLCRP?
- What is the significance of Caribou in your life?
- Do you remember when you first became aware of the importance of Caribou in your life?
- Who in your life has challenged you to consider the voice of Caribou?
- What would you like future generations to remember, when thinking about the SLC?

Decide as a class (or individually with each student) how students' portraits will be presented. These could be photographs or sketches, with detailed captions, written as mini biographies, or captured through audio recording or video clips.

PART 2: EXPLORING NATURAL SELECTION

LEARNING TARGET:

I am able to describe how microevolution and natural selection impact Caribou in the Southern Lakes.

MATERIALS

- Natural Selection Worksheet printed (Appendix 4d)

TIME: 30 MINUTES - 1 HOUR

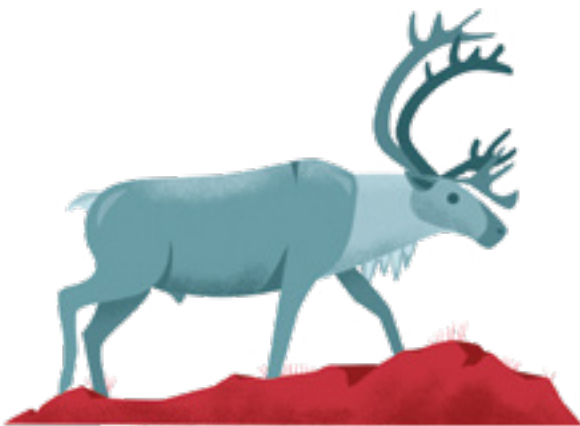
OPENING: INVESTIGATION MICROEVOLUTION

ASK STUDENTS

- What does microevolution mean? (change within a species that occurs over time in a population)
- **Note:** Evolution can also be behavioural, in that behaviour is shaped by their environment, leading to advantages. Examples could include mountain caribou reproductive strategies (spreading out to avoid predators), habitat use (moving from high to low and taking advantage of ground lichens, as compared to southern mountain caribou which evolved in higher snowfall areas requiring them to depend to arboreal lichens).
- **Note:** As a species, mountain caribou have been largely unchanged for a million years or so. Many of the physical adaptations are less clearly a result of microevolution, however pelage, body size and antler size/configuration may be examples (in that they differ between different types of caribou).

Review the main mechanisms for microevolution (mutation, migration, genetic drift and natural selection). Brainstorm examples of each mechanism in relation to the SLC context.

- Mutation: some genes randomly mutated (however, any particular mutation is rare, and this process alone cannot account for a big change in genetics over one generation).
- Migration:- some Caribou with gene X immigrated from another population, or some Caribou with gene Y emigrated.
- Genetic drift: when the Caribou reproduce, just by random luck more calves with gene X than gene Y ended up in the offspring.
- Natural selection: Caribou with gene X escaped predation and survived to reproduce more frequently than Caribou with gene Y, so that more of gene X reproduce into the next generation.
 - There is variation in traits. For example, some Caribou have large racks and some have smaller racks.
 - There is differential reproduction. Unlimited population growth is not supported within the environment, and so not all individuals get to reproduce to their full potential. For example, Caribou with larger racks are often able to reproduce more often.
 - There is heredity. Large racks have a genetic basis. This means that surviving Caribou with large racks have babies with a higher likelihood of having a large rack as well.



- What does this mean? More advantageous traits, such as having a larger rack, allows these Caribou to have more offspring. This trait then becomes more common in the population. If this process continues, eventually, all individuals in the population will have big racks.

ASK STUDENTS

- Can you think of some evolutionary disadvantages to having a large set of antlers?

ACTIVITY: SELECTED NATURALLY

Students will take on the role of a population of foraging Caribou (Adapted from [A Game of Selection](#)). Individuals will vary in their ability to move while foraging, and students will observe how the population evolves by natural selection as the game progresses.

- Inform students that they will be taking on the role of a population of foraging animals trying to feed on lichen (represented by popsicle sticks, spruce cones, coloured rocks or pieces of paper).
- Students will have one of three particular four legged movement patterns while foraging for lichen. The three movement patterns are:
 - Freestylers: can move freestyle on all fours
 - Side-to-siders: must move their right foot and hand in tandem, their left hand and foot in tandem
 - Hoppers: can only move by hopping forward on all fours while keeping hands together and feet together during the hop
- Divide the students into these three movement types. Start the game with a very small number of freestylers. This allows you to suggest that freestyles are a new mutation in the population (and as such start out with low numbers). Students can observe the progression of this mutation through the population.
- Have the students line up along the edge of a designated game area (the size of the area used will depend on the number of students).
- Randomly distribute the pieces of lichen within the game area. Avoid large clumps of lichen. Distribute double the number of pieces of lichen as there are students.
- There are four generations (rounds) in the game. During a generation, students will have twenty seconds (the time may be adjusted depending on the size of the game

area) to collect as much lichen as possible while moving in their four-legged movement pattern.

- Students that collect at least two pieces of lichen are able to gather enough food and survive. If students collect less than two pieces of lichen, they die and move to the side of the game area designated as the dead zone.
- Students that collect four or more pieces of lichen are able to reproduce. To reproduce, a student brings a “dead” participant from the dead zone back into the game. This newly born player inherits the same movement pattern as the player that reproduced. After reproduction, take a count of the different movement types (have students record this data in the Game of Selection worksheet in Appendix 4C)
- Repeat the process for the remaining three generations. Tally the number of each movement pattern at the end of each generation and record the data.

CLOSING: GRAPHING RESULTS

Have students graph the change in movement patterns within the population over the generations of the game.

ASK STUDENTS

- How are each of the key elements of natural selection (variation, selection and heredity) present in this game?

ASSESSMENT OPPORTUNITIES

Are students able to:

- Make inferences about Caribou microevolution (mechanism of natural selection) based on the graphing data from the Selected Naturally game?

PART 3: WOLVES, CARIBOU AND PEOPLE: TRADITIONAL AND MODERN MONITORING TECHNIQUES

LEARNING TARGETS:

I am able to investigate and reflect on a variety of experiences, perspectives and worldviews regarding Southern Lakes Caribou monitoring.

I am able to use evidence-based arguments and scientific language to communicate a suggested course of action for the monitoring of the SLC.

MATERIALS

- **Community Booklet for your community**
- **Southern Lakes Caribou Monitoring Worksheet printed (Appendix 4E)**

TIME: 30 MINUTES - 3 HOURS

OPENING: CLASS DISCUSSION

Tell students that they are going to be discussing the monitoring and management techniques for the Southern Lakes Caribou (SLC) in the Southern Lakes over the next five years.

