

# CHAPTER 11 MATERIALS IN SCHOOLS

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## INTRODUCTION

**M**aster Recyclers care a lot about recycling. Master Recyclers are also parents, grandparents, uncles, aunts and neighbors to children and youth in our community. Some of you work in our school system or are retired teachers, janitors, administrative and district staff. A few of you are even young adults who want to give back to your old school. For these reasons, many of you will decide that you want to spend time making change in schools. Some of you may already be involved in a school and see a problem or have an idea about recycling or food waste. A few of you actually took the Master Recycler course to learn how to make improvements at a school. Some of you just like kids and think that the future of our environment depends on what children learn when they are young. Still others may be interested in doing a volunteer project that involves your kids and other families in your community.



This chapter will let you know about regional programs that offer technical assistance to schools in recycling, composting and waste prevention. You will also learn about the regional approach to educate youth on this topic. It will then focus on four areas that you might decide to get involved with:

- Operations at the school.
- Classroom presentations.
- Events, fundraising and organizing.
- District and regional initiatives.

Some of the educational tools will also be useful for those of you who want to offer outreach and education for youth in other settings like your church, a sport team or scouts.

## TECHNICAL ASSISTANCE AND RESOURCES FOR SCHOOLS

### Operations technical assistance

In the previous chapter you learned about the regional Recycle at Work program (R at W). Because schools are considered a business, in almost all parts of the region specialists offer technical assistance in waste management and prevention in schools. These specialists from different parts of the region meet regularly to discuss how they support schools and to collaborate across jurisdictions.

The exceptions are the City of Portland Public Schools and Beaverton School District who would like to be contacted directly (see sidebar for contact information).

#### RESOURCE

You can find more information about the **Recycle at Work (R at W)** program on their website.

**Beaverton:** Sue Shade, Resource Conservation Specialist, 503-591-4333, [sue\\_shade@beaverton.k12.or.us](mailto:sue_shade@beaverton.k12.or.us)

**Portland:** Nancy Bond, Resource Conservation Coordinator, 503-916-6383, [nbond@pps.net](mailto:nbond@pps.net)

**Metro's website** has many resources and links to further information about recycling and schools.



### Metro education program

Metro staff provide free classroom presentations, puppet shows, educational theatre assemblies and other educational materials on waste prevention. Metro's programs engage students in activities and discussions, encouraging them to think critically about how the choices we make impact our lives, resources and the future.

**Puppet shows for grades K-3.** Metro's free puppet shows for elementary schools make it fun to learn about composting, natural gardening and recycling.

**Elementary school assembly programs.** Metro sponsors the development and presentation of fun and engaging waste prevention and recycling assemblies for elementary schools.

**Elementary school classroom presentations.** Metro's classroom presentations for first to fifth graders teach students about waste prevention, recycling, natural resources, composting and alternatives to toxics. Each presentation is approximately 45 minutes.

**Elementary school curriculum resources.** Resources to teach students about composting, recycling and waste prevention.



**Middle and high school classroom presentations.** Metro’s interactive, hands-on presentations teach middle and high school students about waste prevention and reduction. Presentations are approximately 50 minutes.

**Waste reduction education at outdoor school.** Metro provides funds and curriculum resources for waste reduction education at Outdoor School — helping to keep an Oregon tradition alive while inspiring students to make sustainable choices. Outdoor School Environmental Education program offers all sixth grade students in Multnomah County and their teachers a 24-hour experience where they can explore forests, streams and fields.

**Metro Online Smart consumer videos for middle school students.** View short, fun videos exploring consumer issues that affect middle school students.

**Metro lending library.** Check out a list of recycling and waste reduction videos available for use through Metro’s lending library.

## Additional education programs

**Oregon Green Schools.** At schools across Oregon, students, teachers and staff are making a difference in their communities with programs to recycle, reduce waste, save energy and conserve water.

Oregon Green Schools (OGS) helps with:

- Hands-on technical assistance
- Curriculum and funding resources
- Recognition and events

OGS is a nonprofit organization formed in 1997 with 25 regional coordinators throughout the state and nearly 300 participating schools. Regional coordinators help schools conduct waste audits, provide guidance and training for new programs and recommend curriculum resources and grant opportunities. They also help schools become Certified Green Schools.

### RESOURCE

Additional information is available on the Oregon Green Schools website.

