

Five Steps to Meaningful Indigenous Engagement in Science Research (Adapted for Field-based Teaching)

Context

Land and Peoples Acknowledgement

The work leading to this resource was done on the traditional, ancestral, and unceded territory of the (Musqueam) at the University of British Columbia Point Grey campus in what today is called Vancouver, Canada; as well as acknowledge and respect the lək'wəŋən peoples on whose traditional territory Ocean Networks Canada and University of Victoria stands. The authors acknowledge the connection that Musqueam and the Songhees, Esquimalt, and W̱SÁNEĆ peoples whose historical relationships with the land and sea continues to this day.

About the Authors

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How was this resource produced?

This resource was collaboratively produced in the context of [Earth Science Experiential and Indigenous Learning \(EaSEIL\)](#), a faculty and curriculum development initiative that creates space for instructors, students, staff, and community members to develop and transform field-based experiential learning in UBC science and engineering courses at the University of British Columbia (Lukes et al., 2022). This resource is part of a collection of tools and resources to support instructors in designing field-based learning experiences in science and engineering envisioned by L. Lukes.

The initiative supports instructors affiliated with EaSEIL's community of practice to respectfully incorporate Indigenous histories, ways of knowing and Knowledges, contexts and perspectives into science and engineering curriculum. As part of EaSEIL's faculty development programming, Pieter joined a community of practice meeting in December 2023 as a speaker. He shared the five steps to meaningful Indigenous engagement in science research that he has adapted from his experience, inspired by the work of others in the field such as [Bob Joseph](#), Ken Paul, Shelley Denney, elders and the many Indigenous delegations Ocean Networks Canada Indigenous Engagement team has brought together nationally and internationally. One group that was instrumental in the development of these 5 steps was the 53 member Indigenous Pacific Islander delegation at [OceanObs19](#) who wrote the Aha Honua declaration and stood in front of 3000 scientists and said "we want to engage properly."

After the EaSEIL Community of Practice meeting in December 2023, the authors collaborated to produce a resource summarizing the five steps and translating them into considerations for field-based teaching. Our purpose was to support UBC science and engineering instructors to establish connections with existing principles and ideas about what meaningful engagement and building true partnerships with Indigenous communities looks like in practice, so that they could incorporate these approaches in their own research and teaching practices as they mentor undergraduate and graduate students in how to conduct science or engineering in outdoor settings. This is meant to be a living document and the steps as presented are not meant to be viewed as a rigid order nor are they meant to be used as a checklist.

Terminology

Indigenous Engagement: It's about connecting with communities early, often, and on an ongoing basis to try to develop an understanding of the complexities, values, beliefs, interests, issues and concerns. – Bob Joseph

Field-based teaching: We define field-based teaching as opportunities that instructor(s) offer students to learn outdoors, on land or water, outside of classroom or laboratory facilities.

References

Lukes, L., Mazabel, S., Sherman, S.B., Pete, S., & Gilley, B. (2022, October). *Developing an initial theory of change for the Earth Science Experiential and Indigenous Learning (EaSEIL) Project, a faculty and curriculum development project*. The Geological Society of America, Denver (USA) and Online

Five Steps to Meaningful Indigenous Engagement in Science Research (Adapted for Field-based Teaching)

This resource invites instructors to enhance their awareness about considerations and actions when they are planning to integrate Indigenous context and perspectives in field-based learning experiences. It offers general guidelines/'loose' steps to engaging with Indigenous communities for the purposes of teaching and mentoring students on and community-centred approaches to doing field work.

How to use this resource?

1. **Read** through the steps and **reflect** about where you are in relation to what each step proposes.
2. **What are your intentions in relation to integrating Indigenous context and perspectives in field-learning experiences?** Use the space below to write your intentions (e.g., learn more about the Indigenous context of the field sites I visit in my course; enhance students' sense of place with Indigenous perspectives; engage with Indigenous community members as co-educators)

Note: Depending on your intentions and your own personal learning journey, you will work through one or more of the steps.

