



Carton Council

Carton Recycling in Schools

A Go-Green Guide



Prepared for the Carton Council by



environmental impact initiative



Carton Council
RecycleCartons.com



SIG Combibloc





The Carton Council's

Carton Recycling in Schools

Go-Green Guide

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About the Carton Council's *Schools Recycle Cartons!* Program

Dear Green Leader,

Welcome to the *Schools Recycle Cartons!* program! As part of a broader initiative to promote carton recycling, we—the Carton Council—have partnered with Environmental Impact Initiative, a Chicago-based nonprofit, to help schools recycle their cartons. Through extensive research—including a 2009 in-school pilot study—we've found that schools can collect and recycle more than 95% of their cartons with minimal effort and cost.

Whether you're a school administrator or a parent volunteer, this guide contains all the information you need to start a carton recycling program at your own school. We'll provide the "why" and the "how" of school carton recycling, and give you all the tools you need to make the program a success. And by sending us your results, you can help to improve carton-recycling nationwide!

Sincerely,

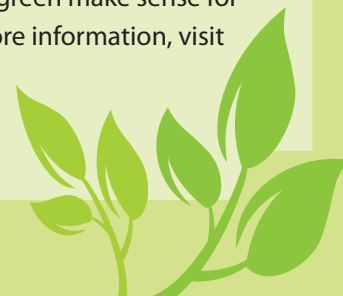
Jeff Fielkow
Vice President-Recycling
The Carton Council

P.S. Keep in touch! you'll find program updates, additional tools, and contact information at www.RecycleCartons.com/schools.html. We look forward to hearing from you.

About Us

The Carton Council is a group of packaging companies that seeks to improve the environmental impact of cartons by promoting carton recycling across the country, and by continuously improving the environmental performance of cartons. The members of the Carton Council are Elopak, Evergreen Packaging, SIG Combibloc, and Tetra Pak. For more information, visit www.RecycleCartons.com.

Environmental Impact Initiative (EII) is a nonprofit think-and-do tank that helps governments, schools, and businesses to implement emerging green practices and technologies. By bringing practical solutions to eco-ideals, we make green make sense for people and organizations. For more information, visit www.eiigreen.org.





Why School Carton Recycling?

Your school can take center stage in caring for the environment

Among students, teachers, administrators and parents, few topics generate as much enthusiasm as environmental stewardship. From in-class composting to school-wide recycling programs, kids and their communities are gung-ho on going green! When a school is ready to start greening up, there's one area that makes a big difference: recycling beverage containers.


Most schools find that disposable drink containers are the best way to handle mealtime liquids. They're time-efficient, keep spills to a minimum, and can be recycled to minimize their impact on the environment. Cartons—which have long been schools' number one container choice—have the added benefit of being made mostly of a renewable resource: paper. Unlike mineral resources, which are finite and often energy-intensive, renewable materials can be produced indefinitely, making them a better environmental choice.

But even though milk and juice cartons are recyclable, schools send almost five billion of

them—along with countless plastic containers—to landfills each year. This hurts the environment and—equally important—it impedes kids' formation as environmentally responsible citizens. Lessons on eco-consciousness from the classroom are negated in the cafeteria when students see recyclables mixed in with trash. By separating your school's cartons and arranging pickup with participating recyclers, you can help your students make a positive impact on the environment—an impact they'll see and contribute to *every day* at mealtime.

This guide is here to help. It arms administrators and school organizers with all the information





they need to implement carton recycling at their schools. In the pages that follow, you'll find an overview of milk- and juice-carton recycling, an outline of the benefits your school will enjoy by recycling cartons, and—most importantly—a step-by-step set of instructions on getting the program started and ensuring its success.

We'll start with some facts on drink containers and recycling.

Container confusion

“Are milk cartons recyclable?”

Milk cartons and juice cartons are not only recyclable, they're also made primarily of a renewable resource—paper. The strong paper fiber from used cartons is in high demand among paper manufacturers in the US and abroad.

Although not all recycling haulers collect beverage cartons, many do and the number grows each year. To find out whether your current hauler collects cartons, contact them directly.



Recyclers Need Schools' Help

There's an old saying in recycling: “A large enough pile of anything is worth real money!” Although the goal of recycling is to preserve our environment, revenues from recycled materials are important because they pay for the labor, equipment, and transportation involved. Transforming any recyclable into usable raw materials requires many steps, including collection, sorting, cleaning, bundling, and processing. Equipment in particular is expensive, and once recycling companies commit to processing a given material, they must collect large quantities of it to offset their costs.

That's why—in this moment in history—schools are in a unique position to help the recycling industry and the environment. As a result of efforts by the Carton Council and other advocates, recyclers have begun accepting milk cartons and juice cartons on a larger scale, but they need to collect as much of the material as possible to defray the costs of equipment upgrades. With an abundance of beverage cartons and an eco-minded agenda, your school has the power *right now* to make carton recycling a success! By collecting cartons and drink boxes from meals, your students and school can support recyclers at a crucial moment and help bring carton recycling to communities nationwide.

For more information about cartons and carton recycling, visit www.RecycleCartons.com.



The hidden costs of improper container disposal

Across the country, recycling service is better than ever, but many schools still don't recycle. Sending recyclable items to landfill not only hinders recycling efforts, it undermines schools in more ways than one. If your school currently landfills beverage cartons, consider these hidden costs to your educational program and budget:

Cost #1: Throwing away recyclables contradicts environmental lessons

Teachers know it better than anyone: kids learn by doing. *Practice*, more than any single thing, helps kids solidify understanding and form positive habits. In terms of environmental stewardship, it's crucial that young students see recycling happen and be able to participate.

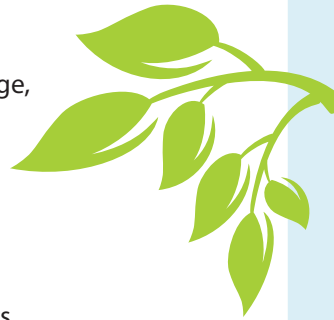
Throwing away recyclables not only fails to provide this opportunity, it actively contradicts the positive environmental messages that students receive in the classroom. Students may wonder, "If recycling is so important, why aren't we doing it?" The mixed message undermines teachers' efforts and credibility with their students, and may lead kids to see caring for the environment as someone else's problem.

Cost #2: Sending recyclable items to landfills hurts the environment

Schools play an important environmental-leadership role in their communities, yet the high volume of containers they discard is harmful to the environment. The average US elementary school has 469 students and sends upwards of 80,000 drink containers, of all types, to landfills each year. Collectively, that's 5,761,239,523 (almost six billion) containers, or about 30 million large bags of trash!¹

¹ The average US elementary school enrolls 469 students, per the U.S. Department of Education, National Center for Education Statistics' Public Elementary/Secondary School Universe Survey, 2007-08.

While our society hasn't yet found a way to live trash-free, throwing away recyclables makes our landfills fill up faster, it causes more fuel to be spent transporting garbage, and it wastes valuable reusable resources like paper, aluminum, and recyclable polyethylene plastic. If we care about our children's future, we owe it to them to preserve their future environment by recycling our schools' beverage containers.



Cost #3: Throwing recyclables in with trash leads to higher waste-hauling fees

Whether measured by volume or by weight, mealtime drink containers add up. Unrecycled cartons add 391 full trash bags to the average school's dumpsters each year, causing a school to require either larger dumpsters or more frequent pickups than if it recycled its cartons. Larger, rigid plastic containers are even worse.

And the trash is heavier, too. Although the containers themselves are light, kids often dump them with half or even all of the liquid still inside. In a recent audit of school waste disposal, we found that liquid from beverage containers was responsible for 35% of all lunchtime garbage weight. In schools that recycle, liquid accounted for a whopping 52% of the weight of lunchroom trash!

Thus, for the many schools and districts that contract a private hauler, the three factors that most influence the waste bill—required dumpster space, frequency of pickup and the weight of trash at pickup—are all negatively affected by unrecycled beverage containers. At a time when budgets are tight, can your school *afford* to keep landfilling its beverage cartons?

The answer: Recycle cartons!

By choosing recyclable cartons, made mainly from a renewable resource, for serving milk and juice, schools are on the path to eco-stewardship. But following through is important. Ensuring that your school's milk and juice cartons make it to a recycler is best for all involved—it's good for your kids, it's good for your community and it's good for the environment. Many schools now have access to carton recycling without knowing it. Here are some of the benefits of launching a carton-recycling program at your school:

Confident, green-savvy students

When it comes to learning about the environment, children are all ears. By giving your students the opportunity to recycle their milk and juice cartons, you reinforce lessons learned in class and help kids develop good recycling habits early on.

