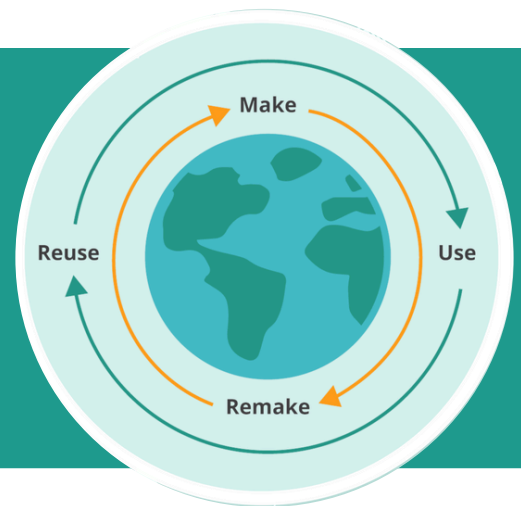


Sources of Plastic Waste in the Environment

#Eco360

Activity

Grade Level: 9-12



Main Objective

Learners will explore the sources of plastic waste in the environment. Learners will learn about the countries and industries that produce the highest amount of mismanaged plastic waste ending in the environment.

Learning Outcomes

By the end of this activity, learners will:

- Identify the biggest plastic waste producing countries in the world
- Identify the biggest plastic waste producing industries in the world
- Analyze data on sources of plastic waste and make informed conclusions

Length of Activity: 1.5 - 2 hours

Step 1+2: Intro to plastics waste in the environment

Step 3+4+5: Use worksheet to research about plastic waste

Step 6: Activity discussion

Materials Required

- Internet-enabled device
- Plastics in the Environment backgrounder
- Eco 360 notebook (we recommend asking learners to maintain a notebook for this program to write down reflections as they go through the program)
- Source of Plastic Waste Worksheet

Curriculum Connections

Alberta

Grade 9 Unit C: Environmental Chemistry

- 1 - Investigate and describe, in general terms, the role of different substances in the environment in supporting or harming humans and other living things

Biology 20, 30 All Units

- STS outcome (science, technology, and society): explain how science and technology have both intended and unintended consequences for humans and the environment

Ontario

Grade 9 Geography

- C3. Industries and Economic Development: assess the relative importance of different industrial sectors to the Canadian economy and Canada's place in the global economy, and analyse factors that influence the location of industries in these sectors (FOCUS ON: Spatial Significance; Patterns and Trends)
- E1. The Sustainability of Human Systems: analyse issues relating to the sustainability of human systems in Canada (FOCUS ON: Interrelationships; Geographic Perspective)

Activity

Step 1: Using the backgrounder, introduce the problem of plastic waste and its sources

Ask learners the following questions before beginning the activity (they are encouraged to take a guess before diving into the facts!) and write their answers on the board that can be seen by all learners:

- In your opinion, which industrial sector generates most plastic waste?
- In your opinion, which country or region generates most plastic waste?

Step 2: Review worksheet instructions

Distribute the Sources of Plastic Waste Worksheet to your learners. Review the instructions tab on the worksheet to help learners complete the activity.

Step 3: Complete “Plastic Waste by Sector” Section

Ask learners to complete the activity on the tab “Plastic Waste by Sector”.

Step 4: Complete “Plastic Waste by Country or Region” Section

Ask learners to complete the activity on the tab “Plastic Waste by Country or Region”.

Step 5: Complete Infographic Section

Ask learners to complete the activity on the tab “Infographic” – after creating the infographics in the worksheet, learners can save them as PDF documents and share with the class and friends on social media.

Step 6: Conclusion

Conduct a class discussion exploring the following questions.

- Were you surprised by any of the findings? Educators can compare the new findings with the answers recorded before doing the worksheet activity.
- Did you notice the list of top 10 countries that generate the highest plastic waste per capita, in total and by the share of global mismanaged plastic waste are different? Can you explain the difference between the three?
- What should Canada do to reduce its plastic waste?