

A Trash-Free Future?

Could we have a world without trash?

by Alison Pearce Stevens

Trash is a fact of life. Done eating a sandwich? Toss the wrapper. Tore your pants? Dump them in the trash. All over the world, people create garbage that ends up in landfills and dumps. But does it have to be that way? Some creative people think not. They have a vision of a trash-free future.

The Trash Problem

There are many ways to make less trash. We can use re-fillable water bottles instead of plastic ones that get thrown away. We can recycle glass, plastic, metal, and paper. Food scraps can be composted to turn into new soil. Everything that is reused or recycled means one less piece of trash.

But what about shoes or chairs or cars? Those are hard to recycle because they're not made of just one thing. Is there any way to keep these out of the trash? Maybe--if we change the way they are made in the first place.



Most trash winds up in a landfill. Photo by MPCA Photos.

The Plastic Problem

Plastic is made from oil. It's cheap, strong, waterproof, and easy to shape into all kinds of objects. That makes it very useful. but it also doesn't decompose. And that can be a problem.

- Between 500 billion and 1 trillion plastic bags are made every year.
- Most are used for about 15 minutes.
- Less than 1% (1 in 100) are recycled.
- The rest go in the trash, where they linger for thousands of years.

What's the solution? Can we invent a plastic that is strong and doesn't dissolve, until we want it to? Many scientists are working on it.

Making Better Trash

Say you have a chair with a plastic frame, metal legs, and a cloth seat with foam padding. It's all glued together tightly. If one of the legs breaks, you might have to throw the whole chair in the trash. Since it's made of many different materials, it will probably go to the landfill.

This office chair has been designed to snap apart easily, so it can be repaired or recycled. Every part of it can be re-used. Photo (and chair) by Dutch company Ahrend Inrichten BV.

At the landfill, the metal legs might rust away. The cloth might rot. But the foam and plastic will stick around--possibly for hundreds of years. Plastic lasts a long time. It doesn't rot. That's one reason it's so useful. But that also makes it difficult to get rid of.

Is there a better way to dispose of a broken chair? Why not repair it instead? If the chair is easy to take apart, you could replace a bent leg with a new one. Then only the leg would go into the trash--or it could be recycled. When items are built to be repaired, they last longer, so less goes into the trash.



New Again and Again

If your chair is easy to take apart, it's also much easier to recycle. The metal legs go into the metal recycling bin. The plastic frame goes out with the bottles. Fabric and foam made from oil can't be recycled--but it could be burned as fuel to make heat.

Engineers are also working on new types of plastic and foam that decompose more easily. Some of these are made from mushrooms and plants. This can go into the compost (along with the fabric) to make new soil. Other new kinds of plastic dissolve when they meet acid or special kinds of bacteria.

No part of this snap-apart, recyclable chair winds up in a landfill. It's never just "thrown away"--it turns back into material to make new things.



This packing foam is not plastic. It's made from mushroom hyphae (root-like structures) grown around straw. It can go right into the compost pile. Photo by Stephen P. Nock.

Getting to a trash-free future will mean changing the way we make things, and the way we think about them. These changes are just beginning. But if we can figure it out, it could help the world a lot. And that's no trash talk.

This park used to be a landfill. Now it's a green space for people to enjoy. Photo by Tdorante10, CC SA-4.0.

