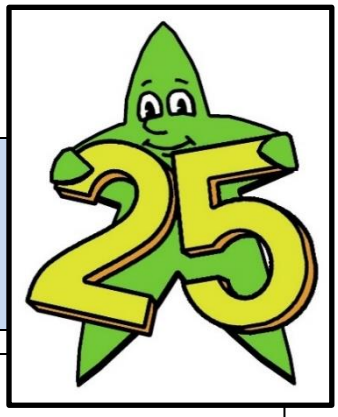
Schoolwide Compost Collection



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Snapshot
The composting option for schools that has the biggest positive impact on the environment is collection for large-scale industrial composting.

Objective:
Approximately 33% of the school's waste will be diverted for composting. Students and staff will be able to identify what items go into the compost collection bins and understand reasons why composting helps the earth.

Age Groups: K-12th grade and adults

Setting: Most or all rooms within the school building

Project Duration:
Ongoing

Materials:
- Collection bins for compostables (5-gallon for classrooms, larger for most other areas)
- Signage/labels for bins
- Examples of compostable items at school
- Poster-making materials

(Continued next page.)

Why This Project Matters:

Approximately one third of a school's waste is organic, compostable materials. This includes food waste, paper towels, tissues, napkins, and other non-recyclable papers such as bright-colored paper and construction paper. When organic materials are landfilled, they decompose without oxygen, producing methane gas. Methane is a greenhouse gas much more potent than carbon dioxide. If organic materials are composted properly in the presence of oxygen, methane gas is not produced. After implementing a successful recycling program, removing compostable items from the landfill-bound waste stream is the next step in a school's work toward Zero Waste and safeguarding the environment.

Project Summary:

Large-scale, community-wide composting has become increasingly available. Schools in these communities may hire a local company to haul their compostables to an industrial facility. The big advantage of this method is that large amounts of food waste, non-recyclable paper and yard waste can be collected and composted off-site, producing the highest waste diversion of any composting strategy. Compostable waste can be collected from the kitchen, cafeteria, hallways, classrooms, and bathrooms. A successful program will include collection, ongoing education, and feedback to the school community.

Implementation:

Getting started:

1. Contact local composting facilities and haulers to see if they offer compost collection to schools (check with the school's current trash and recycling haulers first). Request guidelines from the facility/hauler to learn which materials are accepted in their compost collection. Traditionally, large-scale composting facilities accept all food (including meat, dairy, and bones) and non-recyclable paper (like tissues and paper towels), as well as **BPI-certified** compostable materials. The Biodegradable Products Institute (BPI) provides the only third-party product-verification certification in North America that meets the international ASTM standards for compostability.
2. Identify the school's current trash volume by finding out which day(s) of the week the trash company is scheduled to service the school's trash dumpster. The evening before or the morning of the service, visit the dumpster to get an estimate of how full it is before pick-up. Do this for 4-6 weeks to calculate a good average. Use this data to estimate the volume of compostables that the school will likely produce (approximately 33% of the trash volume). This will help determine the dumpster capacity needed for compost collection.
3. Meet with the school principal or administration to determine a budget for the composting program. Consider that the school will be able to reduce its trash service once the program is established. The saved cost on trash can be put toward the compost collection cost. If the trash hauler also provides compost collection, inquire about the possibility of adjusting the contract to include compostables, suggesting that the fee reduction in trash hauling should offset the new fee for compost collection.
4. Schedule twice-per-week hauling service for the compostables (for after collection begins) to reduce pest and odor issues. Classroom and cafeteria containers should be emptied daily to avoid pests. Bathroom paper towels can be emptied as needed.
5. It is important to remember and remind others that anything that could go into the compost container is currently already in the school's waste stream. There is no increase in the amount of material that is being removed from any area of the school. The material will simply be sorted differently both inside and outside of the building.
6. In areas where trash containers are visited by wildlife, consider wildlife-proof containers or inexpensive locks.

