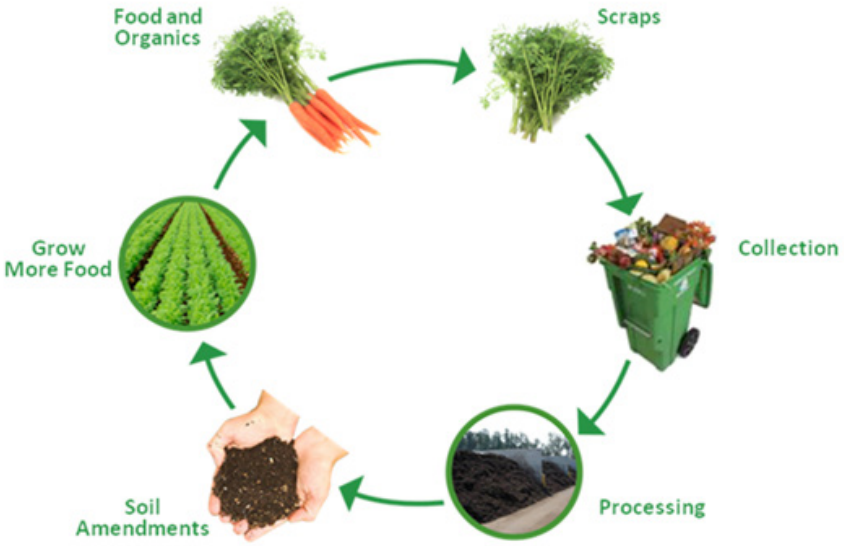
Composting
at your school



Composting is a great way to reduce your school's overall waste production, reduce the amount of food that goes to waste in cafeterias, put to use leaves and grass clippings, and to eventually create valuable fertilizer for your garden. Composting has many great benefits and this guide will attempt to help you with your project, from planning to using your compost.

Starting Your Project

Garner Interest

The first step in your project should be garnering the interest of some students and at least one faculty adviser who can serve as a mentor and liaison to the administration. While working on projects that require consent of the school's administration and maintenance crew, a faculty adviser can be invaluable.

Develop a Collaboration

An enthusiastic group of students will also be needed to carry out such a project, as their support can help get the project approved, and they will be needed to maintain the compost pile and the systems involved, which include transporting food waste, grass clippings, leaves, etc. to the pile, turning the pile, adding water, and using the compost in the garden. A garden or environmental club would be good a choice for support, especially because anyone maintaining a garden at the school should be interested in using the compost in their garden, and thus will support the compost project.

Raise Funds

Keep in mind that you may need money to build the compost bin and to buy new trashcans for your cafeteria. These will allow people to put compostable trash in, if these resources are not already available at your school. If they are not already available, you should work a small budget proposal in to your proposition.

Find A Spot

Once you have the support of students and at least one teacher, you should scope out and rank several possible locations on the school property that are well suited to compost pile. The best place for a compost pile is in a dry, shady spot, near a water source, that is easily accessible but not highly trafficked. Food scraps will need to be transported from the cafeteria daily, so the closer the compost pile is to the cafeteria, the better.

Get Approval

Once you have these locations, and a solid vision of how the program will run (how and where you will collect compostable materials, who will maintain the pile, and who will use the compost), you can go to the school administration for approval. It would be a good idea to also discuss the plan with the maintenance/grounds crew at your school to at least make sure they know about the project, and if you want their help, then you will definitely need to speak with them. Since the administration will probably have the final say on whether or not you can proceed with the project, it would be a good idea to discuss the plan and get approval from the maintenance crew first, then go to the administration not only with your plan but with the go-ahead from the maintenance crew.

Focus on Sustainability

When you meet with your administration, present the plan and its benefits, discuss how it will be run and maintained, and why it should be done. Presenting the plan as a benefit to the school with no downsides will be vital to obtaining the approval you need to go on with the project. The project will likely need to be student run; it is unlikely a school's administration will be willing or even able to reassign resources to the project. A concrete plan of how you will be collecting food and other waste, transporting it to the compost pile, maintaining the pile, and using the material in a garden will all be vital to your success.

Talking Points

Be prepared to explain what composting is, how it works, and what it is used for. It will be vital to present the benefits of the project as well. Here is some information to help you present the project.

- Composting is the process of organic matter, such as leaves, grass and food scraps, being broken down by microorganisms, bacteria, insects and worms, into a soil like substance that returns vital nutrients to the soil over which it is spread.

- Composting reduces waste, and conserves space in the landfills or other garbage dumps where it would typically go, and can also prevent emissions from the incineration plants garbage often goes to, helping in part to mitigate global warming through greenhouse gas reduction.

- In a typical situation, composting all compostable materials on a continual basis can reduce the amount of waste generated by up to 25%. In school cafeterias, this could potentially be even higher.