An in-school recycling program also provides a meaningful teaching context for core subject skills. Tying classroom lessons in with school-wide environmental efforts allows students to apply math and science concepts to real-world problems that matter to them.

Finally, taking part in their school's environmental achievements makes students feel empowered by showing them they can make a positive impact in the world!

A reduced environmental impact

At a school of 500 students, a year's worth of carton-recycling efforts will conserve:

- 170,561 sheets of paper
- 14 mature trees
- 5,970 gallons of water
- 417 full trash bags of waste-storage/transportation space²

Over five years, the average school serving one meal will save the equivalent of 781,169 sheets (almost 1,500 reams!) of paper, 72 trees, 29,848 gallons of water, and divert an astonishing 1,956 trash bags from landfill! It will also save 15,999 kilowatt-hours of energy—which is enough to power about 1,920 flat-screen TVs for a month—and reduce the weight of its cafeteria waste by 70,034 pounds. That's over 35 tons...the weight of fifteen SUVs!

Eco-excellence in the community

When it comes to eco-awareness in communities, schools can make a real difference. Children are often the environment's staunchest advocates, and are known to spontaneously educate parents and other family members and spur them to action.

And because carton recycling is at a turning point nationwide, your school is poised to make an even greater impact. By supporting carton recycling in your own neighborhood, you and your students will pave the way for recycling to spread to other schools and communities nationwide.

² Projections based on cafeteria-waste data from the 2009 Annual School Milk Survey published by MilkPEP, the School Nutrition Association and the Dairy Council, and from two in-school studies conducted by Environmental Impact Initiative.

Sustainable, affordable waste management

By draining and separating cartons, the average school can reduce the weight of its cafeteria waste by more than a third, and its volume by an average of *43 large trash bags each month* that school is in session. Although waste-hauling contracts and contractors differ from school to school, these reductions position schools using private haulers to negotiate a lower waste-hauling fee. This is particularly true if their hauler is also their recycler, because the cartons being removed from the waste stream also happen to be a commodity that recyclers can sell for profit.

Although administrators sometimes worry that environmental efforts will strain their budgets, reducing cafeteria waste is a way for schools to both save the environment *and* save money.

“OK,” you’re thinking, “I’d love to get a carton recycling program going at our school, but where do I start?”

The Carton Council’s *Carton Recycling in Schools* guide

Administrators, school nutrition directors and others who are interested in recycling their schools’ cartons will find in this guide all the information they need to get started.

By using the guide to get carton recycling up and running at your school, you will:

- Reduce cafeteria waste
- Help students develop good recycling habits
- Position your school to negotiate lower waste-hauling fees
- Reinforce classroom environmental messages
- Reduce your school’s environmental impact
- Boost kids’ self esteem by empowering them to make a difference
- Support carton recycling in the greater community
- Give your school a reputation for eco-excellence

Educating our children to care for the environment is one of the most important lessons we can offer—our lives may depend on it. Turn the page to see how you can make a difference with carton recycling!





Carton Facts



Today's milk carton: A smart environmental option

When it comes to caring for the environment, the milk carton's a pro. Cartons are made mostly of paper—a renewable resource. And since cartons are recyclable, schools can be ecologically responsible without giving up the practicality and convenience of serving prepackaged beverages.

Q: "What are cartons made of?"

A: On average, standard school-sized milk cartons are made of 88% paper and 12% polyethylene. Juice boxes are made of 74% paper, 22% polyethylene and 4% aluminum on average.

Q: "How are milk and juice cartons recycled?"

A: At a papermill, used cartons and water are placed into a machine called a hydropulper, which reduces the paper to fibers—kind of like a giant blender! This paper fiber is a valuable resource for making recycled paper products and even building materials.

Q: "Are recycled cartons made into new products?"

A: Yes! Recycling puts cartons back in business by recycling them into paper products and even building products you use every day.

Preview



In the pages ahead, we lay out the process in five sections, with a checklist at the end of each to track your progress. You'll also find hands-on resources in the *Helpful Materials* section at the end of the guide.

Getting Started

1. Determine If Carton Recycling Is Available in Your Community
2. Gain Approval & Support
3. Arrange Recycling Service for Collected Cartons

Setting Up Your Program

4. Recruit Help
5. Review this Guide
6. Determine Carton Usage & Establish Goals
7. Assess Resources
8. Anticipate Issues
9. Determine & Procure the Materials Needed
10. Develop the Cafeteria Disposal & Dismissal Process
11. Communicate the Program

Launching Your Program

12. Kick-Off Day—Begin Recycling Cartons!
13. Troubleshooting—Assess After the First Week

Auditing & Evaluation

14. The Recycling Audit
15. Assessing Your Audit Results
16. Re-negotiating Your Waste Hauling Service

Reporting Your Success

17. Compile Your Report and Share the Results





How to Recycle Milk & Juice Cartons at Your School

So, you've decided to start a milk-and-juice carton recycling program at your school. Congratulations, you're joining a growing number of leaders across the country who are working to make their schools more environmentally responsible!

Any school-wide effort can seem daunting at first, but don't worry. We've found that—with a little guidance—a carton-recycling program can be implemented fairly easily and without stressing a school's already-taxed resources.

Whether you're a district administrator, principal, school nutrition director, teacher or staff member, or PTA member, this section will give you step-by-step directions, best-practice suggestions, and out-of-the-box resources to get your school's program started. We'll also show you how to calculate your program's impact so you can motivate your students and publicize your success. We've compiled this

"how-to" guide based on extensive pilot programs and feedback from schools, education professionals, parents and environmental experts.

Our goal is to help you get your program off the ground and running smoothly, and—in the process—build momentum to inspire other schools nationwide to join the effort. In addition to conserving the land and resources saved by recycling cartons, you'll be helping kids learn environmental stewardship at an early age. These are two very important missions—so let's get started!

Getting Started

Determine If Carton Recycling Is Available in Your Community

Your first step is to go to the Carton Council website to see if a recycler in your area accepts milk and juice cartons: <http://www.RecycleCartons.com/>. Click on the arrow on the “State” pull-down menu and select your state. Then click on the “Go” box and look for your community on the pop-up menu.

If your community is listed, that means that a recycler in the area accepts cartons, most likely through residential curbside or drop-off recycling. This is a good sign—while the recycler may not be *your* service provider, your hauler can potentially deliver the cartons to this recycler. If your community is not listed, you may still pursue carton recycling as outlined below. In either case, your next step is to secure district approval to explore this with your hauler.

Gain Approval & Support

It’s important to identify and secure the support of the school personnel who may need to approve, implement or manage various aspects of the recycling program. In the preliminary stage, key individuals include the school principal, district administrators, and school nutrition director. Preliminary discussions may be required to establish the benefits of the program, communicate with the recycler, access resources, and flesh out any issues. Once your top-level administrators are on board, they can help to gain buy-in throughout the school hierarchy.

After you’ve confirmed that carton recycling is available to your school and obtained permission to proceed, you’ll need to reach out to all factions at your school—including administrative staff, teachers, custodians, cafeteria supervisors, and students—to make your program a success. Someone should be designated as the recycling program coordinator to manage the process, recruit necessary personnel, and monitor progress.

Arrange Recycling Service for Collected Cartons

The next step is to determine whether your waste/recycling hauler will accept cartons for recycling and—if so—arrange for pick-up. This step should be conducted in close cooperation with school and district administrators, who have access to information about the school’s waste-hauling contract and service providers. Here are the actions you’ll need to take:

1. First, determine who your current waste/recycling haulers are and what your service includes.
2. Does your school already recycle some materials (e.g., paper, plastic, or aluminum)? If not, you may want to initiate an overall recycling program that includes these materials as well as cartons with your hauler.
3. The Carton Council website mentioned previously will tell you whether cartons are recycled in your town or city.
4. If cartons *are* recycled in your area, call your local government to find out who that recycler is (skip to #6).
5. If your community is *not* listed as having access to carton recycling, you’ll need to do

a little detective work. Carton recycling is rapidly spreading and an area recycler may accept cartons. Using business listings from your local phone book, identify the waste haulers in your area and call around. If you find a recycler that accepts cartons, you can either arrange pickup with them, or use the information to educate and gain traction with your current hauler, who may add cartons to keep your school's business.

