Plastics in Our Oceans

Eco 360 Jr
Activity
Grade Level: 3-8

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 these tiny plastic particles end up in our environments. Learners will learn how plastic particles harm our water bodies, especially when they enter our oceans.

Learning Outcomes

After completing this activity, learners will:

- Describe what microplastics are and how are they generated
- Identify why and how microplastics end up in the environment, in particular, 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

Time Required: 2-3 hours

Materials

- internet-enabled device
- student atlas/map of Canada
- backgrounder

Introduction

Read the provided backgrounder with the class. (5 min)

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 *A Plastic Ocean* (Netflix, Google Play, Apple TV, YouTube), 102 min

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

- What are microplastics? What are nurdles?
- How do microplastics/nurdles get into the ocean?
- What is the effect of microplastics/nurdles in the ocean?
- What can we do about this?

Mapping activity (15 min)

Using your student atlas, textbook or the map below (Fig. 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 is dropped into your nearest river or lake; what is the path it could take to get to the Ocean?

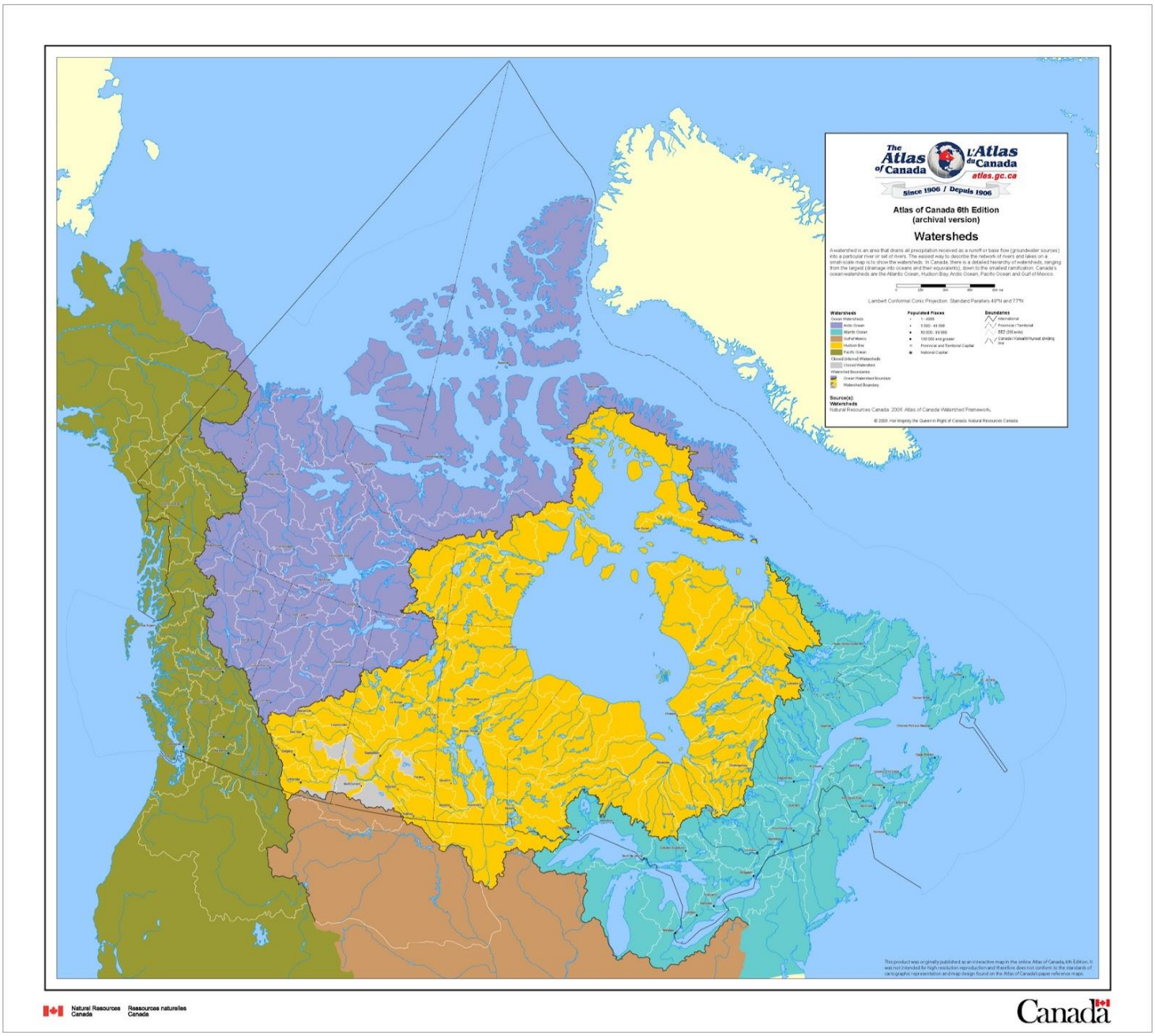

Fig. 1 (Natural Resources Canada)

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

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

Grade 3-5 teachers can go to https://plasticoceans.org/earths-ekko-education-guide/ to download the education guide.

Grade 6-8 teachers can use https://plasticoceans.org/wp-content/uploads/2018/11/PO_Educational_Sup_v16_NOV2018.pdf, the education guide for A Plastic Ocean.

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