#### OREGON GREEN SCHOOL

*This certificate is proudly presented to*

#### East Gresham Elementary School

in recognition of outstanding efforts in waste reduction and resource conservation.  
Certified May 21, 2015 through May 21, 2018

CITY OF GRESHAM

OREGON Green Schools

GSS

Sharon Ruffalo and Gregg Hayward,  
OGS Regional Coordinators  
City of Gresham

Oregon Green Schools Association

Gresham Sanitary Service  
Oregon Green Schools Sponsor



RESOURCE

Additional information is available on the Eco-Schools Networks webpage.

RESOURCE

Additional information is available on the Schoolhouse Supplies website.

RESOURCE

Additional information is available on the SCRAP PDX website.



**Eco-School Networks.** Through the Center for Earth Leadership, Eco-School Networks (ESNs) are composed of parents leading projects in elementary schools (K-5) in Portland Public Schools and Washington County (Beaverton, Hillsboro and Forest Grove districts). Their goal is to introduce sustainable practices and raise environmental awareness through the daily experiences of children in school. Parents in each network complete the Center’s no-cost, four-session Eco-School Network Leadership Training. The training gives participants the tools and confidence needed to take on projects.

**Schoolhouse Supplies.** Schoolhouse Supplies is a nonprofit that supports Portland public education by giving students and teachers free classroom supplies. Their Free Store for Teachers is stocked with gently used and new supplies donated by the community. The reuse program reduces the need to purchase new supplies.

**SCRAP PDX.** SCRAP is a nonprofit dedicated to inspiring creative reuse and environmentally sustainable behavior by providing educational programs and affordable materials to the community. SCRAP provides a number of educational offerings that promote creative reuse. You can bring a group of kids there for a tour or workshops or attend teacher trainings on creative reuse. SCRAP also donates art supplies and classroom education to one school every year.



## TACKLING WASTE AT A SCHOOL

Helping a school improve their operations and become more sustainable can be extremely satisfying and such work might be a good fit if:

- You are good at organizing people and planning projects.
- You are interested in researching and working with the unique logistical and financial factors at play in schools surrounding waste management.
- You plan to devote a lot of time and energy to one project.
- You are a patient person who sees yourself playing an ongoing role as a partner in helping a school.

Certainly there are times when Master Recyclers and parents find themselves needing to play an advocacy role in improving sustainability at a school. But it is important to remember that it is most effective to consider yourself and others at the schools as working partners who are interested in shared goals. To get to that point, start by carefully investigating the current projects and roles of all players in a school, the resources available and the limitations of what you might be able to accomplish.



### Start with your local resource

You will want to start by finding out if anything is already happening at your school, who the key players are, and what obstacles currently exist.

The Recycle at Work coordinator or Conservation Coordinator in your area and Oregon Green Schools are great places to go to find someone who knows what is already happening in a school. Contact these organizations and find the person who is focused on your area. This person should be your number one local resource.

Before you call your local resource, consider: What is it you are really wanting to do? Is it specific, like you don't like seeing Styrofoam in the school lunches? Or is it more general like you see a lot of food or paper thrown away and would like to help? Or is it even broader like you just want to get involved in any way that is helpful and be a part of a larger effort. What does the school or district website say about current activities or programs? Once you have considered these questions you are ready to call your local resource and tell them about your goals. **Here are questions you should ask:**

- Are there sustainability activities already going on at the school? Is someone already trying to tackle this particular issue?
- Who are the key players at this school?
- Who are your allies and where are the sticky problem areas?
- Who in Facilities Operations manages the hauling contract and how do I reach them?
- Are there district-wide constraints I should know about?
- Is the project I am thinking of something that will last longer than I plan to stay involved?
- Is there any other homework that your resource suggests you do before calling the school?

Be sure and ask your resource for specific tools and resources such as curriculum, free signage and containers that they think will be helpful for your project. These programs are designed to equip you with what you need to succeed.

If there is absolutely nothing going on already at this school with respect to recycling or sustainability, ask them what they recommend you do to get the ball rolling? How can you help do some fact finding in order for your resource to best help you?



## Connect with your school

You might ask your local resource which of these three options is the best approach to connecting with your school:

1. Have your local resource make an email introduction to your principal.
2. Meet with your principal to share your ideas, get their perspective, and learn about school protocols.
3. Have your principal connect you to the school's leadership, green team, or Parent Teacher Association (PTA).

### Potential internal allies to consider in your project:

- Facilities staff
- Principals
- Other parents or a parent organization (like a PTA)
- Existing green team
- Student groups like Leadership, Student Council, volunteer or environmental club
- Teachers (especially science teachers)
- Local businesses who already partner with the school

## RESOURCE

Go to <http://tinyurl.com/schoolwastereduction> for a quick guide created by the Portland metro area School Resource Conservation Network.

