

PART ONE: FOUNDATIONS

3. Connecting With the Land: Including Land-Based Activities in Your Units

Understanding and experiencing connections with the land is fundamental to Indigenous Knowledge. One way of integrating Indigenous ways of knowing into a science unit is to provide students with an opportunity to interact with the land in some way. Ideally, every unit will include a land-based activity. This section gives some suggestions for how that can be achieved.

Activities that provide experiences and connections with the land are not intended to imitate or recreate actual First People's relationships with their territories. (The exception, of course, is for students in a First Nations community school whose experiences will be related to their own cultural activities).

The types of land-based activities suggested here are intended to encourage students to:

- develop their own relationships with the land
- interact with their environment and community
- engage in authentic experiences
- develop an understanding and appreciation of different relationships with the land
- view the land from a holistic, interconnected perspective

Suggestions for incorporating land-based activities into your units

- Know your local area. Beyond the school grounds, what places in your neighbourhood can students visit? Explore what options are available for land based activities, such as parks, open areas, or woodlands.
- Include a holistic view; consider the big picture as well as the specific activity.
- Some possible types of land-based activities include:
 - food and medicine gathering with appropriate guidance from the local First Nations community
 - geological field trips
 - visits to archeological sites
 - exploring the night sky from an Indigenous perspective.
- You may be able to collaborate with other teachers to make joint trips.
- Have discussions with your administration to offer opportunities within the schedule.
- Adapt some of the walks suggested in *A Walking Curriculum: Evoking Wonder and Developing Sense of Place* by Gillian Judson.
- For more background and ideas, see the article "Learning from the Homeland; An Emerging Process for Indigenizing Education," by the W?SÁNEC School Board and Tye Swallow. It is found in *Knowing Home: Braiding Indigenous Science with Western Science, Book 2*, page 206. Download from <https://tinyurl.com/fnesc76>.

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Planning for Land-Based Activities

Taking students out on the land requires planning both by students and teachers.

a. Selecting a Site

- Select a suitable site that students can safely and easily visit. A natural site will likely enable students to have a feeling of being connected with the land or nature. However, any site, such as a nearby park or a corner of the school grounds should have some type of character that students can identify and reflect on.
- Carry out necessary field trip permission and parental notification, as required

b. Preparing for the site visit

- Prepare students for the visit to the site by explaining the purpose of the activity. This will depend on how you are using these activities: on their own, or as part of a larger project.
- Go over expectations for behaviour and safety considerations, and any other protocols that may pertain to the field trip.

c. For more ideas for planning outdoor activities, see:

- *Get Outdoors! : An Educator's Guide to Outdoor Classrooms in Parks, Schoolgrounds and Other Special Places* (Sue Staniforth, WildBC) It includes Teacher Tip Sheets such as Outdoor Classroom Essentials, Field Trip Checklist and Outdoor Field Trip Planner.
- Judson, Gillian. *A Walking Curriculum: Evoking Wonder and Developing Sense of Place*.

Land-Based Learning in Action

Here are two examples of authentic land-based projects experienced by students in cooperation with their local First Nations community.

Connecting Natural Resources and Economic Activities Kitasoo Community School, Klemtu

The high school class of Kitasoo Community School in Klemtu, BC, partnered with the local members of the KXIRA (Kitasoo-Xaixais Integrated Resource Authority), to participate in a land-based activity in which students visited different locations in their territory with the primary purpose of studying the connections between natural resources and economic activities in the area.

Local knowledge keepers shared stories with the students about the historical, environmental and socio-cultural significance of these places to the local First Nations. They also explained the different designations for places within the territory (reserve, conservancy, provincial park) and what each means as far as how the area was managed in the past and is managed today.

Once students returned to the classroom they evaluated the different perspectives people can have surrounding the use of natural resources in their territory and participated in a role play activity where they had to negotiate

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between different stake holders who were interested in the potential economic opportunities in the area.

As an assessment piece, students returned to the locations in the territory and were given the opportunity to share what they had learned about each location to the KXIRA members. Students shared their knowledge of the history, socio-cultural significance, and the different natural resources of each site.

The assessment piece for this project aimed to honour the oral transmission of knowledge in First People's cultures and the notion that knowledge is often focused on a sense of place.

Lu Lax Kyook Ecological Monitoring Project Hartley Bay School, SD 52

Students from Hartley Bay School, of the Gitga'at First Nation, participated in real-life ecological monitoring of a local estuary over the 2014-2015 school year. They worked with Elders and scientists, and were supported by the community and the Band Council. Not only did they create their own learning, the students contributed real data to the community's on-going monitoring programs, and were able to help build a better capacity to plan for future generations. The project won the Jack Layton Award for Youth Action in Sustainability presented by Learning for a Sustainable Future for 2015. (See <http://lsf-1st.ca> for more information.)

View an overview of the project in this video: <http://bit.ly/2dqgVBc>

The goal was to provide an immersive learning environment where no one subject area was distinct from the other. The students themselves, with the guidance and direction of teachers, developed their own big ideas and constructed their own knowledge. They threw out the textbook and made our Place the textbook.

To conduct their surveys in the Mossy Bay estuary, students travelled by boats. The equipment and scientific instruments were in most cases supplied by the Gitga'at Guardians but the students were involved in making some instruments. Students participated in monitoring five particular elements of the Lu lax kyook estuary:

1. Fish populations in the estuary (Beach Seining)
2. Salinity and Temperature
3. Stream Flow
4. Land Animals surveying (Trail Cameras)
5. Berries

Students used traditional techniques such as locating animal trails, and modern technology including automatic trail cameras. This created an excellent blend of the modern with the traditional. Additionally, students learned in multiple subject areas through one learning project: Language Arts (Sm'algyax/English), Socials, Science, Math, PE, Media Visual Arts and Visual Arts.