Plastics in Our Oceans

Eco360 Jr.
Activity
Grade Level: 3-8

Main Objectives

Learners will learn about the impacts of plastic on oceans. Learners will learn about the production of tiny plastic particles - called microplastics - and explore how microplastics end up in our environments. Learners will learn how plastic particles harm our water bodies, especially when they enter our oceans.

Learning Outcomes

By the end of this activity, learners will:

- Describe what microplastics are and how are they generated
- Identify why and how microplastics end up in the environment including our water bodies
- Describe the negatives impacts of macro and microplastics in oceans
- Identify how they can take action to eliminate microplastics from entering our water bodies

Length of Activity: 2 - 3 hours

Step 1+2: Introduction to microplastics in the ocean and map path of a water bottle to enter the ocean
Step 3: Use the Plastic Cycle Interactive activity from GreenLearning

Materials Required

- Internet-enabled device
- Student atlas/map of Canada
- Backgrounder

Activity

Step 1: Introduction to microplastics in the ocean

Read the provided backgrounder with the class. To understand the problem of large and small (micro) plastics in our oceans, learners will do a study of one of the following films:

- Grades 3-5, watch Earth's Ekko:

https://earthsekko.com (21 min)

- Grades 6-8, watch The Plastic Problem - A PBS NewsHour Documentary:

The Plastic Problem (54 min)

Guiding questions for discussion after watching the film (10 min):

1. What are microplastics? What are nurdles?
2. How do microplastics/nurdles get into the ocean?
3. What is the effect of microplastics/nurdles in the ocean?
4. What can we do about this?

Step 2: Mapping activity

Using your student atlas, textbook or the map below (Figure 1), look at Canada's waterways. Have learners find their town or city and understand what waterways are nearby. Have them predict what would happen to a plastic bottle if it were dropped into your nearest river or lake. Ask learners what is the path it could take to get to the Ocean?

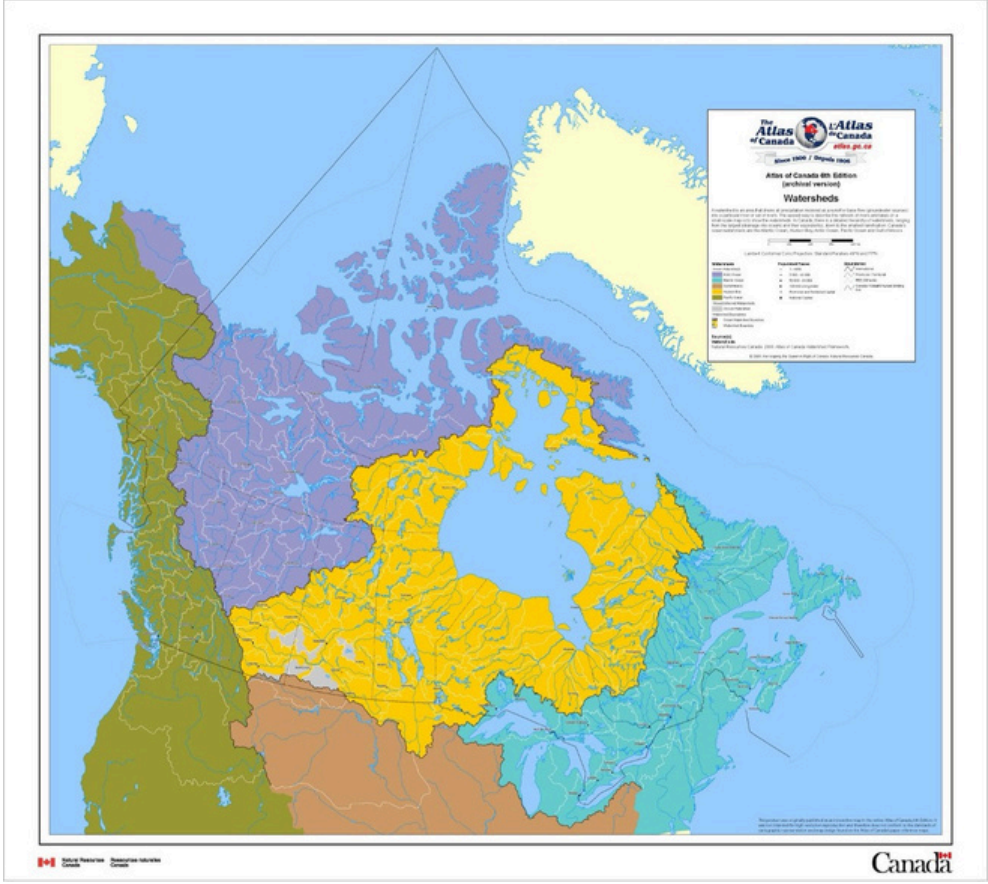

Figure 1 (Natural Resources Canada)

Now have learners try the Ocean Plastic Tracker (5 min) to see where their bottle ends up. Was their prediction, right? If not, discuss what surprised them about the results.

https://theoceancleanup.com/plastic-tracker/

Step 3: The Plastic Cycle Interactive

Plastic interacts with us and our environment in strange and surprising ways! Use the following link to explore the plastic cycle. Learners will be able to see what effects plastic has on lake, river, and ocean ecosystems. (15 min)

https://greenlearning.ca/the_plastic_cycle/story.html

Further Background Information

For a deeper dive, look at Ocean Wise's Ocean Plastic Education Kit:
https://ocean.org/action/ocean-plastic-education-kit/