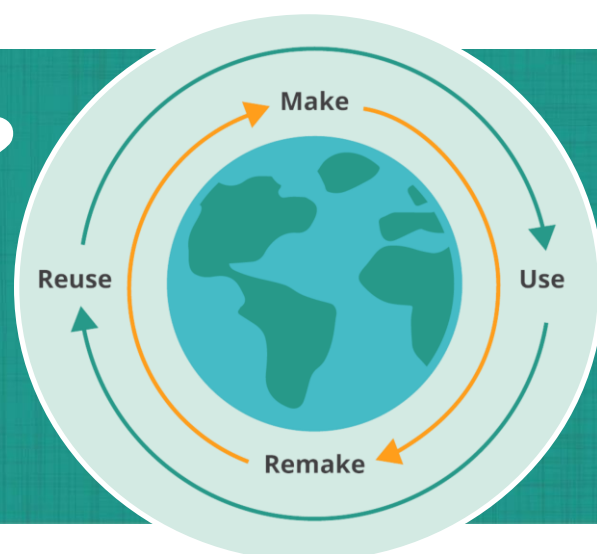


What are Plastics?

#Eco360
Activity
Grade Level: 9-12



Main Objectives

The objective of this activity is to learn about plastics, their history and application in our daily life. Learners will conduct research to understand the life cycle of plastics and share their findings with class.

Learning Outcomes

By the end of this activity, learners will:

- Understand plastics, their history and application in life
- Describe the life cycle of plastics
- Apply research skills to investigate a question
- Understand how much plastic waste ends up in the environment

Curriculum Connections

Alberta

Grade 7: Unit A Interactions and Ecosystems

- 1 - Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions

Grade 9: Social Studies

- 9.2.5 - How does individual consumer behaviour impact quality of life (e.g., environmental issues)?

Ontario

Grade 9 Geography

- E1. The Sustainability of Human Systems: analyse issues relating to the sustainability of human systems in Canada (FOCUS ON: Interrelationships; Geographic Perspective)

Length of Activity

60 - 90 minutes

Materials List

Internet-enabled device

Topic 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)

Life Cycle of Plastics Worksheet

Life Cycle of Plastics Infographic

Step 1

Begin by exploring what are plastics and how they are made, their history, and uses by watching the videos below:

a. Plastics 101:

<https://www.youtube.com/watch?v=ggh0Ptk3VGE>

(6 minutes)

b. A Brief History of Plastics:

<https://www.youtube.com/watch?v=9GMbRG9CZJw&t=47s>

(5.41minutes)

c. 7 Different Types of Plastics and their Uses

<https://www.youtube.com/watch?v=Pbuilhr0LVA&t=37s>

(4 minutes)

Step 2

- Divide your class into 3-5-person jigsaw groups – you can find more information here: <https://www.jigsaw.org/>
- In their jigsaw groups, learners will research the question 'What is the life cycle of plastics?'
- Distribute the Life Cycle of Plastics Worksheet to learners
- Distribute the Life Cycle of Plastics Infographic to learners

- e. As instructed on the Worksheet, assign one stage of the life cycle to each learner in a jigsaw group for research. There are 5 stages identified in the life cycle, therefore forming jigsaw groups of 5 learners is recommended
- f. Have learners research the life cycle stage assigned to them, looking at what happens during that life cycle stage, the co-benefits and challenges in that stage. Learners can use any resources of their choice. For ease we have curated several resources and provided them on the Worksheet on this topic.
- g. Learners can record their findings on the Worksheet under the life cycle stage assigned to them.

Step 3

Allow one learner from each jigsaw group to join other learners that are assigned the same cycle stage. In this step, learners will discuss their findings and take notes on the Worksheet.

Step 4

Ask the learners to re-join their original jigsaw group and have each learner in the group share their findings with their group. Learners can complete their worksheets by learning about other life cycle stages from their peers in the group as they come together.

Step 5

Have learners reflect on the activity, recording in their notebooks the main stage of the plastic life cycle that they explored in their jigsaw groups and how the life cycle could be adapted to a circular economy.