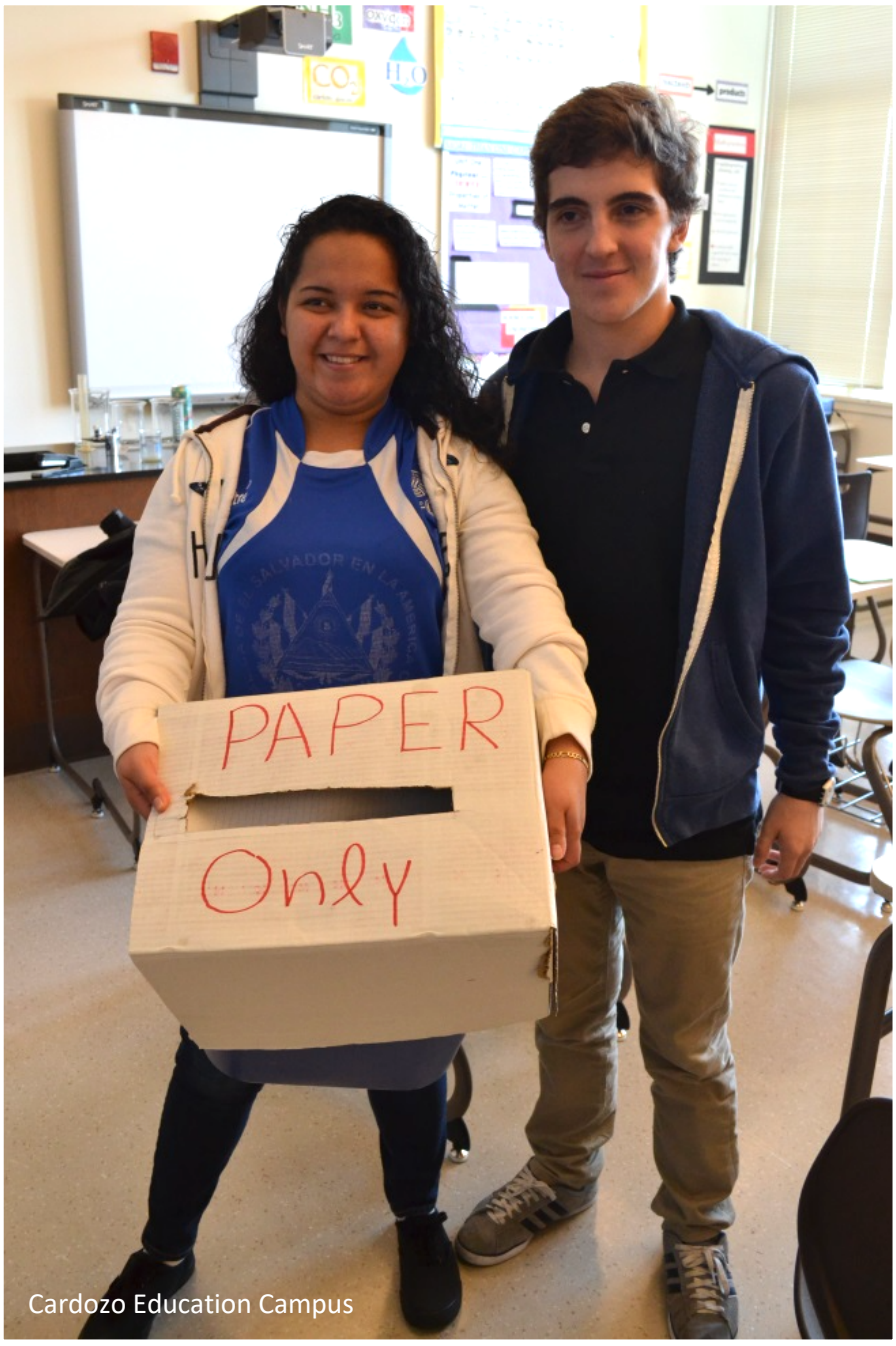
DC Recycle Right! Competition



Cardozo Education Campus

SY 2018-2019

DC Department of General Services

About the Recycle Right! Competition

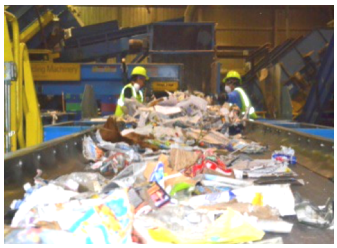
The Recycle Right! Competition rewards schools for recycling right, not for recycling more.

