Tracking Change Youth Program

Update & Milestones

Materials

Lesson Plans

1. **Science 7** - Ecosystem Shift (Aquatic)
2. **Science 7** - Ecosystem Shift (Ice)
3. **Science 7** - Co-Management
4. **Science 7** - Fish Monitoring
5. **Science 8** - Local Aquatic System Health
6. **Science 8** - Issues
7. **Science 8** - Local Drinking Water
8. **Science 10** - Climate Change
9. **Science 10** - Global Climate Change and Rivers in Different Biomes
10. **Experiential Science 30** - Freshwater Ecology
11. **Experiential Science 30** - Sustainability and Freshwater Resources
12. **Experiential Science 30** - Disturbance and Development

River Journeys

Protected area activity:

- How to Interview
- Scientific Investigation
- Success Stories

On-the-land activities

Lesson plans

Science 8 - Local Drinking Water

Unit E: Freshwater and Saltwater Systems (Social and Environmental Emphasis): Describe the distribution and characteristics of water in local and global environments, and identify the significance of water supply and quality to the needs of humans and other living things

- identify major factors used in determining if water is potable, and describe and demonstrate tests of water quality (e.g., investigate and describe the physical characteristics of a sample of water, such as clarity, salinity and hardness; investigate biological tests).

Introduction: Many Indigenous communities in Canada do not have access to clean drinking water. This lesson introduces students to the importance of clean water and allows them to investigate the quality and perceptions of drinking water in their own community.

Science 8 - Local Drinking Water

Activating Strategy 1: Opening question to activate student knowledge: is the water in your community safe to drink? As a class, draw a scale of water sources (tap, bottled, well, river, lake, etc.) from safest to least safe, based on student perceptions and experiences. Lead a class discussion using provided questions.

Activating Strategy 2: Indigenous youth in Canada are strong leaders in protecting water. Autumn Peltier is one of these young activists. Watch Autumn speak at the United Nations General Assembly for the declaration of the International Decade for Action on Water for Sustainable Development. As a class, discuss student reactions to seeing a young person fighting so hard for water protection.

Science 8 - Local Drinking Water

Learning Experience (Class Activity): *Introduction to water quality assessment in a First Nations community (case study).*

Many First Nations across Canada face challenges in ensuring the drinking water they have from the land and in their communities is safe to drink. Today, we will look at a case study of how people in one First Nations community understands and responds to the safety of their local water sources.

- Distribute copies of a study on water quality assessment with either Katl'odeeche First Nation or Dene Tha' First Nation. Read the case study together as a class, in small groups, or individually, and respond to the provided questions.

Science 8 - Local Drinking Water

Learning Experience (Group Activity): *Drinking Water Survey (in community).*

Display the “Drinking Water Survey” for students using a projector. Walk through the survey together and adapt survey according to student feedback. Make a few copies of the finalized survey for each student.

Have students collect survey responses around the school, from other students, teachers, administrators, parents, or community members. For homework, have students collect survey responses from parents, community members, elders, etc. Allow enough time for students to gather responses.

- Input survey responses into the “Drinking Water Survey Summary.”
- Conduct simple statistical analysis with the “Drinking Water Survey Summary” spreadsheet.
- Review the Survey Summary together as a class.

Science 8 - Local Drinking Water

Extension*:* Students use the information they gained through the survey to spark further research about water issues relevant to their community. Options:

- In small groups, identify areas of further research raised by your survey. Hold in-depth, conduct online research, and carry out scientific testing. Based on further research, small groups prepare presentations about what they learned and give some recommendations regarding water management, to be delivered to leaders, community members, and/or key stakeholders. Students might host an event at the school or present at a local meeting.
- Scientific testing is another way to understand water quality. Conduct scientific testing on various local water sources identified through the survey using school resources or test kits offered through the Safe Drinking Water Foundation site.

Website: network survey results between schools

Traditional Words

English Word	Dene (Beaver or xe'ghont'e)	Dene (Slavey or Kaguntu)	Cree	Gwich'in	Inuvialuit
Drinking Water	Tu tsedǫ	Tu tse'tsehi			
Good tasting	Tu łuko	Tu theka'			
Dirty water	Tu tsene'	Tu dzǫ t'ehi			
Bad tasting water	Tu dehtsį	Tu nezų'ile			
Bad smelling water	Tu woteh dehtsį	Duye' tu de'tsį			
Water that is healthy	Tu mbe uujǫ ghe'tse'da	Tu beta nezų ts'ena			
Water that might make you sick	Tu edu mbe ujoǫ ghet'tse'da	Tu beta dedihi ati'			
Water I would never drink	Eyi tu la edu ghǫ'don esi	Tu edu tsetsehi'ile ǫt'e			
Town water from the tap (water truck)	Tu wo'dłutthe tsi tu	Tu me'ch'ine tsi' tu			

Other Highlights!

- Quotes of environmental health and change
- Youth Knowledge Fair (local)
- Case studies (regions, issues, etc.)
- Interviews
- Qualitative & quantitative surveys (fish)
- Experiment/scientific testing (Operation Water Pollution, HOBO sensors)
- Videos (MCFN monitoring)

Milestone	Status	Deadline
Refine lesson plans	COMPLETE	July 29, 2020
Complete River Journeys materials	In progress	~July 31, 2020
Feedback from youth and teachers	In progress	August 10, 2020
Create “teacher package”, landing & “about” pages	In progress	August 10, 2020
Incorporate final photos/terms **- updates?**	In progress	TBD
Design PDF lesson plans	In progress	TBD
Build website with Finn	In progress	~August 21, 2020
Promotion!	-	~August 24, 2020