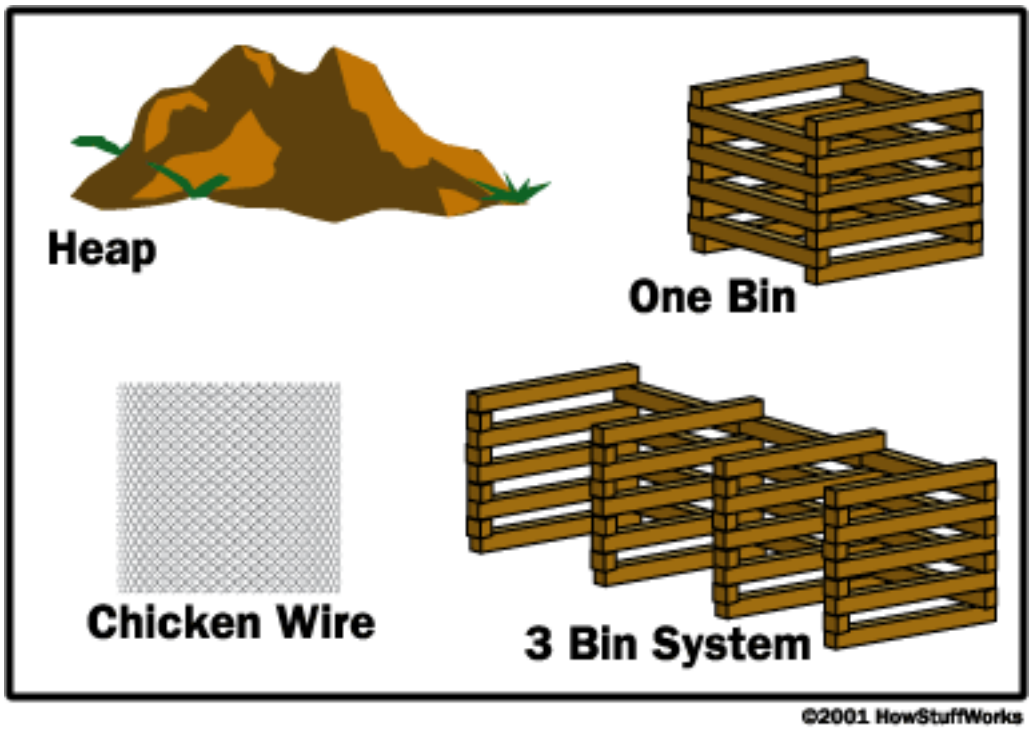
- Composting is fairly easy, practical, convenient and useful, and the reduced waste can even save you money over traditional waste disposal.

- Compost holds water and returns organic matter and nutrients to the soil in your garden, helping plants grow faster and stronger. This can be especially helpful to sandy soils, which do not hold water well and are generally nutrient poor compared to non-sandy soils.

- Adding compost to your garden helps plants grow healthier, which keeps air cleaner, conserves soil, and can provide great food.

Building a Compost Bin

1. Compost bins do not need to be fancy, and can be made out of many different materials. If you have a budget, compost bins can also be purchased pre-built or in an easy to assemble kit. However, there are many different ways you can construct a compost bin.



2. One compost pile should be about 3 cubic feet, so you will want to make sure your piles are neither too large nor too small. A good idea is to use wooden pallets to make a box, open on the top, bottom and one side, to mark off where the pile is and to keep it contained. You can also make the same shape out of regular boards, or stakes and plastic or metal fencing or chicken wire. Put a coarse material like woodchips or twigs at the bottom. This will facilitate drainage and aid aeration.

Collecting Compost

1. You will need separate trash can in the cafeteria for compostable materials. These should be well marked, and you should do your best to make sure students are aware of the composting system. Educate people on what can be composted, make posters to put on the cans and on the walls next to them, along with the information about what can and cannot be composted, and make sure they are not easily confused with the regular trash.

2. Be very clear and repetitive on what people should and should not be putting in the compost bins, as many people will struggle to understand what is going on and how to separate their wastes in to compostable and non-compostable materials. Especially if you will only be putting out your compost bins once a week, it may be a good idea to have one or more people stand by the cans directing people what to throw in the trash as opposed to what to put in the compost.

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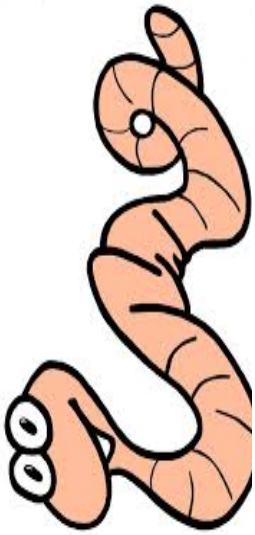
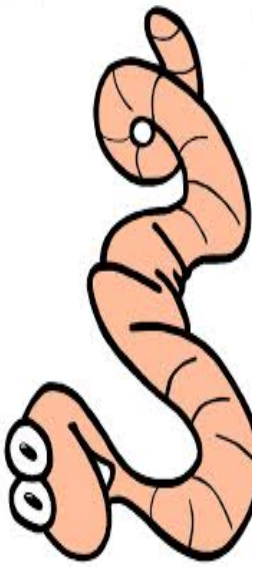
Implementing Your Compost System

1. Once the infrastructure exists to carry out your program, you can begin doing so. You should first educate students on why the program is being done, where they can put their compostable food waste after lunch, what can and cannot be put in to compost, and how the compost will be used.