Inspired by the Green Schools Alliance's Green Cup Challenge, students participating in the competition use math skills in a real-world application to conduct weekly classroom bin surveys. During each bin survey, students count the number of recycling and trash bins used correctly and incorrectly. Students and teachers then take action to improve the bin survey results over the course of the competition. Schools can choose to participate together as a whole school or pit classroom against classroom.

Why Recycle Right?

What does it mean to recycle right? To recycle right, the right materials have to get sorted into the right bins and then from the bins to the correct outdoor containers so that they can be transported to the proper waste management facilities. This happens when people make the decision to follow the labels on the bins and only put acceptable items in the recycling bins. It's important to remember that just because something is *recyclable*, it does not mean that the item is *acceptable* at your local recycling facility. In Washington, DC, the Mayor's List of Recyclables and Compostables dictates what items are acceptable at local recycling and compost facilities.

Why recycle right? Recycling right is important because when items are disposed of in the wrong bin, they "contaminate" the bin and the material cannot be recycled. Paper can be recycled into new paper items including newspaper, tissue products, paper towels, insulation and even kitty litter. There are many additional benefits—for example, recycling one ton of paper saves enough energy to heat an average home for six months.[1]



What is contamination, and why is it a problem? Contamination occurs when materials are incorrectly sorted into the wrong bin. When a bin contains the wrong materials, like when there's a plastic bag in a paper bin, the bin is considered to be contaminated. Contamination is a problem because:

- It ruins the otherwise recyclable material (Think: A sandwich with ketchup in the recycling bin = ketchup-smeared paper). Contaminated material either goes to a landfill or is incinerated instead of getting recycled. Contamination from one school can cause an entire truckload of recyclables to become trash!

[1] Tools to Reduce Waste in Schools. U.S. Environmental Protection Agency. http://www.capitalregionrecycling.com/Libraries/Program_Files/EPA__toolstoreducewasteinschools.sflb.ashx

- It increases the cost of sorting the material at the recycling facility.
- It decreases the value of the recycled material, which negatively affects revenues and profits for the city.
- The District can lose money in the form of penalties for having trash in recycling truckloads.
- Because of high contamination, China placed a ban on waste imports in July 2017. This means the U.S. will be unable to sell many of our recyclables to China, where the materials could be made into new items.

5 Steps to Prepare

Step 1: Assemble a Recycle Right team.

This group of students, along with at least one teacher or administrator, will be responsible for conducting bin surveys throughout the school building.

Teachers participating in the competition should attend a Recycle Right! training to learn more about how to lead a team. See DGS's Healthy Schools website for information about the date and location of training.

Step 2: Review correct paper recycling procedures in your school.

DCPS Schools: Correct sorting means following DCPS Recycles! Waste Management Procedures, which dictate that blue recycling bins are for PAPER ONLY in classrooms. Classrooms should have 1 blue bin labeled for paper only and 1 black bin for trash. See page 8 of the Waste Management Procedures for more info on what bins should be in in common areas, teachers' lounges, and other rooms that generate a lot of paper.

Other Schools: Correct sorting procedures and set-up depends on your school's recycling program. If you are unsure about your school's recycling procedures, ask your school's business manager and/or custodial staff.

Step 3: Identify your sample.

Identify which classrooms' bins you will survey throughout the competition. This will be your sample, and should not change throughout the competition. You should survey bins in a minimum of 10 classrooms. You may also choose to survey bins in common areas, copy rooms, or teachers' lounges. Ideally, you will survey all the bins in your school!

Step 4: Set up bins, labels and additional signage.

Make sure recycling and trash supplies are set up correctly throughout your school according to your school's recycling procedures. Place additional posters and signage as you see fit.

Step 5: Set deadlines for the competition. See deadlines below for 2018 competition.

	Action	Deadline
Week 1	Conduct your baseline survey (#1)	Friday, Oct. 5
Week 2	Conduct survey #2	Friday, Oct. 12
Week 3	Conduct survey #3	Friday, Oct. 19
Week 4	Conduct survey #4	Friday, Oct. 26
Week 5	Submit make-up results. Analyze results.	Friday, Nov. 2

Awards & Recognition

Schools can compete for Highest Performance, Most Improved, and Most Replicable Solution awards, which will be determined by the Department of General Services after the competition has concluded.*

Highest Performance – An objective category that awards the school with the highest percentage of correct bins throughout the competition. This is calculated by evaluating each school's average percentage of correct bins across all four weeks.

Most Improved – An objective category that awards the school that improved their percentage of correct bins by the most percentage points from week 1 to week 4. This school may have started with a low percentage of correct bins but improved the most throughout the competition.

Most Replicable Solution – A subjective category to award the school that came up with the most replicable solution to improve sorting.