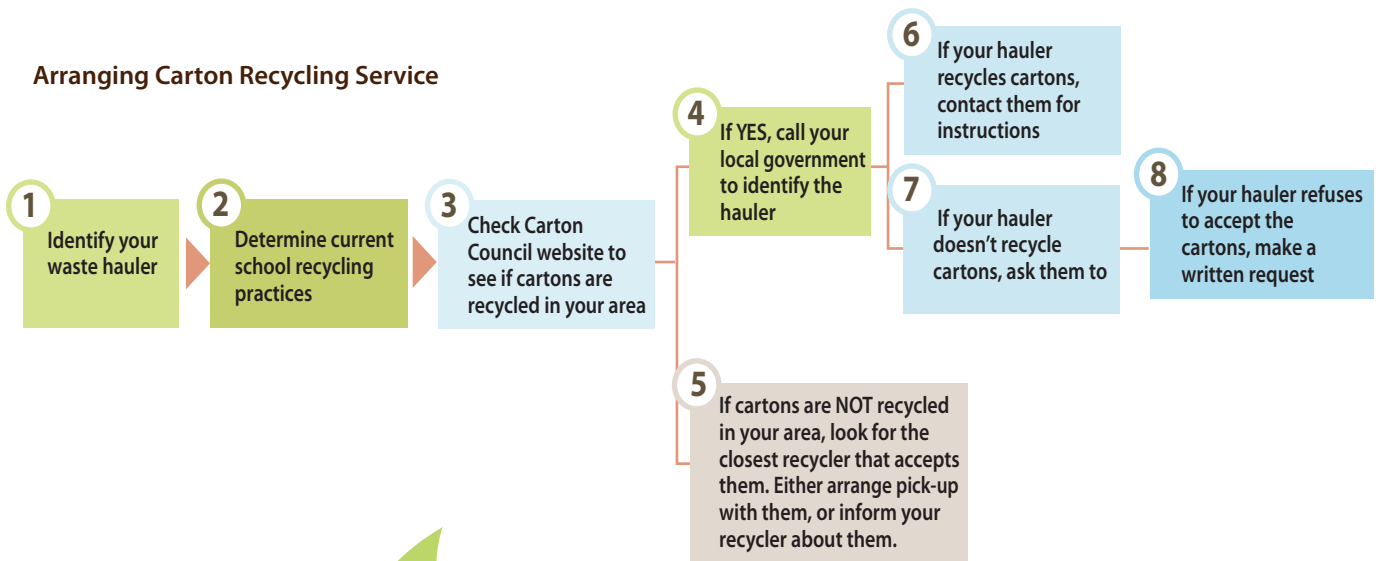
6. If your hauler is the recycler that accepts cartons, contact them to determine how they want to receive them. Do they want them separated, or mixed with other recyclables? If separated, should they be bagged and placed in the recycling dumpster, or placed in their own recycling dumpster? What color should the bags be if you must separate? Find out if they have any other requests.
7. If your hauler is not that recycler, tell them that a local recycler accepts cartons and that you want to begin recycling them. Ask if they will accept cartons as recyclables. Since haulers are paid for recyclables, they may be interested. If they will accept them, ask how they want to receive the cartons.
8. If no alternate providers exist and your hauler refuses to accept the cartons, you can write them a letter to press your case (see the *Helpful Materials* section for a sample letter).

Even if you don't convince your hauler to accept cartons as recyclables, don't despair—or give up. Your effort is valuable, and may still pay off in the future. A large number of schools requesting carton recycling can eventually lead to a "tipping-point" effect that convinces haulers to change their policies.

Once you've determined that your school *can* recycle milk and juice cartons, you're ready to develop a program tailored to your school's needs. We explain how in the next section. The side bar on the next page provides a checklist for this section.



Arranging Carton Recycling Service



“Getting Started” Checklist

- Check the Carton Council website to see if a recycler in your area accepts cartons. If your community is listed as accepting cartons, determine who the recycler is by contacting your local government.
- Gain approval to investigate carton recycling from school district administrators and/or principals.
- Determine who will be the recycling program coordinator at your school or district.
- Determine who your waste hauler is and what your current service includes. Does your school currently recycle? If not, start an overall recycling program that includes cartons.
- Contact your waste hauler to discuss milk- and juice-carton recycling.
- If your hauler will accept cartons as recyclables, express your school's intent to recycle and determine their requirements.
- If your hauler will not recycle cartons, try to locate alternatives. If none exist, write a letter encouraging your hauler to recycle. Recruit other local schools to do the same.

Setting Up Your Program

In this stage, you will plan your program, line up resources, and iron out any potential issues. We suggest initiating your program at the beginning of the school year if possible, to establish solid routines right away. Even with prior planning, schools may need a little time to line up materials and prepare students and staff. With good participation, you'll be recycling in five weeks or less!

Recruit Help

To get a carton-recycling program set up at your school, you'll need some help. Determine who will be necessary to the process—administrators, principals, teachers and cafeteria supervisors, custodians, PTA members, and students—and get them involved right from the start.

In general, a committee of 3–5 people per school is optimal for establishing and communicating the program. Support and involvement of the principal is vital, and—ideally—key persons at the district level would be available for working with waste haulers and motivating participants.

Communicating program benefits—such as cost savings on waste-hauler fees, potential tie-ins with curricula, and improving the environmental stewardship of the school—can help you win the support you need. You can use the “Potential Impact Estimator” and “Recycling Impact Calculator” worksheets in the *Helpful Materials* section to estimate and communicate the benefits in concrete terms.



Once the program is running, you can compile your actual results using these same tools.

Review this Guide

After recruiting a carton-recycling committee, the recycling program coordinator should review this guide with the committee to gather input about resources and potential issues, and to build participation throughout the school. The guide provides implementation best-practices from real-world school carton-recycling programs with successful recycling rates of more than 95%.

Note that the “How-to” section is based on cafeteria-style lunch programs. If your school serves breakfast or after-school meals in a cafeteria, the same recommendations will apply for those meals. For the steps below that involve calculating potential program impacts, simply add the number of breakfast and after-school-meal students to your lunch-student figures, or use daily milk usage counts if you have them. If your school serves breakfast or after-school meals in class or in some other way, you will need to determine an alternative collection strategy for those meals if you wish to recycle those cartons.

Determine Carton Usage and Establish Goals

It’s useful to get an idea early on of how many milk and juice cartons your students generate. Our pilot study of carton recycling at elementary-school lunch periods showed that students produce these cartons at reliable rates—collectively, you can expect about 55 total cartons (milk and juice) for every one hundred enrolled students that eat lunch at school each day that school is in session. To estimate the

usage of each material at your school, go to the “Potential Impact Estimator” worksheet (*Helpful Materials*). If, for educational purposes, you wish to conduct a pre-program audit rather than estimate, go to page 18 for instructions.

Once you know how many cartons your school is using, your team should establish a goal for the program, for example: “To collect and recycle more than 95% of the milk and juice cartons consumed at [your school or district name].”

You’ll also want to sketch out a rough time table for implementing your program. Planning, purchasing, communicating and integrating classroom activities all take time; be sure to leave ample room for everyone to do their part.

Assess Resources

The most important resources to consider will be personnel and basic recycling materials. Additional personnel should not be necessary—carton recycling can usually be introduced into the current cafeteria waste-disposal and dismissal process. However, some additional demands will be placed on cafeteria and custodial staff, particularly in the early stages of the program. School personnel will have to introduce and explain the new process to students. They’ll also need to supervise the program to make sure it runs smoothly.

Once you develop your implementation plan, you’ll know what additional materials you might require, such as recycling cans or buckets for excess liquids. In the next section, we provide more details on materials. At this early stage, you may simply alert your principal and custodial staff that some additional materials may be needed.



Anticipate Issues

Each school may encounter different issues based on a number of variables, including number of students, the length of meal periods, cafeteria size and configuration, and staffing. It's important to discuss the program with any involved personnel in order to anticipate issues and develop solutions to them. Ensure that cafeteria workers and custodial staff understand who is responsible for program-related setup and cleanup before, between, and after meals (e.g., the excess liquid buckets, recycling and trash cans, and bags). Likely concerns are listed below along with the insights we've gleaned from programs implemented at various schools.

