

The Water Walker: Indigenous Wisdom and Water Contamination

OVERVIEW

Special thanks to Seeing Red for footage from The Water Walker.”

ESSENTIAL QUESTION

In what ways do indigenous views of water align with scientific views, and how do indigenous activists use artistic expression to advocate for water protection?



Screenshot from *The Water Walker*, Courtesy of Seeing Red 6Nations

OVERVIEW

In this lesson, students will explore the significance of protecting water for some indigenous communities. They will be introduced to the work of influential indigenous activists on the global stage, including activist Autumn Peltier and musician Taboo. They will also conduct a scientific experiment to examine the dangers of contaminated water. Through these activities, students will consider the relationship between artistic expression and conveying important social and environmental messages.

As described in the documentary *The Water Walker*, a Water Walker is a term used among some indigenous communities to designate people who advocate for water protection and fight against water contamination. The film introduces Autumn Peltier, an Anishinaabe young person from Canada who follows in the footsteps of her aunt, another Water Walker to advocate for clean water. The documentary follows Peltier and her mother as Peltier prepares to present a speech to the United Nations defending the cause of eliminating water contamination.

Peltier’s conviction to protect water is deeply inspired by indigenous perspectives on the importance of water, which in their own right are based in scientific understanding. Water acts as a solvent, into which various minerals and molecules – or solutes – dissolve. The membranes of plant cells are semipermeable, meaning that through the process of osmosis, plant cells take in the solutes of the water that surrounds them. This process of osmosis may lead to beneficial or harmful effects within the plant, depending upon the type of solutes absorbed. Such effects transfer to humans, livestock, or fish who also eat the vegetable material. In such a way, avoiding water contamination is paramount to the health of entire ecosystems. As Autumn’s mother explains in the documentary, water produces the various types of “medicine” in the world – the plants, fish, and animals – and if the water is contaminated, so too is the medicine.

Understanding this science, indigenous people, environmentalists, and many young people have protested projects or activities that contaminate the health of water sources. Most notably, protests have revolved around fossil fuel pipelines which threaten to devastate ecosystems should

they leak or rupture. Often protesters and healthy water advocates rely on art and music to spread their message – and they are sometimes joined by well-known allies. For example, as part of the 2016 protests against the Dakota Access Pipeline, artists Taboo Nawasah collaborated with the non-profit organization Hip Hop Caucus to release “Stand Up/Stand n Rock,” a protest song that was viewed millions of times on YouTube – helping to spread the Water Walker’s message.

OBJECTIVES

Upon completion of this lesson, students will:

1. KNOW (KNOWLEDGE):

- Many indigenous people have strong connections to land and water, and often advocate for eliminating water contamination
- Indigenous perspectives of water often align with the science behind water
- The process of osmosis and the definition of the terms “solvent,” “solute,” “solution,” and “semipermeable membrane”
- Indigenous artists and activists can be role models for ways of addressing environmental issues

2. MASTERY OBJECTIVE

- Students will be able to examine the cultural, spiritual, and scientific significance of water by watching clips from the documentary film *The Water Walker* and pursuing a hands-on experiment on water contamination.

ACTIVITIES

MATERIALS NEEDED

- White flowers (3-5 per group)
- Jars (3-5 per group)
- Food coloring (3-5 colors per group)
- Water
- Scissors
- Art supplies (Cardboard, paper, paint, markers, etc.)

MOTIVATIONAL ACTIVITY

1. Play **Clip 1, “The Water Walker.”** Then ask students:
 - According to the clip, what is a “Water Walker”?
 - Why do Water Walkers defend clean water?
 - Do you think today a position such as a Water Walker is important? Why or why not?
 - Why might it be important to defend water?
2. Inform students that in this lesson they will be examining the work of a young Water Walker named Autumn Peltier, her fight to end water contamination, and some of the science behind clean water.

