

DRINK



EMPTY



RECYCLE



CARTON RECYCLING IN SCHOOLS

Program Start-up Guide

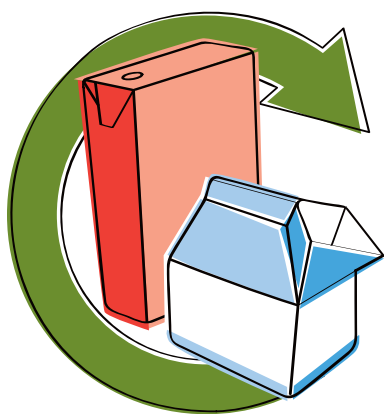


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LET THE CARTON LIVE ON



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 schoolwide 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, staff member, or PTA member, this section will give you step-by-step directions and best-practice suggestions 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.

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!

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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 your community accepts milk and juice cartons:

www.RecycleCartons.com

The recycling locator feature allows you to search by clicking on the map, entering your zip code, or entering in your city and state.

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 school district’s service provider, your service provider can potentially deliver the cartons to this recycler. If you have more than one waste hauler/recycler in your area, call your local government to find out which hauler is accepting cartons. If

“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.

your community does not currently accept cartons, please complete the online form to be notified once carton recycling is available. Also refer to the “Arrange Recycling Service for Collected Cartons” section. In either case, your next step is to secure district approval to explore this with your hauler.

GAIN APPROVAL & SUPPORT

After you’ve confirmed that carton recycling is available to your school, you’ll need to reach out and secure the support of the school personnel who may need to approve, implement or manage various aspects of the recycling program. Key individuals may include district administrators, school principals, the school nutrition director as well as 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.

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. 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. Contact your waste/recycling hauler to ask if they will accept cartons in your recyclables and determine how they want to receive them. Do they want them separated or mixed with other recyclables? Find out if they have any other requests.

4. If your hauler does not want to accept cartons, tell them that a local recycler accepts cartons and that you want to begin recycling them. Since haulers are paid for recyclables, they may be interested.

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. Use the helpful "Getting Started" checklist on the previous page.

SETTING UP YOUR PROGRAM

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, cafeteria supervisors, custodians, PTA members, and students—and get them involved right from the start.

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

The recycling program coordinator should review this guide with the principal and others to gather input about resources and potential issues, and to build participation throughout the school.

DETERMINE CARTON USAGE & ESTABLISH GOALS

It's useful to get an idea early on of how many milk and juice cartons your students generate. To estimate the usage of each material at your school, go to the "Potential Impact Estimator" worksheet (Helpful Materials). Note that the Estimator is based on cafeteria-style lunch programs. If your school serves breakfast or afterschool meals in a cafeteria, simply add the number of breakfast and afterschool meal students to your lunch-student figures, or use daily milk usage counts, if you have them.

If your school serves breakfast or afterschool 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.

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."

You'll also want to sketch out a rough timetable 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 may be placed on teachers, cafeteria and/or custodial staff, particularly in the early stages of the program. Someone will have to introduce and explain the new disassembly process to students as well as supervise the program to make sure it runs smoothly from the beginning. This would be a great job for school environmental clubs, students or cafeteria volunteers.

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 for them. Ensure that cafeteria workers, custodial staff and/or volunteers 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). 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 thoroughly emptied prior to collection in the lunchroom, 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.

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 less than \$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.

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 recycling cartons has the potential to create congestion and slow down dismissal. Here are some other questions to consider:

- » **How orderly is your current cafeteria process? Can it be improved? How can you integrate the new recycling process to maintain timely student dismissal?**
- » **Where will students dump excess liquids?**
- » **Does the cafeteria have disposal sinks for emptying residual liquids? Are they sufficient, or will you need 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.**
- » **Do you have ample room within the existing outside recycling dumpster to accommodate the new carton volumes between hauler pick-ups, or will you need more frequent pick-ups or more dumpsters? Can you reduce the number of outside trash dumpsters or frequency of pickup? Once you're recycling, you may consider adjusting your waste-hauling service and, perhaps, renegotiating 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 have any other requirements?

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, that may work for excess liquids, provided it is conveniently located and the emptying procedure is orderly.

Consider differentiating your recycling cans from your trash cans by color—for example, blue or green versus gray or black. 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 can 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.

DEVELOP THE CAFETERIA DISPOSAL & DISMISSAL PROCESS

The goal of the dismissal process is to minimize lineups at that critical time when students dispose of their food trays. 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, cafeteria monitors can instruct them as they empty their trays. If necessary, use 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 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. Dumping liquids is critical to the success of the program.