Concerns	Lessons Learned
Will milk cartons smell or create vermin issues while they await recycling pickup?	As long as excess milk is <i>thoroughly</i> emptied prior to collection in the lunchroom and the collection bags are tied, smell and vermin have not been an issue. Because recycling pickup usually occurs at least once per week, cartons aren't stored for long enough for problems to occur.
Will the cartons need to be rinsed and/or dried?	Generally, no. If cartons are thoroughly emptied, dumping the excess liquids is sufficient. As an additional precaution, custodians should poke small holes near the top of the bags of recycled cartons (if they are bagged) to enable air flow and minimize moisture build-up. In extreme situations—e.g., if the end market is a great distance from the school—the cartons may need to be dried before bagging. Check with your recycler.
Will we have to crush the milk and juice cartons?	No, you should not crush or compact the milk and juice cartons.
What will the costs be for additional materials?	Your costs should not be substantial—often, the materials are already on-hand in the school or district. If not, you can currently purchase trash/recycling cans for \$45 or less, dollies or casters for about \$24, and 5-gallon buckets for under \$10.
Will dumping milk and juice excess liquid create a lunchroom mess or slippery conditions?	In schools that provide sufficient buckets and create an efficient dumping and carton-collection process, lunchroom mess has been minimal. No slippery or other hazardous conditions have been reported. Dump-pans or funnel lids can be purchased with the buckets as an additional precaution.
Will there be enough time during lunch periods?	Yes. We've found that with an efficient lunchroom disposal and collection process, lunch schedules have not been disrupted.
Will the program create an added burden on lunchroom staff?	During the initial days of the program, students may have questions and require program guidance. However as the novelty of the dumping and collection process wears off, it becomes second nature to them.
What if students throw other waste into the recycling cans?	Other materials occasionally find their way into recycling cans. But holding an initial assembly to educate students about the program, attaching pictures or models of milk and juice cartons to the recycling cans, and the use of student or parent program helpers during the initial phase of the program minimize these incidences.

Because of the short duration of most meal periods, efficiency is the most critical factor in program design. At most schools, meal periods are short—usually only 25–30 minutes—and

sometimes chaotic. Without careful planning, the extra steps of dumping out excess liquids and separating cartons has the potential to create congestion and slow down dismissal. Here are some other questions to consider:

- How many students do you serve per period?
- Where will students dump excess liquids? Does the cafeteria have disposal sinks for emptying residual liquids? Are they sufficient, or will you need buckets? (We suggest buckets for more than 50 students).
- What is the best location for any additional recycling cans and buckets? What is the best utilization of your cafeteria space to create good traffic flow? Once you decide, make sure stations *stay in place*—trash/recycling cans on wheels have a tendency to move around a cafeteria.
- Make sure the excess liquid bucket set-up is height appropriate. For elementary students it can go on the floor. For older students it can go on a spare table, desk, or milk crate.
- How orderly is your current cafeteria process? Can it be improved? How can you integrate the new recycling process to maintain timely student dismissal?
- Will carton recycling create a burden on cafeteria or custodial staff? Can you minimize this, perhaps by volunteer or student help?
- Do you have ample room within the existing recycling dumpster to accommodate the new carton volumes between hauler pick-ups, or will you need more frequent pick-ups or more dumpsters? Might fewer landfill trash pick-ups or dumpsters be required? Once you're recycling, you may consider adjusting your waste-hauling service and, perhaps, re-negotiating your contract to save on costs.

Determine and Procure the Materials Needed

Begin with your recycling hauler's instructions for providing the cartons to them. Have they directed you to mix them with your other recyclables or to separate them? This will affect the number and type of disposal cans you'll need. Did they communicate any other requirements? For good traffic flow, we recommend creating one "disposal station"—consisting of a bucket for excess liquid, a recycling can and a trash can—for every 50 students in your largest meal period.

If your recycler wants you to separate your cartons from other recyclables, you'll need an additional recycling can (one for cartons and one for mixed recyclables if your school collects those). If your cafeteria has a sink, and the number of students is low—less than 50—a sink may work for excess liquids provided it is conveniently located and the emptying procedure is orderly.

For recycling, we recommend standard, round 55-gallon cans with dollies, or casters, for ease of use. Rectangular bins can do in a pinch, but are harder to toss items into and to move, and they generally hold less. Consider differentiating your recycling cans from your trash cans by color—for example blue or green versus gray or black. If your school is separating cartons, your recycling hauler may also ask you to place them in a different type of trash bag, for example, in easily identifiable clear bags. For excess liquids, standard 5-gallon paint buckets minimize splashing and spillage and can be easily carried.

Once you begin recycling cartons, your dumpster needs may change. A standard 55-gallon trash bag holds about 190 uncrushed



cartons, so you can estimate how much more recycling volume—and how much *less* trash volume—you will have based on the volume estimates you calculated. Transferring cartons from the landfill trash dumpster to the recyclables dumpster will reduce your weekly volume of landfill trash (and the weight, due to the removal of liquid waste), while increasing recyclables volume. If your existing recyclables dumpster tends to fill up, you may need to add another dumpster or increase the frequency of pick-ups.

Determine what additional materials you'll need to procure. First, ask your custodial staff if anything you need is already on hand, at school or in the district. Order whatever isn't available soon so you can implement the program.

Develop the Cafeteria Disposal & Dismissal Process

Your carton-recycling program may be compatible with your current disposal and dismissal processes, or it may not be. The goal is to minimize lineups at that critical time when students dispose of their food trays and head outside to play or to the next period. Some schools may be tempted to have meal monitors pick out the recyclables, but we recommend that students empty their own trays. Not only is it the most efficient method for collecting the cartons, it teaches students to be environmentally aware and self-sufficient. In the first few days, supervisors can instruct them as they empty their trays. If necessary, “staff up” with volunteers until the new process becomes routine.

The best disposal station set-ups locate excess-liquids buckets first, recyclables in the middle, and trash at the end. This puts recyclables in the forefront of students' minds and prevents them from tossing them into the trash due to



Best-Practices: Documentation Matters

The Program Plan is your roadmap to carton-recycling success. Documenting it will help. Every school's plan will be slightly different, but a good plan will include:

- A clearly stated program goal
- A description of how cartons will be provided to your recycler
- A process for cafeteria disposal, carton collection, and student dismissal
- A communication plan for explaining the program to staff, students, and parents
- A clear explanation of the responsibilities of supervisors, staff, and students
- A strategy for auditing and evaluating the program after launch (see page 18)

confusion or haste. Space the disposal stations apart so students can freely move around them, and position supervisors nearby to encourage timely flow and answer questions.

The dumping of excess milk or juice is vital to the process—*make sure that students are thorough*. Our school waste audits found that liquids represent more than 50% of post-recycling cafeteria waste by weight (and over 35% if you don't recycle). Dumping liquids removes weight from the waste stream, it reduces waste-hauling costs, and it minimizes the chance of liquid contamination to the recyclables.

To create an optimal traffic flow, consider the number of students and the capacity of your cafeteria. We've found that a “formal” dismissal process—by tables, rows, or some kind of

order—that incorporates trash disposal reduces congestion. Having multiple traffic flows for larger cafeterias also aids efficiency and enables supervisors to dismiss multiple tables or rows at a time. Once you determine your disposal and dismissal process, write it down—including process flow diagrams showing dismissal routes of tables to the disposal stations, if needed.

Communicate the Program

The three groups you will need to communicate with to ensure success are: 1) Staff (including custodians); 2) Students; and 3) Parents.

Staff Awareness

Staff participation is crucial to implementing and coordinating your program, and participation happens when people feel personally committed to a goal or plan. You can gain this commitment with competent, considerate planning, clear communication of program logistics, and by conveying the program's many benefits for students and the environment.



- Early on, prepare a memo announcing the program to all staff (see our *Helpful Materials*, p.22, for a sample memo).
- Once you've developed your Implementation Plan, schedule a meeting with all personnel necessary to the program to explain it.
- Keep staff and faculty posted on timelines and goals. Provide ample time for those involved to order materials, prepare students, and meet any other objectives.
- Schedule a final meeting one week before your intended kick-off day to resolve any

Best-Practices: Optimal Carton Disposal

Instruct your custodial staff to poke some small holes at the top of the bags of recycled cartons (if they are bagged) to enable air flow and minimize moisture build-up. This will ensure that your recycler receives high-quality material.

remaining issues. Inform custodians of the vital role they play in the program.

- Send an email reminder about the program to all staff on each of the two days before kick-off to build awareness.

Student Awareness

The better you prepare students with clear directions, the smoother your implementation and cafeteria dismissal will be.