PROCEDURE:

1. Play **Clip 2, “Introducing Autumn Peltier.”** Then ask students:
 - Who is Autumn Peltier?
 - What was one of the reasons Autumn Peltier became a “water warrior”?
 - Based on the clip, how did Autumn Peltier choose to protect water?
 - Why might she be concerned about pipelines? What are pipelines? How might pipelines lead to water contamination?
2. Inform students that the clip refers to the construction of a pipeline in Western Canada called the Trans Mountain Pipeline Expansion Project. Play the CBC News video, “Canada’s Kinder Morgan Pipeline Explained” (<https://www.cbc.ca/player/play/video/1.4683323>) Then ask students:
 - How would you describe the Kinder Morgan Pipeline Project? (*It is a project to “twin” a pipeline in Western Canada.*)
 - What is carried in this pipeline? (*Various fossil fuel products.*)
 - What potential benefits does the pipeline offer? (*Jobs, money to Canada.*)
 - What are the potential drawbacks? (*Oil spills, toxins in soil and water affecting plant and animal life.*)
 - Why might people be opposed to the pipeline?
3. Play **Clip 3, “Water as Medicine.”** Then ask students:
 - According to Stephanie Peltier, what is the importance of water?
 - Why might Stephanie Peltier be concerned about the pipeline?
4. Distribute **Handout - Water Contamination Experiment.** Inform students they will now be doing a classroom experiment to test whether Stephanie Peltier’s concerns about water contamination are accurate. As a class or in groups (depending on the availability of materials), conduct the experiment described in Part 1 of the handout.

5. Allow one day to pass. Then examine the flowers in the experiment and ask students to investigate possible differences in the flowers, and fill out the chart in Part 2 of **Handout - Water Contamination Experiment** with their observations. Ask students to report the observations they noted in the handout.
6. Ask students to complete Part 3 of **Handout - Water Contamination Experiment**, and volunteer to share their scientific description of what occurred in the experiment.
7. Replay **Clip 3, “Water as Medicine”**. Then ask students:
 - Based on the experiment we conducted, do you feel Stephanie Peltier’s perspective on water is based in science? Why or why not?
8. Inform students that as part of her activism, Autumn Peltier spoke before the United Nations on the topic of water contamination. Play **Clip 4, Autumn Peltier Speaks before the U.N.** Ask students:
 - What are some of the reasons why Autumn Peltier feels protecting water is important?
 - What might she mean by the phrase, “Warrior Up”? How might someone who cares about water “warrior up”?
9. Play **Clip 5, Stand Up / Stand N Rock**. Inform students that this video was produced by Taboo of the American music group Black Eyed Peas in response to a similar pipeline project developed near the Standing Rock Sioux Tribe Reservation between North and South Dakota. After the clip, ask students:
 - What stood out to you about this video? Were there any visuals or lyrics that stood out?
 - Did you see any similarities between the message of this video and the work of Autumn Peltier? Why might they be similar?
 - How might music be a vehicle for environmental activism?

SUMMARY ACTIVITY

1. Display **Image 1, Climate Strike Signs**. Inform students that the documentary *The Water Walker* also features footage of Autumn Peltier attending a student climate strike—one of which is featured in this photo.
2. Using art materials, ask students to create similar climate protest signs, using the scientific and indigenous knowledge they gained from this lesson as inspiration.

EXTENSION ACTIVITIES

1. Watch the complete *The Water Walker* documentary: contact contact@storytelling@weareseeingred.com to arrange a screening.
2. Select one person featured on the United Nations’ “Meet 13 Indigenous Young Indigenous Rights Activists” list (<https://www.un.org/youthenvoy/2021/08/meet-13-indigenous-young-indigenous-rights-activists/>). Conduct additional research on the person you selected. Then, write a short summary of who they are, what their environmental concerns are, and how they are pursuing activism.



NEXT GENERATION SCIENCE STANDARDS

5. Structure and Properties of Matter

5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

COMMON CORE STATE STANDARDS

College and Career Readiness Reading Information Text Standards for Grade 5

CCSS.ELA-Literacy.RI.5.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

CCSS.ELA-Literacy.RI.5.6 Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

CCSS.ELA-Literacy.RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

CCSS.ELA-Literacy.RI.5.10 By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4-5 text complexity band independently and proficiently.

College and Career Readiness Standards for Writing for Grade 5

CCSS.ELA-Literacy.W.5.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.W.5.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

College and Career Readiness Standards for Speaking and Listening for Grade 5

CCSS.ELA-Literacy.SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

CCSS.ELA-Literacy.SL.5.2 Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.



CCSS.ELA-Literacy.SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

College and Career Readiness Standards for Language for Grade 5

CCSS.ELA-Literacy.L.5.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.



RESOURCES

VIDEO RESOURCES

- *The Water Walker* - The Water Walker
- *The Water Walker* - Introducing Autumn Peltier
- *The Water Walker* - Water as Medicine
- *The Water Walker* - Autumn Peltier Speaks before the U.N.

HANDOUTS

- Handout - Water Contamination Experiment