ASK STUDENTS

- What are some examples of traditional Caribou stewardship? Does anyone know any of the Traditional Laws around Caribou harvest or monitoring?
- What are some examples of traditional ägay/wolf management practices? (impacts of predation)
- What are some modern ways in which Caribou and wolves are managed? (GPS collaring, taking samples to test for genetic diversity, disease, diet and aerial surveys)

In pairs or small groups, have students reflect on the following questions and record their group's answers:

- What questions do you have about monitoring techniques being used?
- What kind of data do you think should be collected on the SLC in order to make appropriate management decisions?
- How could wolf/ägay monitoring support Caribou management decisions in the Southern Lakes?
- Hypothesize why the SLC exhibit behavioural or movement pattern changes. What evidence could you gather to support your hypothesis? Why is seasonal movement behaviour important for us to understand when making decisions on behalf of the SLC?
- How might DNA research help scientists better understand evolution? Why is this important information to collect?



ACTIVITY: CONSIDERING CARIBOU ON THE LAND

Take students on a hike to an alpine area with a local Elder, Traditional Knowledge Holder or Game Guardian to a local patch of Caribou habitat near your community.

Give each student a clipboard with paper and a writing utensil. Allow students to pose the questions above to the Elders or visitors, and also to share some of their ideas and reflections as well.

At an appropriate time on the hike, allow students to find a spot to sit on their own for five to fifteen minutes of quiet, solo reflection and observation. Encourage students to leave paper, pencils and any technology behind. Prepare the students for this time with one of the following suggestions:

- Simply sit and let your mind wander as you observe the landscape and let the content settle in. What information/data do we need in order to be better stewards for the SLC?
- Imagine yourself transported back in time, five, ten, fifteen, one hundred years. Imagine what the landscape would look like. What would still be present 100 or more years ago? How do changes in the landscape influence the monitoring activities happening now and in the future?
- Consider the area from the perspective of a moving Caribou. Why is seasonal movement behaviour important for us to understand when making decisions on behalf of the SLC?
- Think about the impacts of geography, human features and habitat on Caribou movement. Why do you think Caribou may do things the way they do?

CLOSING: REFLECTING TOGETHER

Have students come back together in a circle to share their reflections.

One or more students can present the guest with a homemade card and gift (card or gift made by students or wild-harvested flowers) to show gratitude for the time and/or teachings shared with the students.

If an Elder or visitor is not present, ask the students if they know of any Elders or youth in their communities or lives that are important to them. Invite students to share any teachings they have learned about how to treat Caribou and how to act when out on the land in relation to Yukon First Nations ways of Knowing, Doing and Being (e.g., sustainable or respectful harvesting practices, respect for the land, waters and seasonal activities).

Give the students time to work individually or in small groups to use the information they have gathered from all sources to complete the SLC monitoring worksheet (Appendix 4D).

ASSESSMENT OPPORTUNITIES

Are students able to:

- Share a closing reflection/question/insight about their experience that demonstrates active listening?
- Acknowledge differing viewpoints respectfully?
- Explain their reasoning for the importance of and necessary continued use of monitoring techniques (traditional and/or modern)?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to integrate Yukon First Nations and Western scientific understandings of interrelationships between Caribou and the Southern Lakes ecosystem	Not yet able to use Yukon First Nations or Western scientific understandings to address interrelationships	Initial comprehension of Yukon First Nations and/or Western scientific understandings of interrelationships	Uses Yukon First Nations and Western scientific understandings to discuss interrelationships between Caribou and the Southern Lakes ecosystem. Able to respond with the No Voice perspective	Uses Yukon First Nations and Western scientific understandings to discuss interrelationships between Caribou and the Southern Lakes ecosystem. Able to respond thoughtfully with the No Voice perspective
PART 2: I am able to describe how microevolution and natural selection impact Caribou in the Southern Lakes	Not yet able to use microevolution or natural selection to infer impacts on SLC	Uses microevolution or natural selection knowledge to infer impacts on SLC	Uses microevolution and natural selection knowledge to infer impacts on SLC	Uses microevolution and natural selection knowledge to infer impacts on SLC and provides detailed explanations
PART 3: I am able to investigate and reflect on a variety of experiences, perspectives and worldviews regarding SLC monitoring	Some comments on either experiences, perspectives or worldviews. Connections do not directly address the monitoring of the SLC	Includes a variety of experiences, perspectives, and worldviews that connect partially to the monitoring of the SLC	Includes a variety of experiences, perspectives, and worldviews that connect directly to the monitoring of the SLC	Includes a variety of thoughtful and complex experiences, perspectives, worldviews, and adds additional resources outside of the classroom
PART 3: I am able to use evidence-based arguments and scientific language to communicate a suggested course of action for the monitoring of the SLC	Unable to propose actions focused on the monitoring of SLC. Does not use evidence-based arguments or scientific language	Proposes some actions focused on the monitoring of SLC. Uses some evidence-based arguments or scientific language	Proposes relevant actions focused on the monitoring of SLC. Uses evidence-based arguments and scientific language	Propose multiple and/or complex actions focused on the monitoring of SLC. Uses evidence-based arguments and scientific language fluently

GRADE 12

FIRST NATIONS STUDIES:

HONOURING TRADITIONAL KNOWLEDGE IN

DECISION-MAKING FOR THE SOUTHERN LAKES CARIBOU

BIG IDEAS

- The identities, worldviews and languages of Yukon First Nations are renewed, sustained and transformed through their connection to the land
- The impact of contact and colonialism continues to affect the political, social and economic lives of Yukon First Nations

CONTENT	CURRICULAR COMPETENCIES
<p>Traditional Territories of the Yukon First Nations and relationships with the land organisms</p> <ul style="list-style-type: none"> • Difference between political boundaries and Traditional Territories • How the land shapes and influences Yukon First Nations worldview (e.g., stewardship, cultural practices of the land and relationship to language) <p>Role of oral tradition for Yukon First Nations</p> <ul style="list-style-type: none"> • Elders and Traditional Knowledge Holders who share the history of their people and lands • Oral tradition as valid and legal evidence • Stories, songs, music and dance as forms of narrative • Oral tradition shapes identity and connects to the past, present and future. • Oral tradition provides guiding principles for living. • First Nations concept of time <p>Impact of historical exchanges of ideas, practices and materials among local Yukon First Nations and with non-First Nations peoples (e.g., trade networks and routes, settlement and migration patterns, exchange of goods, technology, economy and knowledge industries such as the gold rush)</p>	<ul style="list-style-type: none"> • Using appropriate protocols, interpret a variety of sources, including local stories or oral traditions, and First Nations ways of knowing (holistic, experiential, reflective and relational experiences and memory) to contextualize different events in the past and present (evidence) • Assess the long- and short-term causes and consequences, and the intended and unintended consequences of an action, event, decision or development (cause and consequence) • Explain different perspectives on past and present people, places, issues or events, and distinguish between worldviews of today and the past (perspective) • Make reasoned ethical judgments about actions in the past and present, and assess appropriate ways to remember, reconcile or respond (ethical judgment)

LEARNING TARGETS

1. I am able to explain how the land shapes and influences Yukon First Nations worldviews, and explain the different perspectives on land use planning (past and present) surrounding Southern Lakes Caribou.
2. I am able to utilize Yukon First Nations oral tradition as a source of evidence supporting the Southern Lakes Caribou Recovery Program, and future land-planning involving Caribou.
3. I am able to assess the long- and short-term causes and consequences of historical events (e.g., the Alaska Highway, colonization, residential schools, population increases and recreation increases) on Caribou in the Southern Lakes.
4. I am able to make reasoned ethical judgments about actions in the past (Southern Lakes Caribou Recovery Program) and present (Southern Lakes Caribou Relationship Plan, How We Walk with the Land and Water) and assess appropriate ways to respond.

