



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Education

Master of
Educational
Technology
Program



Virtual Inclusive Makerspace

Access to Clean and Safe Water for Indigenous Communities

Making to evoke change for t real-life crises for Indigenous People

Overview of the challenge

This challenge exposes makers to a Canadian crisis for Indigenous communities who have fallen victim to centuries of environmental racism. Still, in 2023, Indigenous people are denied the right accessing safe and clean drinking water at the hands of the government of Canada. Through this inclusive maker challenge, learners will work through the design thinking process to propose and make practical and effective solutions for solving the water crisis for Indigenous communities.

Materials and Resources Required

a) Map: [Water Safety in First Nations](#)



b) Interactive Map: [WWF Watershed Report](#)



c) Water Today: [Daily Advisories](#)



Any no tech, low tech, or high-tech materials that you wish. You are encouraged to utilize materials in your environment for this challenge.

Inclusive Maker Challenge Instructions

Spend the next few minutes examining the links provided in the materials section. After viewing the content, what are your initial questions? Concerns? Observations? Inquiries? Issues?

Identify the problem presented in this information.

Using the materials available, create an innovative solution to the problem. While doing so, consider the following prompts in the critical questions section as you begin to design.

Be prepared to move your ideations to execution through the design of a prototype and then into the testing phase of your prototype.

Challenge Objectives

The objective of this challenge is to propose plausible solutions to an age-old environmental racism issue, namely, providing accessibility to clean water to Indigenous communities.

Critical Questions for Consideration

- A. What is the problem?
- B. Why is this a problem?
- C. What are the possible solutions?
- D. What can be designed to help with these solutions?
- E. How might you justify your design to an audience in education? (teachers/students)? Government (deputy ministers, municipal leaders)? Corporate leaders? Healthcare?

Background/ Additional Information

For more information about environmental racism, please visit this interactive digital learning resource that focuses on [Environmental Racism, Indigenous Water Issues, and Water Politics](#).



You may also be interested in engaging with these multiliteracies for more information on environmental racism and the Indigenous water crisis in Canada.

- a) [Water crisis in Canada as a reflection of environmental racism](#)



- b) [Access to clean water in Canada and environmental racism](#)



- c) [Make it safe: Canada's obligation to end the First Nations water crisis](#)



Inclusivity Focus

When introducing this topic into learning environments, you will want to practice cultural sensitivity, responsiveness, and appropriateness. You may want to gauge what the learners know about this issue. Environmental racism is not something that has been prevalent in the literature until recently and is certainly not included in most curriculums. There is an imperative need to jam these curriculums to shed light on Indigenous issues and fully engage in the truth and reconciliation process. Inviting informed members of community to speak on behalf of this issue (i.e., Indigenous members who are directly impacted by this form of racism). Please check your own inherent biases and the misinformation that has been published about this topic and in turn, make sure that all voices, perspectives, and marginalized and oppressed individuals are heard and honoured. Create a safe and welcoming learning environment for all of your students to free express their ideas and sound opinions pertaining to this topic.

No Tech, Low-Tech, High-Tech Options

For maker materials you can provide learners with anything and everything. Please do not assume what the learners could use but rather, task the learner to find their own materials, use what is available in your natural, institutional, and virtual environment. The possibilities for this maker challenge are endless.

Extensions

The possibilities for extending this maker challenge are endless. Please see the list below for extension examples and share your own ideas by tweeting your ideas to #UBCMETmakerchallenge.

- Present your tested prototype to your local MPP, your closest Indigenous community, or to a non-profit organization advocating for Indigenous water rights (see the list below)
 - a) [Raven Trust](#)
 - b) [Water First](#)
 - c) [One Drop](#)
 - d) [Water for People](#)
- Create a dragon's den pitch based on your prototype which will be shared with Fortune 500 companies (i.e., RBC, Johnson and Johnson) that are invested in

eliciting change in under-represented and marginalized communities. Typically these companies will provide a monetary grant for the selected prototype to be made to fruition or the money may provide you funds to donate to a non-profit organization to turn talk to action.