Materials:
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- Dumpster or another large container for holding compostables until pick-up by a commercial composter

Extensions:

- Purchase bags of finished compost for students to see and touch the final product. Use the compost in school gardens and landscaping.
- Have older students research the science of composting and teach younger students about:
  - the compost/ soil food web
  - the role of water and oxygen in composting
  - the importance of compost adding organic matter to the inorganic components of soil
  - the importance of soil in our daily lives

7. With the head custodian and principal, decide where the compost collection containers should be located throughout the school, and where extra trash containers may be removed. Five-gallon buckets with lids (all the same color) make great collection containers for classrooms and small bathrooms. For larger collection areas like the kitchen, cafeteria, large bathrooms, and hallways, 10-gallon to 32-gallon containers work well. Establish waste stations in all areas where recycling, trash, and compost collection bins are grouped together. Requiring participants to choose between the containers at the station helps to increase participation and create new habits. It also reduces custodial labor with fewer containers to service. Solo trash cans tend to encourage old landfilling habits.
8. Purchase the containers (or solicit donations) and work with custodial staff to set up the building's collection system. To reduce custodial workload, implement a policy where classrooms are responsible for emptying their smaller classroom collection containers into larger hallway or cafeteria compost containers daily. Emptying the classroom container makes a perfect rotating student job that increases student buy-in to the program.
9. Print or purchase adhesive labels with guidelines for each container.

Things to consider:

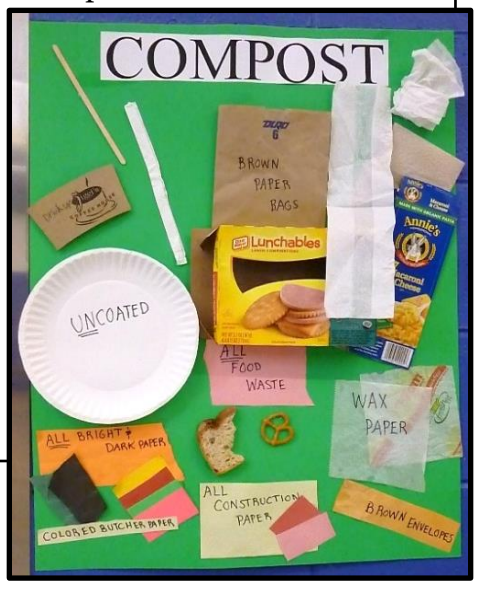
- Consider implementing the new composting program in October or during second semester of the school year. These are good times to introduce new routines without interfering with the bustle of activity during the start of the school year.
- Use consistent colors for collection containers and signage. Colors that differentiate between trash, recycling, and compost help reduce contamination.
- In children's bathrooms, trash cans may be eliminated altogether. Paper towels are typically the only waste produced and can be collected in a compost container.
- The waste station in the cafeteria may include: a dump bucket for liquids, a recycling bin, a small trash bin, and a large (20-gallon or 32-gallon) container for collecting food waste, paper napkins, paper towels, etc.
- Place a compost collection bin in the school kitchen and educate the kitchen staff about why and how food waste and any non-recyclable paper can be collected.

Keeping Compost Clean:

- When establishing a school compost collection program, be sure to promote clear and easy-to-understand guidelines that highlight which waste materials are accepted, and which are not. Compost collection programs are growing both in number and in participation throughout the U.S. It has become increasingly important to ensure that the collected materials are truly compostable so the finished compost does not release contaminants into the greater environment when applied to soil.
- Collected compostables should consist of food waste, non-recyclable paper, and yard waste only. All metal, glass, and plastic *must* be kept out.

Training and implementation:

1. Gather samples of the items that can be composted in the school's new program and use them to train a student group. Students can then create posters to display by the cafeteria and hallway compost bins that feature 3-D examples attached with the help of a hot glue gun. This type of display is a very effective teaching tool.
2. Work with the student group to create skits, video or audio announcements, and short presentations to launch the new compost collection system and to educate the school community about the composting guidelines, containers, and collection procedures. The environmental benefits of composting should also be emphasized. A 30-minute kick-off assembly covering these elements creates all-school pride in the program. Student group members can participate as presenters in the assembly.
3. If they are not already in place, hand out classroom compost bins to teachers at the end of the assembly.
4. Following the assembly, ask teachers to sign up for a 25-to-30-minute classroom training session within a week of the kick-off event. These in-class sessions will provide more details and allow students and teachers to ask questions.
5. Plan 30-minute training sessions with all types of school staff before the collection program begins. Train teachers to facilitate the student rotation to empty and clean their classroom compost containers and to use the guidelines for compostables collection with their students. Creating one waste station and removing extra trash cans from each classroom makes the program more efficient. The lids for the compost buckets should always be in use.
6. Train parent volunteers to help students sort their waste correctly in the cafeteria for up to six weeks following the program kick-off.
7. Prepare a statement or letter for the school's newsletter announcing the new program to parents.
8. Meet with school custodians periodically in the first few weeks to get feedback and adjust collection details. It is critical to have custodial support for the program.



