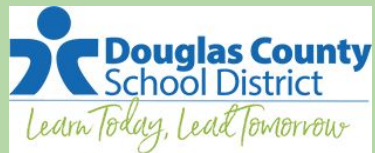


COMPOST 101

DCSD OFFICE OF SUSTAINABILITY



FOOD IN THE LANDFILL

- America is losing up to 40% of its food to the landfill
- On average, 400 pounds of food per person every year ends up in the landfill each year
- By weight, food waste is the largest waste item in American landfills
- Wasted food rots and produces methane gas
- Methane is a greenhouse gas that is 25 times more potent than carbon dioxide
- High levels of Methane in the atmosphere can trap heat and contribute to climate change



Methane Generated In Landfills

LANDFILLS

Methane is generated in landfills and open dumps as waste decomposes under anaerobic conditions (oxygen-free). The amount of methane created depends on the quantity and moisture content of the waste and the design and management practices at the site. Landfills in regions with dry conditions are not as productive as those in area with high moisture content. In 2012, landfills contributed 102.8 Tg of methane to the atmosphere.



That is equivalent to over 113 million tons of methane in the atmosphere.



REDUCE REUSE RECYCLE COMPOST

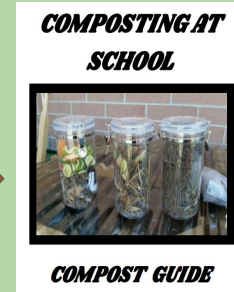
So.....

***What is the purpose
for composting food
scraps?***

- ★ Composting reduces the amount of food going to the landfill
- ★ Create **Humus** (finished compost) for garden soil
- ★ Teaches us that food is a natural resource and should not be wasted
- ★ Composting helps climate change
- ★ Composting saves money
- ★ It is easy and fun
- ★ Helps with soil water retention
- ★ Humus helps keep unwanted pests off of your plants
- ★ Reduces the impact of chemical fertilizers

How to start composting scraps at school?

Review Composting At School



1. **TEAM** - Round up a compost leadership team of students and teachers to help develop, maintain and manage a compost program
2. **PLAN** - Create a plan and present it to Sustainability Department and Administration for approval
3. **COMMUNICATION** - After approval of the plan, communicate with kitchen staff and custodial
4. **IMPLEMENTATION** - Implement the compost plan within the school, and adjust as needed for quality improvement and long term maintenance

What type of composter is right for your school?

Three bin composting- The process of using 3 different bins gives you more options

Tumbler composting - The process of using a barrel that spins your organic waste

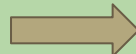
Trench composting- The ability to bury your organic waste in a 12 inch trench

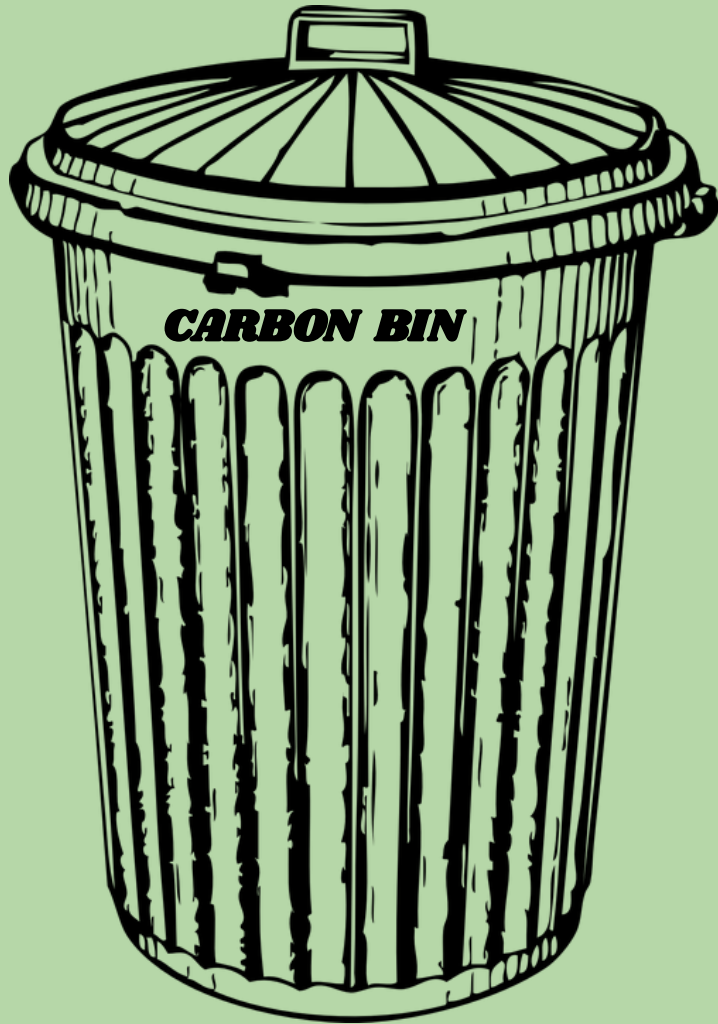
Trash can composting- The process of putting your organic waste in a holed out trash barrel - Home Depot has one already set up for you [Trash Can Compost](#)

Heap composting- The process of putting all your compost in a pile and turning it frequently, Recommend a pitch fork or [a compost turner](#) to help turn.