STEP 1. Identify

- The Indigenous community or territory you want to build a partnership and/or collaborate with.
- Start as SOON as possible. The earlier the engagement, the better. Start with the proposal together. Work as a team with the Indigenous peoples in whose territory you are studying.
- Are they a treaty or non-treaty nation? This determines if they have a band office or are self-governed. Where are they located? Are they urban or are they remote? What is the population?

Considerations for field-based teaching:

- Which location(s) do you visit/plan to visit (field trips/courses?)
- Go to nativeland.ca, <https://maps.fpcc.ca/> and identify ALL Indigenous communities/territories whose Lands you're visiting/planning to visit (roadcuts count)
- Make a list of these Indigenous communities/territories
- Add to orientation package / information / field guide

STEP 2. Learn

- Dig deep into your research!
- Educate yourself about the Indigenous peoples you would like to collaborate with (to understand the people and the communities). It's respectful to have a comfortable understanding of the history, traditions and culture.

Considerations for field-based teaching:

- Gather Indigenous-authored/vetted resources about the specific locations where your field trip or course [takes/will take] place [about traditions, history, knowledges of local Indigenous communities; the communities' relationship with those places]. Often the nation will put their history and other resources on their website.

These are some resources that instructors who teach on sites in British Columbia, Canada have found useful:

- [Indigenous Peoples Atlas of Canada](#) (also available through [Xwi7xwa Library](#))
- [Musqueam a Living culture](#)
- [Squamish Nation](#)
- [Tsleil-Wuatuth Nation, The People of the Inlet](#)
- [Huu-ay-aht First Nations](#)
- [Cowichan Tribes](#)
- [nuuča̱a̱nuł̓athin We Are Nuw-chah-nulth](#)
- [Syilx Okanagan Nation](#)
- [Okanagan Syilx Lib Guide](#)

- Visit/reach out libraries in your institution and inquire about specific resources to learn about the Indigenous history, traditions, culture of specific communities. For example, at the University of British Columbia, you can connect with [Xwi7xwa library](#)
- Visit/reach out to Indigenous Peoples (First Nations, Inuit & Metis) offices (self-governed or federal band offices), cultural centres, land management offices to say hello, share your intentions, and inquire about available resources* (e.g., maps, books, online resources, archive) or people to connect with* (Land stewards, guides, guardians) - *if not already identified on the related Indigenous Peoples websites.
Some heritage museums and cultural centres offer in person/virtual tours that your students could join prior to/during field trips/courses. Make sure to reach out in an

unassuming and informed way. Keep in mind when reaching out, there may be long wait times due to overworked offices and communities.

These are some examples of Indigenous-led Heritage Museums and Cultural Centres that instructors affiliated with EaSEIL and who teach on sites in British Columbia, Canada have found useful:

- [Nk'Mip Cultural Desert Centre](#)
- [SNCEWIPS Heritage Museum](#)
- [Kiixin Tours](#)

- Upload a list of relevant resources to the learning management system and invite students to engage with these resources as part of course work (prior, during or after field learning experience – for example researching/learning together with students, as part of small group projects).

Step 3. Plan

- Meaningful relationships take time and effort to forge and follow-up is necessary to maintain a positive relationship
- Create an engagement plan (keep track of efforts and outcomes). Consult key members of the First Nation(s) such as the Land Manager or Guardians of who should be at the advisory group meetings. Hold Advisory group meetings every 1-2 months for guidance and to make sure everyone is on the same page.

Questions to consider:

- What level of engagement do you hope to achieve?
- What is the community interest in your project?
- Can we build a proposal together?
- Am I giving enough time for my engagement?
- How will the Nation benefit? What can we offer? Can we hire? Do we have an honorarium budget for elders?
- Is this to take place in stages? Break it down into small pieces that can change or shift as the relationship builds.
- How will you share back your research, data, reports & other?