We recommend holding a school assembly in the cafeteria, with disposal stations *in place*, several days before the kick-off to announce and explain the program. This should be followed by school-wide announcements by the principal and visual reminders—especially in the cafeteria—for reinforcement. Schools may choose to hold assemblies by grade if being in small groups will help students pay attention.

The assembly should convey the importance of the initiative and instill a feeling of mutual responsibility in students. Involve them in the demonstration—student leadership and participation is vital to validate the process to other students. It's also an opportunity for students to emphasize what issues surrounding recycling are most important to them and that the process is easy...and "cool." At the assembly, set up a disposal station and demonstrate the

Best-Practices: Use Visual Communication for Impact

Create a brief PowerPoint or visual presentation to educate students about:

- What happens to their trash (from lunch boxes to school trash cans to landfills)
- How long materials persist in landfills: 1–2 months or more for organics; 2 months to several years for paper; 80–200 years for aluminum; 400–1,000 years or more for plastics—this one always elicits a gasp!
- How students can help: 1) Recycle, 2) Reduce waste with reusable containers, and 3) Bring only what they will eat
- The new carton-recycling process, with visuals showing how excess liquids, cartons, and trash go into their respective receptacles
- The estimated impact your carton-recycling effort will have (number of trees, amounts of paper, water, etc. conserved)

new recycling process to them with an example lunch-sack or tray by thoroughly emptying your milk, tossing your carton and disposing of the trash. You can also make a visual presentation on recycling to educate students (sidebar, above).

Parent & Community Awareness

Changes within schools can stimulate change in the community, so educating parents about the program is important. You can inform parents via school emails and websites (or with take-home announcements, if necessary). If you have access to parent volunteers, arrange for them to help out during the program's first week, so they can be involved in the initiative and their child's environmental education.

Be sure to publicize your efforts through press releases to your local government and local

papers. Community members that learn about your school's efforts to benefit the community through waste diversion will often look for ways to support your work.

"Setting Up Your Program" Checklist



- Recruit a recycling program committee of 3–5 teachers, cafeteria supervisors, custodians, PTA members, or students to help plan and communicate the program.
- Review this Carton Recycling Guide with the recycling program committee.
- Use the calculation worksheets in the *Helpful Materials* section to estimate current carton usage and potential recycling impacts. Set a recycling goal.
- Assess personnel and facility resources. Can current cafeteria staff accommodate the program? What materials are available and what additional materials—such as buckets or recycling cans—are needed?
- Anticipate issues that might arise, e.g., the timely dismissal of students or burdens on staff.
- Arrange for the purchase of any additional materials you need well before kick-off day.
- Develop your strategy for cafeteria disposal and dismissal, emphasizing efficiency and good traffic flow.
- To ensure good participation, communicate your program and its potential benefits to staff, students, and parents.



Launching Your Program



Once you and your team have laid the groundwork, you'll be ready to launch your program! When your materials are physically in the school and ready to go, confirm your launch date. Remember to schedule your introduction assembly two days prior to prepare students. Follow the tips throughout this section for a smooth and easy implementation.

Kick-Off Day—Begin Recycling Cartons!

It's kick-off day, and you're ready to go!

Begin with your principal's morning announcement reminding students about the program kick-off. Have staff and/or parent volunteers put up your recycling signs in the cafeteria and on recycling cans. Make sure that custodians have set up the disposal stations in the locations that you've decided upon.

At the beginning of each meal period, supervisors should briefly announce the program kick-off and demonstrate the process for students, including thorough emptying of cartons. As the meal period winds down, initiate as orderly a dismissal as possible to help students familiarize themselves with the process. Supervisors and volunteers should help students recycle correctly and note any areas of confusion among students or any refinements that can be made. Between periods, a short "de-briefing" among personnel can be useful to gain consensus on any adjustments that can be made during the first week.

Troubleshooting—Assess After the First Week

After you've implemented the program for a week and made refinements, bring together the involved staff to evaluate the program and what, if any, improvements to make. If this is a district-wide effort, consult with other coordinators to find out what's working for them. Here are some questions to consider:

- Are students exiting in a timely way? If not, you may need more disposal stations, more traffic flow, or better communication.
- Are all or nearly all cartons being recycled (or do some wind up in the trash)? Do students understand that they should also recycle juice cartons and boxes?
- Are any contaminants (liquid straws, other trash) being mixed with the cartons?
- Are students thoroughly emptying their cartons?
- Is your staff overly burdened? Students should do their own recycling to minimize demands on staff. If they need help, use volunteer parents or student "green" teams to guide them.

Best-Practices: Clear Signage

Disposal stations should feature clearly marked recycling cans and excess-liquid buckets. You can differentiate recyclable cans from trash cans by color—blue or green vs. gray or black. Posters can illustrate the process for students:

1. Pour ALL excess liquid into the bucket.
2. Toss milk and juice cartons (and other recyclables) into the recycling can(s).
3. Empty trash (including straws, if you use them) into the trash can.
4. NO TRASH in the recycling cans!



Best-Practices: Involve Students!

- Successful schools have used student environmental clubs or “Green Teams” to help administer the program.
- Art classes can create recycling-can signage and hallway or cafeteria posters to publicize the effort and its environmental benefits.
- A “Clean Plate Club” encourages students to drink all of their milk or juice. Students with empty cartons can proceed directly to the recycling can without dumping liquid, which speeds their dismissal.

- Are there discrepancies between meal periods? Younger children sometimes need extra help, particularly while the program is still new.

Once you’ve got the bugs worked out, you can plan your post-implementation audit (see next section). Plan to do the audit at least a week after the program is running smoothly.

“Launching Your Program” Checklist

- Hold a school assembly to announce the program kick-off and demonstrate the new process.
- Kick-off Day—start recycling!
- Evaluate the program’s effectiveness after the first week and identify refinements.

Auditing & Evaluation


Recycling audits enable you to test your program and to publicize your success with facts. The audit and reporting process is also a valuable learning tool that you can integrate into math, science, humanities, or computer curricula. Audits may be conducted at any point to maintain program strength.

The Recycling Audit

Conduct an audit after you’ve got the program running smoothly. Audits will measure actual milk- and juice-carton collection and provide waste-diversion data for your report on program performance and environmental benefits.

Audits should take place on days with normal attendance and under normal circumstances—avoid days before or after holidays and during special cafeteria meals or celebrations. Also, instruct staff and volunteers to avoid providing excessive help to students—the goal is to see how the program works *under normal conditions*. Here’s how to conduct your recycling audit:

1. Count the number of distributed milk cartons and juice cartons used. If your school maintains daily records of milk distribution, use those for your milk count. If not, arrange for your cafeteria staff to set out a pre-determined number of milk cartons to cover your distribution needs for a day. At the end of your meal periods, subtract the number of cartons remaining from the number you started with. Alternatively, auditors can wait until all students are seated and then move from table to table tallying the number of milk cartons. For juice cartons, auditors will have to move from table to table to count how many are consumed by students.

- 
2. Observe the dismissal and disposal process at the end of each period. Note whether—and why—some students don't recycle certain cartons and how to improve the process.
 3. At the end of each meal period, pull and combine the carton-collection bags from the recycling cans and label them with the appropriate period for referencing during the final count. For example, write on the bag(s) "Grade 2", or "11 am." The excess-liquid buckets may also be collected and weighed between each period and recorded if desired (subtract the weight of the empty bucket afterwards to get the liquids-only weight). Set the bags aside in a designated area for counting later and tell the custodial staff not to dispose of them until after the final count.
 4. Conduct Steps 1-3 for each meal period on the audit day.
 5. Do your collection counts and compile the data after the last meal period (use the "Carton Recycling Audit Sheet" in the *Helpful Materials* section):
 - Determine the number of milk and juice cartons used for each period. The total is your "total carton usage" number—what can potentially be recycled. Record them on the audit sheet.
 - Count separately the number of milk cartons and juice cartons *collected* from each meal period. You may also weigh each bag to establish the collected weight of cartons by period. If you wish to weigh the cartons, you'll need a scale that can measure ounces (e.g., a fisherman's scale with a hook from which to hang the bag). Record these numbers on the audit sheet and total the number for milk and juice cartons collected for each period.
 - Calculate the collection rate for milk cartons and juice cartons by dividing the number collected by the initial usage numbers. For example, if 40 juice cartons are counted at the start of the meal period, and 34 are found in the various carton-recycling cans, the juice-carton collection rate is $34 \div 40 = .85$ (or 85%).
 6. Compile the overall carton-recycling rate by adding the totals for each period and dividing the total cartons collected by the total carton usage numbers.