Earth Cube - The process of using a fully enclosed composting cub featuring power mixing, compost aeration and biofiltration

Vermicomposting- The process of using worms to compost on a smaller scale





CARBON (Browns) COLLECTION

- PAPER TOWELS
- SHREDDED PAPER
- PENCIL SHAVINGS
- DEAD PLANTS
- DEAD LEAVES
- DRIED GRASS CLIPPINGS
- DRYER LINT
- WOOD SHAVINGS (NON TREATED)

Smaller the items, the better they will breakdown. You wouldn't want to put a cardboard box in it unless you shredded it. Or large pieces of paper unless they are shredded.

Recipe for compost: Greens + Browns + Water + Air

Greens (Nitrogen Rich)

Vegetable / fruit peels & scraps

Coffee grounds, tea bags

Green grass clippings

Green garden waste

Flowers

Other (Add Minerals)

Egg shells

Wood & wood pellet ash (sparingly)

Browns (Carbon Rich)

Dried leaves & brown grass clippings

Pine and spruce needles

Paper, cardboard and newspaper

House plants

Prunings & cuttings (these help create air pockets)

Sawdust from untreated wood

Straw

Avoid including these materials in a backyard compost...

Meat, fish and bones attract animals

Dairy products in large quantities make the compost smell bad

Fat, oil and grease in large quantities slow down the process

Feces (kitty litter, dog doo, humanure) contain pathogens

Weed with seeds or persistent roots

Diseased plants


Ash or sawdust from chemically treated or painted wood

DO NOT ADD TO SCHOOL COMPOST

- MEATS OR PROTEIN
- OILS
- BEANS
- BREAD
- CITRUS - lemons, limes, grapefruit.....
- DAIRY - cheese, yogurt, milk.....



These items decompose slowly, cause odors, attract rodents and unwanted bugs.







The image shows three glass jars with metal lids and clasps, arranged on a wooden surface against a brick wall. Each jar represents a different stage of a composting process. The first jar on the left is labeled 'INCOMING' and contains fresh vegetable scraps like cucumber and carrot. The middle jar is labeled 'WORKING' and shows the scraps broken down and mixed with soil. The third jar on the right is labeled 'FINISHED' and is filled with dark, rich, finished compost. The jars are placed on a wooden crate or tray.

INCOMING

WORKING

FINISHED

Troubleshooting Your Compost

Too Wet		Add carbon (ash, pine shavings, leaves)
Too Dry		Add more nitrogen (fruits and veggies)
Too Smelly		Add carbon (ash, pine shavings, leaves)
Too cold		Add nitrogen and turn

Good tips on keeping a healthy compost:

- Turn your compost regularly (3 times a week minimum)
- Do not add extra water unless needed (nitrogen rich ingredients add water)
- Smaller items are better (easier for decomposers to break down)
- Keep a compost thermometer in your compost to regulate temp.
- Keep a container of carbon (browns) in case you need to add to your compost
- Temperature needs to be over 100 degrees

Educational Videos

Science Show Kids Make the Most of Compost - Great videos on many different subjects

PBS Food Forward (Make Food, Not Waste) - A 27 minute, 3 clips, show about food rescue and compost

- Shorter version with just SF clip

The Perfect Compost Recipe - Tells how to use the perfect ingredients for compost

Worms - Learn all about worms, SciShowKids video

Worms at Work - Please preview this one first. May not be suitable for all audiences-PG

Composting at School - (10 minute video) Remember that school backyard composting only takes fruits and veggie scraps.

Teacher Resources

[Composting at School Guide](#) - A complete guide of starting compost at your school

[Science Standards Correlation](#)- Meets Physical, Life, Earth and Space Science Standards

[Compost Curiosity](#) - EPA - Reducing the impact of food waste by feeding the soil

[Do The Rot Thing](#) - Compost activities

[Composting Lesson Plan](#) - Great ideas and lesson plans

[DCSD Compost](#) - Be the change poster for your school waste

[Compost Action Plan](#) - Plan out the steps to implement composting in your school

[The Methane Cycle](#)

[The Carbon Cycle](#)

*There are many free resources out there if you just "DIG" for them.
Have FUN opening up your own can of worms!*



THANK YOU!

For additional information
contact:

Beth Church
bachurch@dcsdk12.org

Heather Berry
hmberry@dcsdk12.org

