Lesson Title | Unit
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Food Supply Charades | Food Waste

Grade Level(s) | Common Core Standard(s)
---|---
3-5 | (4-ESS3-1)

Objectives | Essential Questions
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Students will understand the amount of time and energy that goes into growing produce. Students will understand that more resources are wasted when we waste food beyond the food itself. | What do we waste when we throw out food?

Duration | Materials Needed
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.25 - .5 hour | N/A

Background Information | Setup Required
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The process of growing a certain crop. | 

Overview
This is a quick demonstration that will use student participation to illustrate the many steps involved in growing food and transporting it to a grocery store.
Procedure

Intro

Start your lesson by asking students if they have ever thrown away food before. What are some of the reasons food gets thrown away at home? What about during lunch at school? Where else do much larger quantities of food get thrown away? (Be sure to make it clear that everyone throws away food and food scraps sometimes-this activity isn’t about shaming!).

After receiving a few reasons, ask your students what they think gets wasted when we throw out food. (The food itself, any packaging, the time it takes to grow the food?). Explain that during this activity we’re going to illustrate the process of growing food and getting it to a supermarket.

Activity

This activity requires a lot of willing volunteers, so make sure you’re doing this activity with a large enough group (or you will have a lot of repeat performers, which is fine). Ask your students what the first step is in growing a fruit or vegetable they’re familiar with (an apple is usually a pretty good go-to). For our purposes, it’s easiest to start at planting a seed. If a student raises their hand and says “planting a seed,” have them come up and do a quick, silent movement that represents planting a seed (if your group can handle it, you can have the students do one quick sound effect to go along with their movement - you’ll be calling back on them throughout the activity so they’ll be repeating their movement/sound a number of times).

What’s the next step after we plant our apple seed? Usually we have to care for it. Have the next student come up and mimic a watering and/or pruning motion. For older students, it’s important to note the duration of time that passes in the plant maintenance period. For some vegetables it’s only a couple months, but for a fruit tree it takes years of care before a tree produces fruit. If you have enough students, you can have numerous motions represent the growing period.

Every time you add another motion/student to your line at the front of the class, go back and review all the processes so far, and have your student volunteers repeat their motion when called on. For our apple example, you could have students represent the following: planting the seed, caring for the tree, harvesting the apples, a truck driver bringing the apples to a washing facility, workers at the washing facility, workers packaging the apples, a driver driving the apples to a grocery store, a worker stocking apples in the store, and then finally a customer in the store driving the apples back home. At the end, you can include a person taking a bite from the apple and then throwing it in the garbage. If you’d like to avoid guilting students about home food waste and would instead like to focus on larger culprits like grocery stores and restaurants, feel free to end the simulation there.

(For added impact for older students, you can add more students to the line to include the extra steps it takes to grow food in another part of the world and then bring it to Martha’s Vineyard.)

Regardless of the example food you choose, you should have a long line of students at the front of the class acting out the growing process from start to finish. Ask the remaining students what this means about wasting food. Are we just wasting that one apple, or are we wasting all the time farmers spent growing the apple, workers spent preparing it for sale, and all the time and energy (especially gasoline) spent getting the apple from one place to another?
Depending on the age of your group, you could mention that the USDA estimates that the United States wastes roughly 30-40% of its food supply - that’s over 130 billion pounds of food every year! Imagine all the time and energy wasted when we throw away that amount of food!

Wrap Up

So what are ways we can waste less? We can certainly throw out less food, but sometimes food waste (along with other food scraps like onion skins, banana peels, etc.) is unavoidable. What if we try to buy more food from local growers (here you can either discuss that less time/energy/gasoline is spent preparing produce if it has a shorter distance to travel from farm to plate, or if there is time you can run through the above activity again with far fewer students/motions)? We may be wasting less resources when we buy local, but either way that food waste has to go somewhere. So where does it go?

You can either choose to talk about compost here, or use this as a segue into a lesson about the difference between what happens in a compost versus what happens in a landfill, which is where wasted food goes when we throw it in the trash.

Extensions and Variations

This lesson could be a great tie in-activity for lessons related to standard 4-ESS3-1 and the difference between renewable and nonrenewable energy sources. We waste a lot when we throw away food, but when you look at the tangible components of waste, fuel makes up a large part of it in our modern food system. Is it practical to feed lots of a nonrenewable resource into transporting food that might be wasted?