



Treating Oil Sands Wastewater

Organizational Info:

Title: Treating Oil Sands Wastewater

Summary: Students learn about the water contamination from oil sands and how scientists are helping to clean it up.

Inquiry Question: Inquiry Question 3: What is the law of water and why is it important that this law is respected?

Duration: 1 class

Learning Environment: Classroom, online

Season: Summer, Spring, Fall, Winter, All

Materials:

- Printed copies of news article found here: <http://surl.li/gyfhg>
- Technology and Wastewater.pdf
- Quirks and Quarks Interview with Dr. Dianne Orihel: <http://surl.li/gyfgx>

Meta Data:

Content Type: Activity, community action project, educator guide, resource, language learning, or storytelling

Bundle: Water

Theme: Contaminants in the Environment

Subject Area: Biology, Chemistry, Environmental Education, Science, Social Studies

Curriculum Focus: 8

Curriculum Links:

Science and Technology: E1.1, E1.3, E 2.3, E 2.6

Western STEM Connection

1. Students read the following article from *The Conversation* focused on Dr. Dianne Orihel's work on how new technology makes wastewater from the oil sands safer for fish:
<http://surl.li/gyfhg>
 - Summary of research found in **Technology and Wastewater.pdf**.
2. To learn more students can also listen to the following Quirks and Quarks interview with Dr. Dianne Orihel focused on this study: <http://surl.li/gyfgx>
3. After reviewing the materials teachers leads a discussion with students focused on how technology is being used to help us adapt to and mitigate the impact of contaminants and other stressors on the environment. Students can share other examples they are aware of and reflect on the *Law of Water* relates to this topic.



QUILLS

Queen's University Indigenous Land-Based Learning STEM
Queen's University Biological Station

Optional Extension:

Students research the use of technology to mitigate environmental impacts and report back to the class.