## Background checks

Most districts require volunteers to have gone through a district background check before working in a school. Master Recyclers can either do whatever background check each particular district requires or can register themselves with the *Oregon Online Central Background Registry* (application available online), which is utilized by all school districts.

## Jump in!

Having done your homework, you're likely already on a successful path to making a difference at your school.

### Examples of Master Recycler Projects

- Durable silverware drives to eliminate spork packages (plastic spork, plastic straw, paper napkin).
- Milk carton recycling (see case study).
- Fundraising for Steel Cow milk dispenser and durable cups.
- On-site food composting and wormbins.
- Conducting a waste audit for the school to assess potential goals and savings.
- Teacher and student school supply collection day in spring to gather and save materials for the fall.
- Designating a closet in the school for supplies and promoting its use especially in spring and fall.
- Setting up boxes to collect paper that has been used on one side, but can still be used on the other side.

### RESOURCE

*Look online for the Oakland Unified School District Food Donation Guide.*

### RESOURCE

*Look online for the EPA's Guide to Conducting Student Food Waste Audits: a Source for Schools.*



## Milk Cartons Case Study



### Where:

Ridgewood Elementary  
in Beaverton

### Master Recycler:

Katie Reed (Class 37) and  
Kristen Wesel (Class 39)

### Problem:

Several tons of milk cartons were  
being thrown away every month.

**Milk cartons are a good source of fiber for some recyclers, but they can't be mixed with office paper because they have plastic injected into the pulp.** This means they have to go to a separate recycler. On top of that, if not properly managed, milk in cartons can spill on other recyclables and even rot the paper in the cartons themselves before they get recycled.

When Katie approached the school about why they weren't recycling the cartons the custodian, Greg Poulin, decided to investigate what it would take for the closest material recovery facility, Far West Recycling to take them. Far West Recycling said cartons need to be emptied, rinsed and dried. So Katie, Kristen and others from the school formed a green team, they got a barrel into which kids can empty their milk and they got racks donated to dry milk cartons on. They organized a system where kids earn prizes for taking turns lightly rinsing and drying the cartons. Then parents bag milk cartons and hand them off to the custodian who pokes holes in the bags and hands them to the hauler.

This program resulted in a significant enough reduction in garbage that the school renegotiated its contract with the garbage hauler and continues to pay thousands of dollars less for garbage each year. The program was so successful that Oregon Green Schools and the Eco-School Networks asked Katie and Kristen to share their story. Today many schools in the Beaverton school district are recycling their milk cartons.

Unfortunately, the milk carton project lost steam at Ridgewood because the custodian was assigned new duties and the parents who managed the process left as their kids moved on to other grades. But what started as a milk carton project became so much more.

Kristen shares, "In order to create a legacy of sustainability for Ridgewood, we had a meeting of stakeholders including parents, teachers and garden volunteers to decide our future focus. We chose to re-start the Ridgewood Student Green Team. Our adult sustainability team connected more closely with the Ridgewood Parent-Teacher Co-op (PTC) to get more invested volunteers so that we can grow and continue the program without having gaps when committed parent volunteers leave the school and move on. Since then we have a very well established adult Sustainability Team and nearly forty 4th graders on our student Green Team. We organize clothing swaps and other events. Even though milk cartons are back in the garbage, the garbage service fee has not increased to its former level because the overall amount of discards is still less than it was previously. We are committed to keeping our trash low and will concentrate on Oregon Green Schools trash audits every three years to monitor our progress."



## SPECIAL EVENTS, FUNDRAISING AND COLLECTION EVENTS

Perhaps you were thinking of a project that would allow you to connect with other families, kids and teachers. Or a project that is a bit smaller and has a distinct beginning and end. From sporting events to fundraisers, environmental clubs to PTAs, there are lots ways for Master Recyclers to help with community gatherings at schools.

Many of the steps and resources are similar to those for recycling projects in schools. Oregon Green Schools and the Eco-School Networks have many great ideas and resources.

### Examples of Master Recycler projects

(If you are considering doing any of these types of projects and they are larger than a single classroom, start working with the facility operations early in the process.)

- Waste-free lunch days.
- Waste-free auction and raffle prizes such as experiences, durables, and compost containers.
- Supplies, sporting equipment, costume, or clothing exchanges.
- Non-curbside recycling drives (electronics, Styrofoam, X-mas lights, etc.).
- Collection of gently used household goods donations for the Community Warehouse.