*As an option, you can also choose to give these awards to individual classrooms at the end of the competition.

The Competition

Week 1: Conduct a Baseline Survey

Conduct a bin survey to establish a baseline and submit your results. In order to know how much you improve, you must know where you start. Use the bin survey worksheet provided on page 9.

Submit your data each week using this form:

https://goo.gl/forms/hIfFvAstJjGFmr8h2

a) In the "Classroom" column, enter the classroom number for the bins.
b) In the "Correct" columns, enter the number of bins that contained ONLY items that belong in those bins according to the bin labels.
c) In the "Incorrect" columns, enter the number of bins that contained ANY items that didn't belong in those bins.

Week 2: Share Results, Take Action, and Conduct Survey

Share results and create an action plan. Share the results with the whole school. Each classroom should create an action plan to improve recycling "correctness" throughout the remaining 3-week period. Review the Action Ideas section (pg. 5) for ideas.

You can use this opportunity to apply science concepts such as writing a hypothesis and conducting an experiment. For ideas on how to improve paper recycling, review the resources and real-life examples provided below. You can also get come up with your own creative ideas!

Conduct Survey. Conduct weekly bin surveys using the same survey form that you used to establish your baseline during Week 1. Submit your results to DGS.

Weeks 3 & 4: Take Action and Evaluate your Strategy

Repeat the steps in Week 2 for Weeks 3 and 4. Revise your strategy if you do not see an improvement in your recycling correctness. Don't forget to submit your results.

Week 5: Make Up Week.

Submit additional bin surveys. By the end of this week, you should have completed and submitted four bin surveys of your entire bin sample.

Optional: Analyze Results and Award Winners

Schools may choose to give the following award to individual classrooms that were surveyed throughout the competition. You can make up your own awards, too!

For **Highest Performance**, award the classroom with the highest percentage of correct bins throughout the competition. Use the scoring worksheet on page 10.

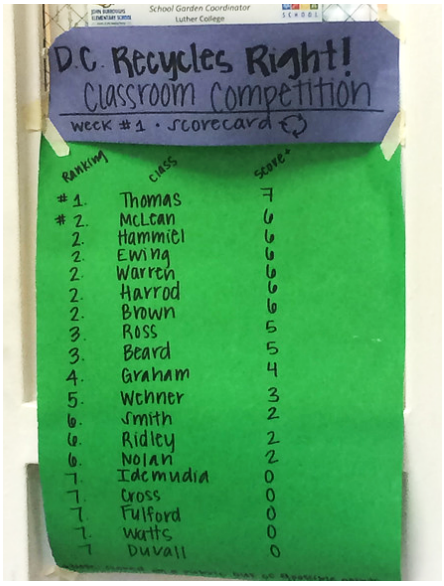
When you're done, celebrate then continue to recycle right all year long!

Connect to Classroom Learning

The Recycle Right Competition is designed for you to be able to integrate with or supplement your in-class lessons with a real world activity. Examples of how to do this include:

- **Math**— Apply math skills, including counting, addition, calculating percentages, creating graphs, and calculating slope (in calculating improvement over the 3-week period), etc.
- **Science** – Explore nutrient cycling, climate change, limited resources, etc.
- **Art** – Create posters and signs.
- **Economics** – Explore secondary materials markets and commodity prices.

Check out Recycle Right curriculum-linked lesson plans written by DCPS teachers here.



Action Ideas

- Share your weekly results with your school and use them to improve your recycling "correctness" throughout the three-week period.
- Announce survey results on the morning announcements and encourage correct recycling procedures in classrooms.
- Have students make Posters and Signs to label classroom recycling bins.
- Provide incentives for classrooms that recycle right.
- Post a leaderboard in a common area like the lobby, so everyone can see which classrooms are the best at recycling right.

Quick Links

- Dept. of General Services - DCPS Recycles! Website
- DCPS Recycles! Waste Management Procedures (July 2017)
- Classroom and Common Area Cheat Sheet
- The DCPS Recycles! Honor Roll Self-Assessment
- DCPS Classroom Recycling Acceptable Items
- Department of Public Works (DPW)'s Commercial Recycling Guide

Results from 2017 Competition

During Growing Healthy Schools Month 2017, 13 DC schools participated in the DC Recycle Right Competition to promote recycling right in their schools. Check out the photos and press release from the 2017 competition to see examples of what schools have done in the past to improve recycling correctness throughout the school.

Who Participated?

