

Tumbler Compost System Overview

What is a tumbler composting system?

A compost tumbler is an enclosed compost bin or drum that rotates to mix organic material added inside. **Composting** is the controlled decomposition of organic matter. Organisms, specifically microorganisms, break down food and yard waste and turn it into compost that can be used to enrich our soil and plants. **Compost** is a dark, crumbly, living soil amendment.

Why compost?

Composting has **benefits to soil, plants, and society**. Compost enhances soil health and fertility which improves the growth of our plants. Composting at home also reduces the amount of food waste that ends up in our landfills and allows us to recycle organic material locally!

What can be added to your compost tumbler?

The composting process requires four key ingredients: **greens**, **browns**, **water**, and **oxygen**. **Browns** refer to material that is high in carbon. **Greens** refer to material that is high in nitrogen. The microorganisms that break down organic material require **oxygen** to breathe and a thin layer of **water** around each compost particle to move around.



DO NOT ADD: Meat, fish, bones, oily foods, dairy products, eggs, weeds with seeds, “compostable” utensils and bags, glossy paper, or pest-infested plants



Helpful Tips

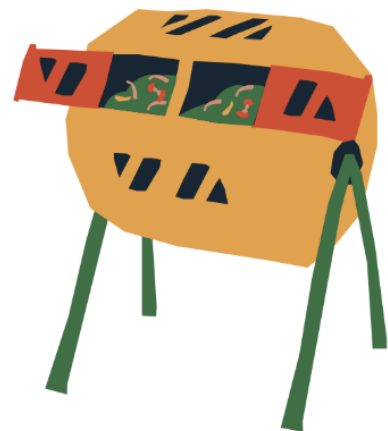
- **Store brown material in a bin (or open pile) near your compost tumbler for easy access**
- **Store extra food scraps in a plastic bag in your freezer until you are ready to add them to your compost pile**
- **Chop up large feedstocks as needed --- increasing the surface area of your material helps it break down faster**
 - **Examples:** Thick stems, corn cobs, pineapple tops
 - **2-6 inches is ideal**
- **Close the lid on your tumbler after adding new material to prevent pests**

Set-up Information

1. **Step 1:** Identify a dry, shady spot outside of your home
2. **Step 2:** Assemble your compost tumbler and add “starter” material to introduce microorganisms into your drum.
 - a. **Examples:** finished compost, manure, or soil from your yard
3. **Step 3:** Add green and brown material to your tumbler
 - a. Ensure that it follows the **ideal composting ratio** of **1 part green material to 2-3 parts brown material**

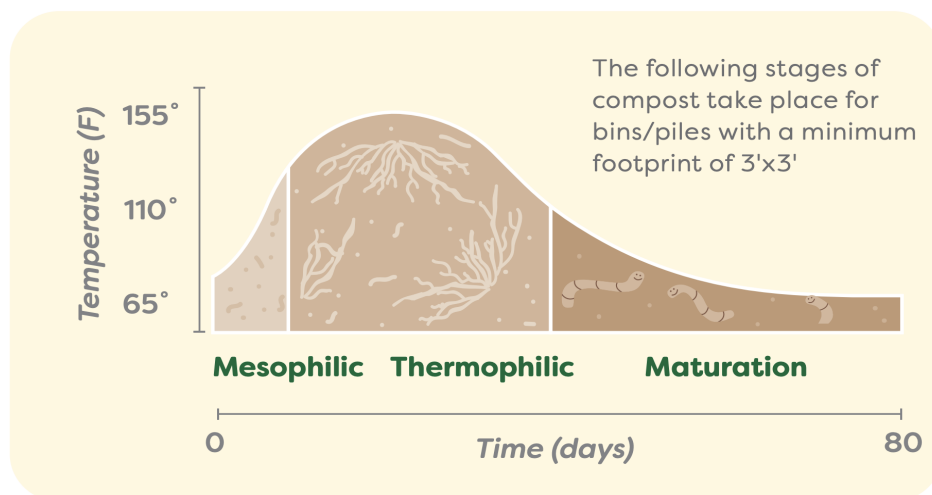
Add material to your tumbler every few days until it is about 4 inches from the top of the drum. **DO NOT** overfill your drum to prevent the material from matting or clustering.

Each time you add new material, spin your tumbler 2-3 times to help aerate the compost. **DO NOT** overmix – too much turning can prevent the compost from reaching the temperatures needed for proper decomposition.



Phases of Decomposition

Organic material is broken down in phases by **microorganisms**.



Source: LA Compost

Mesophilic Stage <i>First few days</i>	Thermophilic Stage <i>2 - 3 weeks</i>	Maturation Stage <i>6 - 8+ weeks</i>
→ Microorganisms begin to breakdown easy-to-digest organic material → Moderate Temperature: 65° - 100° F	→ As the material is being digested, the compost heats up, and difficult-to-digest material gets broken down → Temperature: 130° - 155° F	→ Microbial activity and decomposition slow down → Temperature: 80° - 110° F → Mature compost is dark brown in color

Optimal Conditions

1. **Carbon to nitrogen ratio: 1 part GREENS to 2-3 parts BROWNS**
2. **Moisture Level:** Squeeze compost in your hand, your compost should feel as moist as a wrung-out sponge and form a ball in your hand.
3. **Aeration:** Your tumbler should be properly aerated. Spin your tumbler every 3-5 days to promote airflow. *Turning your compost tumbler*
 - a. Provides oxygen to the microbes in your compost
 - b. Releases trapped heat and moisture
 - c. Helps break apart clumps and “fluffs” material