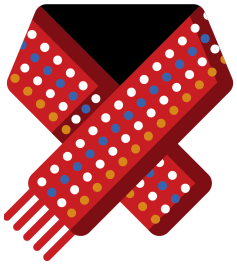

Métis Harvesting, Science & Technology Video Series

Grade 4-8 Science & Technology

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La Nawsyon dé Métis di Ontaryo | Métis Nation of Ontario | Nation Métisse de l'Ontario

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Index

A Note to Educators:

Welcome to the Educator's Guide for the Métis Harvesting, Science and Technology Video Series! Thank you for taking the necessary steps to include Métis science and technology in your classroom!

We recognize that this may be new learning for many educators. Our goal is to provide resources that support educators and learners as they explore the topic of Métis harvesting and science and technology in the classroom.

We hope this guide is a simple-to-use tool for teachers and students. Educators can use this guide in parts or as a whole to teach multiple themes outlined in the Grade 4-8 Science and Technology Curriculum. We recommend 3-5 class periods and that students choose one consolidation activity to demonstrate their understanding. The guide is an opportunity for students and educators to use the Métis experience to connect with broader topics such as the importance of engineering, machines, environmental sustainability and conservation, as outlined in the "Extensions" section at the end of the guide.

Throughout this guide, you will notice **bolded terms**. Definitions for these terms are listed in the English-Michif glossary. Supporting resources include a lesson plan, consolidation and extension activities, and additional recommended resources. Relevant terms are highlighted in bold throughout the resource and can be referred to in the glossary for further context and understanding. These materials are to support both students and educators in learning more about Métis harvesting and science and technology.

Teacher Background Information

Who are the Métis?

The Métis are one of the three Indigenous peoples of Canada. They are a distinct people from First Nations and Inuit. The Métis Nation and the communities which it comprises governed themselves for generations before Canada became a country. The nation has a long history of political organization, activism, and collective will to protect their way of life, which are seen in events including the Battle of Seven Oaks, the Mica Bay Incident, and the Northwest Resistance, which have ensured the Métis culture and way of life to survive to this day.

The Métis people find their origins in the fur trade marriages of European men and First Nations women during the late 1700s in west-central North America. In the generations that followed, the children of these unions married amongst themselves, resulting in the birth of a distinct Métis identity, culture, history, and way of life that has grown into the vibrant and robust culture of today's Métis Nation.

The Métis Nation includes many Métis communities from Ontario-westward. In Ontario, the majority of Métis come from **seven historic communities** that are located along the parts of the province's lakes and rivers.

Métis Harvesting Practices

The Métis have an interconnected relationship with the land and water where historic Métis communities are located in Ontario. It should be noted that Ontario is a diverse province both in the experience of Métis communities and the environmental terrain that influenced how and what Métis harvested. In most of Ontario, the largest game animal would be the moose. Within Ontario, the hunt is overseen by the Métis Nation of Ontario's (MNO) **Captains of the Hunt** (COTH) are responsible for the rights and responsibilities of Métis harvesters and promote the health of each harvesting region. Historically, the Captain of the Hunt was an elected position, and those who held the position would lead the Métis Buffalo hunts on the prairies.

Land is still a contentious issue in Ontario. Competing priorities and jurisdictions have only served to convolute the advancement of Métis harvesting rights in the past. But in recent years, the **Duty to Consult**

process has ensured that **the Crown** meets its constitutional obligations and that First Nations, Métis, and Inuit groups have a voice in the use of their harvesting territories.

Métis Constitutional Rights

For generations, Métis people have harvested and been stewards of the land. However, throughout history, the Crown refused to recognize the Métis as distinct Indigenous peoples, and therefore denied their rights to harvest and practice their traditional way of life on the lands and waters. By refusing to recognize the Métis as a distinct people, they also refused to recognize the Métis land rights, resulting in them becoming **disenfranchised** from their traditional lands as settlement and development expanded. It was not until 1982 that the Federal Government recognized the Métis as one of the Aboriginal peoples of Canada and their existing rights were affirmed under Section 35 of the *Constitution Act, 1982* (Section 35).

The *Powley* Case

Even after constitutional recognition as one of the Aboriginal peoples of Canada, the Métis continued to face outright denial of their rights by provincial governments from Ontario to British Columbia. In response, the Métis Nation initiated the "Hunt for Justice" which was a coordinated legal strategy aimed to prove that Métis held existing harvesting rights protected by section 35 by defending Métis harvesters in courts. This strategy involved Métis Governments launching several test cases from Ontario-westward to try to get a case that would go all the way to the Supreme Court of Canada ("SCC") and finally fulfill the promise of section 35 to the Métis. The Hunt for Justice was ultimately won through the 2003 Supreme Court of Canada decision in *R v. Powley* (*Powley*) which focused on a Métis community within the Upper Great Lakes region of Ontario–the Sault Ste. Marie Métis Community.

On October 22nd, 1993, father and son Steve and Roddy Powley killed a bull moose outside Sault Ste. Marie, Ontario. They tagged their catch with a Métis card and a note that read "harvesting my meat for winter." One week later, the Powleys were charged by Conservation Officers for hunting moose without a license and unlawful possession of moose contrary to Ontario's *Game and Fish Act*.