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.

1. Early on, prepare a memo announcing the program to all staff (see our Helpful Materials section for a sample memo).
2. Once you've developed your Implementation Plan, schedule a meeting with all personnel necessary to the program to explain it.
3. 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.

4. Schedule a final meeting one week before your intended kick-off day to resolve any remaining issues. Inform custodians of the vital role they play in the program.
5. 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.

Consider holding a school assembly in the cafeteria 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.

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. At the assembly, set up a disposal station and demonstrate the 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

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.

LAUNCHING YOUR PROGRAM

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 debriefing 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 (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!



HELPFUL MATERIALS

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

AUDITING & EVALUATION

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- » The Recycling Audit
- » Assessing Your Audit Results
- » Renegotiating Your Waste Hauling Service

REPORTING YOUR SUCCESS

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- » Compile Your Report & Share the Results

ADDITIONAL RESOURCES

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- » Carton Fun Facts
- » Potential Impact Estimator
- » Carton Recycling Audit Sheet
- » Recycling Impact Calculator
- » Letter to Non-Participating Recycler
- » Early Memo to Staff
- » Early Memo to Staff (Spanish)
- » Template for Carton Recycling Report
- » Carton Council Reporting Sheet
- » Activity Sheet: Maze
- » Activity Sheet: Crossword/Word Scramble
- » Activity Sheet: Matching

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.

"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.

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 predetermined 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 from the recycling cans and label them with the appropriate period for referencing during the final count. For example, write "Grade 2," or "11am." 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 cartons 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 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. 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

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.

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.

RENEGOTIATING 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.

"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 renegotiate your waste hauling contract. To do so, contact your hauler.
- Consider how the lessons from carton-recycling can improve schoolwide recycling.

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 renegotiating 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?*

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:

1. Summarize the carton-recycling program for new audiences.
2. Provide the collection-audit results and project your annual results.
3. Calculate and share the resulting environmental benefits.
4. *(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!

CARTON FUN FACTS

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.

What are cartons made of?

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.

How are milk and juice cartons recycled?

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.

Are recycled cartons made into new products?

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

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.

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 more than 304,000 cars. This is what is at stake and why your efforts are so important!

WHY RECYCLE?

- » Over 5 years, an average school can save 8,458 pounds of paper—**more than 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!**

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 are equal to one ton.**

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/schoolsrecyclecartons

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 *Daily Juice-Carton Usage* *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 cartons (c) *Expected weight of excess liquids (d)* *Total expected weight of diverted waste per year (lbs.)*

CARTON RECYCLING AUDIT SHEET

School Name: _____ Audit Date: _____ Auditor: _____

Note: For Rows “e” and “h,” add the indicated rows to determine totals. For Row “k” divide Row “h” by Row “e.” Refer to page 11 in the guide for Recycling Audit instructions.

A	Lunch Period / Class							TOTALS
B	Total Students ¹							
C	Milk Cartons Distributed ²							
D	Juice Carton Usage ³							
E	Total Carton Usage (c+d)							
F	Milk Cartons Collected							
G	Juice Cartons Collected							
H	Total Cartons Collected (f+g)							
I	Weight in Pounds ⁴ (if desired)							
J	Weight of Excess Liquid (if desired)							
K	Collection Rate (h ÷ e)							

Example (using one lunch period): At the Grade 4 lunch period, a school distributed 125 milk cartons to students. In addition, at the beginning of lunch, auditors counted 32 juice cartons that students brought. At the end of the audit day, they counted 120 milk cartons and 28 juice cartons collected in the Grade 4 carton recycling bags. Grade 4 achieved the following recycling rates: **Milk Cartons: 120/125 = 96% and Juice Cartons: 28/32 = 87.5%**

The Total Grade 4 Recycling Rate was:
$$\frac{\text{Total Cartons Recycled: } 120+28 = 148}{\text{Total Carton Usage (E): } 125+32 = 157} = \frac{148}{157} = \mathbf{94.26\%}$$

1. This is the total number of enrolled students that eat their lunch at school.
2. If your school maintains a daily count, use that. If not, have your food service staff set out a pre-determined number of milk cartons that will cover the distribution needs for a day (e.g., if 425 students attend lunch, set out 450 cartons). At the end of each period, subtract the number of cartons remaining from the number you started with. You may also conduct a count by moving from table to table and tallying the numbers of milk cartons and juice cartons after students are seated.
3. For juice cartons, you must conduct a count by moving from table to table and tallying the number of containers after students are seated.
4. Multiply the total number of cartons by 0.0342 pounds, or if you wish, weigh the bag(s) of emptied cartons.