2. Schools can produce a great deal of waste, and the amount of compostable material may overwhelm your capabilities. Therefore, it may be prudent to only compost on one day each week, or every other or third day, depending on the amount that you can handle and the amount your school produces.

3. With support and cooperation from the student body, you can have a great deal of compostable material, and run a very successful program. You may need to skim through the material before adding it to the compost pile to make sure there are no materials that do not belong in a compost pile, which can ruin it.



4. Worms are vital assets to a compost pile as they speed up the decomposition process. While worms will show up on their own eventually in your compost pile, adding them yourself when you first start to compost will help get the decomposition process going right away. Containers of worms are sold at many stores as bait for fishing. You could purchase some, then simply put them all on your compost pile to get the process going immediately.

Compost Upkeep

1. Add brown materials (dry leaves) and green materials (grass clippings or old annual flowers) as you collect them, making sure larger pieces are chopped or shredded. Shredding and chopping any large pieces you have will help the materials break down faster. In total the pile should be at 27 cubic feet (3'x3'x3').

2. Your compost pile should have an equal amount of browns to greens and alternate layers, about 2 to 6 inches thick, of organic materials of different sizes. The alternating layers will help balance levels of oxygen and nitrogen throughout the compost. Do not add animal waste, meats, oils, dairy, diseased plants, weeds that have gone to seed, or plants treated with pesticides or herbicides to your compost. If you do not have greens and browns available at the same time, you can build an entire pile out of one, and then add the other as it becomes available.

3. Moisten dry materials as they are added. Proceed with caution! Adding too much water could make the pile smell and too little could slow down decomposition. The pile should be kept moist, but not soggy. It should maintain the approximate consistency of a wrung out sponge.

4. Once your compost pile is established, mix grass clippings and green waste into the pile and bury food scraps under 10 inches of compost material. Add in a shovelful of finished compost or garden soil to help kick start the microbial activity in your pile. Save a few bags of fallen leaves each fall to use in your pile in the spring and summer, when green materials are often in much greater supply than brown materials.

5. Cover top of compost with a tarp to keep it moist (optional).

6. Turn the pile once a week to move material from the outside of the pile in. Oxygen is essential to the organisms breaking down the materials in your compost pile, and if the pile is not turned regularly and they are deprived of oxygen, decomposition will slow or stop entirely. Turning makes sure that decomposition proceeds at a normal pace. Additionally, you should fluff the pile with a pitchfork every time you add material. Turning the pile aggressively every spring and fall, so that the pile is turned totally inside out and upside down, speeds decomposition greatly.

7. When the material at the bottom is dark and rich in color and you can't differentiate any of the different materials in it, your compost is ready to use. This process can take a few months.

Once you have the pile established, you can begin collecting and depositing material on a daily basis. Remember to check for materials that cannot go in to compost, and keep turning the pile to aid in the decomposition process. Ensure that someone is tending to the pile over the summer break. While the compost pile will not 'go bad' or be ruined by not being maintained over the summer, it will work much better for its intended purpose and decomposition will proceed much faster if it is turned regularly. Your maintenance/grounds crew can continue adding grass clippings, leaves and twigs that they collect, but it should be in moderation. Since there will not be any food waste added over the summer, it is important that they not add too much of the grass clippings and leaves, as it will through the composition of the pile out of balance.

Another option for you to consider is having your faculty and staff compost the food scraps they produce while working over the summer. This is an area where your faculty adviser can be very helpful. Again, make sure everyone is educated on what to put in the pile, and make sure someone is turning it and ensuring that the right ratio of materials is maintained. Students can be a part of this as well, coming in to add to the pile, turn it, and make sure it is not too dry, wet, hot or cold.

Here is a list of what to compost and what not to:

Do Compost

Green Materials

- Fruit and vegetable scraps
- Horse, cow, chicken or rabbit manure
- Garden and grass clippings
- Egg and nut shells
- Plant stalks, stems and vines
- Apple cores and citrus rinds

Brown Materials

- Coffee grounds and (unbleached) filters and tea bags
- Bark, twigs and woodchips (limited amount)
- Wood ashes (only sparingly)
- Leaves

Do Not Compost

- Meat and fat
- Fish
- Poultry
- Bones
- Dairy products
- Plastic or synthetic fibers
- Diseased plants
- Vegetable oil
- Dog or cat feces
- Invasive weeds
- Weeds that have gone to seed

Source: CT DEP

Using Compost

Once your compost is dark and rich, it is ready to use. You can add it to the topsoil of your garden to give the plants additional nutrients. As it is extremely nutrient rich compared to regular soil, it would be somewhat of a waste to use it in place of soil. It is best when a thin layer is spread on top of the soil or mixed in. Plants can only absorb a finite quantity of nutrients, but if you have excess compost it is okay, because those nutrients will be returned to the soil and available for next year's plants to use (but you should still try to make your compost go as far as possible; if you have more gardens you can spread it on, do that before adding excessive amounts to the same beds). Compost gives plants valuable nutrients, allowing them to grow bigger and faster, and yielding a more bountiful harvest.