

## Weigh the Waste

**Overview:** Gardens provide unique opportunities for youth to observe decomposition and learn how nature turns its "waste" — decaying organic matter — into treasure. By exploring what kinds of things we humans dispose of and then learning about alternatives to placing them in the trash can, your young gardeners will learn how to use nature as a model to become better environmental stewards. Hopefully they will be inspired to decrease the amount of overall waste they generate too!



### Materials:

- Buckets, boxes and/or containers for collecting and separating waste
- Gloves (optional)
- Trash bags
- Measuring tools to fit collection size (food scales, people scales, luggage scales, measuring cups)

**Approximate Time to Complete:** 1+ days

**Location:** Indoor

**Ages:** All Ages

**Season:** Any season

### Instructions

The latest *Advancing Sustainable Materials Management* report from the EPA

([https://www.epa.gov/sites/default/files/2021-01/documents/2018\\_ff\\_fact\\_sheet\\_dec\\_2020\\_fnl\\_508.pdf](https://www.epa.gov/sites/default/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf)), published in December 2020) calculates that 4.91 pounds of municipal solid waste is generated by each person every day in the United States. That equates to 292 million tons a year. Of that waste:

- 23.6% was recycled
- 11.8% was combusted and the energy recovered
- 8.5% was composted
- 6.1% was recovered through other food management pathways

But that still left 50% that was placed in a landfill. That is a lot of trash!

Finding ways to decrease the amount of waste we generate is a top priority. Simple changes such as using reusable water bottles more often, buying gently used homewares, and decreasing paper used for communication are simple ways we can change our daily behaviors. Another interesting fact to note about our waste is that almost 40% is made up of organic matter and much of that is potentially compostable (including food, yard trimmings, and wood). This means that composting systems — both small-scale and large-scale — have the potential to divert much of this waste from ending up in landfills.

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Finding ways to repurpose materials to craft our own garden supplies and build compost bins to compost yard waste and food scraps can be a fun way to provide opportunities for kids to feel like part of the solution to our trash problem. Where to begin?

1. The first step toward making any changes is to examine the situation. What better way to do this than through an audit of your trash. For one or more days, plan to collect all the waste you make and then sort it. Try to pick typical days, rather than exceptions like a day when you are out more than normal and might have less trash or a day with a special occasion that might generate more trash.
2. Gather your sorting supplies. At minimum you will need waterproof containers to sort food and/or other liquid waste and separate boxes or bins to sort dry waste. The number of sorting containers can vary greatly depending how you want to categorize your trash. For example, with food waste, you can separate it out by type (fruits/vegetables, meat products, bread, etc.) or you can be more general and just divide it into two categories: compostable and not compostable. (Learn more about what is compostable and what isn't here: <https://www.epa.gov/recycle/composting-home>.) The same is true for non-edible waste. For example, you can sort it in more specific categories (you could use the same categories used by the EPA for their data which includes: paper/paperboard, glass, metals, plastics, rubber/leather/textiles, wood, yard trimmings) or you could just sort it into two general categories of recyclable and not recyclable. (Learn more about what is compostable and what isn't here: <https://www.epa.gov/recycle/how-do-i-recycle-common-recyclables>.)
3. Sort your trash. You can sort it as you go, or collect it all in a trash bag and sort at one time at the end of the day. You may want gloves to help you with this task.
4. Measure the volume of your trash. There are many ways to do this too depending on the age and interest of your kids. Keeping it simple, sort your trash and take digital photos and compare the amount of your trash using visual observation. Want to practice some math and science skills? You may want to use a shipping scale, bathroom scale, or luggage scale to measure your trash by weight. If you know the size of the buckets or containers you are using, you could also base it on how many buckets/containers are filled and talk about volume. If you are comparing smaller volumes, you may even be able to use things like measuring cups.
5. Record your results and take time to discuss. You may want to ask questions like:
  - Looking at the extra food: Was the portion served too big? Did it not taste good? Was it not safe to eat? Could we have shared this with others?
  - Looking at the other waste: Did we need to use that? Could any of the items be replaced by reusable items (cloth napkins instead of paper napkins, dish clothes instead of paper towels, reusable water bottles instead of plastic water bottles, etc.). Is this really waste or could we use some of these items again in other ways?
6. Connect your findings to your garden. Learn how to compost your food scraps using a traditional compost bin (<https://kidsgardening.org/gardening-basics-composting/>), an indoor worm bin

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(<https://kidsgardening.org/worm-compost/>) or an outdoor worm bin like the Subpod composting system. (<https://subpod.com/>) Brainstorm ways to reduce, reuse and recycle (<https://kidsgardening.org/garden-activities-reducing-re-using-and-recycling-in-the-garden/>) to help your garden grow, such as making a trellis from old yard signs and reusing food containers to start seeds.

### Want to explore more?

For more ideas on exploring composting and the handling of food waste, check out the new *Subpod for Schools Compost Guide for Educators*. Subpod and KidsGardening teamed up to put this lesson guide together to teach students about food waste, the benefits of composting and how to grow food — all while teaching them how these help our planet. You can receive a free copy of the guide when you sign up for Subpod's educator email list at: <https://subpod.com/pages/kids-gardening-compost-guide-for-educators>

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