



## Extension: Starting a Compost Pile at School

Starting a compost pile at school for yard debris is a practical way to teach students various scientific lessons--and it keeps valuable organic waste out of the landfill!

**Step 1:** Decide which type of composting system is right for your school. In order to compost yard waste and food scraps, you should use a container that is completely closed in order to prevent pest infestations. You can build an enclosed container, but many prefabricated models are available at lawn & garden stores that work very well.



If you are only composting yard debris, you can construct "Turning Units" which are a series of two or three 3-sided square holding bins placed side by side. The turning units can be made of wood, wire, or concrete blocks. You start with a 3 foot by 3 foot pile of organic matter and when it has reduced in size, transfer it to the next bin. The more you turn, the faster it will compost. Use the third bin for holding finished compost as it finishes in the second pile.

**Step 2:** Decide where to locate the bin(s) on the school property and who will be responsible for taking care of it. The pile must be checked every week to see that it has the proper moisture content and that it is turned enough to keep air in the pile.

**Step 3:** Use the resource list in this curriculum to make sure you are up to speed on how to compost. Visit [www.oregongreenschools.org](http://www.oregongreenschools.org) and [www.deq.state.or.us/wmc/solwaste/edu.html](http://www.deq.state.or.us/wmc/solwaste/edu.html) for support information.

**Step 4: Composting Basics: What to add to the pile**  
Generally, the best compost occurs with a Carbon to Nitrogen ratio of 20:1

High Carbon ingredients include:

Dry leaves  
twigs  
sawdust  
paper (tissue, napkins, newspaper,  
coffee grounds/filters/tea bags)  
cardboard  
straw, dry grass

High Nitrogen ingredients include:

vegetable scraps  
fresh lawn clippings  
herbivore manure  
garden weeds/leaf  
clippings from shrubs

What you should NEVER add to the pile:

Meat and dairy products or fats and oils (will attract pests)  
Pet Manure (from non-herbivore animals)

**REDUCE**  
**REUSE**  
**RECYCLE**



**Step 5:** Keep the pile maintained. Add water until the pile is as damp as a wrung out sponge--continue watering the pile over time as it dries out. Turn the pile frequently to add air. Keep food scraps buried in the pile to keep pests away and reduce odors.

**Step 6:** Add new material to the top of the pile and harvest finished compost from the bottom of the pile when it is uniform, dark and crumbly and looks like soil. This may take 6 weeks to 6 months depending on the method used. \*Compost should reach temperatures of 140 degrees to 160 degrees in order to kill weed seeds and plant diseases.

**Step 7:** Use finished compost as a soil amendment when planting (in a 2/3 soil to 1/3 compost ratio) or as a direct land application.

### **Problem Piles:**

My pile does not heat up: The pile is too wet or too dry. Add dry material into a very wet pile. If the pile is moist, but not decomposing--then add more nitrogen rich material.

My pile is attracting pests: Turn frequently to prevent nesting animals. Use a closed container when composting food waste, keep food waste buried in the pile to keep away flies, etc. Never add meat, dairy or oily and fatty foods.

My pile smells like ammonia: The pile has too much nitrogen, so add more carbon material. Also, the pile may be too alkaline (very high pH), so add acidic material like saw dust, oak leaves, or vegetable scraps.

My pile smells like rotten eggs: The pile is becoming anaerobic--add oxygen by turning frequently and making sure that it is not too wet. If the pile is very wet, add dry brown material like leaves or dried grass.

### **Composting Tips:**

It is not necessary to place your pile in the sun, the heat generated is caused by decomposition. It is important to try to keep the pile in a 3 foot by 3 foot size to maximize heat without compromising aeration.

Keep the pile(s) protected during the rainy season with a tarp or bin cover.

Mulch yard debris and bulky food waste (like banana peels) with a shovel or other yard chopping tool to speed the composting process.  
(Optional)

Add a few shovels of fresh soil to new compost piles to introduce the microorganisms that will break down the materials.