The Powleys knew that as Métis they had the right to harvest for good that they believed was protected under Section 35. With the full support of the MNO and the Métis National Council (MNC) the Powleys were supported through a ten-year legal saga across four levels of court. THey won unanimously at every level, including the Supreme Court of Canada which affirmed that the Powleys (as members of the Sault Ste. Marie Métis community) had an existing right to harvest as Métis protected under Section 35.

Steve Powley at the Supreme Court of Canada

The Supreme Court of Canada also set out the ten-part test for the establishment of the rights of other Métis communities, known as the "*Powley Test*".

Connection to STEM

The ability of Métis to thrive has depended on their resourcefulness and adaptability, which is evident in the technology they have used throughout history. The seasonal nature of **harvesting** requires Métis to be prepared for any weather, terrain or challenge. The Métis were skilled at understanding the value of both modern and traditional ingenuity, with harvesting practices adopting modern technology and skills while till rooted in cultural practices of conservation, land stewardship, animal and plant sustainability and fostering **biodiversity.**

For students investigating STEM, it is important to understand and value the engineering concepts of all peoples and how they can continue to inspire new environmentally sustainable and ethical concepts. Métis are resourceful, and life on the land requires them to be skilled at observation, tracking and deductive reasoning. There is a holistic understanding of scientific inquiry, applying many ways of knowing (also regarded as "subjects" in Western understanding) to the task or issue.

Episode #1: Fishing “Pèch”

Ontario's waterways have been sustenance and trade sources for Métis people for generations. Ontario is home to the largest freshwater lake in the world, Lake Superior, and 250,000 more. **Fishing** for the Métis people has not only served as a way to feed their families and communities but was also used for trade. Métis were sought after as commercial fishermen or as guides. Today, fishing is still practiced in various ways by Métis as a way to supplement their diet and connect to culture and community.

Common fish caught in Ontario are trout, bass, catfish, pickerel (or walleye), salmon, perch and whitefish. Fish can be caught all year round and require different types of equipment depending on the season. In spring, summer and fall, fishing can be done from shore/dock or in a boat using rods and reels. In the winter, fish can be caught on the ice with either a shortened ice fishing rod or with gill nets.

As with all harvesting, conservation is vital with fishing. The size of the fish, time of year, population and species' health are considered when deciding whether to catch or release. For example, some **harvesters** will release large “breeder” fish and female fish during the spawning season so they can lay their eggs. Other fish taste better depending on which season they are caught.

Once harvested, Métis have used many different methods of preservation. Before the introduction of modern **technology**, fish could be salt-packed, smoked, sun-dried or canned. Today, fish can also be vacuum-sealed and stored in freezers.

Minds On- Teacher Prompts:

1. *Who are the Métis, and do you know any Métis harvesters?*
2. *Do you or your family members fish?*
3. *What types of fish are local to Ontario? (i.e. trout, perch, walleye/pickerel, bass, salmon, catfish etc.)*
4. *What do you need to consider to be safe when you are on the water?*

Episode #2: Transportation “Transpawrtasyon”

The birchbark **canoe** was the principal watercraft during the fur trade, and its lightweight and maneuverability allowed for massive amounts of supplies to be moved along the waterways and land to trade posts. Over time, trains became the most effective way to transport large quantities of goods, followed by transport trucks, which are more commonly used today. Many of today’s highway systems parallel these old train and trade routes.

The design of the **snowshoe** has changed minimally over hundreds of years, except for materials. First Nations people originally mastered the concept of “floating” on top of the snow and crafted for the various terrains they used. There are many different styles. The “Bear Paw” style is flat, somewhat round, and used for big fluffy snow and treed areas. The “Huron” Style looks like a beaver tail and helps move across ice, snowdrifts and roll terrain. It can be tricky to navigate heavily treed areas with roots. The “Ojibway” style has a tail at the front and the back, and it is not recommended for going up hills. Best suited for flat terrain, its large size is also helpful for larger wearers. For anyone planning on venturing out on snowshoes, it is highly recommended to have them suited to their weight and terrain to minimize effort.

Modern Snowshoes

Traditionally, snowshoes were made of wood, sinew, and leather. While time-consuming to make, a traditional set of snowshoes can last for lifetimes with little maintenance. Modern snowshoes can be made of plastics, aluminum, and carbon fibre and can be mass-produced much more efficiently. However, they lack a traditionally made set's craftsmanship and historical significance.

When the lakes and rivers froze, Métis people used dog sleds to transport people and goods (even mail) to various communities. Unlike a horse and carriage, sled dogs are adapted to the cold and can easily navigate different terrain. Today, most people do not maintain a team of dogs but opt for a snowmobile to travel large distances in the winter. The fall hunting season can bring a variety of weather, and a snowmobile is vital to transporting a large animal, such as a moose, out of the forest.

Fig. 10: From Precious Blood Archives: Original photograph, taken at the front of the ‘old church’ showing an early and well known pioneer of the Sault, and a staunch parishioner of the Jesuit Church, Joachim Biron with his sled and team. (Undated but likely mid to late 1860’s.)