Assessing Your Audit Results



Compare the audit results against the school or district goals. Also compare the performance of the individual meal periods. If one period, or perhaps one school, is falling short of the recycling goal, determine where improvements can be made. Also, compare the recycling collection of milk cartons against the rate for juice cartons. If the juice-carton rate is lower, make sure that students and staff understand that they are to be recycled also. Create clear signage on recycling cans—if it doesn't exist—to improve collection.

Communicating your results is important to the program. Seeing the numbers acts as a reward and further motivation to participants, engaging staff and students alike to keep up the good work! You can express the results by charting, graphing, or summarizing them, and then publishing them (for help, see the "Template for Carton Recycling Report" in the *Helpful Materials*).

Tips from the Field

Here are some tips from principals, teachers and parents whose schools have successfully implemented carton-recycling.

“Find a group of students who care about the environment, and let them go at it!! They are the best teachers—for both students and grown ups.”
—Pat Kritzman, *Braeside School Principal, Highland Park, IL*

“Our kindergarten and 1st grade students had lower recycling rates at first—78% and 83%—than older students, who recycled 96% of their cartons. Lunchroom staff and volunteers helped them empty their cartons and they soon caught on.” —Jennifer Schreier, *Patterson School Parent, Naperville, IL*

“Use plenty of signage at the beginning of the program to maximize student awareness and, therefore, participation.” —Becky Heller, *Ravinia School Teacher Assistant, Highland Park, IL*

“Get your custodian involved! Ours was integral to our success. He reminded students to recycle and made the process an easy one.” —Ellie Rubenstein, *Lincoln School Teacher, Highland Park, IL*

“Establish the program early on in the year and enlist the commitment of student leaders to help run it. Be patient, but vigilant, in reinforcing the routine.”
—Susan Ozawa, *Braeside School Teacher, Highland Park, IL*

Charting progress is also a powerful way to help slow-start schools improve. Schools and meal periods with low initial recycling rates showed dramatic improvement within a two-week period by publicizing their audit results and comparing them against other meal periods and schools. A simple graph or bar chart (try using a milk carton graphic) depicting the results versus the goal can have a very positive motivating effect.

Re-negotiating Your Waste Hauling Service

Recycling milk and juice cartons will affect both your landfill waste and recyclables volumes. As a result, you may need to adjust your current waste-hauling service, possibly to add more recyclables pick-ups or to reduce landfill trash pick-ups. By recycling, you will be reducing trash volume due to carton collection *and* trash weight, through the dumping out of excess liquids. We’ve found that in a school of 500 students, excess liquids can comprise 40 pounds per day, and over 50% of post-recycled cafeteria waste by weight.

If your school uses a private waste hauler rather than municipal service, the changes to the waste profile may save your school or district money. Many waste haulers handle recyclables as well, and their profit margin from recyclables is higher than their profit margin from waste. This is because, while haulers must pay what’s called a “tipping fee” to landfills to dispose of trash, they actually receive payment from recycling plants in exchange for the recyclables they collect. By collecting your cafeteria cartons, your school:

1. Reduces its trash service needs by a (potentially) substantial volume and weight
2. Increases a hauler’s potential profit by replacing low-value trash with high-value recyclables

These two facts may entitle your school to a discount. Once your audits show that you’re successfully recycling more than 95% of your cartons, it’s time to have your principal or district representative consider re-negotiating your school’s service contract with its hauler. The following questions will help you or whoever contacts your hauler to have a substantive conversation about your service:



- What recyclables do you (the hauler) currently collect and have a market for (e.g., paper, cartons, glass, plastics, or aluminum)?
- Do you charge for recyclables pick-up, or are your pick-up costs absorbed in the profit you make from selling the recyclables?
- If we reduce our landfill trash volume by removing recyclables from our waste stream, can we save on our trash pick-up costs? Will you pay for recyclables we source separate?

“Auditing & Evaluation” Checklist



- Conduct a recycling audit after you’ve got the program running smoothly.
- Assess your audit results against the program goals and identify any improvements to make.
- Evaluate whether to re-negotiate your waste hauling contract. To do so, contact your hauler.
- Consider how the lessons from carton-recycling can improve school-wide recycling.

Reporting Your Success

You’ve successfully implemented carton-recycling, you’ve conducted an audit to quantify your success—now it’s time to get credit and inspire other schools to follow your example!

Create a short report to email to the school district, staff, PTA, parents, community and local

press. Reporting your success will inspire other schools and community members to replicate your efforts. Be sure to share the results with students, or better yet, have them help create your report. It will not only make them proud of their effort and encourage further initiatives, but also provide useful material to integrate into various curricula. In the report:

- Summarize the carton-recycling program for new audiences.
- Provide the collection-audit results and project your annual results.
- Calculate and share the resulting environmental benefits.
- (Optional) Project what district, city, or statewide efforts could achieve.



We’ve provided a template for your report in the *Helpful Materials* section that will make it easy to plug in data from your audit and calculate your program’s environmental impact. You’ll also be able to use available education data to spur others to start their own programs.

Finally, send a copy of your report to us, so we can learn about your success and see how schools use this guide. We’ve provided a simple report sheet in the *Helpful Materials*. Send your report to: src@recyclecartons.com. Good luck!

“Reporting Your Success” Checklist



- Use our template to create a short report for the school district, staff, PTA, parents, and the local community and press.
- Send a report to src@recyclecartons.com using the Carton Council Report Sheet so we can learn about your success!



Helpful Materials

Use the tools and hands-on resources in the pages that follow to streamline the implementation of your school's recycling program:

- (a–c) Student Activity Sheets
- (d) Potential Impact Estimator
- (e) Recycling Impact Calculator
- (f) Carton Recycling Audit Sheet
- (g) Letter to Non-Participating Recycler
- (h) Early Memo to Staff
- (i) Early Memo to Staff (Spanish)
- (j) Template for Carton Recycling Report
- (k) Carton Council Report Sheet



Carton Fun Facts



The carton: A smart environmental option

When it comes to caring for the environment, the carton's a pro. Cartons are made mostly of paper—a renewable resource! That means we can produce them indefinitely, unlike other resources that we might run out of. But we need to recycle them! Here are some facts about recycling and cartons:



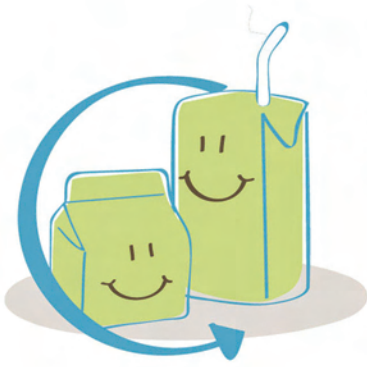
Did You Know?

- The average US school uses 74,345 cartons every year!
- There are 67,032 public elementary schools in the U.S.
- 40 milk cartons are equal to one pound and 80,000 cartons equal to one ton.
- On average, milk cartons are made of 88% paper and 12% polyethylene, and juice boxes are made of 74% paper, 22% polyethylene and 4% aluminum.

Why We Should Recycle

- Over 5 years, an average school can save 8,458 pounds of paper—over four tons—by recycling its cartons.
- For every ton of paper we recycle, we save 17 trees.
- Over 5 years, an average school can save 72 trees by recycling cartons and...
- 28,848 gallons of water!
- By recycling cartons every day, the average school prevents 2.2 large bags of trash from going to landfills. That's about 11 bags every week, 44 every month, and 391 per year!

What if every U.S. school recycled?