PRIOR LEARNINGS

Prior to teaching the following activities and games, it would be helpful if the students had a basic overview of Southern Lakes Caribou seasonal movement and seasonal rounds. Some helpful resources are listed below.

- Project Caribou - [An Educator's Guide to Wild Caribou of North America](#)
- Sharing Circle Protocols - [Teacher's Guide YFN 5- Revised 2nd Edition, 2014](#)
- [Southern Lakes Caribou Relationship Planning - here, for caribou](#)
- Caribou in the Schools: Community Booklet

PART 1: ENGAGING WITH THE LAND AND PEOPLE

LEARNING TARGET:

I am able to explain how the land and water shapes and influences Yukon First Nations worldviews, and explain different perspectives on land use planning (past and present) surrounding Southern Lakes Caribou.

MATERIALS

- **Caribou artifact: antler(s), Caribou tufting, clothing, swatch of Caribou hide or Pictures of artifacts printed (Appendix 1A and 2C)**
- **Website: [Yukon Land Use Planning Council \(FAQs\)](#)**
- **Printed list of Value Line statements (Appendix 4F)**

TIME: 60 MINUTES

OPENING: CONNECTING TO CARIBOU

Gather in a circle outside and pass the Mezi/Caribou (Dän'ke, Tàa'an Män dialect) artifact (swatch of hide) around, allowing every student a chance to hold it. Welcome students to share their connections to or questions about Caribou. If students do not yet have a personal connection to Mezi, are they close with someone who is? What do they wonder about Mezi?

ASK STUDENTS

- **What do you know about Land Use Planning?** See Yukon Land Use Planning Council (FAQs)
- **How do you think Land Use Planning affects the SLC?** Decisions about how land will be used affect development in Caribou habitat; Caribou are interconnected to other organisms and ecological features impacted by Land Use Planning

ACTIVITY 1: VALUE LINE

A value line teaches students to make deep connections and ask questions through listening and observing. Find an open outdoor area where students can arrange themselves along an imaginary line. Ask for three students to support the activity. The first student first will read the statements (below) out loud. The second student will observe and analyze the results of the value line. The third student will write down the results observed by the second student.

The rest of the students will listen to the statements and stand along the imaginary line in response to their answer.

TELL STUDENTS

One end of the line will represent 'strongly agree', and the other end will represent 'strongly disagree'. Once you hear the statement, you can then move yourself to the place on the line that best reflects your perspective. Our observer will then share the results to be noted down by the note taker.

Value Line Statements

1. Caribou deserves to have a voice at the decision-making table when Land Use and Resource Management Plans are being created.
2. Yukon First Nations knowledge and perspectives are shaped by the land and water.

3. The land and water offer humans teachings on how to live respectfully, responsibly and sustainably.
4. Decisions about Land Use Planning have always valued Yukon First Nations worldviews and knowledge.
5. Land Use Planning is a simple process where everyone usually agrees about what should be done.
6. The way Land Use Planning is done today is the same as traditional (pre-colonization) First Nations land use and management.
7. I want to share my voice at the decision-making table when Land Use and Resource Management Plans are being created.
8. Colonization has not impacted how land and water is used.
9. There are many perspectives to take into consideration when Land Use Planning begins.
10. **Consider adding in additional statements for students to reflect on.**

After each statement, consider asking one or more students to share why they have placed themselves where they have. The interpreter will observe where students have placed themselves, and the notetaker will mark down the results. Consider asking the students what, if anything, was surprising to them when they review the results.

ACTIVITY 2: RELATIONSHIPS THROUGH SYMBOLS

Tell students: **Yukon First Nations people understand that the land and water teaches animals how to live, and animals, in turn, teach humans how to live. The First Nations way of life is all about relationships with Creator, with spirit people, with animals, with the land, waters, humans. Reconciliation can only happen if people view themselves as part of the natural world. In order to learn with and from each other, we need to have an open mind and be willing to work together in harmony.**

Find an outdoor location with lots of natural materials (sticks, snow, rocks, leaves, dirt and cones) and organize students into three groups. Each group will be given one component to reflect on:

1. **Respect (Law):** Respect means honouring our cultures, our traditions and ourselves.
2. **Care (Law):** We all have a responsibility to care for every living being and create meaningful relationships involving accountability and reciprocity.
3. **Share (Law):** Respectfully sharing knowledge and opinions can build strong and nurturing relationships, which will have positive effects on the land, communities and families.

Once the group has a sense of what comprises their component, they are meant to create a symbol to represent it. Students can use natural materials to make a visual representation of the component on the ground.

After each group has completed their visual representation, students will move from group to group to hear each symbol explained, and ask any clarifying questions to deepen understanding. In this way, the three components should be understood by all students.

CLOSING: CLASS RULES OF ENGAGEMENT

Gather in a circle, and allow students to share any final reflection on the activity.

Next, have students come up with at least five class rules of engagement for the duration of the decision-making work on behalf of the Southern Lakes Caribou (SLC). Examples of class rules of engagement could include:

- We agree to select at least one representative to speak on behalf of the Caribou in all of our discussions.
- We agree to check in with each other for clarification so we understand each other.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Share their perspectives on the value line experience?
- Contribute to the closing discussion on the three components?
- Suggest a rule of engagement for the class?



PART 2: UNDERSTANDING THE SOUTHERN LAKES CARIBOU RECOVERY PROGRAM (SLCRP) THROUGH COMMUNITY CONNECTIONS

LEARNING TARGETS:

I am able to utilize Yukon First Nations oral tradition as a source of evidence supporting the Southern Lakes Caribou Recovery Program, and future land-planning involving Caribou.

I am able to assess the long- and short-term causes and consequences of historical events (e.g., the Alaska Highway, colonization, residential schools, population increases and recreation increases) on Caribou in the Southern Lakes.

MATERIALS

- **Caribou artifact:** antler, hide or clothing/ photos printed (Appendix 1B and 2C)
- [Southern Lakes Caribou ArcGIS Storymap](#)
- **Caribou Cards** (Appendix 1D) printed and cut out

TIME: ~90 MINUTES- 2 HOURS

OPENING: CONNECTING WITH CARIBOU

Start indoors. Project the Southern Lakes Caribou (SLC) ArcGIS Storymap (Page 3: Caribou Range Use) for students to observe the differences between the seasonal ranges of the SLC.