Children also needed transport. Traditionally, Métis women would use a "cradleboard" to carry their children with them as they completed daily tasks like harvesting plants and berries. Today, Métis use modern baby equipment such as carriers, strollers and wagons to bring along their children. The invention of new materials and styles has allowed for safer, more weatherproof and ergonomic options that allow children to learn on the land alongside their parents.

Jane Polson.'s baby in a cradle board photo provided by descendants of the McLeod-Turner family line

Minds On- Teacher Prompts:

1. *How do people travel and transport items today? (ie. car, transport, train, subway, bus, etc.)*
2. *How do you think people travelled across the province (specifically Métis people) long ago?*
3. *How are these options better or worse? Students can think about safety, reliability, environmental impact, etc.*
4. *What impact, in your opinion, have these choices had on Métis harvesting?*

Episode #3: Clothing "Linj"

Métis strap dresses

The Métis have many culturally specific items such as the capote, sash, smoking cap, beaded vests, ribbon skirts and strap dresses.

Clothing was often inspired by First Nations and European styles and incorporated natural and modern materials, into a style that is entirely their own,

The capote was traditionally made from wool blankets and often from vibrant colours and patterns. These blankets provided ample yardage to create garments of all sizes and were warm against the winter cold and wind. While temporarily water-resistant, these coats would eventually absorb water (**hydrophilic**) and become very heavy. Some furs, like beaver, muskrat or otter, are **hydrophobic**, with a waterproof barrier allowing those mammals to travel comfortably in **water.** Wool is still used today as one of the best materials to insulate and wick moisture away, essential to staying warm in the winter.

Modern Winter Gear

The invention of man-made materials has drastically improved the safety and convenience of harvesting for Métis people. The nylon used in winter and rain gear provides a repellant barrier from moisture and blocks the wind. Reflective materials and hunter orange allow for greater visibility and safety, and camouflage-patterned clothing helps hunters remain unseen to birds and animals they seek to harvest.

Minds On- Teacher Prompts:

1. *What do you need to consider to be safe on the land or in your community?*
2. *What effect do the seasons have on wardrobe choices?*
3. *What materials have been advanced with technology (thermal reflective insulation, nylon, fleece) and what traditional materials have stayed relatively the same (wool, cotton)?*

Episode #4: Trapping “Pawgnyé”

The birth of the Métis Nation is rooted in the **fur** trade of the late 1700s, specifically, beaver trapping to produce pelts made into hats. This industrious animal was responsible for the expansion of Métis communities across the homeland as Métis settled around the fur trade posts. Métis people trap for both sustenance and population control. The concept of trapping is that a person can set a trap or trapline and do other tasks while they wait for an animal to be caught. This is vital in the winter when the weather can make it unsafe to ice fish or hunt at times. Animals such as snowshoe hares can be harvested for food, while larger predatory animals such as coyotes and foxes are harvested to ensure that other species' populations remain abundant.

Pile of Furs

The mechanics and strategy of trapping have stayed the same over time. The design of traps has changed subtly to ensure greater **safety** for people and more humane treatment of the animals being trapped. Once trapped, the animal can be harvested for food or fur. It is important to note that licensed trappers do trapping under strict international guidelines to ensure the safety of all (including pets).

Minds On- Teacher Prompts:

1. *Do you know anyone who traps?*
2. *Why is trapping important to the Métis both traditionally and today? (Consider the origins of the Métis being in the fur trade).*
3. *How has trapping evolved to be more humane?*
4. *What do you need to consider to be safe on the land or in your community?*

Episode #5: Hunting "Chasé"

The Métis way of life depends upon the environment and ecosystems that support the wide range of harvested species. Ontario is home to large game such as moose, deer and bear and smaller game such as rabbit, ducks, geese and turkey. All can be harvested for various uses, but using as much of the animal as possible is always encouraged. As a community, Métis harvesters ensure that elderly citizens or those who are unable to be on the land are offered some of the harvest. Food and its connection to the land is an important way to bring community and culture together today.

Traditionally, game meat could be preserved by smoking, canning or made into pemmican. Today, game meat can still be smoked, dehydrated, and made into jerky, and various cuts can be stored in a deep freezer.

The moose has become symbolic of Métis rights in Ontario and across the homeland in the modern era. The hunting of a moose became the vehicle with which the Métis right to harvest was affirmed through the *Powley* decision (see page 6), which made it clear that MNO citizens have a right to harvest and feed themselves, their families and their community as Aboriginal people under Section 35 of the *Constitution Act, 1982*.

A Bull Moose

Hunting is also a seasonal activity with a high concentration of harvesting in the fall and more limited spring harvesting for animals such as bears and turkeys. Métis harvesters can also target different animals at different times of the year based on needs. For example, a fall bear will have a thick layer of fat to be processed into bear grease (used for cooking, insect repellent, medicine, and soap). A spring bear will have a longer coat and claws but will have less fat after a long winter, so a harvester looking to replenish their own supply of bear grease or providing some to the community should target fat fall bears if they can.