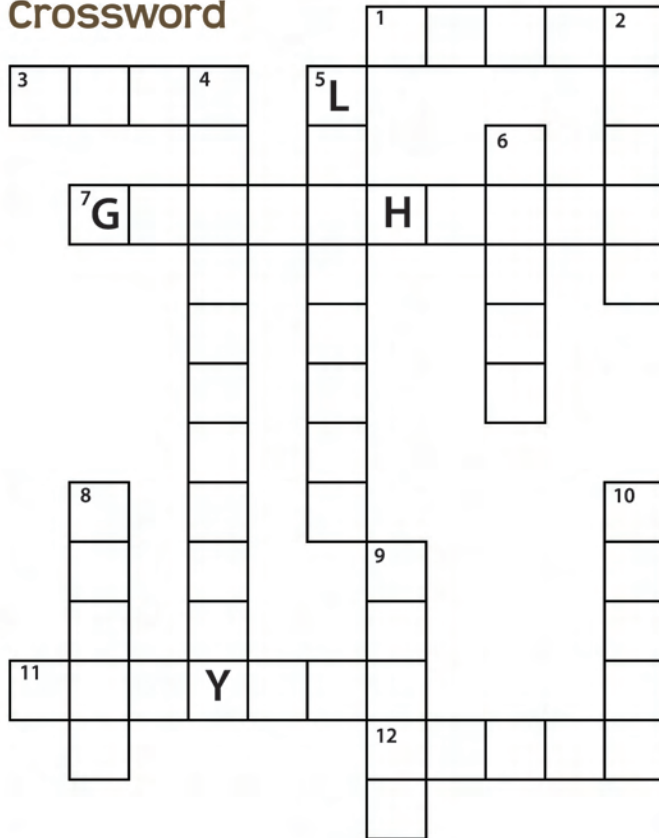
Recycling Activity Sheet

Did You Know?

- In three years, the average US elementary school can recycle over 203,000 cartons, which would save over 4,470 pounds of paper and 38 trees.
- Recycling those 203,000 cartons would also keep 1,068 full trash bags out of landfill dumps.
- Combined, all of the elementary schools in the US could recycle over 4.8 billion milk and juice cartons in one year! Stacked end to end, these cartons would circle the entire earth 12.6 times!



Crossword



Across

- Remember to remove this “sucker” before emptying your carton.
- You can also recycle cartons in this place where you live—tell your parents!
- By reducing these types of gases, recycling helps to reduce global warming. (Hint: plants are sometimes grown in a structure with this name).
- Reduce, Reuse, and _____.
- The planet on which we live and that you care for.

Down

- One school can save nearly 5,599 gallons of this thirst quencher every year by recycling cartons!
- One school can save enough of this power to run 32 TV sets for one year by recycling its cartons.
- Place where trash ends up if it isn't recycled.
- Milk and _____ cartons can both be recycled.
- Cartons are made mostly from this renewable material that we use to write on.
- One school can save 13.5 of these things that squirrels climb by recycling its cartons for one year.
- One school can keep 391 _____ bags of cartons out of garbage landfills each year by recycling. (Hint: it rhymes with “smash”!)

Word Scramble

Unscramble the underlined letters to make the correct words. Then use the **BOLD** letters to form the answer at the end.

Recycling your **K**IML and juice cartons is YSEA. First, IRDKN all of your milk or juice.

Remove your **T**RSWA and then TPYME the rest of the liquid into the CUBTEK.

Next, place the milk or juice TONCAR into the YLGNICERC bin.

If its students do this RYEEV day, one school can AEVS over 67,000 cartons from landfill!

Question: What do we care for by recycling milk and juice cartons? **Answer:** The _____ !



Potential Impact Estimator

It's useful to have an idea of how many milk and juice cartons or boxes your school uses. It will allow you to estimate the environmental impact your program will have (see next worksheet) in order to inspire participation and educate students. It will also help you gauge the potential effect on your waste-hauling and recycling service. All you'll need to start is the total number of *enrolled* students who eat lunch at school. Our formulas take attendance into account, so don't worry about that. Just follow the calculations below, based on metrics we've developed through pilot programs and research. Or, download our easy-to-use Excel worksheet at www.RecycleCartons.com/schools.html.

1. How many cartons will your school be recycling?*

a. Identify the total number of enrolled students who eat lunch at school

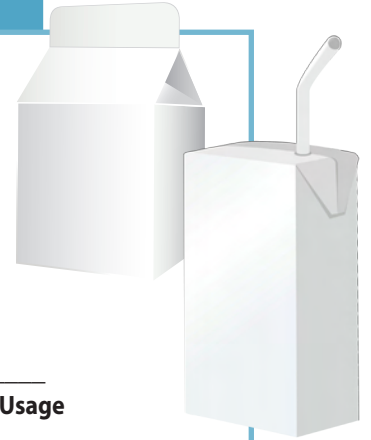
b. _____ x **.52** = _____
 # of enrolled students who eat lunch at school Expected Daily Milk-Carton Usage

c. _____ x **.03** = _____
 # of enrolled students who eat lunch at school Expected Daily Juice-Carton Usage

d. _____ + _____ = _____
 Daily Milk-Carton Usage (b) Daily Juice-Carton Usage (c) **Expected Daily Carton Usage**

For weekly figures, multiply your Daily Carton Usage by 5. For monthly and annual figures, multiply by 22 and 180, respectively.

* If your school serves breakfast or after-school meals, carton usage will be higher. If you know the average number of milks served at these meals, add that number to the daily milk carton usage figure (b). Our metrics are based on results for lunch periods in schools with an average US public school free-and-reduced-lunch rate of 36%.



2. How much waste will your program divert from landfill?

a. Multiply your Expected Daily Carton Usage ("d", above) by 180 for your **Expected Annual Carton Usage**. _____

b. _____ ÷ **190** = _____
 Expected Annual Carton Usage **Number of 55-gallon trash bags diverted from landfill per year**

c. _____ x **.0342** = _____
 Expected Annual Carton Usage **Weight of recycled cartons per year (lbs.)**

d. _____ x **.166** = _____
 Expected Annual Carton Usage **Weight of excess liquids diverted from waste stream per year (lbs.)**

e. _____ + _____ = _____
 Expected Weight of recycled
 recycled cartons, lbs. (c) Expected Weight of excess
 liquids diverted, lbs. (d) **Total expected weight of diverted
 waste per year, lbs.**





Recycling Impact Calculator

Once you've conducted your audit, you can calculate the environmental benefits of your effort! If you estimated your program's potential impact before you began, you can now compare your *actual* benefit figures. You can use these benefit numbers to report back to your school and local community. Begin with your total numbers for "Milk Cartons Collected" and "Juice Cartons Collected" (columns "f" and "g" of your "Carton Recycling Audit Sheet"). Then, we make it easy with a single metric—sheets of paper saved—to calculate the other benefits. You can also download our easy-to-use Excel worksheet at www.RecycleCartons.com/schools.html. All calculations are for **annual impact**.

Determine Your Annual Carton Usage from Audit Data

- Multiply the *total* "Milk Cartons Collected" by 180 for **Annual Milk Carton Usage**. _____
- Multiply the *total* "Juice Cartons Collected" by 180 for **Annual Juice Carton Usage**. _____

Calculate the Environmental Benefits of Your Recycling Program

1. Paper saved annually*

- _____ x **2.20** = _____
Annual Milk-Carton Usage Sheets of Paper Saved by Milk-Carton Recycling
- _____ x **1.41** = _____
Annual Juice-Carton Usage Sheets of Paper Saved by Juice-Carton Recycling
- _____ + _____ = _____
Sheets Saved–Milk Cartons (a) Sheets Saved–Juice Cartons (b) **Total Sheets of Paper Saved**

* For pounds of paper saved per year, multiply your total sheets saved annually ("c", above) by 100.

2. Trees saved annually

_____ x **.000085** = _____
Your Total Sheets of Paper Saved Annually ("1.c.", above) **Trees Saved**

3. Water saved annually

_____ x **.035** = _____
Your Total Sheets of Paper Saved Annually **Gallons of Water Saved**

4. Trash diverted from landfill annually, by volume

_____ ÷ **190** = _____
Annual Carton Usage (Milk & Juice Cartons) **55-gallon trash bags diverted from landfill**

5. Trash diverted from landfill annually, by weight

_____ x **.201** = _____
Annual Carton Usage (Milk & Juice Cartons) **Pounds of waste diverted (excess liquid + cartons)**

6. Energy saved annually

_____ x **.02** = _____
Your Total Sheets of Paper Saved Annually ("1.c.", above) **Kilowatt-hours (kWh) of energy saved***

* 2,000 kWh can power about 20 flat-screen TVs sets for one year.

7. CO₂ emissions avoided

_____ x **.0000125** = _____
Your Total Sheets of Paper Saved Annually (above) **Metric tons of CO₂ (mT CO₂) avoided**

* 1 mT CO₂ emissions saved equates to keeping about 3 average US vehicles off the road for one month.

Simplified formulas created by Environmental Impact Initiative. For the complete calculations, contact us at info@eiigreen.org.