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- Purchase only food service ware (cups, plates, cutlery) that have been certified compostable by Biodegradable Products Institute (BPI). This organization uses international standards to certify products. Reference their website to ensure products are truly compostable.
- Plastic-coated paper products, such as plates, bowls, cups, cartons, juice boxes, ice cream cartons, and frozen food boxes must be kept out. Studies have shown that the plastic coatings remain as non-biodegradable microplastic fragments in the finished compost, contaminating the soil on which the compost is applied. Microplastics are a major source of plastic pollution and cause harmful effects on living organisms.

Maintaining the program:

1. Monitor the trash dumpster for three to six weeks after the compost collection is implemented and compare the volumes to the pre-program levels. (See the *Getting started* section above). Record the trash reduction volumes and share with the school community.
2. Monitor the cafeteria collection bins periodically after the kick-off (this can be done by students or parent volunteers). If repeat issues arise (e.g., plastic wrappers in the compost), make an announcement or send home reminders in the school newsletter.
3. Distribute composting guidelines to all teachers and staff. In subsequent years, distribute guidelines at the beginning of each school year and/or as requested.
4. Provide "refresher" assemblies or classroom presentations each year until the new program becomes habit. Incoming student classes should receive education annually. Periodically retrain staff to compensate for staff turnover.
5. Provide regular reports to the school community about the volume of material they are composting and how this benefits the environment. Check with the hauler or school custodian to see if they can generate this information. Share this data as a centralized graph (see Reporting Progress, Chapter 28), announcements, or in the school's newsletter.
6. Have a student group conduct annual audits of the compost and trash bins to see how well the staff and students are doing, and what could be improved (see Conducting a Waste Audit, Chapter 30). Students can then create an awareness campaign based on their findings.

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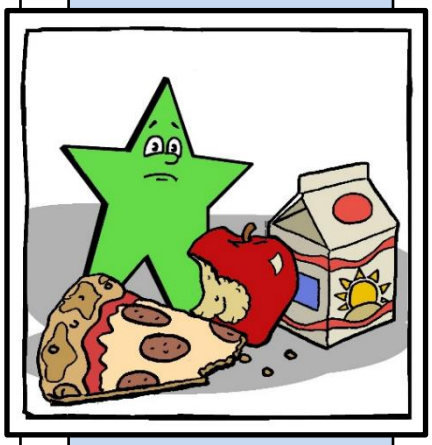
- Beware of purchasing plastic products that are marketed as *degradable* or *biodegradable*. They do not meet international certification or BPI standards for compostability.

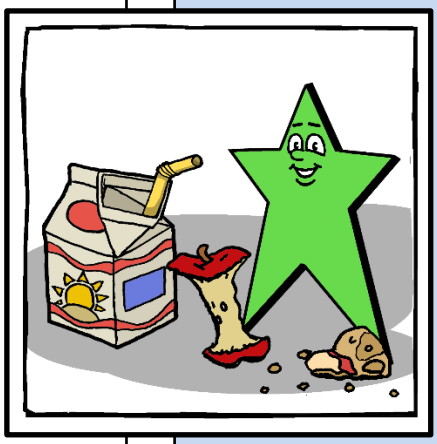
Lining compost containers:

- Compostable bags are available in all sizes to line compost containers. They can be expensive, depending on your project budget. Classroom containers can be lined with newspaper or paper bags. If containers are lined with plastic bags, the bags themselves must be kept out of the compost dumpster and put into the trash.

Assessment:

- Monitor the trash and composting dumpsters for reduced trash volumes and increased compost volumes. Look for and record contamination issues.
- In the lunchroom, pop-quiz students at their tables or as they bring items to the compost bin. Ask questions such as:
  - What is one item that can be composted at school?
  - What is one item that should NOT be composted?
  - What compostables did you bring in your lunch today?
  - Can a napkin be composted?
  - Can a paper towel be composted?
  - What do you think about composting?
  - How does composting help the earth?
- When students perform an audit of the trash and compost collection bins (see *Maintaining the program* section above), compostable items should ideally be less than 10% of the trash bin contents, and trash items should make up 10% of the collected compostables. Have the student group create a campaign to report their findings to the school community, including reminders about common sorting mistakes and the benefits of composting to the environment (healthier soil, less waste, reduction in methane generated by landfills, etc.). Video or audio announcements, posters, and short presentations to classes make an effective campaign.





Related Activities:

Take a Bite Out of Food Waste – Chapter 4
Schoolwide Recycling Collection – Chapter 18
Composting with Worms – Chapter 23
Backyard Composting at School – Chapter 24
Reinforcing Collection Programs Over Time – Chapter 27
Reporting Progress – Chapter 28
Conducting a Waste Audit – Chapter 30
Special Considerations for High Schools – Chapter 35