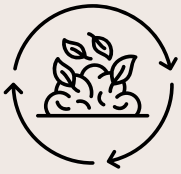
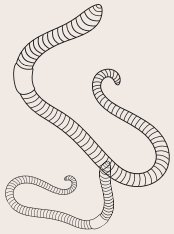
Quick Guide to Backyard Composting



What is composting?

Composting is a natural process by which decomposers like bacteria, fungi, worms, and mites break down organic material (food scraps, lawn clippings, fallen leaves, etc.) into a nutrient-rich, soil-like material called compost.

Decomposers do this by either using chemicals in their bodies to break down organic matter or by chewing, grinding, and squeezing the materials into smaller pieces. The heat they emit while breaking down organic material speeds up the decomposition process. The spaces they create as they move through the compost pile allow air, water, and nutrients to circulate.



Why should I compost?

Composting provides so many environmental, social, and economic benefits!
Here are just a few reasons why you should compost:

1. Composting reduces the amount of organic matter that goes into landfills and reduces the pollution they create.
2. Adding compost helps loosen compacted, heavy soils to help roots grow deeper to access crucial nutrients and water.
3. Compost contains many nutrients that are released slower and stay in the soil longer than synthetic fertilizers.

What will I need?

1 Greens & Browns

We separate the two kinds of organic materials that we use to compost into greens and browns.

- Green materials are high in nitrogen whereas brown materials are high in carbon.
- Add one part green, nitrogen-rich material, such as food waste and grass clippings, to every two parts of brown carbon-containing material like leaves, branches, and twigs. Check out the "What Can I Compost?" one-pager below for more information about what you should and should not add to your backyard bin.
- Chop or shred your greens and browns to 1-3 inches in diameter, which leaves enough space between particles to move air through while still breaking the material down quickly to reduce odor and visits from unwanted wildlife.

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A Good Spot

Place your bin or pile in a sunny part of your yard on bare soil. Position your bin or pile so that you can easily water it to prevent it from drying out.

3

Volume

Your pile should be large enough to maintain heat, which means that it should be a minimum of 3'x3'x3' (or one cubic yard). A smaller pile will take longer to produce finished compost.

4

Moisture

Decomposers need moisture to live in. Keep compost as moist as a wrung-out sponge. Piles that are too dry decompose very slowly, and piles that are too wet will produce a foul odor.

5

Air

Turn your compost every week to introduce oxygen. Turning too little will produce unfinished or smelly compost. Turning too often will prolong the process and may allow some harmful microbes and weed seeds to survive.

From Food Waste to Finished Compost

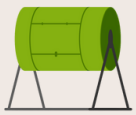
Now that you know the composting basics, it's time to choose the right composter for your space. When deciding which composting method to use, it's important to consider what you want to compost, what you will do with your compost, and where you plan to compost. The four most common backyard composting methods are listed below. Learn more about each composting method and more here.

Compost Pile

- Inexpensive, few tools needed, easy to harvest compost
- Can attract wildlife and pests, requires yard space, may generate odor

Stationary Bins

- Fits in small outdoor spaces, keeps out unwanted pests and vermin, low-maintenance
- More difficult to turn than open pile, limited volume, may generate odor



Tumbler Composters

- Easy to turn, fits in small outdoor spaces, keeps out unwanted pests and vermin
- Limited volume, more difficult to harvest than open pile

Worm Bins

- Fits in small indoor and outdoor spaces
- Requires regular moisture, may attract pests like fruit flies, some maintenance required

Compost is ready to be harvested when the finished product is a rich dark brown color, smells earthy, and crumbles in your hand. If there is still recognizable food or the pile is still warm, check it again in a few weeks. Once harvested, you can manually separate the compost using your hands or a sieve/screener to separate the unfinished material and finished compost.

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Frequently Asked Questions

Where can I get worms for a worm bin?

You can obtain worms by purchasing them at bait shops or through an online vendor, or you can gather worms through worm hunting. There are a couple ways to collect worms from the wild: placing a large wet sheet of corrugated cardboard on the ground overnight, catching worms during and after rain, and digging up worms by a stream or lake. You can find detailed instructions here.

Why does my compost smell?

Most often, strong odors are due to a lack of oxygen or too much nitrogen (green materials). A strong ammonia smell means there is too much nitrogen. Stop adding food waste until the decomposers break down the food waste already in your compost, turn your pile more frequently, and add more browns. A rotten-egg-like smell means that your compost needs air. Turn it and add browns to absorb the moisture. If your pile is too wet, mix the compost and let it dry out to the consistency of a damp sponge. Learn more about compost odors here.

Why does my compost have fruit flies?

The presence of fruit flies can mean that you need to bury your food waste, your compost needs more brown materials, or your compost is too wet. Adding brown materials on top of your food waste can reduce the number of fruit flies in your compost. Make sure that you are mixing your compost weekly and ensure that it is not getting too wet. If they persist, you can make homemade traps to add inside or near your bin. Learn how to make a homemade apple cider vinegar trap here.

Why isn't my compost breaking down?

