Video: Student engineers develop early warning system for blue-green algae

September 25 2023, by Geoff McMaster

Blue-green algae—or cyanobacteria—produce a range of toxins harmful to humans and animals.

Credit: University of Alberta

With temperatures rising due to global warming, blue-green algae blooms have become increasingly common on Alberta lakes. Early detection is crucial because the algae produce toxins that can be harmful to humans and animals.

Second-year Métis engineering student Jordan Eleniak is well acquainted with blooms, having grown up dodging them on Lac La Biche. Last

summer, in a U of A Indigenous internship program called I-STEAM Pathways, Eleniak developed a microbial fuel cell that quickly recognizes voltage fluctuations caused by the toxins, sending data to biologists over the internet. The technology is cheap and easy to produce, with materials fabricated by a 3D printer.

I-STEAM Pathways is a cross-disciplinary program enabling First Nations, Métis and Inuit students to engage in hands-on research in a variety of environmental fields including science, [environmental engineering](link), environmental law and policy.

In this video, Eleniak demonstrates how his [fuel cell](link) works.

Provided by University of Alberta

Citation: Video: Student engineers develop early warning system for blue-green algae (2023, September 25) retrieved 6 May 2024 from https://phys.org/news/2023-09-video-student-early-blue-green-algae.html