

Lesson 2: Traditional Knowledge

Overview: Students will be introduced to the concept of Traditional Knowledge, and how this knowledge contributes to sustainability and planning for the future of the Great Bear Sea. They will explore examples of Traditional Knowledge and consider how this learning is passed on from one generation to the next.

Subjects: Science, Language Arts

Suggested Time: 3 classes (45-60 minutes)

* **Teacher Note:** Other seasonal rounds that may be available from your local community could also be incorporated into this lesson. Materials with a * are available on the Great Bear Sea USB, or at www.greatbearsea.net.

Materials and Resources:

- Computer, projector and screen
- Lesson 2 Film Clips:
 - ✕ Cultural Traditions (6 mins)
 - ✕ Traditional Knowledge (8 mins)
 - ✕ SEAS1 (3 mins)
 - ✕ SEAS2 (3 mins)
 - ✕ Clam Gardens (2 mins) – *optional*
- Teacher Background – Lesson 2
- 2.1: Seasonal Round and Seasonal Use Cycle
- 2.2: Traditional Knowledge
- Haida Marine Seasonal Round*
- Haida Ocean & Way of Life Brochure*
- Kwakwaka'wakw Seasonal Use Cycle*

Learning Objectives:

Students will:

1. Understand the value of Traditional Knowledge and how it contributes to sustainability and planning for the future.
2. Describe and identify examples of Traditional Ecological Knowledge.
3. Explore the concept of interconnectedness of all living things in an ecosystem using First Nations Traditional Knowledge examples.
4. Learn that harvesting and taking care of marine resources is important in First Nation culture.

Lesson Context

This lesson will introduce the students to Traditional Knowledge (or Indigenous Knowledge), and how knowledge is built and continues to evolve based on relationships with and understanding of place. Students will also discover how this knowledge can be passed from generation to generation and continues to change as time passes and new learning occurs. Students will learn more about Traditional Ecological Knowledge by looking at seasonal rounds and seasonal use cycles from the Haida and Kwakwaka'wakw Nations. Seasonal rounds or seasonal use cycles map the Traditional Knowledge of an area, displaying the when and what of harvesting around the seasons for a specific place.

Learning Activities

Activity 1 - 2 classes

Part A: Traditional Knowledge (45-60 minutes)

1. Share the following quotes and discuss students' understanding of these quotes.

"When the tide is out, the table is set." A common concept shared by many First Nations and also shared in the film by Joann Green, Hereditary Chief, Heiltsuk Nation; Executive Director, Heiltsuk College

"Everything we eat, whether it's inter-tidal, whether it's bottom fish, whether it's herring, whether it's herring spawn, whether it's salmon – everything comes out of that ocean. It's a lifeline. It's a lifeline for our people." - William Housty, Chair, Heiltsuk Integrated Resource Management Department

First Nations depend on the oceans. The ocean provides many resources to harvest. These resources are important to the First Nation cultures.

2. Ask the students what **harvest** means. Ensure they understand that harvest means something that is collected, gathered or taken from an ecosystem.
3. Inform the students they are going to watch a film clip and ask them to keep in mind the following discussion questions:
 - What are some of the different resources that were harvested?
 - How did different people learn what and when to harvest?
4. Watch the film clips **Cultural Traditions** and **Traditional Knowledge**.
5. Brainstorm together the key learning from the film clips.

In the film they were taught where and when to harvest from others. This is an example of **Traditional Knowledge** that is passed along from one generation to

the next. The idea of place is important as communities have gathered knowledge around specific places to harvest specific resources, which can also be known as **Traditional Ecological Knowledge (TEK)**. Explain to students that one particular type of Traditional Knowledge – the local knowledge First Peoples have about the natural world in their traditional environment – is sometimes referred to as TEK. See **Teacher Background – Lesson 2** for more information.

Some discussion points may include:

- TEK is local knowledge pertaining to the particular territories in which people live, which has been (and continues to be) passed down from generation to generation. While First Peoples share some common values and worldviews, local knowledge captures the nuances and specifics of place, about local ecosystems, sustainable use of resources and the interconnectedness of all living and non-living things.
- TEK is knowledge about how to live and thrive in a particular place. For Indigenous peoples around the world (and First Peoples here in BC), TEK has allowed communities to flourish for thousands of years, with knowledge passed on from one generation to the next.

It is important to recognize that Traditional Knowledge encompasses a vast and sophisticated system of knowledge, including stories (such as Underwater Big House, Story of Gitnuganaks from Lesson 1), values (such as, harvesting only what one can eat, process or distribute), governance systems (such as, where specific families or groups hold rights to marine harvests).