Strategy:

- Who is project lead and who will be your lead on communications?
- What tactics to ensure success?
- Honorariums? Salary?
- Tracking: a clear chart with communications, successes, and lessons learned will be helpful planning for future projects. The intention is that the plan is co-developed in an iterative process with input from the partner

Considerations for field-based teaching:

- Identify the level of engagement you hope to achieve and your intention(s) when reaching out. Answering the following question could help guide this process and subsequent steps in planning:
 - What purpose(s) does this engagement have/could have for me as instructor, for my students' experience? Check all that apply:
 - a. To inform communities about my activities
 - b. To seek permission to be there for the purposes of teaching
 - c. To better understand communities' relationship with locations I visit for my own knowledge (assumes you have already engaged in Steps 1 and 2)
 - d. To better understand communities' relationship with locations I visit for informing students about it (assumes you have already engaged in Steps 1 and 2)
 - e. To invite their perspectives to inform mine/students understanding
 - f. To inform my understanding of their priorities and identify potential contributions stemming from my course
 - g. To forge collaboration (e.g., community as co-educator)
 - h. Other:

Step 4. Engage

- Don't engage too late... reach out!
- Get to know each other first before engaging straight into business. Tell each other a story. Have initial meetings to get to know one another before necessarily jumping into project goals.
- Indigenous Band offices and other administrative offices are like town offices, frequent requests for information/involvement are received
- Initial contacts can be: Individual Indigenous community office, a regional community (e.g., council representing a group, office established by a group of communities). Stewardship, land management offices, land or coastal guardians.
 - First contact will give you good advice on next steps
 - First contact may not need protocol, learning about protocol (a useful resource is: <https://www.ictinc.ca/blog/topic/indigenous-protocol>)
 - Any missteps with good intentions can be overcome

Considerations for field-based teaching:

- Connect with the Indigenous communities (in person? Via email? As a group of instructors? On my own?) to inform them about my teaching in the area and (select all that you'd like to do, choose one as a starting point):
 - a. Moving forward in the right direction - state intentions, describe activities, invite the communities' ideas for what we should do
 - b. Seek permission to be out in areas of their territory

- c. Invite a cultural guide/steward to join you/group (for a conversation, for a day out in the field, to get to know one another). If you would like to invite them as co-educators, establish protocols (honorarium, other forms of reciprocity, transparency about process – where, who, what, why and whether/how they want to be identified/acknowledged in institutional documents – syllabi/Canvas).
 - d. Take time to listen to their stories, priorities (visiting cultural centres and/or special events)
 - e. Gauge their interest in learning more about my teaching/disciplinary interests, reciprocity
 - f. Ask them if there is anything in particular you should know about those places (e.g., sacred, traditionally meaningful, special care)
 - g. Ask if there is anything you should pay attention to and inform them about (e.g., presence of bitterroot or other plant/animal species)
 - h. Ask what you could do to make sure you're respecting their traditions, protocols, stewardship of the Land
- Enhance your cultural competency as you visit different sites (as informed by Step 2 and/or engagement with Indigenous peoples. For example, increasing awareness of and respect/care of meaningful plant species (e.g., bitterroot); language revitalization (when permitted to do so) through resources, in conversation with students; sharing own process of engaging with local Indigenous groups with students.

Step 5. Maintaining Relationships

- Initial first steps may move slowly leading to meetings without direct outcomes (Remember the nation may be already overly engaged or busy with their jobs)
- Once trust is in place, the relationship is a strong one with much potential for positive mutual benefits
- Consult who best to invite to advisory meetings.
- Hold advisory group meetings
- Always stay transparent

Considerations for field-based teaching:

- If you establish a direct relationship with a person/centre in the community, reach out to them after the field experience is over, thank them for their time and share student feedback with them (gather your students' perspectives about the experience). [Includes in person/virtual visit to cultural centres or museums]
- If you're reporting to your department, colleagues, funding agencies, and/or publishing about the learning experience, connect with your contact person: ask whether and how they want to be identified/acknowledged, invite input on the report, invite authorship (these questions are ideally part of the initial conversation). Seek consent to share on an ongoing basis.

- If you're using traditional names or Indigenous languages on course resources, share with your point of contact to confirm data sovereignty (e.g., can you/students share traditional knowledge in a map?). They may not want it shared or may offer input. How could the community benefit/use those resources?
- If you were granted access to visit a site. Connect with land management, guide or guardian and let them know how it went and report on anything they asked you to report about.
- Give Back! Share your research, transcriptions, data... after the project (if you collected any data or did research as part of field teaching).