The safety of both hunters and members of the general public is always a top priority, which is why Métis harvesters must follow all **firearm** safety laws while exercising their hunting rights, which are decided upon and enforced by the Captains of the Hunt. Captains of the Hunt can also regulate the hunts within their regions by imposing seasons (such as deer and moose in the Georgian Bay Traditional Harvesting Territory, the

Métis harvest season runs from September 1st to December 31st) or even restricting the hunt to protect the species from overharvest.

Minds On- Teacher Prompts:

1. *Who are the Métis, and do you know any Métis harvesters?*
2. *What types of animals are harvested here in Ontario? (deer, moose, bear, turkey, geese, ducks etc.)*
3. *Who manages the animal populations in the province?*

Episode #6: Fire and Wood "Feu é Buch"

A pile of firewood being hauled by dog sled

Fire is a vital part of being human. We rely on it to stay warm, cook food, and have clean drinking water. Having access to wood and knowing how to create a fire can also mean the difference between life and death. Another aspect of Métis harvesting that is often overlooked is firewood collection. Under Section 35 of the *Constitution Act, 1982*, Métis have the right to harvest, including firewood for personal use. Today, we have access to many different energy sources- hydroelectricity, natural gas, propane, solar and nuclear. But when on the land, wood is the most readily available fuel source.

The best wood for constructing a fire is hardwood. This type of wood comes from deciduous trees (those that generally lose their leaves) such as maple, oak, ash and birch. This dense wood burns slower and longer than softwood, making it reliable for cooking and heating. Softwoods such as pine and cedar can burn but often are more volatile due to their resinous nature. These softwoods were traditionally used to craft objects such as snowshoes or musical spoons.

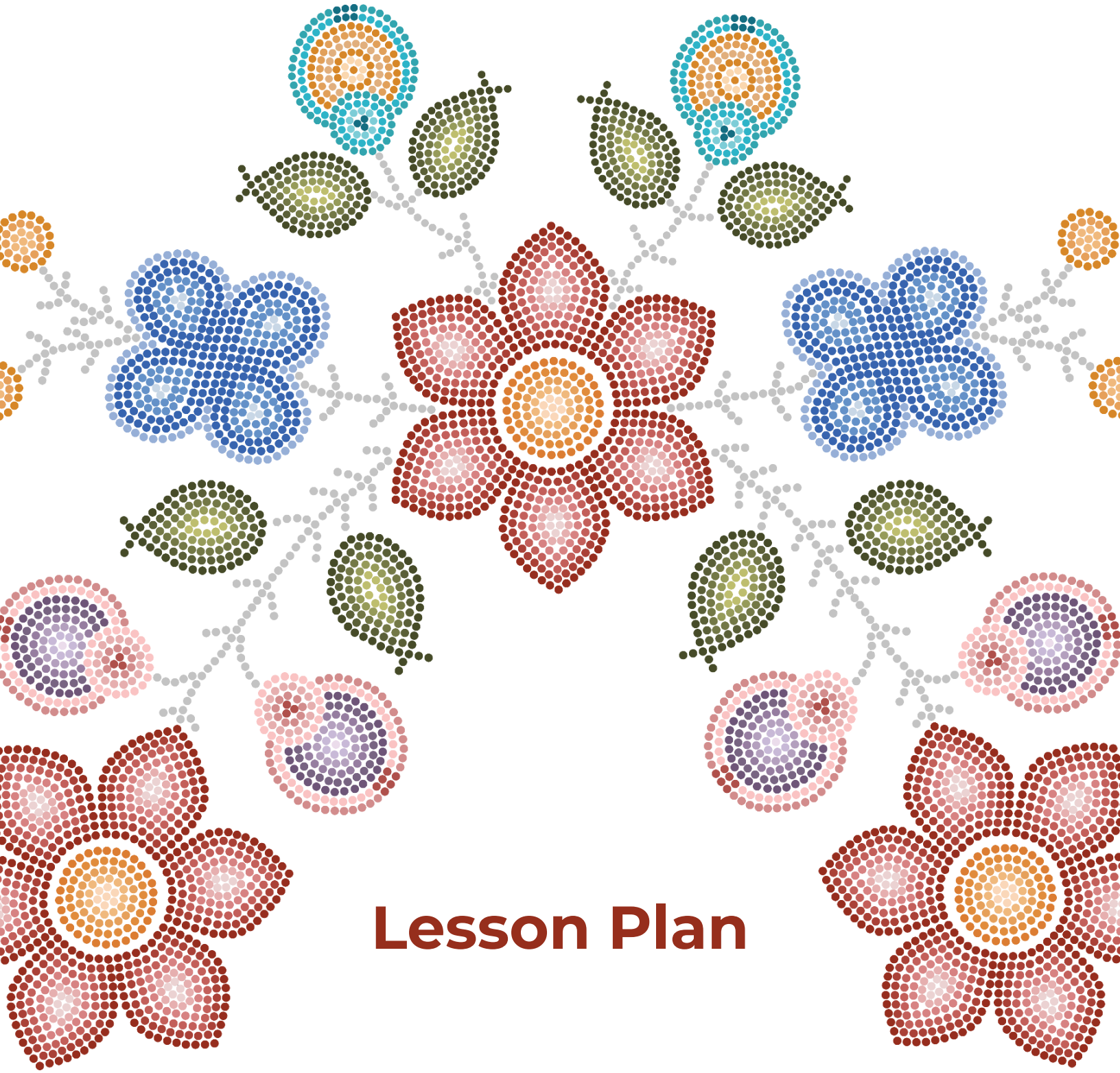
Minds On- Teacher Prompts:

