

# Ocean plastics: The impact of ocean bound waste

## INTRODUCTION

Plastics in the ocean create big problems for our environment. To introduce the issue of ocean plastics to the classroom and get students thinking about ways they can make a change, watch this [short video](#). The following document provides three potential directions that teachers can explore with students. Each direction can be explored individually and modified as needed. Directions include resources, discussion topics, activities, and class challenges.

## CURRICULUM CONNECTIONS

### SOCIAL STUDIES

#### Grade 7

- Learners will create a response to changing societal conditions in the Maritimes.

#### Grade 8

- Learners will plan an advocacy action in response to an issue.

## WE WANT TO HEAR FROM YOU!

Please share classroom experiences with us to highlight our website and social media.



## KEY RESOURCES

**[Divert NS Ocean Action Zone](#)**: Take action to reduce ocean plastic at the Divert NS Ocean Action Zone.

**[Ocean School](#)**: Ocean education resource for use in the classroom and at home.

**[National Geographic Kids](#)**: Downloadable toolkits aimed at reducing plastic waste.

## GLOSSARY

**Ghost Gear**: Lost, abandoned, or broken fishing equipment left in the ocean.

**SUP**: Single-use plastics.

**SUI**: Single-use items.

**Microplastics**: Fragments and beads of plastic smaller than the end of a pencil. They are often fragments of larger pieces of plastic which can be consumed by marine life.

# DIRECTION 1

## The impact of single-use items on the ocean.

### BACKGROUND

Nova Scotia is home to the beautiful Atlantic Ocean. Unfortunately, human activity is having a big impact on ocean health. Single-use item usage has significantly increased in recent years and these items are being found in our ocean. Each year, around the globe, 8 million tonnes of plastic pollution enter our oceans. As plastics break down in the ocean, they turn into microplastics that have harmful effects on the ocean ecosystem.

There are many opportunities to reduce single-use plastics such as choosing reusable items, purchasing items with less packaging, and looking for recycled content in products.

### DISCUSSION TOPICS

- Reflect on the types of single-use items in your school. Investigate which items could switch to reusable or be eliminated.
- Research what actions have been taken in Nova Scotia and in Canada to reduce single-use plastics. Are these actions effective? What additional actions should be implemented?
- Research packaging alternatives that have less impact on the environment (i.e. beverage rings, food packaging, reusable packaging).
- Explore what happens to plastic as it degrades in the ocean.

## Classroom actions

### Suggestions for long-term projects or quick in-class activities.

**Take the ocean action pledges:** Pledge to use reusable bags when shopping, say no to straws and plastic cutlery, carry a reusable water bottle, use a reusable mug, pick up litter, or choose products with less packaging. Visit: <https://divertns.ca/learn/ocean-action-zone>

**Awareness campaign:** Use posters, social media ads, or another medium to create awareness on how single-use items impact the ocean.

**Advocate for change:** Survey your cafeteria or school and record the amount of single-use items in use. Present information to administration to advocate for sustainable alternatives.

#### Resources:

- [Ocean Friendly Nova Scotia](#): Business recognition program to reduce single-use plastics.
- [Nova Scotia Plastic Bag Ban](#): Information about the provincial plastic bag ban.
- [Coastal Action Microplastics Project](#): Information about microplastic in Atlantic Canada.

# DIRECTION 2

## Reducing land-based litter to improve ocean health.

### BACKGROUND

In Nova Scotia, any litter that is less than 50km from the shoreline is considered ocean bound. Approximately 80% of ocean litter is land-based and 20% of ocean litter is from ocean-based sources like fishing and shipping. Plastics can get into the ocean when litter blows into the waterways or garbage is flushed down the drain.

Litter in the ocean has many negative impacts. In 2016, the UN found that 800 species of marine animals were being harmed by plastics. Researchers estimate that, on average, every person consumes a credit card worth of plastic every week through eating, drinking, and breathing.

### DISCUSSION TOPICS

- Reflect on the litter in your schoolyard or surrounding community. Where does litter accumulate and why? What are the most common items?
- Review the [2021 Divert NS Roadside Litter audit results](#). Reflect on the trends in large and small categories and the top brands identified. Does anything surprise you?
- Explore how litter in your schoolyard or community could make its way into the ocean. What happens when it gets there?

## Classroom actions

### Suggestions for long-term projects or quick in-class activities.

**Clean up litter:** Organize a clean-up for your school or community, categorize what you find and share your results.

**Deliver a presentation:** Educate your classmates on the issue of ocean litter or invite an expert to speak to your class.

**Create an awareness campaign:** Create a campaign to inspire students to help reduce litter in your school or community.

#### Resources:

- [Divert NS Lesson Plan](#): 'Plastics in the Schoolyard' learning experience.
- [Divert NS Roadside Litter Audit](#): Understanding Nova Scotia's litter infographic.
- [Great NS Pick Me Up](#): A litter clean-up organization that provides free supplies to volunteers.
- [Divert NS Local Waste Educator](#): Local experts in reducing, recycling and composting available for classroom visits.

# DIRECTION 3

Investigating the impact of discarded or lost fishing gear on our oceans.

## BACKGROUND

Nova Scotia is known for its delicious seafood. However, fishing can result in lost or discarded fishing gear. Between 600,000 and 800,000 metric tonnes of “ghost gear” enter the oceans in Canada annually. Lost or abandoned traps used in lobster and crab fisheries are the most common.

Many organizations and municipalities work hard to clean up ocean litter and fishing gear. There are also many volunteers that dedicate time and effort to keeping Nova Scotia’s beaches and shorelines clean.

## DISCUSSION TOPICS

- Investigate the term “ghost gear.” What items and materials is it made of? What are the main causes of ghost gear?
- Research strategies, technologies, programs, and local clean-up groups that help reduce lost fishing gear in the ocean.
- Explore the impacts of ghost gear on the ocean ecosystem.

## Classroom actions

Suggestions for long-term projects or quick in-class activities.

**Create an awareness campaign:** Use posters, social media ads, or other mediums to create awareness of the impacts of ghost gear on the ocean ecosystem. Share the campaign with the industry/local fishers if you are located within a fishing community.

**Organize a shoreline clean-up:** Find a shoreline clean-up organization in your area and partner with them to support their cause.

**Take the ocean action pledge:** Do your part to keep plastic out of the ocean!

<https://divertns.ca/learn/ocean-action-zone/pick-litter-around-my-home-my-school-or-beach>

**Awareness Campaign:** Use posters, social media ads, or another medium to create awareness about local options to divert textiles from landfills.

### Resources:

- **[Ocean Wise Shoreline Cleanup](#):** A conservation initiative that aims to inspire Canadians to keep shorelines free of litter.
- **[Canada’s Ocean Agenda](#):** The Government of Canada’s plan for safer, cleaner, healthier oceans.
- **[Canada’s Ghost Gear Information](#):** Learn about Ghost Gear in Canadian waters.
- **[Coastal Action Ghost Gear Resource](#):** Learn about the retrieval of abandoned, lost, and discarded fishing gear in Nova Scotia.