- Burroughs Elementary School (Ward 5) †
- Cardozo Education Campus (Ward 1) †
- Dorothy I Height Elementary School (Ward 4) *
- Drew Elementary School (Ward 7) *
- Hardy Middle School (Ward 2)
- J.O. Wilson Elementary School (Ward 6) †
- Janney Elementary School (Ward 3) †
- Key Elementary School (Ward 3) †
- Roosevelt High School (Ward 4) *
- Seaton Elementary School (Ward 6)
- School Without Walls @ Francis-Stevens (Ward 2) †
- Tyler Elementary School (Ward 6) *
- Woodrow Wilson High School (Ward 3)

† - Indicates school participated in 2015 and 2016 Recycle Right! Competitions
* - Indicates school participated in 2016 Recycle Right! Competition

The Results

Over the course of the competition, schools improved classroom recycling bin “correctness”, applied 21st century math and science knowledge, and practiced invaluable interpersonal skills.

- Highest Performance -

Burroughs Elementary School (Ward 5): Maintained the largest percentage of correct bins throughout the competition. On average, 96% of Burroughs' bins were correct.

- Most Improved -

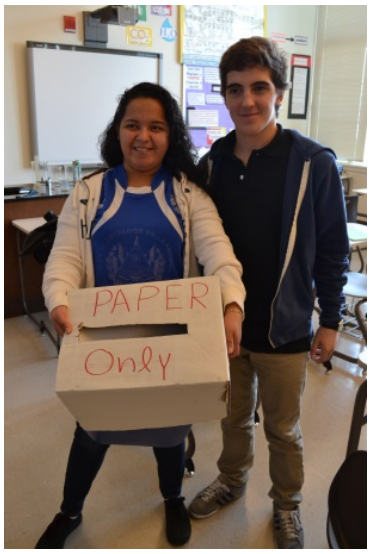
Tyler Elementary School (Ward 6): Improved their percentage of correct bins by 35 percentage points from week 1 to week 4 – more than any other participant.

- Most Replicable Solution -

Woodrow Wilson High School (Ward 3): Developed a method to improve sorting that other schools can easily adopt. Their AP Environmental Science students participated in the competition as part of their class and will connect their data with curriculum.

Recycle Right Strategies

Students from **Cardozo Education Campus (Ward 1)** created bar graphs to analyze recycling data and trends throughout the competition. Cardozo Education Campus students also made a lid for the paper recycling bin out of cardboard to prevent contamination.



Students in the **Sustainability Club at School Without Walls @ Francis-Stevens (Ward 2)** made homemade paper with both clean and contaminated paper recycling batches to show how contaminated recycling bins lead to poor quality recycled paper products.

Several schools, like **Columbia Heights Education Campus (Ward 1)** and **Randle Highlands Elementary School (Ward 7)**, created student green teams, which continued to improve recycling throughout the year.

Frequently Asked Questions

Question: Is cardboard allowed to be recycled in the paper bin?
Answer: Yes, cardboard is allowed in the paper bin. Cardboard boxes should be broken-down.

Question: Can tissues and napkins go in the paper recycling bin?
Answer: No, tissues and napkins should NOT go in the paper only bin. They are dirty and contaminate the bin.

Question: Is there a separate pick-up for bottles and cans?
Answer: Schools have blue carts for the collection of bottles and cans.

Question: Can milk cartons go in the paper recycling bin?
Answer: No, milk cartons should NOT go in the paper only bin. The milk cartons have a plastic lining which contaminates the paper recycling stream. Milk cartons should be recycled with bottles and cans.

Question: My school collects bottles and cans in our classrooms. Can we include mixed recycling bins in our bin survey?

Answer: Yes you can! Evaluate all bins in the classrooms you select as part of your sample. A bin is considered 'correct' if ALL items in the bin are sorted correctly according to the label on the bin.

Worksheets

Recycle Right! Competition
Weekly Bin Survey Worksheet

Name(s) of Surveyors:

Date: / /

Circle One: Baseline (week 1) Week 2 Week 3 Week 4

	A	B	C	D	E	F
Classroom (Room #)	# of Correct Recycling Bins	# of Incorrect Recycling Bins	# of Correct Trash Bins	# of Incorrect Trash Bins	Total # of Correct Bins (A+C)	Total Bins Surveyed (A+B+C+D)
Totals						

Recycle Right! Competition Scoring Worksheet – Highest Performance *You can use this scoring worksheet to calculate the Highest Performance winner.*				
	A	B	C	D
Classroom (Room #)	# Correct Bins (Add up all from Weeks 1- 4)	Total Bins Surveyed (Add up all from Week 1 – 4)	Overall Percent Correct =(A/B) x 100	Highest Performance Ranking (Rank Column C in order from largest to smallest)