1. *Why is fire important to people?*
2. *What are the differences between using fire on land and at home?*
3. *Who in your family can you trust to handle fires?*
4. *Do you know how to start, manage, and put out a fire safely?*

Glossary

English	Definition	Michif (pronounced phonetically)
Aboriginal	While the word Indigenous is more commonly used today, the term Aboriginal retains meaning within a legal context, specifically Section 35 of the *Constitution Act, 1982*. The term is used in reference to those documents. In all other circumstances, today's acceptable terminology is Indigenous or First Nations, Métis and Inuit. Other words that are used in historical legal documents may be "Indian," and "Half Breed." These are considered offensive in modern-day language.	
Biodiversity		Biodzivèrsité
Canoe		Kano
Captain of the Hunt (COTH)	The Captains of the Hunt (COTH) are integral in managing Métis harvesting rights. One COTH is assigned to each of the traditional Métis harvesting territories within Ontario. COTH are mandated by the Métis Nation of Ontario (MNO) to have authority over the Métis harvest in their respective territory.	Chèf dla chas
Clothing		Linj
The Crown	The Crown is the common term for the institution and authority of the British Crown within Canada. The term is most often used to refer to Crown lands and "The Crown," which represents the state in treaties or court cases.	La kouronn
Disenfranchised	The exclusion or removal of civil liberties from a person or group of people. This could be the inability to vote, hold office, access social services, etc.	Privé dleu drwa
Duty to Consult	Ontario, as a provincial representative of the Crown, has an obligation to consult with Indigenous communities, including Métis, First Nations, and Inuit communities, where the Crown's actions may adversely affect the group's constitutional or treaty rights.	Bezwin dkonsulté
Fire		Feu
Firearm		Fuzi
To fish		Pèch

Fur		Pwèl
Métis Harvesting	The MNO was the first Métis government in the Métis Nation homeland to successfully complete negotiations with their provincial government regarding Métis harvesting, the taking, catching or gathering for reasonable personal use in Ontario of renewable resources by MNO citizens. Such harvesting includes plants, fish, wildlife, and firewood taken for heating, food, medicinal, social, or ceremonial purposes, as well as donations, gifts, and exchanges with other Indigenous persons. Métis harvesting is for reasonable personal use only and does not include harvesting for commercial purposes.	Rékawlt dé Métis
Harvester	Métis harvesters participate in the taking, catching or gathering of renewable resources to sustain themselves and their families. They are guided by their regional and local Captains of the Hunt and still abide by provincial safety regulations.	Rékawlteur
Historic Community	Historic Métis communities are a distinctive political collective, which in addition to their mixed First Nation and European ancestry, developed their own customs, way of life, and recognizable Métis identity separate from their forebearers.	Kawmunoté istawrik
To Hunt		Chasé
Hydrophilic	An object that is absorbent or water-loving.	Idrofil
Hydrophobic	An object that is water resistant or insoluble.	Idrofawb
Red River Cart	Red River carts were most commonly used in northwestern Ontario and throughout the Plains. They were an efficient mode of transport to move supplies and people across flat terrain. They were less common throughout the rest of Ontario, as they were difficult to maneuver through dense forests, rocky terrain and across water systems.	Chawrio dla Rivyèr Rouj
Safety		Fièr atansyon
Science		Siyans
Snowshoe		Rakèt
Technology		Tèknawlawji
Transportation		Transpawrtasyon
To Trap		Pawgnyé
Water		Dlo
Wood		Buch/Bouaw



Lesson Plan

Métis Harvesting, Science & Technology Video Series

Grade 4-8 Gallery Walk Lesson Plan

Ontario Curriculum Expectations Grade 4-8:

- Stem Investigation and Communication
  - OE A1: SE A1.4
- Applications, Connections, and Contributions
  - OE A3: SE A3.1, SE A3.2, SEA3.3

Learning Goals: Students will be able to

- Demonstrate an understanding of health and safety practice in relation to Métis harvesting and science and technology
- Demonstrate an understanding of the importance of harvesting in Métis culture.
- Provide an example of how technology has changed harvesting practice for Métis.
- Demonstrate an understanding of how technology has solved real-world problems as it applies to Métis harvesting.

Success Criteria:

- I can describe how Métis harvesters use technology to be safe on the land and apply this knowledge to my own safety on the land.
- I can explain why harvesting is important to the Métis people.
- I can explain how Métis harvesting practices have changed as a result of technology.
- I can summarize how technology has solved real-world problems for the Métis.

