



DC Reduce First! Challenge

Classroom Edition

2018 – 2019

DCPS Recycles! Program
DC Department of General Services
Sustainability + Energy



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Litter collecting at the River Terrace Trash Trap located on the Anacostia River in DC.

About the Reduce First! Challenge: Classrooms Edition



Classroom bin inspection at Burroughs Elementary School

To achieve the [Sustainable DC](#) target of zero waste by 2032, DC will continue utilizing and expanding on what are known as “the 3 Rs” of waste reduction – Reduce, Reuse, and Recycle. Your school can help DC reach this goal by targeting the first R – **Reduce!**

Why Reduce? In 2015 the U.S. generated 262.4 million tons of municipal solid waste, which averages to 4.48 pounds per person per day.¹ This waste ends up being burned in an incinerator, buried in a landfill, or becoming a hazard to wildlife and ecosystems as litter. Once these items have been thrown away the resources used to create these materials, such as trees, petroleum, nutrients, water, and fuel, cannot be used again. Even if these items were recycled instead of thrown away, they would require resources to recycle the material, such as energy for machines and trucks to haul the recyclables. In order to conserve these resources, we need to reduce the amount of materials generated.

The DC government has made strides to reduce the use of certain materials, such as prohibiting the use of foam products through implementing the [Foam Ban](#) in 2016 and passing the [Bag Law](#) in 2009, which promotes the use of reusable or no shopping bags instead of single-use plastic shopping bags. DC schools participating in the Reduce First! Challenge will help contribute to the solutions for reducing waste in DC!

The DC Reduce First! Challenge: Classrooms Edition is a four-week competition focused on reducing waste generated in classrooms at DC schools. During the competition, teams from each school will conduct a simple classroom waste audit, select a commonly discarded item to reduce, and compete to achieve the highest reduction in waste of that item.

Can't compete with DGS in March? Your school can do this challenge at any time as a Student Action Project! Use these instructions to guide your students in making real world change.

¹ “National Overview: Facts and Figures on Materials, Wastes and Recycling.” EPA, Environmental Protection Agency, 26 Oct. 2018, www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#NationalPicture.

Awards

Three participating schools will receive awards for their achievements during the challenge. Schools will be evaluated by a panel of experts for the following awards:

Top Performance: Awarded to the school with the largest reduction of the selected item compared to the baseline.

Creativity: Awarded to the school that creates the most clever and unique waste reduction strategy.

Leadership: Awarded to the school that implements and shares a strategy for reducing waste that, of all strategies in the competition, would be the easiest for other schools or institutions to replicate.

Important Dates and Deadlines

February 11, 2019	Registration Deadline Sign up form
February 13, 2019	Training February 13, 2019 4:30 - 6:00 PM
March 1, 2019	Week 1 Deadline Submit baseline data using online form
March 8, 2019	Week 2 Deadline Submit action plan using online form
March 15, 2019	Week 3 Deadline Submit update using online form
March 22, 2019	Week 4 Deadline Submit Results using online form
March 29, 2019	Make-Up Week Submit any remaining data from missed deadlines
April 2019	Winners Announced

Preparing for the Challenge

Follow the steps below to make sure your school is ready to compete and create real change:

1. **Build a Reduce First! team:** Determine which teachers, staff, and students will lead school participation in the challenge.
2. **Review Resources:** See [Appendix A](#) for background information and available resources, such as relevant laws and policies in DC, links to Reduce First! 5E lesson plans, and DGS’s “Story of Waste” story map, which will help inform your team’s waste audit and action plan.
3. **Determine your sample size:** You will need to determine what classrooms you plan to audit over the course of the competition. You can choose to audit all classrooms in your building or just a proportion of them. We recommend that a sample size should be at least 5 classrooms.
4. **Coordinate with custodial staff:** Once you have identified which classrooms you will audit you will need to speak with your Head Custodian about typical trash collection from these classrooms. You don’t want your waste to be collected by maintenance staff before you have the chance to do an audit! Ask your Head Custodian how and when they usually collect waste from your sample classrooms so that together you can plan the best time for an audit. Also coordinate how they would like to deal with waste after audits—they may suggest that your team brings waste to correct outdoor containers after the audit is over. Continue to engage with the maintenance team throughout the challenge; maintenance teams are excellent resources for developing solutions and taking action.
5. **Set a date and time for baseline audit:** Work with your custodial staff to choose a time and date to conduct your audit. The day and time you choose for your baseline should be the same day and time for all of your audits, to ensure consistency (e.g. Wednesday, 2:00 pm).
6. **Gather supplies:** You will need:
 - Gloves to protect hands (participants that attend training will receive gloves)
 - Data sheet (page 8) and pen or pencil
 - Surface cover (e.g. tarp or butcher paper)
 - Bags, bins or boxes for sorting items
 - Clean up supplies in case the audit gets messy (consult with your custodial staff to determine what supplies your team should use to clean up)
 - Optional: camera (for documenting your participation!)

