



Reduce First! Challenge

Plastic Edition

2017 – 2018

DCPS Recycles!
DC Department of General Services
Sustainability + Energy



Mixed recycling in Hearst Elementary School's Cafeteria





Table of Contents

About the Reduce First! Challenge: Plastic Edition.....	1
Awards.....	2
Important Dates and Deadlines.....	2
Preparing for the Challenge.....	3
Ready, Set, Reduce! – Competition Instructions.....	4
Week 1.....	4
Week 2.....	6
Week 3.....	7
Week 4.....	7
Audit Data Sheet.....	8
Target Item Selection Worksheet.....	9
Appendix A: Resources & Extension Activities.....	10
Plastic Abbreviations.....	11



About the Reduce First! Challenge: Plastic Edition

To achieve the [Sustainable DC](#) target of zero waste by 2032, extra effort and increased emphasis will have to be placed on the first of the 3 R's (Reduce, Reuse, Recycle) – **Reduce!**

The DC Reduce First! Challenge: Plastic Edition is a four-week competition open to all DC schools that is focused on reducing plastic waste and pollution. During the competition, teams from each school will conduct a simple cafeteria waste audit, select a single-use plastic item to reduce, and compete to achieve the highest reduction in waste of that item.



Can you spot the plastic water bottle in this photo?
What do you think will happen to the bottle when it rains?

Plastic pollution is a leading local and global environmental problem. Each day, Americans dispose of more than 60 million plastic bottles, and only about 1 of every 5 bottles used in the US gets recycled.¹ Other plastic waste ends up in an incinerator or a landfill or as litter in the waterways and ocean, where it is harmful to animals, plants, and humans.

The DC government has taken action to reduce plastic litter in our local waterways by implementing a [Foam Ban](#) in 2016 and passing the [Bag Law](#). In 2017, the United Nations passed a resolution to curb plastic pollution and recognizing plastic pollution as an urgent threat to our oceans.

Schools participating in the Reduce First! Challenge will generate solutions to the plastic pollution problem! Participants will reduce their own waste and share stories of learning and replicable solutions to inspire waste reduction across the city.

Can't compete with DGS in February? 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 CRI. "Down the Drain." <http://www.container-recycling.org/index.php/issues/.../275-down-the-drain>; UN Environmental Program. <https://wedocs.unep.org/rest/bitstreams/11700/retrieve>

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:

Most Improved: Awarded to the school with the largest reduction of the selected plastic item compared to the baseline.

Most Learning: Presented to the school that effectively connects learning from the challenge with classroom concepts, or otherwise expands on learning from the challenge, and effectively demonstrates this learning to Department of General Services (DGS).

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

Important Dates and Deadlines

January 26, 2018	Registration Deadline Sign up by 5 p.m.
January 31, 2018	Training 4:30 - 6:00 PM <i>Teachers receive 1.5 PLU</i>
February 9, 2018	Week 1 Deadline Submit baseline data using online form
February 16, 2018	Week 2 Deadline Submit action plan using online form
February 23, 2018	Week 3 Deadline Submit update using online form
March 2, 2018	Week 4 Deadline Submit Results using online form
March 9, 2018	Make-Up Week Submit any remaining data from missed deadlines
March 2018	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 participation in the challenge.
- 2. Review Resources.** See [Appendix A](#) for background information and available resources, such as information about relevant laws and policies in DC, links to Reduce First! 5E lesson plans, and DGS's "Story of Waste" story map.
- 3. Observe cafeteria procedures, schedule, and waste management set up.** In order to plan your audits strategically you need to become familiar with when and how waste is collected in the cafeteria. It is not required to have a recycling or composting program in place in order to compete. However, it is required by law that all schools recycle in DC! See [Appendix A](#) for more information about setting up a recycling program at your school.
- 4. Coordinate with custodial staff.** You don't want your waste to be collected by maintenance before you have the chance to do an audit! Talk to your maintenance foreman to plan your cafeteria audits. Ask them 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 custodial 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 after lunch or supper when other students will not be in the cafeteria. 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 Plastic Item Selection

What types of plastic waste does our cafeteria generate?

