

Comprehensive Report: Land-Based Learning and the Salmon Lifecycle

Introduction: Centering the Land as First Teacher

The integration of Indigenous Knowledge Systems (IKS) into mainstream educational settings represents a critical step toward decolonization and reconciliation in Canada. This report examines Land-Based Learning (LBL) as a specific Indigenous pedagogical approach, analyzes its core epistemological principles, and proposes a comprehensive curricular module focused on the salmon lifecycle to demonstrate its practical application. The proposed module, centered on the traditional territory of the Secwépemc Nation, specifically addresses the need for instructional activities and assessment strategies that honour Indigenous perspectives, foster environmental stewardship, and promote holistic student development (Mugford, 2025). The foundational premise of this work is the recognition that the Land is not merely a setting for learning, but is understood as a living, spiritual entity that is always changing and acts as the First Teacher (Bowra et al., 2021).

Indigenous Epistemology and the Nature of Land-Based Learning

LBL is rooted in Indigenous worldviews that contrast sharply with western education's often abstract and fragmented approach. The core epistemological principle is relationality, wherein "land encompasses all water, earth, and air and is seen simultaneously to be an animate and spiritual being constantly in flux" (Bowra et al., 2021, p. 133). This perspective establishes the Land as the basis of all cultural teachings and knowledge, allowing learners to experience the profound interconnectedness of all living and non-living things (Bowra et al., 2021). Consequently, LBL is not limited to connecting with nature but encompasses all learning that occurs when one comes into connection with all that surrounds them, serving as a means

of healing and connecting with pre-colonial identities, cultures, and languages (Bowra et al., 2021). This approach directly challenges the historical disruption of traditional education modes—which flowed naturally with the rhythms of daily life such as hunting and fishing—caused by colonial acts and the violent removal of Indigenous peoples from their lands (Bowra et al., 2021). A key distinction that must be critically understood is the difference between LBL and western place-based learning. While place-based education teaches about and within the local community, LBL moves beyond this limited perspective by intentionally centring Indigeneity, acknowledging that all places were and continue to be Indigenous lands, and honouring the spiritual, emotional, intellectual, and physical relationships Indigenous peoples have with the sentient Land (Bowra et al., 2021).

Rationale: Decolonization, Reciprocity, and Holistic Development

The importance of LBL extends far beyond ecological education; it is a fundamental act of decolonization and a critical strategy for advancing reconciliation among all Canadians (Snow & Obed, 2022). By decentering settler approaches and acknowledging Indigenous values and traditions, LBL overturns power structures and contributes to community-building practices (Snow & Obed, 2022; Bowra et al., 2021). Learning on the land promotes a shift away from western individualism toward fostering kinships and decreasing social isolation, rooted in the collective sharing of knowledge among all persons, regardless of age (Bowra et al., 2021). Furthermore, LBL is essential for developing the holistic skills necessary for navigating a complex modern world. Traditional education, such as learning through hunting, teaches foundational values like patience and resourcefulness, crucial for becoming *inummarik*¹ and fostering

¹ Inummarik is an Inuit term referring to a good, well balanced, contributing member of society. To become an inumarik, it's seen as a lifelong process of learning, self-discipline, and living ethically within relationships all around.

resilience, self-worth, and autonomy among Inuit youth (Snow & Obed, 2022). More broadly, engaging in LBL increases systems thinking, problem-solving skills, and collaborative abilities essential for addressing complex socioecological challenges, such as climate change and environmental degradation (Mckim et al., 2019).

LBL also ensures the principle of sustainability through reciprocity. The relationship between human beings and the Land is understood as a symbiotic one, where all of creation is treated as equal, and humans have no right to take without giving back (Bowra et al., 2021). This mandates self-reflection and an ongoing commitment to nurturing and understanding this balance to ensure the “health of mother earth” (Bowra et al., 2021, p. 138). Additionally, LBL directly counters the western prioritization of cognitive learning by embracing a holistic model that enhances student well-being, reduces stress, and improves cognitive function through active, hands-on engagement (Mugford, 2025). This approach aligns perfectly with the Two-Eyed Seeing framework, which seeks to bridge pedagogical gaps by integrating both Indigenous oral histories and traditional knowledge with contemporary scientific methodologies to deepen learning for all students (Mugford, 2025; Snow & Obed, 2022).

Proposed Curricular Module: The Salmon’s Journey - Reciprocity with the Land

To exemplify the practical integration of Indigenous epistemology, a curricular module focusing on the salmon lifecycle in Secwépemc territory is proposed. This unit uses the lifecycle of the salmon, a creature of immense cultural and ecological importance, to model the principles of relationality, reciprocity, and stewardship.

Out-of-Classroom (Land-Based) Activities

The land-based portion of the module is non-negotiable, as it actualizes the core principle of the Land as the First Teacher. The module centers around Tsútswecw (pronounced

tu twa) Provincial Park (Adams River), renowned for its spectacular salmon run.

