



# CHAPTER 5: Indigenous ways of knowing

*A Project of Learning for a Sustainable Future  
Contributor: Deborah Miller*



Art by Ana Pacheco for  
ArtistsForClimate.org

A project of



Learning for a  
Sustainable Future  
**LSF**

Supported by Natural Resources Canada's Building Regional  
Adaptation Capacity and Expertise (BRACE) Program



Ressources naturelles  
Canada

Natural Resources  
Canada

**Canada**

## Chapter 5. Indigenous Ways of Knowing

This chapter looks at how Indigenous peoples' traditional knowledge, skills and practices, passed down from generation to generation, play a vital role in understanding climate action. Indigenous peoples have been, and are leaders, of climate action; their roles in monitoring climate change impacts and the environmental effects on their traditional lands and waters play a critical part in our fight against climate change (NRCan p.117).

There is a great deal that we can learn from how Indigenous peoples have lived sustainably with the Land for countless generations. Indigenous peoples have adapted by travelling throughout their Land in creating a balance with food sources and balancing resource use, depending on the season. We need to listen carefully to better understand how Traditional knowledge, and its application, contribute to environmental sustainability and planning for the future. According to the NRCAN report, incorporating diverse perspectives and sources of knowledge, such as Indigenous Knowledge Systems, is also imperative for effective adaptation (NRCan all chapters).



Art by Ana Pacheco for ArtistsForClimate.org

The National Issues Report identifies four key strengths of Indigenous and local knowledge systems (NRCan p.118) in the context of understanding and responding to climate change, including:

1. understanding, monitoring and recording climate change impacts;
2. enhancing adaptive capacity and building resilience;
3. supporting sustainable risk reduction strategies; and
4. informing decision-making and policy change.

In this inquiry, we suggest activities, books, and resources that explore various examples of these Indigenous Ways of Knowing and how the teachings and learning is passed on from one generation to the next. Indigenous communities have their own experts, elders, knowledge keepers and ways of knowing; their knowledge is a valuable and essential resource for learning how to adapt to climate change (NRCan.p.131). Indigenous Ways of Knowing is knowledge that we need to value so we can learn what they understand to help the climate conversation and actively seek it to guide us (NRCan p.115).

Mi'kmaq Elder Albert Marshall coined the phrase Etuaptmumk/"two-eyed seeing" this way: (2004)

"I, you and we need to learn to see from one eye with the best or the strengths in the Indigenous knowledges and ways of knowing... and learn to see from your other eye with the best or the strengths in the (Western) knowledges and ways of knowing... but most importantly, I, you, and we need to learn to see with both eyes together, for the benefit of all."  
Elder Albert Marshall, [EdCan Network](#), May 29, 2018

View [Indigenous Knowledges and Two-Eyed Seeing: An In-Depth Conversation with Elder Albert Marshall](#) - A dialogue about the importance of Indigenous Knowledge and the Two-Eyed Seeing in addressing climate change and creating a resilient future. The webinar was organized by *Prairie Climate Centre at the University of Winnipeg*

### **Background Information for Educators (Background info from ELWW 7-12)**

The rapid and profound climate changes are putting lands and territories of many Indigenous communities (Metis, Inuit and First Nations) on the front lines of mitigation and adaptation efforts. According to Terry Teegee, regional chief of the BC Assembly of First Nations, Indigenous communities are often the first to experience the impacts of climate change. Indigenous communities have a strong dependence on and close relationship to the environment and its resources. Threats to Indigenous ways of life due to the changing climate are complex and wide-reaching. Specific experiences vary considerably based on the area or region in which communities are located. One of the general impacts that climate change is

having on Indigenous communities in Canada includes an increased risk of physical harm associated with traditions or activities including hunting and fishing. (NRC p.131) Very experienced harvesters are being forced to alter hunting strategies and take into consideration the lack of rescue facilities available ([Canadian Geographic Indigenous Atlas of Canada](#)). Therefore many people are also experiencing a loss of food security in part due to altered animal migration patterns as well as human travel routes impacting people's ability to access [country foods](#). Indigenous people may be experiencing threatened sovereignty and a loss of communities and culturally significant locations due to rising sea levels, flooding, coastal erosion, and melting permafrost. "Climate change impacts are dependent on a number of connected factors that are rooted in specific places. As a result, climate change is impacting individuals and communities in rural and remote areas across Canada in many different ways. It is important that place-based knowledge systems—including local and Indigenous Knowledge—be drawn upon in understanding and responding to climate change impacts. Both local knowledge and Indigenous Knowledge Systems are based on long-term, ongoing relationships between people and their natural environments. Such knowledge can provide useful insights on changing climatic conditions and on the lived experiences of those affected by climate change." (NRCAN p.118)

How does climate change disproportionately affect Indigenous communities?

Indigenous people in Northern communities have historically demonstrated an incredible ability to adapt to varied and changing circumstances. However, as the impacts of climate change intensify, successful adaptation becomes increasingly challenging. When considering climate change and its effect on Canadian citizens, it is imperative to acknowledge the social and cultural inequalities that exist when it comes to contribution, mitigation and adaptation. For instance, according to the [Government of Nunavut](#), despite the small contribution made by a territory like Nunavut to national greenhouse gas emissions, the effects of the global excess are felt heavily by the citizens.