Letter to Non-Participating Recycler



Although carton-recycling service is improving every day, some recyclers still don't collect cartons. If yours doesn't, you can send a letter like the one below to encourage them to accept cartons. Even if you find an alternate provider, your letter may persuade the recycler to provide better service. Try to get the name of the appropriate contact at the company; it will make your letter more persuasive. The most effective letters come from principals and district administrators.

(On school letterhead)

Ronald Recykler
General Manager
ABC Waste Hauling Services
123 Recycle Road
Verona, Wisconsin 53593

September 1, 2010

Dear Mr. Recykler:

My name is Susan Green. I'm the principal at Kartin Elementary, Verona's largest K-8 grade school. I was sorry to hear that ABC does not include cartons in their recycling services and am writing to ask that your company consider collecting them.

Our school is pursuing carton recycling because we seek to reduce our environmental impact and to teach our students to recycle all materials that are labeled as recyclable. We prefer cartons because they're made primarily of a renewable resource (paper), as well as for other reasons.

Although the infrastructure for carton recycling may have been inconsistent in the past, I am told it is now much improved. Paper packaging companies have set up a program to support haulers and sorters who collect cartons. For more information, please contact Jeff Fielkow at jeff@recyclecartons.com.

In the event that you expand your services to include cartons, please let us know. I can be contacted by phone at (608) 123-4567, or by e-mail at sgreen@kartinelementary.edu.

Environmentally yours,



Susan Green
Principal
Kartin Elementary School



Early Memo to Staff

Use a memo similar to the one below to communicate the program to school personnel. It should come from the principal and be sent out after you've lined up recycling service and established a rough timeline for launching the program.



To: All faculty and staff
From: Principal [insert name]
Date: [insert date]
Re: New carton-recycling program

I'm pleased to announce that in [expected month of launch] of this year, [school name] will launch a cafeteria carton-recycling program. At [lunchtime]/[breakfast and lunch], students' milk cartons and juice cartons will be collected separately from other meal waste. The program will help us to reduce our school's environmental impact and it will help our students to develop good recycling habits!

I invite all staff to consider joining our Carton Recycling Committee. We could use your help and expertise with a variety of tasks, including planning, communicating, coordinating, and making sure that all goes smoothly once the program begins.

Teachers, there will be plenty of opportunities for classroom integration, particularly with science, social studies, math, and art.

Custodians, we'll need you to work with the Carton Recycling Committee to obtain needed materials (like recycling cans and buckets) and—once the program is in effect—to arrange and position disposal stations and empty excess-liquid buckets as needed. [If recycler requires that cartons be bagged:] You will also need to poke small holes in the tops of bags with cartons.

Stay tuned for updates as we approach the launch date. With your help, [school name] will soon be a greener place to work and learn!





Early Memo to Staff (Spanish)



Many schools employ custodians who do not read well in English. Use this version of the memo to reach out to Spanish-speaking staff. It should come from the principal and be sent out after you've lined up recycling service and established a rough timeline for launching the program. We also recommend working with maintenance staff in person to ensure clear communication.

Para: Facultad y personal
De: Principal [insert name]
Fecha: [insert date]
Re: Nuevo programa del reciclaje de cartones

Me da mucho gusto anunciar que, en [expected month of launch] de este año, [school name] lanzará un programa para la cafetería que tiene como meta el reciclaje de los cartones de bebida. A la hora [del almuerzo]/[del desayuno y la del almuerzo], los cartones de la leche y los del jugo se recogerán aparte de la demás basura. El programa nos ayudará a mejorar nuestro perfil ambiental y ayudará a nuestros estudiantes a desarrollar hábitos buenos con respecto al reciclaje.

Invito a todo el personal a considerar el unirse a nuestro Comité del Reciclaje de Cartones. Sería valiosa su ayuda y competencia con varias tareas, incluyendo a la planificación, la comunicación, la coordinación, y la participación en la cafetería, una vez que se lance el programa.

Maestros, habrá bastante oportunidad de integrar el programa con actividades y lecciones de clase, especialmente con la ciencia, los estudios sociales, la matemática y el arte.

Conserjes, necesitaremos que trabajen con el Comité para conseguir materiales (por ejemplo, tarros de reciclaje y baldes) y—ya que el programa esté en efecto—que arreglen las estaciones de basura y que vacíen los baldes que contienen líquidos. [If recycler requires that cartons be bagged:] También habrá que abrirle huecos a las bolsas con cartones en la parte de arriba.

Los mantendremos al tanto en los días que vienen. Con su ayuda, [school name] pronto será un lugar más ecológico para trabajar y para aprender!





Template for Carton Recycling Report

Use this template to create a carton recycling report to communicate your program's success to staff, parents, the local community, and press after you have conducted your recycling audit and calculated your program impacts. Involve students with calculations, research and artwork.

1. Introduce the Program

- A. Open by congratulating your students and staff for getting its carton recycling program in place!
- B. Summarize the program in a few sentences (you can adapt the description from your staff memo).
- C. Give a snapshot of your audit results: recycled cartons, collection rate, and annual projections.

2. Present Your Recycling Audit Results

Present the data from your "Carton Recycling Audit Sheet" in more detail if you choose. For a district-wide program, present individual school and district totals. Discuss any data that may be relevant to your audience.

3. Present Your Recycling Program Impact Data

Present the data from your "Recycling Impact Calculator." The calculator provides *annual* impact numbers; if you want to report monthly or weekly impact, divide them by 9 for monthly, or 36 for weekly. Include:

- **Total recycled cartons.**
- **Environmental Benefits** (points 1–7, "Calculator" worksheet). If you wish, you may also report in terms of 5-year impacts.
- **A fun fact** to contextualize your results. For example, if you stacked all the recycled cartons or lined them end to end, how high or far would they reach? Relate that to a local landmark. For example, in our Highland Park, IL pilot, the district's recycled cartons from one year, lined end to end, would create a 20-mile trail from Highland Park to baseball landmark, Wrigley Field! To calculate yours, use the heights of a standard milk carton (4.25 inches) and juice carton (4.75 inches), then multiply that by your annual recycled-carton totals. Divide by 63,360 (the number of inches in one mile) to get the distance.

4. Extend Your Influence (Optional)

Increase the impact of your program by inspiring other schools! Project the potential benefits of a community-wide or statewide carton recycling program:

- a. Estimate the carton recycling potential by using the "Potential Impact Estimator" worksheet. Determine the total number of students in your community or your state. You can get state data from the National Center for Education Statistics website: http://nces.ed.gov/programs/digest/d08/tables/dt08_034.asp. For community data, use the "Search for Public School Districts" tool. You can search by city, county or state at: <http://nces.ed.gov/ccd/districtsearch/index.asp>. Once you have the number of students, plug that number into Section 1 of the "Potential Impact Estimator" worksheet to determine the number of cartons that could be recycled.
- b. Calculate the Environmental Benefits using the "Recycling Impact Calculator."
- c. Add a "Fun Fact," if you wish.

We estimate that if *all* US public elementary schools recycled milk and juice cartons from all school meals, they could annually divert over 4.81 *billion* containers and 25.34 million full trash bags from landfill, and save over 911,500 trees, 107 million pounds of paper, and 374 million gallons of water. Such an effort would also conserve 214 million kWh of energy—enough to power 19,200 homes for a year—and avoid the CO₂ emissions equivalent of over 304,000 cars.

This is what is at stake and why your efforts are so important!

5. Provide Some Best-Practice Tips

If you'd like, share any recommendations or lessons that you learned while implementing your program that might help another school. And be sure to direct people to www.RecycleCartons.com/schools.html so that they can download the free guide and other materials to get their programs started!





Carton Council Reporting Sheet



We want to hear about your carton-recycling results! Use this sheet to report them to us. You can print it, fill it out, scan it, and email it to us, or—better yet—save on paper use by downloading a fill-in electronic version from our website: www.RecycleCartons.com/schools.html. Save your completed form and email it to src@recyclecartons.com.

Carton Recycling Audit Results

1. How many enrolled students eat lunch at your school?

2. How many milk cartons were distributed on your audit day?

3. How many juice cartons did students bring on your audit day?

4. Add boxes 2 and 3 for your Total Carton Usage.

5. How many milks cartons were *collected* on your audit day?

6. How many juice cartons were *collected* on audit day?

7. Add boxes 5 and 6 for your Total Carton Collection.

Information & Comments

List your school's name, district, city or town, and state.

Please share your recycling program experiences and tips for other schools. (Add as many pages as you need!)





Carton Council
RecycleCartons.com



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Prepared by
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