

Conservation Matters

A monthly column focused on conservation education, as the result of collaboration among several area conservation commissions and organizations. If your town's commission or conservation organization would like to contribute articles, please contact Jessica Tabolt Halm jesshalm78@gmail.com

Title: Russell Elementary School Sustainability Project: Food Waste

Written by: Doug Earick, RES Science Teacher, and 8th grade science students

During the spring of 2017, the 8th grade science class at Russell Elementary in Rumney created and carried out a class project on food waste at the school. This project was designed as part of the school's participation in the SPIRALS (Supporting & Promoting Indigenous & Rural Adolescents' Learning of Science) program from the University of New Hampshire. The program, developed to support students' understanding of sustainability by having the work on a project of their choice in their community, provided the class with an opportunity to study real-life science in a social context. The class at RES developed several other ideas before making their decision to focus on food waste at the school, including power usage in the community, water pollution, and trash reduction. Over the course of several weeks, the students designed and conducted surveys, met with food and waste officials, and spent hours researching their topic. In the end, they put together a report for the principal and presented their findings to the Rumney school board and at a school community meeting. The following is a short abstract on their findings, written by a student in the class.

*Doug Earick,
RES Middle School Science Teacher*

As a class we have decided to go into depth about the food waste problem in our school. We found out that there is a lot more food than we thought being wasted at RES. Mostly this is because of things like people being picky eaters or getting what they don't want, and the guessing of orders in the kitchen. We took multiple steps during this project. When we first started, we split the class into 3 different groups: Staff/Students Survey group, Cafeteria info group, and a Solutions group. The main goal of the Survey group was to find out how much food kids think they take, eat, and throw away and why. The Cafeteria group found out info about the kitchen like: government regulations on the food, how much the cafeteria makes and the price of the food for the kitchen. The Solutions group needed to find out how to fix the problems about our waste management system here.

From the data we collected from the lunchroom, we saw a large amount of food and milk wasted over the week of our study (see table below).

	Monday	Tuesday	Wednesday	Thursday	Friday
Lbs. Food Prepared	67.5	52.5	55	48	54.5
Lbs. Food Served	45.5	43	44	34.5	35.5
Lbs. Food Repurposed (K)	8	3.5	5.5	6.5	13.5
Lbs. Prepared Food Waste	14	6	5.5	6	5.5
Lbs. Food Eaten (S)	13	7.5	8.5	8.5	9.5
Cups Milks Served	59	58	59	48	68
Cups Milk Waste	9.5	13	9	8.5	10.5

The Cafeteria group had set up an interview with the cafeteria manager, who is the chef for our school. He was able to answer most of our questions about the food waste in the kitchen. When he could not answer our questions, he referred us to the Fresh Picks, the school's food provider, website.

We surveyed all of the students in our school to find out why people are throwing out their food. We found out that about half of our school (49%) admitted to not eating all of their food, and 85% of the students throw away their food if they don't like it. We also now know that 55% of kids get hot lunch every day. Also, about 9% of the kids at RES have some sort of allergy to food or a different belief about food. This includes being gluten free and vegetarian, along with being allergic to nuts, dairy, food dye (especially red), and different fruits. 12% of the kids at our school believe they get too much food, and 57% of the kids at RES don't have enough time to completely finish their meals. We took all this information and came up with different recommendations.

One suggestion we have to our school is to purchase a worm farm, or vermicomposter. A large worm farm would be needed to handle the food waste. The Rumney Conservation Commission has offered to pay for the purchase of the vermicomposter and we hope to have it set up next school year. Another suggestion we have is to donate the excess waste to local farms for pig slop. We have two farmers that we could possibly give the waste to. We also threw around the idea of a lunch order system, so that the lunch people know exactly how much food to make students each, instead of the current system of estimating. The students would fill out what they wanted to get for lunch that day, and before the day began the kitchen staff would get all of the cards and cook the orders. The cafeteria manager said that this system would work, but preferred the kids would hand in their orders the day before he would cook them.

Photo caption: A typical school lunch at Russel Elementary School (top), and the waste collection system used to measure and monitor school lunch waste (bottom).