Ready, Set, Reduce!

Week 1

Baseline Audit and Item Selection

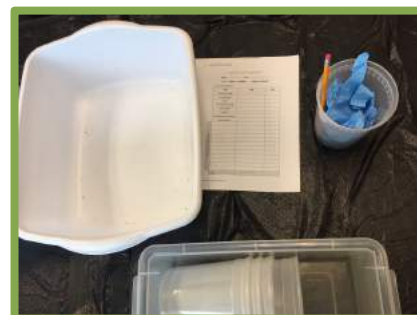
What types of waste do our classrooms generate?

How many of our target item does our school dispose of?

Why do we think it is important to reduce the use of this item in our school?

To identify an item to focus on reducing, you must know what types of waste your school classrooms generate. This investigation will help your team identify an item for your waste reduction strategy.

1. **Set up** your sorting space using either a tarp or plastic trash bags, and make sure you have all necessary supplies. You should have space to sort waste into the following categories:
 - a. **Recyclable items** accepted through the DCPS Recycles! Program or your school's recycling program
 - b. **Compostable items** that can be composted in either garden compost or through organics hauling contract
 - c. **Trash items** that are not acceptable for recycling or composting at school



2. **Sort** all items from your classroom trash and recycling bins into the three categories above. Use the [Mayor's List of Recyclables and Compostables](#) to determine if an item is accepted for recycling or composting in DC.

3. **Sort, count, and record** all items using your [data sheet](#) (page 8).

4. **Clean up** waste and supplies according to the plan developed with custodial staff (see "Preparing for the Challenge"). If your school has a recycling program in place, be sure to recycle the recyclable items. Please note that all DC schools are required to recycle.

5. **Reflect and report** target item and baseline data to DGS using [the online form](#). This can be done any time during week one after the audit has taken place. Optional: Use the **Target Item Worksheet** (page 9) to select an item and to foster discussion about the activity.



Week 2

Create and Submit a Reduction Action Plan

How will we reduce waste of our target item?

In order to successfully persuade others in your school to reduce their use of your target item, your team should explore the impact of this item on your community and the environment. You may want to refer to the DCPS Recycles! [“Story of Waste”](#) story map, [lesson plans](#), or other DC government resources to gather evidence about your item. Consider doing an extension activity to enhance student learning related to the challenge (see [Appendix A](#)). Use this learning to inform your school’s **Reduction Action Plan**.

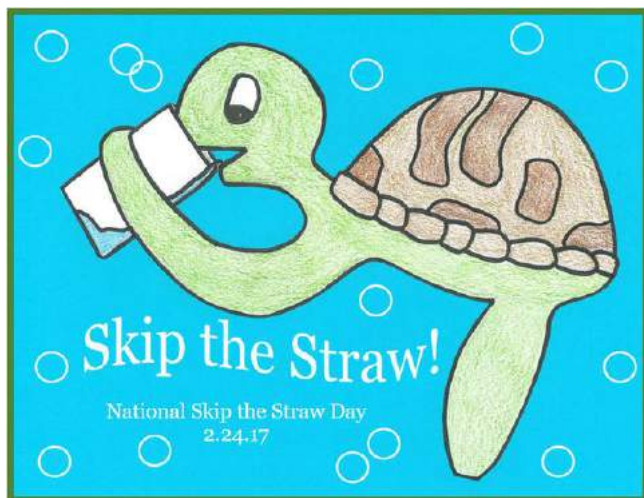
[Submit](#) your plan and a Week 2 update to DGS!

Sample Reduction Action Plan strategies:

- Reduce Campaign
- Education Campaign
- Persuasive Policy (e.g. write to principal to encourage school-wide Plastic Bottle Ban)

Submit data each week here:

<https://goo.gl/forms/3lxFCWpY1Asxmy8l3>



*Reduce! Campaign.
Whitehall Middle School, Whitehall, MI.*



*Education Campaign. DC Department of
Energy and Environment*

Week 3

Take Action and Submit Update

Time to **implement your Reduction Action Plan**! This week, work with your team to put learning into practice and reduce the waste of your team's target plastic item. Use your team's evidence to support your plan.

Submit an update to DGS for week 3 using [the online form](#).