- 1. Elder Led Field Study and Storytelling:** Students will visit the river with an Elder or community knowledge holder (e.g., Elder Mike Arnouse, as referenced). The focus will be on the spiritual significance of the salmon's sacrifice and journey. This activity is crucial for receiving traditional knowledge as shown in the video "Through the Eyes of Elders" (Arnouse, 2011) and understanding the salmon's role in the lifecycle, as well as the cultural uses of the fish (food, ceremony, and provision for the earth upon death). The learning here is emotional and spiritual, fostering the sense of belonging and resilience described by Mugford (2025). The Elder may share stories, such as "The Story of Porcupine" (Qwelmínte Secwépemc, n.d.) and "Coyote and the Salmon" (Thomas, n.d.), to teach foundational values in an authentic context.
- 2. Practicing Reciprocity: Habitat Stewardship:** Students engage in hands-on activities that demonstrate the principle of giving back to the Land. This could involve collaborating with organizations like The Kingfisher Interpretive Centre or the Tk'emlúps te Secwépemc Natural Resources Department. Activities include raising and releasing salmon fry, performing basic aquatic insect/plant counts to monitor water health, and actively caring for the water bed/banks. This directly instills the concept that students are caretakers of the Land and provides an authentic context for developing critical problem-solving skills (Mugford, 2025; Mckim et al., 2019).
- 3. Seasonal Rounds and Behavioral Adaptations:** By observing the local environment, students study the seasonal rounds and behavioral adaptations of the local ecosystem in relation to the salmon. This requires ongoing nurturing and understanding of the Land to live in a balanced way (Bowra et al., 2021). Students would learn how the changing

seasons, water levels, and the health of the surrounding forest (e.g., the impact of wildfires on salmon habitat) could determine the salmon's survival, demonstrating the land's constant state of flux.

In-Classroom Integration Across Disciplines

LBL is integrated across disciplines to ensure it is not an isolated subject (Mugford, 2025).

1. **Science and Indigenous Ecological Knowledge (IEK):** The Science curriculum incorporates IEK on water usage, sustainability, and traditional harvesting practices alongside western scientific investigation. Students use water samples collected in the field to test for contaminants and analyze the data through the lens of both contemporary science and Secwépemc perspectives on the health of Mother Earth (Bowra et al., 2021). The catastrophic impacts of wildfires are studied by examining how they change habitat conditions, which reinforces the need for understanding ecological systems (Mckim et al., 2019).
2. **English Language Arts (ELA):** ELA serves as a space for self-reflection and knowledge transfer, aligning with the oral traditions that are foundational to Indigenous epistemology. Students engage in forest/river journaling and sit spots to record their sensory experiences, emotional responses, and intellectual observations from the field. They then develop story writing skills by transforming their journals into narratives or using traditional Indigenous storytelling structures to recount the salmon's journey, honouring the Land and its elements as a living being. Students can also engage in writing a short story or comic from the perspective of a salmon. For example, how might the salmon perceive the environment and its experience there?

3. **Social Studies and Decolonization:** Social Studies explores the socio-political context of the module, specifically examining land rights and treaties related to the Adams River and the Secwépemc Nation. This critical evaluation forces students to "critically explore and understand our own positionality in relation to histories of conflict over land that continue to shape patterns of behavior" (Snow & Obed, 2022, p. 271). This deepens the understanding of reconciliation by analyzing power structures and historical imbalances in environmental management.

Assessment for Cultural Relevance and Fairness

Assessment must align with the holistic and relational learning outcomes of LBL by critically evaluating traditional tools for cultural relevance and fairness (Bowra et al., 2021). The priority is to assess physical, emotional, spiritual, and intellectual growth, not just cognitive recall.

1. **Process-Oriented Observational Assessment:** The development of resilience, resourcefulness, and collaboration abilities is assessed directly on the Land. Educators use observational checklists or rubrics during activities like water health monitoring and caring for the river banks. The criteria are based on Indigenous values, such as the ability to show patience and contribute to the collective rather than displaying individualism (Bowra et al., 2021; Snow & Obed, 2022). This evaluation of skills development and adherence to ethical protocols provides authentic contextual data (Snow & Obed, 2022).
2. **Holistic Product Assessment:** Traditional essays are replaced or supplemented with a comprehensive multimedia story or presentation. This product requires students to weave together the scientific data (e.g., water quality charts), the cultural teachings (e.g., Elder's story excerpts), and personal reflections (ELA journaling) into a cohesive

narrative of the salmon's journey. This method embraces multiple intelligences and ensures that the assessment reflects the LBL goal of synthesizing knowledge from multiple perspectives, including the integration of Indigenous oral histories and contemporary environmental science (Mugford, 2025).

3. **Relational Self- and Peer-Assessment:** To assess the principles of relationality and contribution to the collective, students engage in reflective practice. They use structured prompts to evaluate their own learning and that of their peers in relation to the Land and the group. Questions might include:

- "What did the land teach you about the concept of balance?"
- "How did your actions contribute to the collective goal of stewardship?"
- "Identify a moment where you demonstrated patience or resourcefulness."

This approach honours the collective nature of Indigenous education and assesses the nurturing of kinships (Bowra et al., 2021).

Conclusion: Embracing LBL as a Necessity

LBL, through the lens of the salmon lifecycle, offers an unparalleled opportunity to create holistic, inclusive, and meaningful educational experiences. By integrating Indigenous epistemologies—recognizing the Land as a sentient First Teacher and embracing the principles of relationality, reciprocity, and stewardship—the curriculum not only enhances student learning and well-being but also directly addresses the need for decolonization and reconciliation (Snow & Obed, 2022). The proposed module uses authentic, hands-on, and culturally relevant activities, supported by a fair assessment structure that validates multiple forms of intelligence. As society moves toward a more sustainable and equitable future, embracing land-based education is not merely an option but, as Mugford (2025) suggests, a

clear necessity. This work requires ongoing collaboration, commitment, and a profound respect for Indigenous ways of knowing to honour the Land, culture, and future generations.

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