### Party Packs Case Study



**Where:** Skyline Elementary in NW Portland

**Lead parent and Master Recycler:**  
Jill Inahara and Jessica Zahn-Laughter (Class 43)

**Problem:** Classroom parties create a lot of waste

**The Skyline Green team noticed that classroom parties were creating a lot of waste.** They audited and found that the 200 parties each year each produced on average 30 gallons of extra garbage. The audit showed that party waste consisted of disposable plates, cups, juice boxes, napkins, plastic candy or chips wrappers, plastic cutlery, decorations, and tablecloths, as well as food packaging. The group piloted with two classrooms to see if they would use alternative durable packs and it was a success. They then worked with the Eco-School Networks to identify DEQ grant money to pay for party packs for each classroom in the school.

Plates, cups and bowls, tablecloths and napkins were purchased through a restaurant supply company, and tubs were used to store the kits and carry dishes to the cafeteria for cleaning. Instructions were included in each kit, including messaging for the kids about why they use durable goods instead of disposables.

RESOURCE

You can find a pdf version of Metro's Community Cleanup Guide online.

## Earth Day Events

**Where:** Alameda Elementary School in NE Portland

**Master Recycler:** Jaylen Schmitt (Class 38)

The Alameda Green Team wanted to build a culture of sustainability in the school. One way they did that was to organize Earth Week activities. They started with an eco-friendly fundraiser. They sold 150 reusable sandwich wraps, 72 water bottles and 1 durable lunch kit for the green team. They then held an Earth Day assembly where kids learned about their carbon footprints and went home to log activities they did at home. The 200 kids who turned in a form entered a raffle for prizes such as compact fluorescent light bulbs, bike helmets, waste-free lunch boxes and garden kits. Logs were entered and the school newsletter featured the collective carbon footprint of participating students and specific action items that would make the biggest difference.

The following two years the green team used the Metro Community Cleanup Guide to plan a collection event. In the first year they collected about 40 cubic feet of Styrofoam that was recycled at Recology, 250 pounds of batteries that were recycled at Batteries Plus, nearly 200 pairs of shoes that were reused by a church with some recycled for sports surfaces, and 37 pairs of eye glasses that were reused by the Lions Club.

## CLASSROOM EDUCATION AND CURRICULUM RESOURCES



Perhaps you like public speaking, creating interactive activities or have a group of kids or youth you would like to share ideas with. If you don't already have a school community, the contacts listed below can help you find one where you can carry out a project.

Kimberly Taylor	503-797-1671	<a href="mailto:kimberly.taylor@oregonmetro.gov">kimberly.taylor@oregonmetro.gov</a>
Darwin Eustaquio	503-797-1522	<a href="mailto:darwin.eustaquio@oregonmetro.gov">darwin.eustaquio@oregonmetro.gov</a>
Clackamas County: Laurel Bates	503-742-4454	<a href="mailto:lbates@co.clackamas.or.us">lbates@co.clackamas.or.us</a>

You can take groups to see the great materials management facilities we have in this region! To find facilities that host school field trips look on Metro's website for the *Portland Metropolitan Area Field Trip and Resource Guide*. Organizing a field trip to facilities listed in this guide would count as volunteer hours.

The following websites and webpages are deep with resources, curriculum, games, activities and options for joining clubs.

- Facing the Future
- EPA Lesson Plans, Teacher Guides and Online Resources for Educators
- Green Education Foundation
- Resources for Rethinking

## DISTRICT LEVEL CAFETERIA ACTIVITIES

Activities in individual schools are driven primarily by their principals and parents. However, some problems are better tackled at the district level.

Tackling such problems especially in the cafeteria on a district level, can effectively capture impressive amounts of waste for compost and recycling, reduce waste at impactful levels and save schools money. According to LeanPath, a Portland-based company that provides food waste tracking systems to the hospitality, foodservice and restaurant industries, 45 percent of all waste generated by weight by the average K-5 school is food related and 31 percent of waste at middle and high schools is food related.

Wasted food is not only an environmental problem, but also a barrier to kids' health and well-being. In 2012 the U.S. passed the Healthy, Hunger-Free Kids Act. The act set new standards for healthy meals for kids. A U.S. General Accountability Office survey released in January 2014 found that 48 of 50 states reported that food waste and the costs have been their two top challenges in implementing the rules. Their research is finding that the wasted food tends also to be some of the healthier food. Studying waste and student attitudes about waste helps the U.S. school meals programs make better decisions about how and what to serve students so that less food is wasted and kids get balanced nutrition.