Part B: Seasonal Round and Seasonal Use Cycle (45-60 minutes)

1. Divide the class into small groups. Give each group the example of the **Haida Marine Seasonal Round*** and **2.1: Seasonal Round and Seasonal Use Cycle**. Allow the groups time to study the seasonal round and identify the seasonal examples of Traditional Knowledge on the organizer. Some discussion points may include:
 - Over thousands of years, communities have gathered knowledge around seasons and life cycles of species to better understand harvesting cycles.
 - In the past (and still today), this knowledge and the sharing of this knowledge from generation to generation (for example, knowing when to collect food, how to preserve for months with little harvest potential, etc.) is important.
 - Seasonal rounds or seasonal use cycles map the local knowledge of an area, displaying the when and what of harvesting around the seasons for a specific place.
2. Pass out the **Kwakwaka'wakw Seasonal Use Cycle***. Have the groups compare and contrast the two different organizers. These are both examples of Traditional Knowledge that have been made into graphic organizers that connect to specific

places. Some discussion questions may include:

- What months seem to be most abundant in each region?
- What months have sparse harvest opportunities? Can you think of some ways that communities could plan for this time?
- Do you think that these seasonal rounds are static, or do they change? (Here is where you can present the idea that knowledge is cumulative – it grows over time).

Reiterate the importance of harvesting at certain times of the year and how managing resources is a critical step to ensure those resources are available for the future. When one thing changes in an ecosystem, other things (including humans) are impacted. Everything is interconnected.

3. Have each group member share if they have ever participated in a harvest. Example: fishing, picking berries, etc. How did you learn about this spot to harvest? This is knowledge that is passed on to you which is similar to traditional knowledge of First Peoples.

Activity 2: Making Connections (45-60 minutes)

1. Watch the film clips **SEAS1** and **SEAS2**.
2. Brainstorm together the key learning from the film clips. Discuss how these participants of the Supporting Emerging Aboriginal Stewards (SEAS) program are connecting to Traditional Knowledge in their territory. These students want to learn more about the language, culture and tradition from their Elders.
3. Discuss what the students can learn from their own parents, grandparents or community members about their past.
4. Have each student create some interview questions to interview a family member about their past and what life was like growing up.
5. Together as a class, have students share who they selected to interview and the questions they asked the individual.
6. Use **2.2: Traditional Knowledge** to read the students a statement from Doug Neasloss, Chief Councillor, KITASOO/XAI'XAIS Band Council & Resource Stewardship Director, KITASOO/XAI'XAIS Integrated Resource Stewardship Authority. His text shows Traditional Knowledge from his and Elders' perspectives.
7. For homework students could carry out the interview with the family or community member and write a paragraph about one thing they learned from conducting their interview.

Extension Ideas

- Explore the **Haida Ocean & Way of Life Brochure*** (pages 4-7) by the Council of the Haida Nation – Marine Planning Program. Divide the class into groups and assign each group an organism to learn more about (salmon, herring, abalone, clams & cockles, seabirds & shorebirds, rockfish and seaweed). Learn how these organisms are connected to the Haida way of life.
- Watch the film clip **Clam Gardens** and research more about Ancient Clam Gardens as an example of Traditional Knowledge.
- Plant a school garden for the students to take care of and harvest throughout the seasons. Create a harvest map for the school garden using the ideas in the seasonal round and seasonal use cycle.
- Head outdoors and find your favourite place on the school grounds or in a green space near by. Using school cameras or student cameras have each student take a picture of this spot. Reflect on why it is special to you. How did you discover it? Has this space changed over the years? Will it remain the same? Could it change in the future? Why? What do think it will be like in 5 years, 10 years, 20 years? Write about why this special place should remain the same for future generations to enjoy and one thing you would want to share with others about this place in the future.

Assessment Ideas

- Formatively assess students' engagement in individual and group work as well as large group discussion.
- Assess student work from the lesson.

Teacher Background – Lesson 2

Indigenous and Traditional Ecological Knowledge (TEK)

Thinking generally about these concepts, Indigenous or Traditional Knowledge refers to the vast, diverse and sophisticated body of knowledge of a group of peoples that has been generated over thousands of years, is passed down from one generation to another, and continues to evolve over time. It is knowledge that pertains not only to cultures and beliefs, but also physical space, environments and place. As noted by the Assembly of First Nations:

“Although there is no universally accepted definition of “traditional knowledge”, the term is commonly understood to refer to collective knowledge of traditions used by Indigenous groups to sustain and adapt themselves to their environment over time. This information is passed on from one generation to the next within the Indigenous group. Such Traditional Knowledge is unique to Indigenous communities and is rooted in the rich culture of its peoples. The knowledge may be passed down in many ways, including: storytelling; ceremonies; dances; traditions; arts and crafts; ideologies; hunting and trapping; food gathering; food preparation and storage; spirituality; beliefs; teachings; innovations; medicines.”

The term Traditional Ecological Knowledge (TEK) is perhaps the most popular term used to refer more directly to the knowledge that First Peoples' have in relation to the natural world, and specifically the distinct ecosystems and landscapes in their traditional environments. Again, there is not a universally recognized definition of TEK, but in helping students understand this concept, the following points may be useful:

- TEK is local knowledge pertaining to the particular territories in which people live, which has been (and continues to be) passed down from generation to generation. While First Peoples share some common values and worldviews, local knowledge captures the nuances and specifics of place, about local ecosystems, sustainable use of resources and the interconnectedness of all living and non-living things.
- TEK is knowledge about how to live and thrive in a particular place. For Indigenous peoples around the world (and First Peoples here in BC), TEK has allowed communities to flourish for thousands of years, with knowledge passed on from one generation to the next.
- The environmental knowledge of generations about a specific local place is very important in the study of science, and thus TEK is used widely in various fields of science, such as resource management, climate change and sustainability.

