

What Happens to the Plastic Bottles We Recycle?

Do you recycle? If so, do you know where your plastic bottles go? Are they made into more bottles or something else? The answer may surprise you!

Recycled bottles are not made into new bottles, they're used for lower grade plastics to build things like playgrounds -- but a new machine may change that!

"What you want to do, ideally, is take that material and recycle it back into high value uses like more soda bottles, water bottles," says George Roberts, a chemical engineer at North Carolina State University.

Roberts and his team developed a way to break down bottles made from polyethylene terephthalate -- or PET. Right now, this type of plastic is non-biodegradable and costs too much to recycle back into food-grade bottles.

"You're trying to complete that loop, then you don't have to make new bottles," said Joan Patterson, also a chemical engineer at North Carolina State University.

Inside the recycling plant's extruder, water is removed from ground up plastic. Then, the plastic is melted and chemically broken down in a process called depolymerization.

"The breakthrough in this process is to be able to go from chips of this plastic to the recycled material in about five minutes," says Roberts.

Good news, considering Americans go through two and a half million plastic bottles every hour! Every year we make enough plastic to shrink-wrap Texas, and most of it ends up in our landfills. But if every American household recycled just one out of every ten plastic bottles they used, we'd keep 200-million pounds of plastic out of landfills each year.

From ScienceDaily.com. The Material Research Society contributed to the information contained in the TV portion of this report.