Lesson Opener (Minds On)

Length		**Materials Needed:**
1 Science Block	1. Students will be shown one or two videos in the series to introduce the topic to the whole class. 2. Before watching the video, it is recommended for teachers to prompt "minds on" thinking by using some of the teacher prompts listed in the background section for each episode. 3. Students will individually complete the section in the student worksheet	• Projector, Smart Board • Laptop • Teacher Background Information • Copies of Video Reflection Chart (see Appendices)

Lesson Activities (Action)

Length		Materials Needed:
Multiple Science Blocks	1. Place students in groups. Each group will watch and reflect on one video, completing that section in their student worksheet. 2. Each group will share their understanding by summarizing their video orally to the rest of the class. Classmates will listen to the presentation to continue completing their student worksheets.	• Laptop/ iPad per group • Video Reflection Chart (see Appendices)

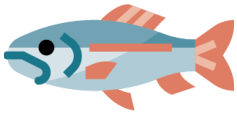
Lesson Consolidation

Length		Materials Needed

Multiple Science Blocks	*Students will demonstrate their understanding by answering the guiding question, "How has technology changed how Métis harvest?"*
	• Students will choose from a variety of options listed in the *Choice Board Consolidation Activity* handout
	• Students should include in their presentation the following:
	  ○ How technology has changed the way Métis Harvest
	  ○ How technology is used to address real-world problems
	  ○ The importance of being safe on the land
	  ○ Why harvesting is important to Métis people
		• Video Reflection Chart (see Appendices)
		• Consolidation Activity Instructions (see Appendices)
		• Additional materials will depend on the student's choice

Appendices

Video Reflection Chart

	Reflection Questions:
Episode 1: Fishing "Pèch" 	**What safety measures were taken in this video?**
	How has technology changed Métis harvesting practices?
	I wonder (write down a question you have about the video)

	Reflection Questions:
Episode 2: Transportation **“Transpawrtasyon”** 	**What safety measures were taken in this video?**
	How has technology changed Métis harvesting practices?
	I wonder (write down a question you have about the video)

	Reflection Questions:
Episode 3: Clothing "Linj" 	**What safety measures were taken in this video?**
	How has technology changed Métis harvesting practices?
	I wonder (write down a question you have about the video)

	Reflection Questions:
Episode 4: Trapping "Pawgnyé" 	**What safety measures were taken in this video?**
	How has technology changed Métis harvesting practices?
	I wonder (write down a question you have about the video)

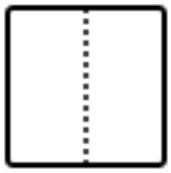
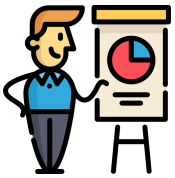
	Reflection Questions:
Episode 5: Hunting "Chasé" 	**What safety measures were taken in this video?**
	How has technology changed Métis harvesting practices?
	I wonder (write down a question you have about the video)

	Reflection Questions:
Episode 6: Fire and Wood "Feu é Bouaw" 	**What safety measures were taken in this video?**
	How has technology changed Métis harvesting practices?
	I wonder (write down a question you have about the video)

Consolidation Activity

Students will choose one option below to demonstrate their understanding of the following concepts:

- How technology has changed the way Métis harvest
- How technology is used to address real-world problems
- The importance of being safe on the land
- Why harvesting is important to Métis people

Create a podcast episode 	Build a model of a piece of technology 	Design a new piece of clothing 
Create a comparison chart 	Write a choose-your-own -adventure story 	Innovation pitch 
Participate in a debate 	Create a mini-documentary 	Design an infographic 

Instructions:

- **Create a podcast episode:**

1. Students will work in a small group (2-3 students) to create a podcast episode using a recording program available at your school.
2. The episode should respond to the four topics listed above the choice board
3. Students will create an engaging title and host names
4. Extension: Reach out to your nearest community council and interview a Métis harvester for your podcast episode.

Cross-Curricular Connection: Language (Oral Communication)

- **Build a model of a piece of technology:**

1. Students will choose a piece of traditional technology that Métis used to harvest and create a model of it. Options could include Red River cart, toboggan, canoe, and dog sled team
2. Along with the model, students will respond to the four topics listed above on the choice board.

A Red River Cart

Cross-Curricular Connection: Art (Visual Art)

- **Design a new piece of clothing technology:**

1. Using what you have learned from the series, students will design a new piece of clothing technology.
2. Students may use a medium of their choice, i.e. pastel, pencil, paint, modeling clay, etc.
3. The design must ensure that the person can be healthy and safe (warm, cool and/or dry) while on the land/community.
4. Students will respond to the four topics listed above on the choice board along with their design.

Cross-Curricular Connection: Art (Visual Art)

❖ **Create a Comparison Chart:**

1. Students will compare and contrast one of the following themes in the video series:

    a. Environmental sustainable technology vs. environmentally harmful technology
    b. Traditional technology vs. modern technology
    c. warm climate technology vs. cold climate technology

2. Students will also respond to the four topics on the choice board along with their chart.

Cross-Curricular Connections: Social Studies/History

❖ **Write a choose-your-own-adventure story:**

1. Using Google Slides (or a similar program), students will write a story demonstrating their understanding of the four topics listed above the choice board.
2. Throughout the story, the reader will be given options to guide the next step. For example, Emma and Jake are going to check the traps on the line. It had snowed quite a bit the night before. Should they use snowshoes or a snowmobile to make travel easier? The reader selects an option which skips to the corresponding slide.