ASK STUDENTS

- Do any of the ranges overlap with any places you recognize? Places where you or people you know spend time?
- In what ways do humans use the lands where the Caribou are found? (driving, hunting, ATV/snow machines, mountain biking, timber harvest, residential properties or skiing)

Brainstorm and record questions as a group to ask the special guest. Possible topics of Caribou conversation or inquiry could be:

- Is there a way to hunt Caribou in a sustainable way that allows numbers to recover? (Sustainable harvesting practices include hunting in a respectful way, taking only what is needed and allowing hunting to continue)
- What/Are there any safety measures for Caribou at busy road crossings, especially during Caribou seasonal movement/ seasonal rounds?
- Are the homes of Caribou still being affected by humans? If so, how?
- If the Caribou could ask us to pause and pay attention, what would they say?

Note: The visitor may also be connected through a video or recording of an Elder or visitor sharing their story and experience of working with the SLCRP.

ACTIVITY: SPENDING TIME WITH ELDERS AND COMMUNITY TRADITIONAL KNOWLEDGE HOLDERS

Gather in a circle. Invite the students to acknowledge the Yukon First Nations Traditional Territory that the activity is taking place on. If they are present, introduce and welcome the visiting Elder or specialist. Go around the circle and have students introduce themselves.

Invite the visiting Elder or visitor to share their story about the SLC and the SLCRP. Ensure time for students to ask questions.

One or more students can present the guest with a homemade card and gift (craft made by students or wild-harvested flowers) to show gratitude for the time and/or teachings shared with the students.

If an Elder is not present, ask the students if they know of any Elders in their communities or lives that are important to them. Invite students to share any teachings they have learned about how to treat Caribou, and how to act when out on the land, related to Yukon First Nations ways of Knowing, Doing and Being (e.g., sustainable or respectful harvesting practices, respect for the land, waters and seasonal activities).

CLOSING: VISUALIZING HUMAN IMPACTS

Round 1

- Gather in a circle. Pass the Caribou Cards (only green, no grey or brown cards yet) around so that each student is holding one. Invite the students to stand up, holding their cards for everyone to see. Imagine that this is the SLC herd.
- Recap with students that the SLC have a very unique story. Not too long ago, the SLC were in danger. Their numbers were getting smaller and smaller. Why? (Unsustainable hunting practices, highways and vehicle traffic)
- Invite students to turn their Caribou cards over and notice the colour on the back. Each colour has a different meaning: Green = healthy/sustainable hunting practices.
- The SLC was initially managed by First Nations, and was vital and healthy.
- Ask students to explain some ways in which First Nations sustainability managed the SLC.
- Collect all of the cards.

Round 2

- Pass the Caribou Cards (a mix of green, brown and grey) around so that each student is holding one. Invite the students to stand up, holding their cards for everyone to see. Imagine that this is the SLC herd.

- Invite students to turn their Caribou cards over and notice the colour on the back. Each colour has a different meaning: green = healthy/sustainable hunting practices; brown = overhunting; grey = highways
- Invite students with grey on their cards to place these face down in the circle. Discuss how highways affect Caribou numbers (collisions and interrupted movement corridors). These students can sit down. These Caribou are gone.
- Take a look around the circle. How many Caribou are left?
- Invite students with green on their cards to hold their cards up in the air, and find another green card in the circle to change places with. Share how First Nations have been harvesting Caribou sustainably since time immemorial.
- Take a look around the circle. How does traditional, sustainable hunting affect the population (total number) of SLC?
- Invite students with brown on their cards to place these face down in the circle. Discuss why overhunting affects Caribou numbers differently than sustainable harvesting. These students can sit down. These Caribou are also gone.
- Take a look around the circle. How many Caribou are left?
- Consider the story shared by the Elder or visitor. What did the SLCRP do to address the shrinking number of Caribou? (Voluntarily stopping hunting, educating the public about the Caribou, giving Caribou space and highway signage)
- SLC Recovery Program Connection: talk about how a ban on all Caribou hunting allowed numbers to recover. Invite students with brown cards to turn these back over, rejoining the herd. Take a look around and notice numbers.
- Brainstorm ideas of how to reduce human impact on Caribou. As ideas are shared, invite two or more students with grey cards to turn these back over, rejoining the herd.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Retell the story of the formation of the SLCRP, in their own words?
- Share reasons why the SLCRP was needed to protect the Caribou?
- Ask questions about the SLCRP?

PART 3: PLANNING FOR 500 YEARS OF CARIBOU

LEARNING TARGET:

I am able to make reasoned ethical judgments about actions in the past (Southern Lakes Caribou Recovery Program) and present (Southern Lakes Caribou Relationship Plan, How We Walk with the Land and Water) and assess appropriate ways to respond.

TIME: 60 MINS TO MULTIPLE CLASS SESSIONS

OPENING: PAST AND PRESENT: SEASONAL ROUNDS

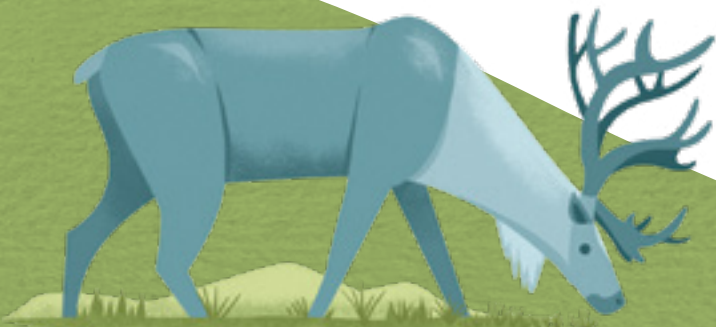
Gather in a circle. If indoors, use a piece of paper, black/white board or smart board to create a seasonal round (see How We Walk link above). If outside, create a seasonal round on the ground using various ethically harvested natural and/or human materials.

ASK STUDENTS

- What actions are the SLC taking at different times of the year?
- What actions are humans taking at different times of the year in the Southern Lakes ?
- How do these actions/needs complement each other?
- How do these actions/needs negatively affect each other?
- How might these actions change or shift in the next 500 years?

MATERIALS

- Printed copies of the Class Rules of Engagement (from Part 1)
- [Reaching Group Consensus \(Learn Alberta\)](#)
- Community Booklet for your community
- [Southern Lakes Caribou Relationship Planning: Here, for Caribou](#)
- [Southern Lakes Caribou ArcGIS Storymap](#)
- [How We Walk With the Land and Water: Guiding Principles](#)
- Relationship Plan Handout printed (Appendix 5A)
 - Recommendation » Impact » Source(s)



ACTIVITY: FUTURE: COMING TO CONSENSUS FOR CARIBOU

Utilize the [Reaching Group Consensus](#) guide from Learn Alberta to set the class up for a Southern Lakes Caribou (SLC) Planning Summit.

Session One: Introduce the idea of a summit; create delegations; introduce requirements for consensus. Split the class into six groups:

- SLC
- Land
- Air
- Water
- People of present day
- People from 500 years in the future

Let the groups know that they are responsible for making recommendations for a 500-year Relationship Plan for the SLC. The intention is to come to a consensus on the question: what actions need to be taken to ensure a healthy and sustainable vision for the SLC in 500 years?

