

EXPLORATION 3: PART 1 – WASTE MANAGEMENT

Main Problem

Daily human activity produces waste. Although [zero waste](#) is the ultimate sustainability goal, [reuse](#), [reduction](#), and [recycling](#) are three strategies for addressing the human impact of waste disposal on the environment.

An example of reuse is a returnable bottle that can be cleaned and refilled. Reduction implies that waste will be minimized, for example, by using less packaging material or less plastic in bottles. Recycling is reclaiming materials from waste to make something new, for example, making an aluminum container from old aluminum cans instead of from the mineral bauxite that must be mined, shipped, refined, and processed into new aluminum.

Guiding Question

How can waste be managed?

Overview

According to the [World Bank](#), in 2016, the world's cities generated 2.01 billion tons of solid waste per year. That equals 0.74 kilograms of trash per person per day. With increasing population and urbanization, by 2050, the global production of solid waste is expected to rise to 3.40 billion tons. That's the weight of 2.43 Mount Everests (or the weight of 20 million blue whales). Globally, waste management accounts for 20 to 50 percent of a city's budget. Managing waste impacts society, the economy, and the environment. (World Bank, 2019).

Sustainable waste management is a priority for Germany. Learn more about how the

city of Berlin is approaching the problem of waste management and the effect of Berlin's policy on the everyday life in Berlin.

Reuse, Reduce, Recycle

Returning to *Schönleinstraße* from *Hermannstraße* by way of the [U-Bahn](#), you and the Graf family walk back to the apartment to prepare for a barbecue with the neighbors. After washing up, and cooling down by drinking a bottle of sparkling water, you and the family begin organizing dishes, utensils, and food for the barbecue.

Mr. Graf checks a text on his phone, "It's time to go downstairs to set up for dinner. Li Wei texted that he and Yusuf are firing up a couple of grills."

"Luca, please take the paper recycling with you." Mrs. Graf takes a bundle of newspapers and magazines from a crate in the hallway and hands them to Luca. "Anna, please take the bio bucket."

"May I take anything?" you ask.

"Yes, thank you. Please carry the recycling bin." Mrs. Graf hands you a bin containing a few clear glass bottles and plastic bottles.

Mr. Graf picks up a basket with dishes and utensils. Looking at you, Luca, and Anna, Mrs. Graf says, "When you finish, please come back upstairs to help carry down the food."

You, Anna, and Luca follow Mr. Graf downstairs. You notice an array of blue, green, orange, brown, and gray bins along the wall of the courtyard. Puzzled, you watch Luca put the newspapers and magazines into the blue bin. Anna opens a brown bin and empties the compost bucket, adding egg shells and fruit peels to the bin. Not sure what to do with the

glass and plastic, you check the diagrams on the bins. As you begin to ask for help, Luca offers advice. “The clear glass goes into the green bin, and the plastic goes into the orange bin.”

“Thanks.” You place the glass into the green bin and empty the plastic into the orange bin. “I thought all the bottles needed to be returned for the deposit.”

Deniz explains, “Not everything comes in a deposit bottle. These bottles do not have a *Pfand* symbol.”

“What goes in the gray bin?” you ask.

“Everything that can’t be recycled,” Jin answers.

To learn more about the color of the bins in Germany, look at the [Know Your Bin Color in Germany chart](#).

After helping his father set up the picnic table, Luca introduces you to Jin, a 14-year-old boy from China, and Deniz, a 13-year-old girl. Deniz was born in Germany after her parents emigrated from Turkey. Jin’s father is in a management training program with a German company.

“We should go back upstairs and help bring down the food,” Luca says. Jin and Deniz offer to help.

Mrs. Graf smiles, happy to see Jin, who is a student at her school, and Deniz, who is a student at Anna’s school. “After dinner, why don’t you take our guest to *Hasenheide Park*. You can stop for ice cream on the way home.”