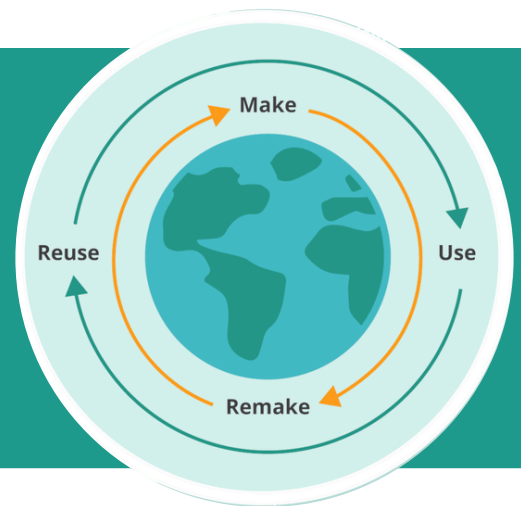


Different Types of Plastics

#Eco360

Activity

Grade Level: 9-12



Main Objective

Learners will explore the different kinds of plastics found in our economy. Learners will learn how to distinguish what kind of plastic they are dealing with by looking at the labels on plastic products.

Learning Outcomes

By the end of this activity, learners will:

- Describe the different kinds of plastics found in our economy
- Be able to differentiate the different kinds of plastics by reading the labels on the plastic products
- Identify which kind of plastic is easily recyclable and those that are harder to recycle.

Length of Activity: 45 - 60 minutes

Step 1: Intro to plastic products

Step 2+3: Learn about different plastic numbers and find examples at home

Step 4: Activity reflection

Materials Required

- Internet-enabled device
- Eco 360 notebook (we recommend asking learners to maintain a notebook for this program to write down reflections as they go through the program)
- Plastic by Number Worksheet
- Information of Plastics Handout

Curriculum Connections

Alberta

Science 20 Unit A: Chemical Changes

- 20-A3.1k identify materials used in daily life that are based upon Alberta's petrochemical industry and that involve changes in energy

Grade 9 Unit C: Environmental Chemistry

- 3 - Analyze and evaluate mechanisms affecting the distribution of potentially harmful substances within an environment

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)

Activity

Step 1: Begin by Watching These Videos

Introduce learners to the different kinds of plastics found in our economy by watching the videos below. It is important to know the difference between different kinds of plastics as it indicates whether the plastic can be successfully recycled or not.

A Brief History of Plastics:



Know Your Plastics:



Step 2: Form Jigsaw Group and Research

- Distribute the "Plastic by Numbers Worksheet". Using the resource below, go through the different kinds of plastics found in our economy with your learners:



- Allow learners to reference the 'Information of Plastics Handout' as they are finding various plastic products in their house. It gives learners examples of each type of plastic as well as their associated formulas and structures.
- Have each learner record their findings in the Worksheet in columns A and B. They can find the chemical formula and composition of the plastic by looking at the PRS and finding the information about that plastic in the resource linked [here](#) (also provided in step 2).
- After each learner has gone through the items, have each learner share the common plastic number they found on their list with the rest of the class.
- As a class, regroup to discuss which is the most common type of plastic that was recorded most often by the learners in their individual exercise.
- Ask learners if all the plastic items that they brought to the class are recyclable in their municipality? They can find that by the instructions usually provided on the recycling bin or by visiting the local municipality's waste management website. If this information is not easily available to learners, ask them what should the local municipal authorities do about it to make this information more accessible and understandable for the masses? Emphasize on the importance of the role of municipalities in making recycling bylaws easily accessible to masses.
- This activity can be done in a distanced learning environment by asking learners to bring the plastic items to their virtual class.
- Educators may also go through the recycling bin in the classroom to find the common items found there. This can be done over several weeks (sorting through the recycling bin and recording findings in the worksheet) to find the common plastic items consistently ending up in the classroom recycling bin.

Step 4: Conclusion

After having gone through the activity, ask learners to reflect on the questions below by having a discussion in groups or answering them individually in their ECO 360 notebooks:

- What was the most common type of plastic found in the classroom activity?
- Did they find a particular plastic item that is consumed frequently but not recycled in the municipality?
- Was the information on what can be recycled in their municipality easily accessible to them (i.e., the recycling bin had information printed on it showing what can be put in there?) If not, what can the learners do about it as informed citizens now to make this information easily accessible to their peers and families?
- Can they use alternative eco-friendly materials for the plastic items that were most commonly found in the class exercise?
- Can they eliminate the use of plastic items that were found in the exercise but not recyclable in their municipality?