

Educational Video Series

Ocean Education: High School Years

Title: Investigating Environmental DNA

URL: <https://canadac3.ca/en/video/investigating-environmental-dna-coast-coast-coast/>

Overview: This 3-minute video explores a pan-Canadian environmental DNA study that was administered throughout the entire C3 expedition. Discuss with your students the changing biodiversity within Canada's ocean ecosystem and the implications of these changes.

Discussion Questions:

- What is environmental DNA?
- Why is this research an important project for DFO (Fisheries and Oceans Canada) to pursue? What is the role of DFO?
- How is eDNA research connected to you? Does it matter to you? How does it relate to what you're studying in class?
- What is the value of biodiversity in Canada's, and the global, ocean ecosystem? Why does biodiversity matter? What are some potential problems that arise when biodiversity diminishes?
- How can human activity affect aquatic biodiversity in Canada? How can protecting biodiversity help humanity? Are you aware of your role in impacting biodiversity?
- How is biodiversity being protected in Canada? Is it enough? Too much? Discuss, research and defend your position.
- Why was the Canada C3 Expedition a unique opportunity for this type of research? Should we conduct more research projects like this one?

Read Bios and Learn More:

[Kristi Miller-Saunders](#) is a research scientist with the Department of Fisheries and Oceans Canada (DFO). Learn more about Kristi's work [here](#).

Extended Learning Resources:

1. Check out [Ocean Sense](#), a program of Ocean Networks Canada, offering real time ocean data and additional learning resources.
2. Watch the [Canada C3 Arctic Live Dive](#) from Cambridge Bay, Nunavut in partnership with [Fish Eye Project](#) to learn about the biodiversity of Canada's Arctic waters.
3. Learn more about Canada's 2020 Biodiversity Goals and Targets at <http://www.biodivcanada.ca>
4. Check out UNEP's [One Ocean: Many Worlds of Life](#) education resource