ONTARIO ENVIROTHON 2020

OPEN LAB: NOT ALL PLASTICS ARE MADE EQUAL

Plastics are common materials we encounter in our daily lives, but not all plastics are made equal. In general, plastics are malleable materials that make up a highly visible portion of the waste stream due to its versatility. Different plastics are used in different ways and can be used to make just about anything.

	PLASTIC TYPE	DESCRIPTION
	Polyethylene Terephthalate (PET, PETE, polyester)	An excellent barrier to oxygen, water, and carbon dioxide, this plastic is clear and tough. It is commonly used in water bottles and textiles. This is the most commonly used and recycled plastic.
	High Density Polyethylene (HDPE)	A relatively stiff material with resistance to most solvents. Milk jugs, laundry detergent containers, and shopping bags can all be made from HDPE. It is tougher than PET, and almost as common.
	Polyvinyl Chlorate (PVC)	This plastic has high impact strength and is resistant to grease, oils, and chemicals. It is best known for its use in pipes, but it can also be used for medical tubing, wire jacketing, and window cleaner spray bottles.
	Low Density Polyethylene (LDPE)	This flexible and relatively transparent plastic can be used to make condiment bottles and toys, but is mostly used in plastic films. Shrink wrap, grocery bags, and the coating for paper coffee cups are made from LDPE.
	Polypropylene (PP)	With a high melting point, this plastic can withstand high temperatures. It is great for holding hot liquids. Medicine bottles, takeout containers, and straws can all be made from LDPE.
	Polystyrene (PS)	This plastic is incredibly versatile. In a rigid form, it can be used to make products like CD cases. Foamed, it is an excellent insulator with low thermal conductivity, lending itself to use as packaging for hot items with a short shelf life or as protective packaging (ie. packing peanuts).
	Other	Use of this code means that some miscellaneous plastic has been used in the product. It can be a single uncommon plastic, or a mixture of different materials. These types of plastics are often not recyclable, as their contents are unknown.

To differentiate between the many types of plastic check the bottom of the product! Plastic products are all stamped with a symbol that indicates what type of plastic it contains.

As plastics are a broad category of materials, recycling them has no single solution. In general, recycled plastics tend to be used for less structurally demanding items than the original products.

In this Open Lab activity, your task is to take stock of the different types of plastic found inside your own home and determine what those products could be recycled into.

1. **Search your kitchen, bathroom, bedroom, garage, or any other storage area for plastic products**
2. **Check each plastic product to find the number stamped onto it**
3. **Make a list, chart, or tally that counts how many products of each plastic type you found**

After making your list, chart, or tally, what did you discover?

- Was one plastic more common than the others? What was it used for?
- Were there any types of plastic that you could not find, or any plastic products that had no number?
- In what room did you find the most plastic products?
- What could you turn the assorted plastics in your home into if you had the means? Do some research to find out!

There are different rules for recycling plastics across Ontario. Look up what your region's restrictions are and keep them in mind the next time you have something to recycle!