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 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/schoolsrecyclecartons. All calculations are for annual impact.

DETERMINE YOUR ANNUAL CARTON USAGE FROM AUDIT DATA

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

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

a. _____ x 2.20 = _____
Annual Milk-Carton Usage *Sheets of Paper Saved by Milk-Carton Recycling*

b. _____ x 1.41 = _____
Annual Juice-Carton Usage *Sheets of Paper Saved by Juice-Carton Recycling*

c. _____ + _____ = _____
Sheets Saved: Milk-Carton (a) *Sheets Saved: Juice Cartons (b)* *Total Sheets of Paper Saved*

2. TREES SAVED ANNUALLY

_____ x .000085 = _____
Your Total Sheets of Paper Saved Annually *Trees Saved Annually*

3. WATER SAVED ANNUALLY

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

4. TRASH DIVERTED FROM LANDFILL ANNUALLY, BY VOLUME

_____ x 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) *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 (1.c) *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.

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

January 20, 2013

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 Waste** 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 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)

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

- » *Open by congratulating your students and staff for getting its carton recycling program in place!*
- » *Summarize the program in a few sentences (you can adapt the description from your staff memo).*
- » *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 (see page 15 for ideas).*

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:

- » *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.*
- » *Calculate the Environmental Benefits using the “Recycling Impact Calculator.”*
- » *Add a “Fun Fact,” if you wish (see page 15 for ideas).*

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/schoolsrecyclecartons 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/schoolsrecyclecartons. Email your completed form to src@recyclecartons.com.

School Name: _____ District: _____

City, State: _____

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?

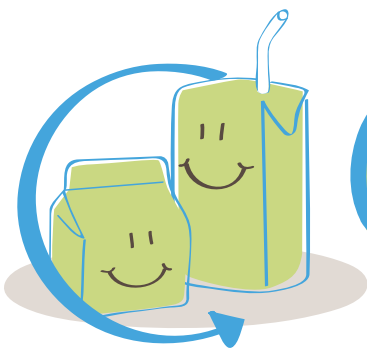
4 Add boxes 2 and 3 for your Total Carton Usage

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

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

7 Add boxes 5 and 6 for your Total Carton Collection

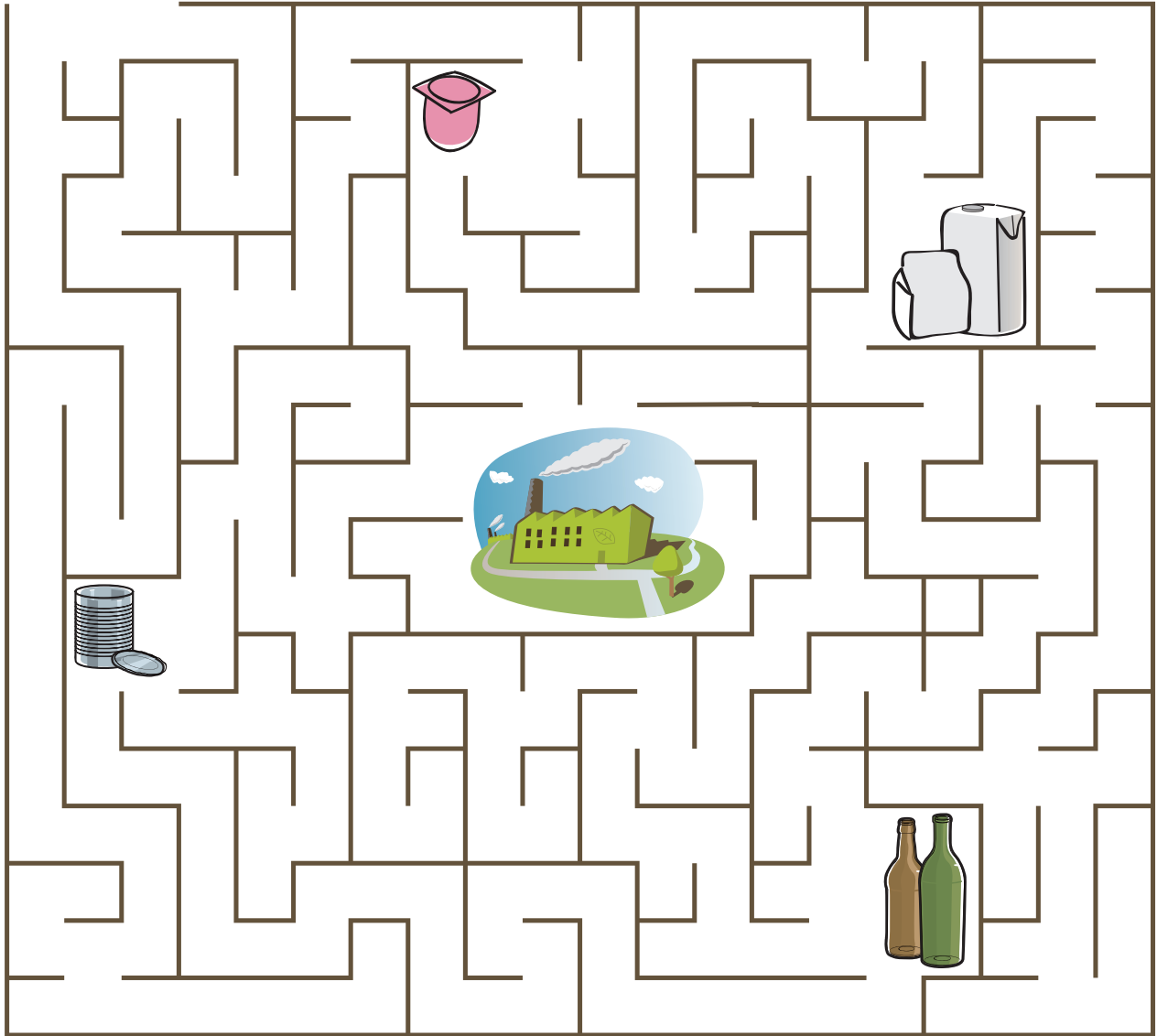
Please share your recycling program experiences and tips for other schools. (Add as many pages as you need!)