#### *Impacts and path forward in The Arctic - Inuit Peoples*

According to the [IPCC \(2019\)](#), the [cryosphere](#) changes in the Canadian Arctic have negatively impacted human health in several key ways. There have been dramatic increases in food and waterborne diseases, malnutrition, injury and serious mental health challenges especially among Indigenous people. Additionally, Indigenous peoples and other Arctic residents have had to change the timing of various activities in response to seasonal changes and safety of travel on ice, land and snow. Some coastal communities have planned for relocation due to failures associated with flooding and thawing permafrost. According to the [IPCC](#), "limited funding, skills, capacity and institutional support to engage meaningfully in planning processes have challenged adaptation." Inuit people have used and occupied Arctic and Subarctic Land, ice and water for thousands of years, documenting use and reliance on the Land and waters for many generations. It is imperative to recognize the critical role that Inuit people must play in developing adaptation and mitigation strategies to address the many complex challenges that define the Canadian North.

Moving Away from indigenous stereotypes ('passive witnesses,' media portrayal)

First Nations people have been and continue to be leaders in the fight against climate change. Inuit leaders brought warnings about the impacts of climate change to the international stage as far back as the Earth Summit in 1992. There are many groups working towards reconciliation in Canada that recognize the leadership of Indigenous cultures when it comes to sustainability as a central tenet of their relationship with the environment ([Sustainable Canada Dialogues](#)). "Local and Indigenous Knowledge are key to adaptation and understanding climate impacts. Residents of rural and remote communities have a strong connection to the environments that they depend on for their livelihood, sustenance, well-being and way of life. Place-based knowledge systems, including local and Indigenous Knowledge, and lived experience are key to understanding and adapting to climate change impacts in rural and remote communities and areas." (NRCAN p.117)

Due to the unique context of Indigenous rights and impacts, (governance, economy, infrastructure and activities) many wide-spread solutions that policy makers have put forward do not acknowledge that Indigenous communities are already engaged in important climate change mitigation strategies that are deeply rooted in Indigenous customs and traditional practices (ICA, 2019). In many ways, Indigenous knowledge and practices can be an incredible resource for learning strategies to adapt to climate change (NRCAN p.117). It is important to think critically about the sources from which we gather information on indigenous rights. In too many instances, a biased version of an event is told and shared widely through the media; stereotyping indigenous activists and protestors, misconstruing actions and portraying a radical, negative picture to the general public.

According to the 2018 [Indigenous Climate Action Report](#), the implications of culturally embedded perspectives are significant: National "Environmental" policies often ask relatively narrow questions about how to reduce emissions and mitigate or stall damage, whereas [Indigenous water walkers](#), for example, are asking us, "How do we get to a spiritually grounded and more fully integrated way of life where we can swim, eat and drink from uncontaminated lakes and rivers?" There is a great deal that we can learn from the way that Indigenous people have lived harmoniously and sustainably with the Land for many years. Indigenous perspectives should be a centra; a voice for policymakers and citizens of Canada to hear as we are adapting and developing sustainable communities of the future.

## **General Introduction to the inquiries in this chapter:**

### **Indigenous Ways of Knowing**

This chapter offers three different structured and scaffolded inquiries to support Indigenous Ways of Knowing. Indigenous People have passed on traditional knowledge from one generation to the next to learn to live sustainably with the Land. These enquiries explore various examples of these Indigenous Ways of Knowing and how the teachings and learning are passed on from one generation to the next. Each of the three inquiries begins with a provocation followed by numerous strategies and examples. These explorations can be completed in their entirety as written; however, because we know inquiry is an organic and fluid process based on student input, educators may wish to take aspects of each of the ideas presented and adapt, modify or replace what's suggested to create their inquiry with their class. Therefore, it is

suggested that teachers review the whole chapter first to determine and plan what works best with their particular group of learners.

The following three inquiries are connected to curricular concepts, as shown in this chart. These curricular concepts are applicable across Canada.

<b>Curricular Connections</b>	<b>Concepts</b>
Citizenship	Respect Foster appreciation Cultural awareness
Social Studies	Diverse perspectives - First Nations, Métis, Inuit Cultural diversity Indigenous languages Indigenous Ways of knowing Traditional Knowledge Balance Family and community roles Elders
Language	Critical literacy Oral communication Retelling Storytelling Active listening Responding Storytelling Speaking and listening activities to share ideas
Science	Ecosystems Seasonal cycle Time and place Experiential learning Natural environment Adaptations Environmental sustainability Climate change

The Arts	Creativity Innovation Interpretation Colour Space Media
----------	--

## **Inquiry 1: Indigenous Perspectives Elder Knowledge**

The inquiry explores the topics of respect for Elders and caring for the environment. Students learn how we can apply Elder knowledge and understanding of sustainability to reduce the effects of climate change.

### **Resources:**

- **Book** - Read aloud the [Elders are Watching](#) by [David Bouchard](#) or watch [online](#)

## **Inquiry 2: Indigenous Traditional Knowledge**

This inquiry examines traditions, connections to nature and how Indigenous People interact with their environment. The activities invite students to reflect on Indigenous perspectives and knowledge as sources of information to reduce the effects of climate change.

### **Resources:**

- Video – [Maq and the Spirit of the Woods](#) by [Phyllis Grant](#)

## **Inquiry 3: Elder Knowledge: Connections to the Land**

Students learn about the importance of Elder knowledge and guidance needed to help us live sustainably. They will inquire into the necessary skills for adapting to and reducing climate changes, taking lessons from Indigenous Peoples who have witnessed the environmental changes to the land.

### **Resources:**

- Provocation 3: [Community Expert](#) – Elder Visit