Session Two: distribute registration package; review agenda; gather information

Session Three: develop criteria for effective proposals; prepare proposals

Session Four: present preliminary proposals; allow for negotiations; revise proposals, hold preliminary vote

Session Five: prepare for round two; negotiate with other delegations; develop and present final proposals; vote on all resolutions; encourage final reflections

CLOSING

Individually or in groups, have students find a way to visually (infographic, comic strip, poster or social media post) or auditorily (podcast, social media post, song or poem) express the outcome of the summit. Some questions to answer in this closing summary could include:

- What was the voice of the Caribou saying? What were the key issues brought forward?
- What was the voice of the people saying? What were the key issues brought forward?
- What were the greatest challenges faced during the summit?
- What were the most significant successes of the summit?
- What were the outcomes of the summit?
- What am I committed to as an individual?

Welcome Elder(s), Traditional Knowledge Holder(s) and/or community members/visitors to observe and offer feedback on the consensus process and recommendations provided by each group.

EXTENSIONS

Revisit the Value Line exercise from Part 1. Using the same statements, assess if values have shifted for individual students or the class.

ASSESSMENT OPPORTUNITIES

Are students able to:

- Reflect on their summit position and incorporate feedback?
- Summarize their experience of the summit in a visual or auditory way?

ASSESSMENT

Formative and self-assessment opportunities are listed throughout the activity plans. The rubric below can be used or adapted as necessary for summative assessment. It may be used to assess the learning targets set out on the previous pages.

ASSESSMENT FRAMEWORK	1 EMERGING	2 DEVELOPING	3 PROFICIENT	4 EXTENDING
PART 1: I am able to explain how the land shapes and influences Yukon First Nations worldviews, and explain different perspectives on land use planning (past and present) surrounding SLC	Is not aware of how the land shapes and influences Yukon First Nations worldviews. Few to no reflections on the different perspectives on land use planning surrounding SLC	Is developing an awareness of how the land shapes and influences Yukon First Nations worldviews. Can show some reflection on the different perspectives on land use planning surrounding SLC	Demonstrates an awareness of how the land shapes and influences Yukon First Nations worldviews. Shows reflection on the different perspectives on land use planning surrounding SLC	Demonstrates a deep awareness of how the land shapes and influences Yukon First Nations worldviews. Shares multiple reflections on the different perspectives on land use planning surrounding SLC
PART 2: I am able to utilize Yukon First Nations oral tradition as a source of evidence supporting the SLCRP, and future land-planning involving Caribou	Not yet able to utilize Yukon First Nations oral tradition as a source of evidence	Some uses of Yukon First Nations oral tradition as a source of evidence	Able to use Yukon First Nations oral tradition as a source of evidence	Multiple uses of Yukon First Nations oral tradition as a source of evidence
PART 2: I am able to assess the long- and short-term causes and consequences of historical events (e.g. the Alaska Highway, colonization, residential schools, population increases, and recreation increases) on Caribou in the Southern Lakes	Few to no reflections on the long- and short-term causes and consequences of historical events on Caribou in the Southern Lakes	Some assessment of the long- and short-term causes and consequences of historical events on Caribou in the Southern Lakes	Strong reflections on and assessment of the long- and short-term causes and consequences of historical events on Caribou in the Southern Lakes	Multiple and/or in-depth reflections on and assessment of the long- and short-term causes and consequences of historical events on Caribou in the Southern Lakes
PART 3: I am able to make reasoned ethical judgments about actions in the past (SLCRP) and present (Southern Lakes Caribou Relationship Plan, How We Walk with the Land and Water) and assess appropriate ways to respond	Few to no reasoned ethical judgments about actions in the past and present. Unable to assess appropriate ways to respond to the needs of the SLC	Some judgments about actions in the past and present. Some assessment of appropriate ways to respond to the needs of the SLC	Reasoned ethical judgments about actions in the past and present. Able to assess appropriate ways to respond to the needs of the SLC	Multiple and/or in-depth reasoned ethical judgments about actions in the past. Thoughtful assessment of appropriate ways to respond to the needs of the SLC

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Appendix 1A

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Appendix 1B

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CARIBOU



LICHEN



CARIBOU HIDE



TENDONS USED
FOR SEWING



SNARE



CARIBOU HAIR/
TUFTING

ANTLER GROWTH CYCLE

Appendix 1C

Caldwell, 2020. The antler and breeding cycle. Yukon wildlife preserve, <https://yukonwildlife.ca/wildlife/moose/2020-10-antler-cycle-moose/>

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CALF





COW



BULL

CARIBOU CARDS

Appendix 1D



**SUSTAINABLE
HARVEST**



**SUSTAINABLE
HARVEST**



**SUSTAINABLE
HARVEST**



**SUSTAINABLE
HARVEST**



**SUSTAINABLE
HARVEST**



**SUSTAINABLE
HARVEST**





**OVER-
HARVESTING**



**OVER-
HARVESTING**



**OVER-
HARVESTING**



**OVER-
HARVESTING**



**OVER-
HARVESTING**



**OVER-
HARVESTING**





**HIGHWAY
DANGER**



**HIGHWAY
DANGER**



**HIGHWAY
DANGER**



**HIGHWAY
DANGER**



**HIGHWAY
DANGER**



**HIGHWAY
DANGER**



TEMPLATE:
LETTER HOME

Appendix 1E

Date: _____

Dear families,

We have been exploring the Southern Lakes Caribou as a class, and we are eager to learn more. Each student has been asked to reach out to family or community members who have Caribou stories to share. Students have been asked to consider:

- *Do you know someone who has seen Caribou before?*
- *Do you know someone who has been on a Caribou hunt?*
- *Do you know someone in the community with a delicious Caribou recipe?*
- *Do you know someone who uses Caribou in their crafts?*
- *Who could you visit with and ask about their Caribou stories?*

Your input and stories are very important for the class' understanding of and connection to the Southern Lakes Caribou.

Please help your child record the information shared with them, so that they can bring their findings into school and share it with the students - this could be through audio recordings, helping them write what they hear, or encouraging them to draw their reflection of the Caribou stories they hear.

Gunalcheesh, shäw nithän, mahsi cho for your support, and for helping us deepen our understanding of Caribou!

All the best,

Date: _____

Dear _____ ,



All the best,

CARIBOU DIET & HOOVES

Appendix 2A

Mushroom collecting, retrieved 2022. Kingbolete mushroom. <http://mushroom-collecting.com/mushroomking.html>.

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LICHEN



WILLOW



MUSHROOM



HOOF



UNDERSIDE OF
HOOF

PREDATORS

Appendix 2B

Canada lynx, retrieved 2022, Outdoor recreation and wildlife, Yukon government, <https://yukon.ca/en/canada-lynx>.

