



Make Something Useful

STANDARDS & CONNECTIONS:

NGSS.HS-ETSI-I-4, NGSS.MS-ETSI-I-4, NGSS.3-5-ETSI-I-3 3

BACKGROUND:

Mismanaged waste and domestic litter is a major contributor to the increase in the presence of plastic in the world's oceans. The United States is the second highest generator of plastic waste in the world with an estimated 38 million tonnes of plastic waste.¹ Even with well-established recycling programs and plastic trade among developed nations, plastic still contributes to a high percentage of landfill waste and pollution. Governmental agencies around the world are looking at unique ways to combat this problem. "Re-use, recycling, and recovery are becoming the key words around which a new paradigm needs to be built to promote sustainability innovation and competitiveness, so that waste will cease to be a problem and become a resource."²

SUGGESTED MATERIALS:

Plastic bottle, craft supplies, random materials/objects from around the room

QUESTION:

In what ways can a plastic bottle be repurposed into something useful?



CREATE

Repurpose a plastic bottle to develop a useful new product.



TEST & IMPROVE

Students will test their prototype, seek areas of improvement, and make changes where needed.



SHARE

Students will share what they've created and their lessons learned.



Investigate the different ways in which plastics are recycled around the world.

¹ <https://ourworldindata.org/plastic-pollution>

² <https://www.europarl.europa.eu/news/en/press-room/20170308IPR65671/waste-boost-recycling-cut-landfill-ing-and-curb-food-waste-parliament-says>

<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data>

<https://www.nationalgeographic.com/news/2017/07/plastic-produced-recycling-waste-ocean-trash-debris-environment/>

<https://plasticsrecycling.org/resources/reports/rate-reports>

https://plasticsrecycling.org/images/pdf/resources/reports/Rate-Reports/National-Postconsumer-Plastics-Bottle-Recycling-Rate-Reports/2017_UNITED_STATES_NATIONAL_POSTCONSUMER_PLASTIC_BOTTLE_RECYCLING_REPORT_FINAL_2.pdf



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