Cross-Curricular Connection: Language (Writing)

❖ **Innovation pitch:**

1. Students can develop an innovative AI application to make harvesting safer and more sustainable for Métis people.
2. Once developed, students can present their ideas in a business-style pitch.
3. Their pitch should address the four topics on the choice board.

Cross-Curricular Connection: Language (Oral Communication)

❖ **Participate in a debate:**

1. Organize a debate or panel discussion where students take on roles advocating for or against specific technological changes in Métis harvesting.
2. Students can consider the cultural, environmental, economic significance and the safety of different types of technology.
3. The debate should address the four topics on the choice board.

Cross-Curricular Connection: Language (Oral Communication)

❖ **Create a Mini-Documentary**

1. Students will work in a small group (2-3 students) to create a documentary episode using the technology and programs available at your school.
2. The episode should respond to the four topics listed above the choice board
3. Students will create an engaging title and host names
4. Extension: Reach out to your nearest community council and interview a Métis harvester for your podcast episode.

Cross-Curricular Connection: Drama

❖ **Design an Infographic**

1. Students will visually present their information using a graphic design program such as Google Apps for Education, Canva, or Microsoft Office. They could choose to create a bubble chart, pamphlet, timeline, slideshow, etc.
2. The information must respond to the four topics on the choice board.
3. Infographics should limit the number of words and be easy for the reader to understand.

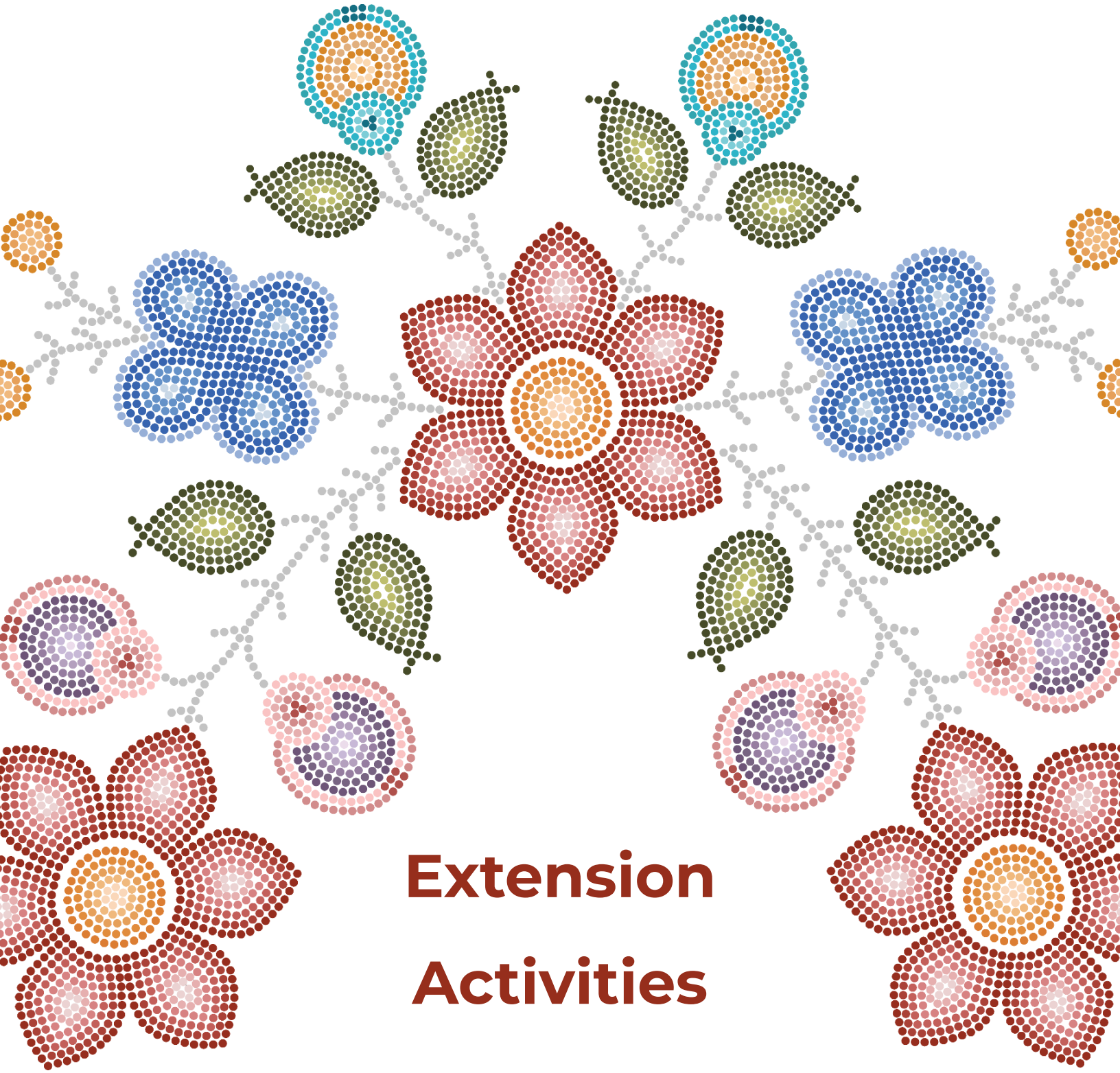
Cross-Curricular Connections: Art (Media Arts)