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WOLF



LYNX



GRIZZLY BEAR



GOLDEN EAGLE



MOSQUITO

ARTIFACTS

Appendix 2C

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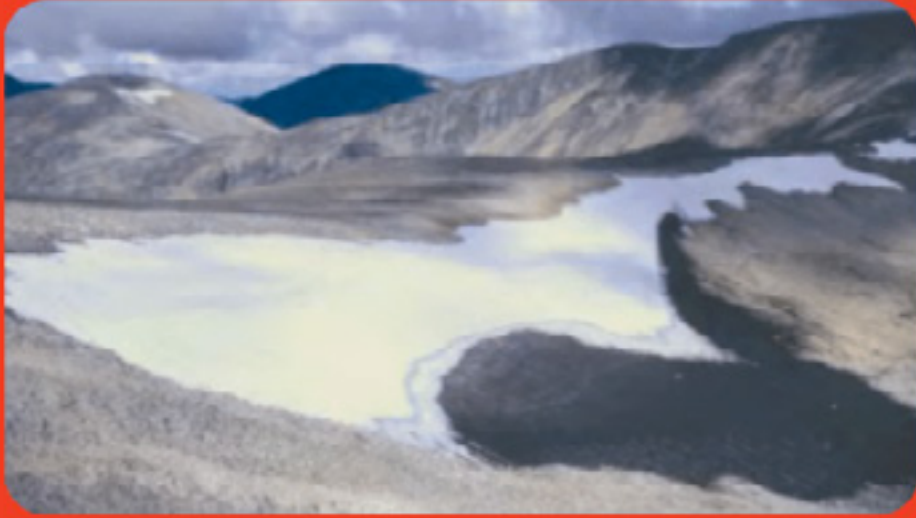


CARIBOU SKIN
PARKA



SNOWSHOE
BABICHE

ICE PATCHES



TRADITIONAL TOOLS



CARIBOU SILHOUETTE

Appendix 2D

Caribou silhouette, retrieved 2022, Pattern universe, <https://patternuniverse.com/download/caribou-pattern/>.



WEB OF LIFE CARDS

Appendix 2E

Caribou facts, retrieved 2022, Active wild, <https://www.activewild.com/caribou-facts/>.

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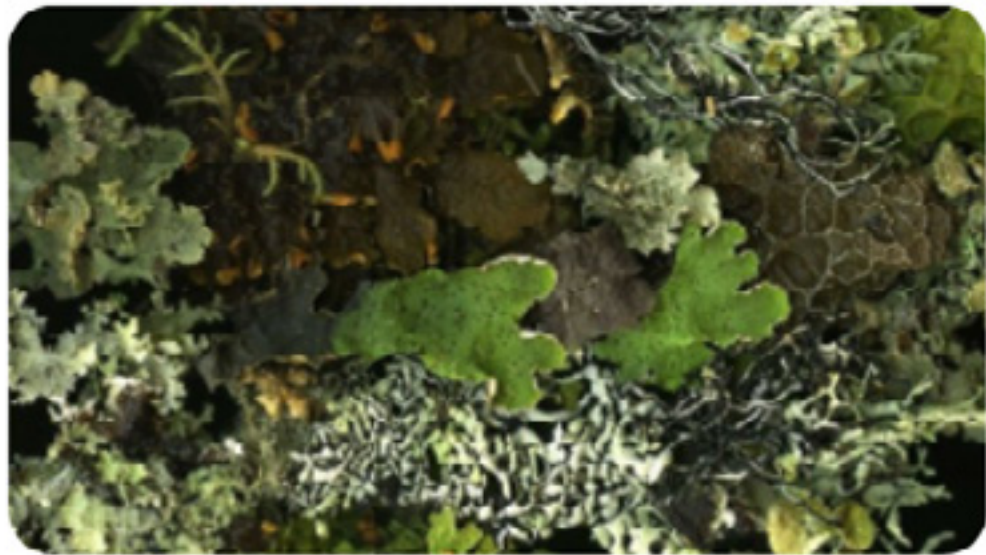
WILLOW

NOSE BOT FLY





SUN



LICHEN



WOLF



GRIZZLY BEAR



RAVEN



CARIBOU

SEASONAL MOVEMENTS & ON THE JOURNEY CARDS

Appendix 3A

Adapted from: Project Caribou, 2018. Checks and Balances activity, p. 66-72

SEASONAL MOVEMENTS

Accidents can occur in a Caribou herd, especially during seasonal movement. Spring flooding, high river levels and strong currents pose drowning risks to young calves.

Remove two habitat havens from the seasonal movement route.

Human impacts dramatically affect Caribou seasonal movement. Fencing, roadways and high-use trails can cause Caribou to avoid or abandon important habitat areas.

Remove two habitat havens from the seasonal movement route.

Calving areas are usually more secluded, and allow calves to be hidden from predators. You reached the calving area!

Calves are born, students can join the game again!

Cold, wet conditions can cause calves to weaken and die.

Remove one habitat haven from the calving area.

An increase in the wolf population is affecting the numbers of the Caribou.

Remove two haven habitats from the calving area.

The snow is not too deep this winter. Caribou are able to dig down and find enough food to fill their bellies this season.

Add two habitat havens to the lowland winter ranges.

ON THE JOURNEY

Buzzing insects overwhelm Caribou on the move. They climb uphill and find relief on a nearby ice patch, but the warming climate means there is no space for the whole herd.

Students tagged by oncoming human hazards move to the sidelines.

Fast-moving traffic alongside traditional movement corridors is increasing collisions and disrupting seasonal movement patterns.

Students tagged by human hazards move to the sidelines.

Caribou need to conserve their energy levels. Any sudden aircraft sounds can cause a stampede in the herd, causing injury, abandonment and possibly death of young calves. (p.16) Low-flying planes have started flying over the seasonal movement route of the Caribou.

Students tagged by human hazards move to the sidelines.

A forest fire has wiped out a large area of habitat that used to provide lots of lichen to eat. The Caribou have to continue moving to find food.

Students tagged by human hazards move to the sidelines.

A forest fire has wiped out a large area of habitat that used to provide lots of lichen to eat. The Caribou have to continue moving to find food.

Students tagged by human hazards move to the sidelines.

TEMPLATE:
CARIBOU COMMITMENT

Appendix 3B

Name: _____

I care about the Southern Lakes Caribou.

I understand humans can have a negative effect on Caribou by:

I commit to doing the following to help protect the Southern Lakes Caribou:

Date: _____ Signature: _____

CLIMATE CHANGE CARDS

Appendix 3C

HABITAT IMPACTS

plant growth-
more food

early blooming-
less food

melting permafrost-
lack of shelter

**shift in
vegetation zones-**
less space

INCREASE OF PRECIPITATION

plant growth-
more food

**heavy snowfall/
deep snow-**
lack of access
to food

heavy rainfall-
higher water levels

**spring summer
snowmelt-**
flooding

COLLARING CARIBOU

Appendix 3D

COLLARED CARIBOU



LOTEK GPS COLLARS FOR
CARCROSS AND IBEX CARIBOU.



