**Green Tips**

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Many of us recycle, which is wonderful! But are we all doing it correctly? Paper, cardboard, glass, and metal cans are easy enough: as long as they are clean, they can go right into the bin to be turned into something new. Plastic is much trickier.

Glass and aluminum are essentially infinitely recyclable. According to the EPA, glass is estimated to take 1 million years to break down into its components silica sand, lime, and soda in the landfill. Recycling glass uses about 30% less energy than producing new virgin glass, and recycled glass does not lose strength. Recycling aluminum is even more efficient: it does not degrade, and it uses about 90% less energy than creating the same products from raw materials would. Aluminum cans take over 200 years to break down in a landfill.

Paper and cardboard can be recycled and reprocessed 5 to 7 times before they break down into fibers too short to be reused. According to the EPA, every ton of paper that is recycled saves 17 trees, 7000 gallons of water, and 460 gallons of oil compared to producing completely new material.

Plastics, on the other hand, are not as friendly as they seem. There are 7 common types of plastic on the market, indicated by the number in the recycling symbol, and detailed in the table on this page. In general, #1 and #2 are widely accepted at curbside recycling, and the majority of the other types are not. Tossing a type of plastic into the bin that is not accepted in your municipality can lead to a load being considered "contaminated" and sent to the landfill. Overall, only 7-9% of plastic is recycled each year. One problem is the market for recycled plastic is limited, as virgin plastic is often cheaper for companies to buy. Plastic products are nearly always "downcycled," meaning the plastic's quality is reduced as it is broken down – a bottle won't be turned into another bottle, but often polyester fibers. Over time, these products will break down and ultimately end up in a landfill, the oceans, or incinerated, releasing toxic pollutants. Another part of the problem is that plastics do not biodegrade, but will break down into microplastics, a term which is becoming more widely recognized in recent years. They are found nearly ubiquitously across the planet, from Antarctic sea ice to the human placenta, and studies have been done estimating how many particles we ingest through our diets each year. The effects from ingestion are still being investigated. Plastic is derived from fossil fuels and also contains compounds such as BPA and phthalates, shown to be endocrine disruptors in animal models.

The production of virgin plastic, because it is derived from natural gas and crude oil, contributes to climate change heavily through greenhouse gas emissions. 300 million tons of plastic are produced each year, half of which is single-use, and much of which is only used for a few minutes before being thrown away. The emissions from manufacturing polyethylene plastics in 2015 produced as much carbon dioxide as 45 million passenger vehicles would in one year, according to the Center for International Environmental Law. Production of plastic is expected to increase 35-40% in the next decade for a multitude of reasons. With these effects on climate and health, it is essential to create less of a demand for plastic when we can, especially single-use plastics, and dispose of them properly when we cannot. Remember the saying "reduce, reuse, recycle" – it is in that order for a reason!

New "sustainable" plastic alternatives are in the works, but are not yet widely produced and still have many downfalls.

When in doubt, you can check your municipality's website for accepted recycling items, or you can use a resource such as Recycle Coach or berecycled.org.

| Code | Type | Examples | How to recycle |
|---|---|---|---|
| | Polyethylene terephthalate | Clear. Drink bottles, clamshell containers (produce, hardware) | Easiest to recycle, often curbside |
| | | *Mylar balloons, microfiber cloth* | *Not readily accepted* |
| | High density polyethylene | Stiff. Detergent bottles, milk jugs, | Easiest to recycle, often curbside |
| | | *Milk crates, outdoor toys, bubble envelopes* | *Not readily accepted* |
| | Polyvinyl chloride | Pipes, toys, shower curtains, siding, flooring, medical supplies (tubing, catheters) | Difficult to recycle |
| | Low density polyethylene | Grocery bags, trash can liners, 6-pack rings, playground parts, computer parts | Some stores collect bags (ex: supermarkets, Lowes) |
| | Polypropylene | Yogurt cups, bottle tops, storage bins, phlebotomy tubes, auto parts | Difficult – some stores collect (i.e. Whole Foods) |
| | Polystyrene | Styrofoam, packing peanuts, takeout containers | Some municipalities have drop-off sites |
| | Other | Combination plastics, acrylics, eyeglasses, melamine dishes | Rare, but some donation programs exist for glasses |