

# Educational Video Series

## Ocean Education: Middle 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