VISBAND TO IDENTIFY INDIVIDUAL
CARIBOU FROM THE ATR.

TOKENS: HARVEST & PROTECTION

Appendix 3E

Harvest

Harvest

Harvest

Harvest

Harvest

Harvest

Harvest

Harvest

Harvest



SIX THINKING HATS

Appendix 4A

Six thinking hats, retrieved 2022, Debono group. <https://www.debonogroup.com/services/core-programs/six-thinking-hats/>.



**express new ideas
& new perceptions**
creativity &
possibility



risk management
difficulties to
overcome &
problems at hand



feelings & hunches

emotions, feelings,
likes, dislikes



thinking process

observing the 6
perspectives



bright optimism
positive outlook
for benefits



information that is
known
facts

LABRADOR

Appendix 4B

Nature watch, 2022, Plant watch: engaging citizens in science, Labrador tea, <https://www.naturewatch.ca/plantwatch/labrador-tea/>



FLOWERS



LEAVES &
BUDS

TOKENS: 3 KEY ELEMENTS

Appendix 4C



NATURAL
SELECTION
WORKSHEET

Appendix 4D

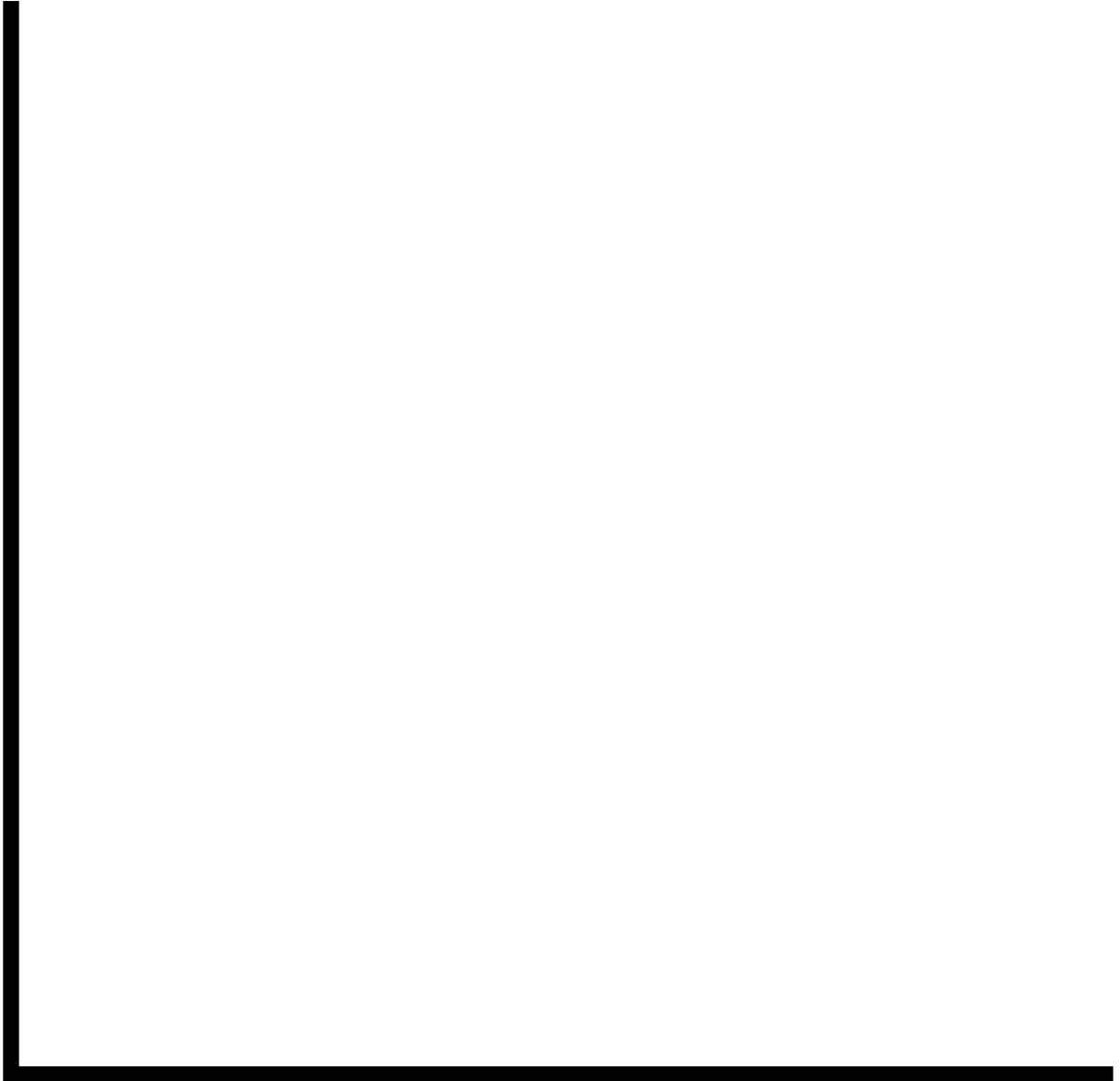
Name: _____

Date: _____

1. Fill in this table as you complete each generation (round) of the game.

Generation	Freestylers	Side-to-siders	Hoppers
0			
1			
2			
3			
4			

2. Using the table above plot the frequency of the three types of movement across the generations. Be sure to properly label each axis.



SOUTHERN LAKES
CARIBOU
MONITORING TABLE

Appendix 4E

Name: _____

Date: _____

Based on the data you have collected from Elders, Traditional Knowledge Holders, community members, visitors and additional research, use the table below to recommend five actions that should be taken to successfully monitor the Southern Lakes Caribou over the next five years. Be sure to explain your reasoning by citing evidence gathered from any of the sources listed above.

Suggested Monitoring Action	Evidence Based Reasoning

VALUE LINE STATEMENTS

Appendix 4F

1. Caribou deserves to have a voice at the decision-making table when Land Use and Resource Management Plans are being created.

2. Yukon First Nations knowledge and perspectives are shaped by the Land.

3. The Land offers humans teachings on how to live respectfully, responsibly and sustainably.

4. Decisions about Land Use Planning have always valued Yukon First Nations worldviews and knowledge.

5. Land Use Planning is a simple process where everyone usually agrees about what should be done.

6. The way Land Use Planning is done today is the same as traditional (pre-colonization) First Nations land use and management.

7. I want to share my voice at the decision-making table when Land Use and Resource Management Plans are being created.

8. Colonization has not impacted how land is used.

9. There are many perspectives to take into consideration when Land Use Planning begins.

10.

11.

12.

13.

14.

15.

RELATIONSHIP PLAN HANDOUT

Appendix 5A

Name: _____ Date: _____

What actions need to be taken to ensure a healthy and sustainable vision for the SLC in 500 years?