If your compost is not breaking down, it is most likely due to an insufficient amount of the 3 "ingredients" discussed above or a lack of heat from the sun. If your compost is too dry, make sure that it is consistently moist (water every week or two). If it is too wet, make sure that you are mixing properly every week. Make sure that you are adding one bucket of nitrogen-rich material to every two buckets of dry carbon-containing material – too little nitrogen-rich materials will cause compost to break down slowly. Make sure that your compost is in a sunny spot.

What do you do with your compost when it is ready?

Finished compost can be used to promote plant growth and improve soil quality. You can add it to your garden beds as a natural fertilizer or use it to create your own potting soil and compost tea. Learn more about how to use your finished compost here.

Where can I get extra composting materials?

- Browns: Collect fallen leaves and sticks from a public park or a neighbor; collect cooled wood ash from your backyard fire pit; gather old newspapers or junk mail and cardboard, but avoid glossy paper; ask nearby breweries for spent grains and hops; or ask a tree trimmer you see working in your neighborhood for wood chips.
- Greens: Collect used coffee grounds from your coffee pot at work, school, etc., or visit your local coffee shop or Starbucks for used grounds; or ask your neighbors for grass clippings or food scraps.

What Can I Compost?

Decomposers need green and brown materials to thrive. Brown materials are high in carbon and green materials are high in nitrogen.

Browns

Dried leaves & twigs

Brown garden waste

Straw & pine needles

Wood chips & sawdust

Animal bedding

Shredded cardboard

Newspaper strips (avoid glossy or colored ink)

Paper towels

Greens

Green grass clippings

Fruit & vegetable scraps

Coffee grounds

Tea bags (remove the staple)

Green garden waste

Do NOT Compost in Backyard Composters:

- Meat & bones
- Dairy products
- Heavily colored paper
- Chemically treated plants or grass
- Weeds gone to seed
- Diseased plants
- Plastic or plastic-coated products
- Human or pet waste
- Grease, fat, or oil
- Coal or charcoal ashes

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Additional Resources

Composting Resources

Choosing the Right Composter
Earth Easy created a guide to help you decide which composter is best for you.

Literless: Where to Compost in Georgia
Don't want to compost at home? Check out this list of community compost locations and organizations around Georgia.

Dig In: A Healthy Soil Resource Guide
Atlanta-based Food Well Alliance created a resource guide with guidance on how to preserve the soil in your garden, methods to start your own composting system, local resources, and local assistance.

Composting in Georgia
The Georgia Recycling Coalition put together a list of composting resources and videos for getting your backyard compost started, compost books and videos for kids, activities and games for kids and teachers, and legislation pertaining to composting in Georgia.

Teaching Resources

UGA Extension: Garden Earth Naturalist Club Soil Module
In this module, children explore the world under their feet. They examine the physical and biological properties of soil by uncovering a soil profile, testing pH and the organic content of soil, looking for soil organisms, and learning about the world of earthworms. This resource includes activities for home, a soil take-home packet, Science Night projects, and instructions for a service-learning project in which students build a worm compost bin and use the compost to improve the soil quality for some of their school site plants. These activities are directly linked to Georgia Performance Standards for grades K-5.

Composting for Kids
This scripted slide set written and produced by Robert E. (Skip) Richter uses multimedia resources to teach students about compost and instructs students as they construct their own compost bin.

Georgia Organics Soil Chefs Lesson Set
The Soil Chefs lesson set was developed by Jenna Mobely for October Farm to School Month. 3-5th grade students learn about the properties of soil and how those properties can improve or inhibit turnip seed growth.

- Soil Scavenger Hunt (Observe and Research)
- Sand or Clay (Question and Hypothesize)
- Soil Chefs (Conduct an Experiment)
- Whose Grew? (Draw a Conclusion and Share Results)

Kids Gardening Lesson Plans
A compilation of gardening and environmentally related lesson plans. Lesson plans related to soil and composting are listed below:

- Learning about Landfills, 3-5th Grade – Students will create mini "landfills" in milk or juice cartons to investigate what happens to common household waste when buried under soil and plants.
- The Soil-Air Connection, 9th-12 Grade – Students will explore the vital role soil plays in the carbon cycle.
- Soil is Alive! 6th-12th Grade – Students will explore the many organisms that call soil home, from microscopic bacteria and fungi to large mammals like moles and voles.
- Decomposition Observation Bags, 2nd-4th Grade – Students examine the process of decomposition and consider how living and once-living materials decompose to become part of soil.

Growing Minds
A compilation of gardening and farm-to-food lesson plans created by Growing Minds Farm to School program in Asheville, North Carolina. Common Core-aligned lesson plans related to soil and composting are listed below:

- Soil Exploration, K-2nd Grade – Through garden exploration, students will learn about the properties of soil and why soil is important to plants. They will closely observe soil and practice tallying and reporting results of soil experiments.
- Soil Amendments, K-2nd Grade – Students learn about the benefits of soil amendments and spend time recording their garden observations.
- Worm Exploration, K-2nd Grade –Teach students about life cycles by learning about worms and the ways they benefit the garden and farms. Through reading literature and completing hands-on activities, the class will conduct a worm investigation and observe that the organisms (and other animals) need food, air, and space to grow.

Spanish-to-English Garden Vocabulary
A bilingual English-Spanish/Spanish-English dictionary created by Susan M. Spector at the University of California Agriculture and Natural Resources department. It includes the most common gardening terms and phrases and a translated and converted metric/U.S. units table.