

STEM



Pepper-sprayed Protector, Sanding Rock Camp. Milk is poured in a Protector's eyes after he was pepper sprayed for fighting the DAPL.

In August 2016, Matika Wilbur traveled to the ancestral territory of the Hunkapapa Oceti, also known as the Standing Rock Sioux Tribe in North Dakota. She went to stand in solidarity in order to protect the Sioux Tribe's land, water, and lifeways from the Dakota Access Pipeline (DAPL), which now carries oil twelve hundred miles from the Bakken oil fields to a distribution center in Illinois. The movement was started by One Mind Youth, a group of Native teenagers who work to prevent suicide among their Native peers.

Matika states, "In Dakota, the place known as 'Cannonball' is sacred. It is called leninyanwakagapi, which translates to 'sacred stone' - the place where the water whirls to create perfect circular sandstones. In the creation story, the first gift from the Creator is water, and the second gift is the grandfather stone. The idea of digging up our ancestors' bones for fossil fuel's dying industry is an utter, shameful disgrace. It's hard to describe how outrageous such desecration is to outside people who have lost connections to their ancient histories, or to those that don't feel the vitality, abundance, and wonder of the land. I met one of the remarkable Runners, Danny Grassrope, a twenty-four-year-old from Kul Wicasa Oyate (the Lower Brule Sioux Tribe). He ran from Lower Brule to Washington, DC, with One Mind Youth to plead with President Obama to stop the Dakota Access Pipeline. He explained his purpose:

'We come with peace and we want to teach the world, not just Natives, that we don't have to be violent. The reason we ran to Washinton DC, is to bring awareness to President Obama as well as to all the United States about how much the pipeline is affecting the people around the Missouri River. This isn't just a Native issue. It's time to unite. It's time to come together. We are one family. This is one world. We are one nation. We get it, we aren't the only ones occupying the United States, so it's time for us to unite as people, as one. No matter what color or race you are. We are one People. We're Native Americans, and we're not doing it just for us. We're doing it for all people. For the four-legged. For the winged. For all things that need water. And we all do. Water is life for everybody...MiníWicóni, we say, which means, 'Water is Life.'

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INVESTIGATION

If the Dakota Access Pipeline or a similar pipeline was planned to go through your community, would you join a protest? Why or why not?

Citation: UC Berkeley Library Guide to Literature on Native American Perspectives of the Dakota Access Pipeline
<https://guides.lib.berkeley.edu/c.php?g=585158&p=4042470>

What is Native data sovereignty?

Citation: <https://nativeland.info/about/data-sovereignty/>

What can we learn from Native peoples about science, engineering, and land stewardship?

Citation: <https://www.nature.com/articles/d41586-021-00022-1>

Citation: <https://www.nature.com/articles/d41586-022-00029-2>

What would it mean to be a steward of the land that you are currently living on?

According to the U.S. Environmental Protection Agency, "Whether by conscious design or institutional neglect, communities of color in urban areas, in rural 'poverty pockets,' or on economically impoverished Native-American reservations face some of the worst environmental devastation in the nation." What is Environmental Justice?

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EXPLORATION

#1: **Read** <https://www.science.org/content/article/covid-19-data-native-americans-national-disgrace-scientist-fighting-be-counted>

How has science been used as a tool to oppress Native peoples?

#2: **Watch:** Insights on PBS Hawai'i: Should the 30 meter telescope be built?

Then discuss: Why is there an Indigenous Hawaiian resistance movement against the Thirty Meter Telescope (TNT) on Mauna Kea? How might scientific organizations work with Indigenous populations when there is conflict over new technology and missions?

#3: **Read:** "If Indigenous Peoples Stand with the Sciences, Will Scientists Stand with Us?" By Megan Bang, Ananda Marin, Douglas Medin
https://doi.org/10.1162/DAED_a_00498

Discuss: How can the scientific field make space for Indigenous scientific inquiry? How can Indigenous scientific practices and concerns enhance the field of Science in general?