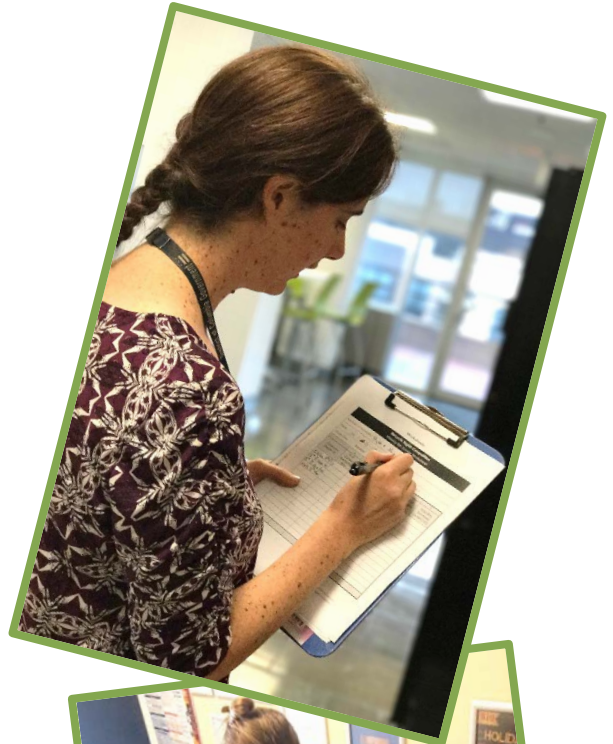
How many of our target plastic item does our school dispose of?

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

In order to identify a single-use plastic item to focus on reducing, you must know what types of waste your school generates! This investigation will help your team to identify a single-use plastic item to focus on.

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:
 1. **Single-use plastic recyclable items**
 2. **Single-use plastic non-recyclable items**
 3. **Non-plastic trash**
 4. **Non-plastic recyclables**

2. **Sort** all items from your cafeteria trash and recycling bins into the four categories above. Use the [Mayor's List of Recyclables and Compostables](#) to determine if an item is accepted for recycling in DC. *If your cafeteria has an organics bin set up for the collection of food scraps and food-soiled paper, you do not have to take everything out of this bin to sort through it. Do a visual check and identify any plastic items you can see in the bin.*



3. **Count and record** all single-use plastic items (categories 1 and 2) using your [data sheet](#) (page 8). Count and record plastic items in the following categories:

Plastic Carry Bags



Straws



Take Out Containers



Bottles



Food Wrappers



Cutlery



Sandwich/Snack Bags



Condiment Cups or Packets



+ **Other** (create additional categories for common single-use items in your cafeteria)

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 single-use plastic items as well as any non-plastic recyclables.
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 plastic item?

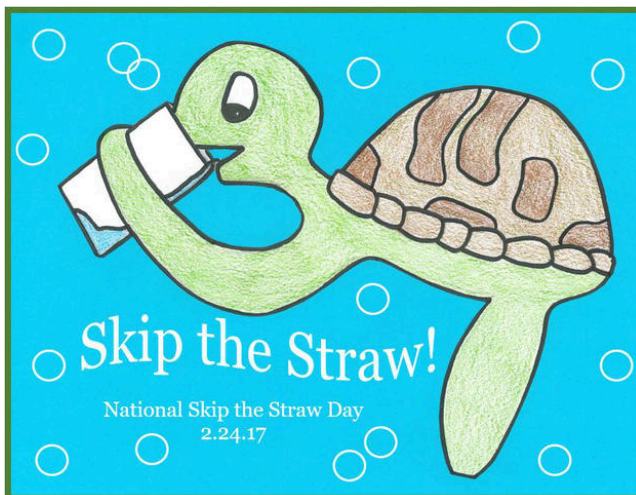
In order to successfully persuade others in your school to reduce their use of your target item, your team should explore the impact of this item on your community and the environment. You may want to refer to the DCPS Recycles! “[Story of Waste](#)” story map, [lesson plans](#), or other DC government 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/DVUJXP83yilCwctg2>



*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 cafeteria 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!

Cafeteria Audit Data Sheet

Date: _____ Time: _____

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

Circle your target item

	Item	Tally	Total
	Plastic Carry Bag		
	Food Wrapper		
	Straw		
	Sandwich/Snack Bag		
	Plastic Bottle		
	Cutlery		
	Condiment Cup or Packet		
	Food Container		
Other Single-Use Plastic Items			
	Total		

Week 1 Target Item Worksheet

Rank Top Ten Most Common Plastic Items	Most Common									Least Common
	1	2	3	4	5	6	7	8	9	10
Plastic 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 2018 training will take place January 31, 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