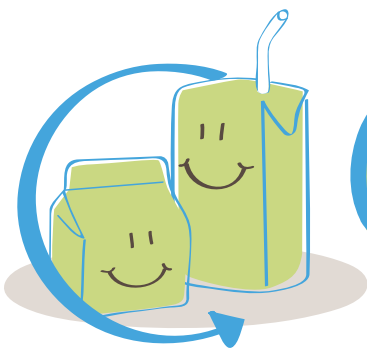


Carton Kids

Recycling Activity Sheet

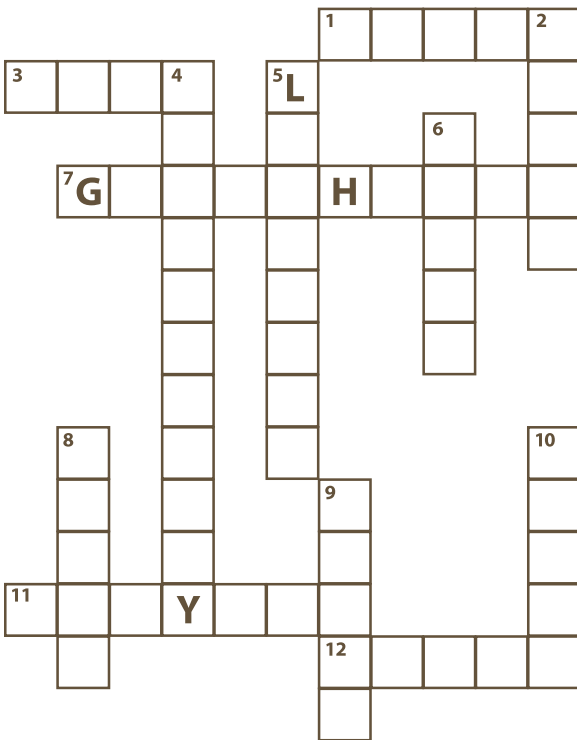
Help our truck pick up all the recyclables and get them to the recycle factory.





Carton Kids

Recycling Activity Sheet



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

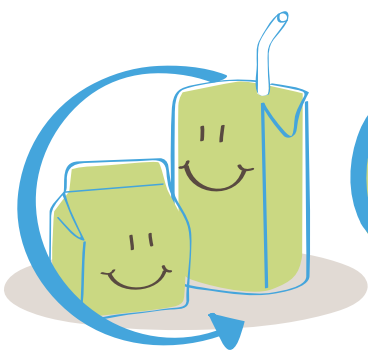
Unscramble the underlined letters to make the correct words. Then use the **BOLD** letters to form the answer.

Recycling your KIML and juice cartons is YSEA. First, IRDKN all of your milk or juice. Remove your TRSWA 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 the landfill!

Question: What do we care for by recycling milk and juice cartons?

Answer: The _____ !





Carton Kids



Recycling Activity Sheet

Some of these things can be recycled. Draw a line to the blue recycling bin if an item can be recycled. If it can't, put it in the trash!