Recommendation	Impact	Source(s)

THE BLIND MAN AND THE LOON

Appendix 6A

McClellan, 1950. My old people's stories: A legacy for Yukon first nations part II: Tagish narrators, Carcross elder Jimmy Scotty, James, p. 421.

The Blind Man and the Loon

December 6, 1950, Carcross Elder - Jimmy Scotty James

There is one man who is blind - he can't see anything. His wife leads him around the time. He can't see. His wife get tired, I guess.

After a while, they are moving the camp. By gosh, they come out on a ridge, and by gosh, there is a big bull caribou coming to them, straight at them. His wife tells the old man, "A caribou is coming!" And by gosh, he takes his arrows out and he says, "You move my hand which way the caribou is, and tell me when to let the arrow go" As soon as the caribou is coming straight to them, she says, "Let her go!"

So he hits the caribou all right, but the caribou runs away. Then that woman gets mad and runs away and leaves that man. He hollers, and he hollers, and he tries to follow. I don't know how many days he's out there, crawling around. After a while he hears a loon hollering. And the loon is his ixt' (pronouniation - "ih-hit" "doctor" or spirit helper).

Finally he finds a little lake down in there, and he goes there. He crawls in there. Every time he hollers, the loon hollers. When he's pretty close to the lake, he hollers again. And he is just walking. He gets his hand into the water, that old blind man, and he stops there.

And that loon, just at that minute, comes to him. And that loon asks him, "What's wrong with you anyway? Where are your people?"

He says, "My wife ran away. I'm blind."

Then the loon says, "You come on my back!" And the loon dives at this end of the lake and he says, "You put your face on the back of my head, and don't look up!" And the loon comes out of the other end of the lake. And then he goes back the same way again. And a third time he goes back again. And then he comes to the other side of the lake again.

And then the loon tells the man, he says, "Look up. Try to look up. See if you can see." By gosh, the man sees the timber a little bit. The loon tells him, "You do it again." And the loon dives to the other end of the lake again to go back for the fourth time. And he comes out this end.

And the loon tells the man, "Look up again. See if you do better."

By gosh, that old fellow is just seeing good. It's just like he is sixteen years of age!

And the loon tells him, he says, "Your wife is just up here a little ways, where you kill the caribou. You go there", he tells him. By gosh, he goes there. He sees the smoke quite a ways.

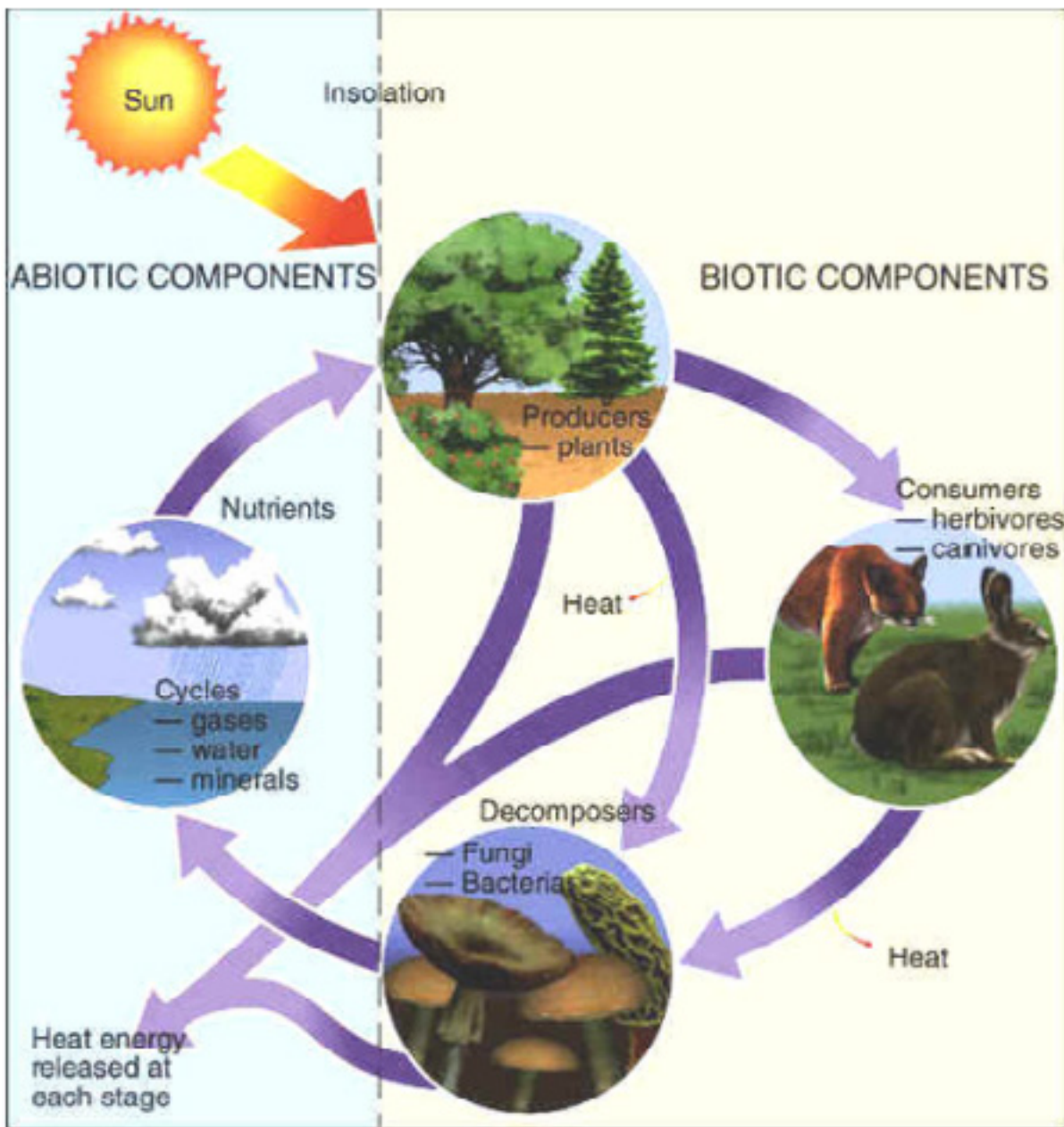
That woman sees him coming, and just grabs her moccasins. She tells the man, she says "I was just going to look for you."

That's all.

ENERGY & MATTER FLOW

Appendix 7A

Howard's Happy-nings, 2012, Grade 7 Life Science, <https://floydmiddle.typepad.com/howard/2012/08/alive-or-not-alive-that-is-the-question.html>



Cover Art by Violet Gatensby, 2022.

Violet is a northwest coast visual artist from Carcross, Yukon. Her work is inspired by traditional stories and knowledge of the land told to her by her mother and grandmother. Woodcarving is her preferred media but she also enjoys metal work, designing and painting.

Designed by Tedd Tucker, 2022.

Tedd Tucker is an Illustrator and Designer in the Yukon making his visual art in his Berwin Studio. His work combines sketches with simple shapes to create bold and bright art, applying ingenuity and imagination into every creation.