

Food Waste

Food is the most common material we throw in the trash. This lesson teaches the importance of preventing food waste and what options there are to manage food waste better.

Grade Level: 3rd to 6th

Timing: 15-minute video + discussion (10 – 30 minutes)

Lesson Overview

Food is the most common material we throw in the trash. This lesson teaches the importance of preventing food waste and options to better manage food waste. This includes strategies students can use to prevent food waste in their own lives, how food scraps can be recycled into compost for better use, and what options are available locally to participate in food scraps recycling.

Key Terms/Vocabulary

Minnesota Waste Hierarchy: A ranking of waste management methods or preference practices in the order in which they are the preferred method or practice: Waste reduction, reuse, recycling, compost, waste-to-energy, landfill

Compost: A nutrient rich soil created as a result of naturally occurring microorganisms breaking down organic material.

Food scraps: Unwanted food or parts of food items

Organics: Food scraps and non-recyclable paper. May also be used to describe yard waste.

Food scraps recycling: Managing organics in piles or rows to facilitate the process of microorganisms decomposing and transforming the organic material into a nutrient-rich soil called "compost".

Vermicomposting: A type of food scraps recycling that relies on worms to facilitate the decomposition of organic materials into compost.

Backyard composting: A type of food scraps recycling that can be done at a smaller scale. Fruits and vegetables will break down in a backyard compost setup, but more durable items like bones and BPI-certified packaging materials cannot.

Food Scraps Pickup Program: A food scraps recycling program offered to residents of Washington and Ramsey counties. Residents collect food scraps in specially designed compostable bags, which are placed in their trash cart or dumpster and picked up by waste haulers. The haulers bring these bags to the R&E Center or transfer stations where they are sorted and sent to an industrial composting facility

Industrial composting: Food scraps recycling done at a large scale and uses long rows (called wind rows) to manage large volumes of organics. Higher volumes of organics allow for a more aggressive decomposition process, therefore industrial composting operations can accept more durable organics such as bone, oil, and BPI-certified packaging.

Learning Objectives | By the end of the lesson, students will understand the following:

- How our food system works, and the variety of resources used to grow, produce, transport, and store food.
- Why food thrown in the trash is the least preferred waste management method for food waste.
- Different strategies students can use in daily life to prevent personal food waste.
- Different options to manage food waste once it is created, including:
 - Food to animals
 - At-home composting
 - Backyard composting
 - Vermicomposting
 - Food scraps collection programs
 - Food scraps drop-off sites
 - The Food Scraps Pickup Program
- What happens to food scraps in food scraps collection programs (industrial composting)
- What items are accepted in food scraps recycling programs

MN State Standards | Lesson reinforces these standards:

Social Studies

4.2.7.1 Explain how the limited supply of natural resources requires people to make decisions about resource use, and examine a specific resource use decision made in your community.

4.3.16.1 Explain how changes in climate and choices humans make impact environments from local to global scales.

Science

6E.3.2.1.3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.* (P: 6, CC: 2, CI: ESS3, ETS1)

Discussion Questions Guidance

The guidance below is meant to be used in conjunction with your own expertise and experience, including awareness of what ideas or concepts will be more relevant to the lived experience of your students. Please adjust or expand on questions or concepts as appropriate.

Discussion Pause #1 (2:37)

- Why is it important to avoid wasting food?
 - *We all need food to be healthy and happy. Wasting food instead of eating it wastes the nutrition and energy in the food to help us grow, learn, and play. Wasting food doesn't just waste the food, but all of the resources that went into making it and getting it to us.*
- What resources does it take to grow and get food to us?
 - *A lot! Time, labor, fertilizers, water, energy, transportation, fuel, money. You can help your students think the full resources required of a food of their choosing*
- How are food scraps different from wasted food?
 - *Food scraps are the inedible parts of food like fruit and vegetable peels, bones, and egg shells. Wasted food is food that was edible and could have been eaten, but was wasted (because we didn't finish what was on our plate/tray, food that spoils when we forget about it, etc.)*

Discussion Pause #2 (5:55)

- What is one way to create less food waste at home?
 - *Examples include only putting the amount of food we want to eat on our plates, eating our full meal and eating up leftovers, having an 'eat first' area in the fridge, understanding date labels, helping plan meals for the week that use up food you already have, etc.*
- What is one way to create less food waste at school?
 - *Trying to eat up all our food at breakfast and lunch, smaller portions (this isn't always possible), mention a share table if your school has it, etc.*

Discussion Pause #3 (9:38)

- What makes compost different than dirt?
 - *Compost and dirt look similar, and both contain organic matter. Compost however, is 100% decomposed organic matter while soil contains inorganics as well (minerals, rocky particles). We add compost to soil to promote healthier plant growth, reduces the need for fertilizers, and improves water retention.*
- What are the different ways compost is used?
 - *At home in gardens, lawns, and potted plants, as well as farms, landscaping, and construction*

Discussion Pause #4 (11:58)

- Do you recycle food scraps at home, at school, or anywhere else?
 - *You can focus on options that are most relevant to your students. If they are mostly unfamiliar with this concept, you can ask them if they've seen organics bins anywhere in the community (libraries, community centers, etc.)*
- Which option - backyard composting, food scraps drop-off or the Food Scraps Pickup Program - might be the best fit for your family, and why?

Lesson Expansion Opportunities | Additional resources, field trip opportunities, etc.

Field trip and tour opportunities

- [Dakota Prairie Composting](https://dakotaprairiecomposting.com/tour-request-form/) <https://dakotaprairiecomposting.com/tour-request-form/>
- [Recycling and Energy Center](https://recyclingandenergy.org/tours/) <https://recyclingandenergy.org/tours/>

Improve your school's waste system

- School Nutrition Staff- Schedule a time for students to chat with a school nutrition staff on what items at hot lunch they are required to take and what are not required. Ask if they have ideas on how to reduce food waste in the cafeteria, like a school share table.
- Apply for funding and assistance - Ramsey and Washington counties have funding, free container labels, and technical support available to help schools start or improve recycling and waste reduction programs:
 - [Ramsey County](#)
 - [Washington County](#)
- Start a Green Team: Organize a group of students to work on projects to help the school and community recycle right. This could include educating classmates, organizing environmental activities such as material swaps, games, and classroom waste sorts, and hosting a book club on environmental

Additional learning resources

- [Ramsey/Washington Recycling and Energy, Food: Too Good to Waste campaign](#)
- [PWE Stop Food Waste Challenge](#) (Annually, month of August)
- [Ad Council, Save the Food](#)

Feedback Form

Provide feedback for R&E to improve this lesson.



Come see for yourself!

Schedule a tour of the R&E Center for your classroom or group.

RecyclingandEnergy.org/Tours



Find more resources at
RecyclingandEnergy.org/Education/k-12-lessons

R&E Lessons | Ramsey/Washington Recycling & Energy views waste as a resource stream and works to extract maximum value from discarded materials. View lesson videos and find helpful resources by scanning the QR code or visiting RecyclingandEnergy.org/Education/k-12-lessons