### Replacing Styrofoam™ trays

In 2010, all school lunches in Portland Public Schools (PPS) were delivered on Styrofoam™ trays. The David Douglas and Parkrose Districts in Portland had not done away with their dishwashers and continued to use durable trays, but school by school, PPS had moved to disposables because of what they thought at the time was a cost savings. It turns out that disposable trays must be bought over and over again and they pile up in the garbage, so the schools were actually spending more money because of this change. Meanwhile a group of parents in eight different schools in Portland who were involved with the Eco-School Networks decided that they wanted to change this practice. They learned that Nutrition Services was receptive to budgeting money for labor to wash durable trays, but facilities did not have the initial resources to pay for the dishwashing machines and durable trays. The Eco-School Networks' parents appealed to the City of Portland, Bureau of Planning and Sustainability who identified one time funds to pay for trays. It took several more years for the procurement of dishwashers and the implementation process, but by 2014 almost all elementary schools were using durable trays.



## RESOURCE

Look online for the Oakland USD School Food Donation Guide for step-by-step instructions and customizable templates.

## Milk carton recycling

A number of individual schools in the region have tried milk carton recycling. The Hillsboro School District (HSD) partnered with the Washington County Solid Waste & Recycling program to establish milk carton recycling at 33 of the district's 35 schools, and the impacts are impressive. The HSD purchases upwards of three million milk cartons per year, weighing in at nearly 48 tons of material. Eliminating milk cartons along with the wet weight of leftover milk, allowed HSD to decrease service pickups for a garbage cost savings of about \$85,000 per year.

## Food donation

Two state and federal policies have made it so both the Portland Public Schools and Hillsboro School District could set a district-wide policy aimed at donating food not eaten during school breakfast and lunches to local food pantries and the Oregon Food Bank.

First, the Oregon Department of Education School Food Safety Inspection Requirements state that prepared food and food that has been handed to the consumer cannot be donated to hunger organizations. However, pre-packaged products, such as pre-packaged vegetables and sandwiches, can be recovered for redistribution, as long as they are not labeled potentially hazardous. The packaging on a potentially hazardous product will almost always indicate whether or not a food item needs to remain refrigerated at all times or after opening (indicating that the food is potentially hazardous and thus, not allowed to be re-served/resold).

The second is the U.S. Department of Agriculture's, *Offer Versus Serve* policy. This policy allows servers to give children choices of the food they want, so that food that does not get chosen can be donated.



## Recess before lunch: a waste prevention strategy

U.S. Department of Agriculture, the School Nutrition Association, and the Centers for Disease Control and Prevention have studied the timing of lunch in relation to recess to understand if children will eat or waste more food. Studies show that implementing recess-before-lunch (RbL) results in children consuming significantly more food during the lunch period and wasting significantly less food. Recess before lunch also increases the average student's productivity levels post lunch. As noted in a study conducted by the *University of Mississippi's National Food Service Management Institute*, "When students go to recess before lunch they do not rush through lunch and tend to eat a more well-balanced meal including more foods containing vitamins, such as milk, vegetables and fruits."

### When recess is before lunch, an average school's student population:

- Wastes less food (on average, a 27 to 40 percent decrease in waste).
- Consumes as much as 35 percent more calcium and protein.
- Decreases its number of post-recess nurse visits, for such issues such as headaches and stomachaches.
- Is calmer and ready to get to work immediately instead of needing cool-down time.
- Increases its post-recess on-task classroom time.
- Decreases its discipline referrals.
- Decreases the need for cafeteria-based supervision.
- Decreases the number of lunch break-related accidents.
- Generates less litter on school grounds and inside the school.



Several schools in the Hillsboro School District already implemented recess before lunch. Larger school districts will likely not have the same opportunity as lunch and recess are carefully timed between grades. However, in districts where it is possible, it is clear that recess before lunch is a win-win.

## How to get involved in district-wide programs

Whether you have an idea or concern or just want to get involved, discussions concerning efforts of this magnitude can be tricky, as they will most likely involve numerous people, mostly administrators. The best approach is to start with your local resource as described in the first section of this chapter. They would know what might already be underway, what resources are available and how you might best connect with key decision makers.



## CONCLUSION

Working with schools and other youth groups is appealing to many Master Recyclers. Even though it is a cliché, youth are our collective future and it is vitally important that we educate them about recycling and sustainability. Projects focused on recycling, composting, and other sustainability efforts can be terrific ways not just to reduce waste at schools, but also to engage young people in this work. Many of the strategies and resources that you would use in a school setting are similar to those you would use at an event or in residential settings. But there are important differences and special considerations and this chapter explored many of those. You now hopefully have a good sense of how to find a school to work with, how to establish effective relationships with key players, and how to find and use resources such as curriculum, presentations, and field trips. While many Master Recyclers are interested in working with one school, there are also opportunities to connect with district-wide initiatives focused on recycling and waste reduction.