Consolidation Activity Assessment Chart

Name _____ Date _____

Choice Activity _____

Success Criteria	Yes	Somewhat	No
I can clearly explain how technology has changed Métis harvesting practices.			
I can describe how Métis harvesters use technology to be safe on the land.			
I can demonstrate how this knowledge could help me to be safe on the land.			
I can summarize why harvesting is important to Métis people.			
I can summarize how technology has solved real-world problems for the Métis			
My knowledge and understanding are demonstrated creatively.			



Extension Activities

Extensions Activities:

Grades 4-8 have similar learning expectations in the STEM strand. Teachers are encouraged to reinforce student learning by expanding these topics to include other grade-specific science concepts.

Grade 4

Coding and Emerging Technologies (A2.2)

- Have students use the *Weather Network* to monitor the weather over a period of time and share how the technology within tracking the weather helps plan outdoor activities such as harvesting, fishing, and hunting. For example, high winds on the lake would be difficult and dangerous for Métis to harvest.
- Discuss how technologies, such as fish-finders and GPS, make travelling and being outdoors safer and more successful.

Structures and Mechanisms: Machines and Their Mechanisms (D1.1, D2.1)

- What was the impact of the canoe on the daily life of the Métis? Would cities like Winnipeg exist without canoes and Red River carts? The canoe allowed the Métis to travel long distances in lakes and rivers. The development of trade routes facilitated by machines resulted in the development of communities and ultimately facilitated colonization across Canada. Many of these routes are now highways and railways that connect Canada
- Identify and describe the machines Métis communities used in their daily lives. Ie. canoe, cart, travois, trap

Grade 5

Structures and Mechanisms: Forces Acting on Structure (D1.1)

- Why is the engineering of a canoe unique? How does it successfully maneuver and transfer force and weight across its structure?
- How does a snowshoe disperse a person's weight to allow for easier travel?
- Why is it important to use the correct type of fishing line to succeed?

Earth and Space Systems: Conservation of Energy and Resources (E1.3)

- Investigate an environmental or conservation project that has been spearheaded by the Métis Nation of Ontario
    - The Métis Nation of Ontario has a community-based water quality monitoring pilot program. This program aims to monitor climate change and pollution on essential bodies of water across Ontario.
    - In 2010, the Métis Nation of Ontario implemented a study focusing on traditional and medicinal plants in southern Ontario to understand the Darlington nuclear project's potential impacts on the Métis way of life.
    - The Métis Nation of Ontario provides support and advice on issues regarding duty to consult, harvesting, and environmental issues.

Grade 6

STEM Skill and Connections (A1.3)

- Using a canoe template and a plastic needle, students could build a paper canoe. Then, students could test its strength in a sink or float experiment.

    Check out the canoe template found here: HBC Build your Own Canoe

Life Systems: Biodiversity (B1.2, B2.6)

- Research and identify invasive species that have or can reduce biodiversity local to your area. Then, consider the perspective of First Nations, Métis, and Inuit people and how this reduction might affect their way of life.
- Identify and analyze local issues related to biodiversity in your area. Then, consider the First Nation, Métis, and Inuit perspectives on the local issue. What should their plan of action be?

Grade 7

Earth and Space Systems: Heat in the Environment (E1.1)

- Research and analyze the science behind clothing comfort. This could be a precursor to testing different materials listed above and then concluding with a design sketch of their own clothing (jacket), what materials they use, and why. Students could choose to design an item for the hunting season, rain, winter, and summer seasons
    - Insulated clothing like the Métis capote (made from a Hudson's Bay blanket) protects our bodies and allows us to enjoy the outdoors during the cold winter months.

Earth and Space Systems: Heat in the Environment (E2.2)

- Demonstrate an understanding of how heat is generated and the connection to Métis and the outdoors with fire. Build a solar oven and test if that could be an alternative to fire for cooking.

Grade 8

STEM Skills and Connections (A2.2)

- How can Artificial Intelligence (AI) be used to promote Métis culture and way of Life? Ie. fish-finders, GPS, sonar, Ministry of Natural Resources tracking systems for wildlife conservation

Structures and Mechanism: Systems in Action (D2.2)

- Food Processing- students could experiment with food dehydration processes, canning and preserving food.
- Processing Meat- Calculate the time it would take to harvest a Moose from land to meal. What percentage of meat does the moose yield? What percentage of meat does the cow yield? Calculate the equivalent labour cost of harvesting the moose and its value compared to beef.

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