Optional: Conduct a waste audit on the same week day and time as your baseline audit to see how your plan is working. You may use this audit to update your plan for the final week of the competition.

Week 4

Measure and Submit Results

How much did we reduce waste of our selected plastic item?

Was your Reduction Action Plan successful? How much was your school able to reduce the waste of your target plastic item? To answer these questions, your team will conduct a second waste audit and compare your findings to the results of your waste audit from week one.

1. **Conduct** a second classroom waste audit, following the instructions from week one. Remember to plan this waste audit on the same day of the week as your baseline audit!
2. **Submit your data** to DGS using [the online form](#).
3. Remember to **thank your custodial staff** for helping you to take action to address a real-world problem!

Classroom Audit Data Sheet

Date: _____ **Time:** _____

Circle: **Week 1 - Baseline** **Week 4 - Results**

Circle your target item

[illegible]

Week 1 Target Item Worksheet

Rank Top 10 Most Common Classroom Items	Most Common										Least Common
	1	2	3	4	5	6	7	8	9	10	
Item											
Total Counted											
Recyclable According to Mayor's List of Recyclables and Compostables? (Y/N)											
Is it reusable?											

Sample Guiding Questions

1. How is our target item produced, and what is it made out of? What impact does the production of this item have on the environment?
2. What happens to our target item once it has been used?
3. Is my item a major pollutant of our waterways? (See [Anacostia River Trash Study 2008](#) or Ocean Conservancy's [Trash by the Numbers.](#))

Appendix A

Resources and Extension Activities

Is my school recycling?

It is not required for schools to have a recycling program in place in order to compete in this challenge. However, it is legally required for all schools in DC to recycle according to the [Mayor's List of Recyclables and Compostables](#)!²

If, as a result of participating in this challenge, students determine that there is no recycling program at their school, the school should take steps to put one in place. DGS can help with this process—start with “[Five Steps to Recycle Right](#)”.³

DC's 'Reduce First' Resources

Washington, DC has several resources that support waste reduction in our city. Before the challenge, be sure to check out:

- Department of General Services – [Healthy Schools Homepage](#): Includes curriculum-linked lesson plans that relate directly to the challenge, a 'Story of Waste' story map, and much more.
- Department of Energy and Environment (DOEE): Learn about DC's [Foam Ban](#), [Bag Law](#), and [trash in the Anacostia River](#).
- Office of the State Superintendent for Education (OSSE): Read the Environmental Literacy Plan
- Attend the Reduce First Challenge Training for Teachers. ***The 2019 training will take place February 13, 4:30 – 6:00 pm.*** Additional details will be shared with registered challenge participants.

Extension Activities

Take learning from this student-led action project even further by engaging students with an Extension Activity. Some ideas for building on the real-world learning in this challenge include:

- **Take a field trip!** You could visit any of the locations listed below, or see the DCPS Recycles! [Field Trip List](#) for more ideas.
 - Anacostia Riverboat tour with the Anacostia Watershed Society or Anacostia Riverkeeper.

² DC Department of Public Works. “Commercial Recycling”. Accessed 22 Dec 2017. <https://dpw.dc.gov/service/commercial-recycling>

³ This resource can be found online at <https://dgs.dc.gov/node/1200747>.

- Plan an overnight experience with Naturebridge, Alice Ferguson Foundation, or Living Classrooms.
- Visit a Materials Recovery Facility (MRF), like Prince George's County MRF.
- **Expand your strategy** at your school or in your community (and get \$\$):
 - Apply for an EcoRise grant (this challenge counts as an 'Ecoaudit')
 - Link to Earth Force 'Caring for our Watershed' competition (this challenge counts as action project for MWEE and gives schools opportunity to receive additional award money for their projects and programs).
- **Do a litter clean up!*** Organize a cleanup independently or in participate partnership with an organization, such as:
 - The Alice Ferguson Foundation: hosts the Annual Potomac River Watershed Cleanup [each April](#).
 - Ocean Conservancy: hosts annual [International Coastal Cleanup](#) and provides resources for litter clean up year-round.

** If you host a litter clean up at your school and will need additional trash service, remember to alert DGS ahead of time. This will avoid trash overflow at your school's dumpster! Email DGS.Recycles@dc.gov at least one week ahead of clean up to ensure sufficient collection.*
- **Take long-term action to fight litter.**
 - Participate in the Adopt-A-Block program through the [Mayor's Office of the Clean City](#).

Plastic Abbreviations

PET or PETE: Polyethylene terephthalate

HDPE: High-density polyethylene

V or PVC: Vinyl

LDPE: Low-density polyethylene

PP: Polypropylene

PS: Polystyrene