It is important to recognize that Indigenous Knowledge or Traditional Knowledge does not just encompass ecological knowledge (TEK), but also a variety of other systems of knowledge including (but not limited to) cultural, historical, economic, political and societal information belonging to a group of peoples. Consider some of these additional resources to learn more:

Appendix A: Interview with Doug Neasloss

Appendix B: Indigenous Knowledge

Assembly of First Nations Environmental Stewardship – Traditional Knowledge

www.afn.ca/uploads/files/env/ns_-_traditional_knowledge.pdf

First Nations Education Steering Committee Science First Peoples Resource

www.fnesc.ca/science-first-peoples

Traditional Ecological Knowledge Prior Art Database

<http://ip.aaas.org/tekindex.nsf/TEKPAD?OpenFrameSet>

World Intellectual Property Organization

www.wipo.int/freepublications/en/tk/920/wipo_pub_920.pdf

Supporting Emerging Aboriginal Stewards (SEAS)

Supporting Emerging Aboriginal Stewards (SEAS) Community Initiative is a youth program initiated by First Nation community partners together with TNC Canada. As noted on their website at www.emergingstewards.org:

"Local programs are designed to engage, develop, prepare and empower Indigenous youth to become the next generation of stewards in their communities and territories. First started in 2009, the SEAS Initiative has supported youth in four communities in the Great Bear Rainforest of British Columbia as well as the Lutsel K'e Dene community in the Northwest Territories. Working collaboratively with TNC Canada, each community partner develops and designs a program uniquely suited to the community's priorities, needs and opportunities for engaging youth in stewardship learning and activities. Programs integrate traditional and cultural knowledge with western science approaches, and typically have both a school component and a summer internship component."

Haida Ocean & Way of Life Brochure* by Council of the Haida Nation – Marine Planning Program is referred to in this lesson plan and is a great additional resource to read.

Vocabulary

Harvest: the action of some living resource that is collected, gathered or taken from an ecosystem.

Name: _____

2.1: Seasonal Round and Seasonal Use Cycle

Study the Haida Seasonal Round provided and discuss with your group your observations for each season. Record what you notice in each season.

Spring	Summer
Fall	Winter

Explain in your own words how the Haida Seasonal Round is connected to Traditional Knowledge. Think about the process that would be used to collect and document this information over time.

Describe why the seasons are important for harvesting these resources?

Examine the Seasonal Use Cycle of the Kwakwaka'wakw. Note your observations about this organizer.

General Observations	Similarities?	Differences?

It is important to harvest at certain times of the year and manage the resources. Think about the current season. Describe what could be harvested in each territory.

2.2: Traditional Knowledge

Doug Neasloss – *Chief Councillor, Kitsoo/Xai'xais Band Council & Resource Stewardship Director, Kitsoo/Xai'xais Integrated Resource Stewardship Authority*

This is a passage from an interview with Doug Neasloss talking about some of the history from the Central Coast as well as how resources were preserved. This knowledge continues to be passed on to future generations.

"I've sat down and had a lot of discussion with our Elders about life, and even, you know, we live in a pretty isolated area, so we didn't have actually a lot of contact until quite late. The first contact we had was actually Captain Vancouver. I believe that was in 1793, when he came up and it was what people, the Elders always talk about how nomadic the lifestyles were. They talked about the seasonal camps, and the permanent camps. They said the food harvest would start in the wintertime. It would start with the clams and cockles in the winter. And then early spring, around March, the halibut would start to come in and they would start harvesting halibut. And then once the halibut was finished, they would start to move over to the herring and the herring eggs. And that was huge. That was probably one of the most important foods in our community, because it wasn't just used for food consumption, but it was also used for trade. And there was a huge trade route along the Coast amongst different families up and down the coast. So Klemtu used to harvest the herring eggs and trade it with the Bella Coola people [Nuxalk] and also the Kitamaat people [Haisla], and they used to trade for eulachon grease, and that was huge because we didn't have eulachons in Klemtu area, and then once that was finished, we'd move over to seaweed in May, and right after seaweed was finished then you would go on to salmon, in particular sockeye salmon, and then later on in the summer, late summer, you would start to get all the salmon, so the coho, pink, and chum would start to come in.

So people were very dependent on all of these resources, and especially because it was such an isolated community, those aquatic resources are extremely important because food costs here in the community are so expensive. People, you know, depended on those, and we had different camps based on different things. Like Marvin Island is a herring camp. People just went there to go and harvest herring eggs. And while they were there, they would dry the herring eggs, they would dry the Halibut, because a long time ago there were no refrigerators or freezers, so they would dry everything. Everything was sun dried. Or they would smoke it. And that's how they'd preserve things."