

Content Outline for Web Module: Composting 101

Benefits (Why)

LO – Learners will list the benefits of composting.

- Reduces the waste stream – less yard waste and kitchen scraps becomes solid waste that ends up in the landfill.
- Improves the soil quality – composting can reduce erosion and help prevent soil compaction.
- Improves water quality – reduces the need for chemical fertilizers that potentially may harm ground water and end up in runoff.
- Conserves water – improves the soil's ability to retain and keep moisture, so you don't have to water as much.
- Fertilizes soil – provides nutrients for the soil and plants.
- Saves money – uses free organic resources that lower water bill and fertilizer costs.

Adapted from the city of Arlington, Texas' Earth Day Resources
(http://www.ci.arlington.tx.us/earthday/earthday_compost.html).

Items to include and those to avoid (What/Not)

LO – Learners will identify common household items that can be included in composting and those that should be avoided.

Include (Browns/Carbon)

- Cardboard/clean paper/newspaper
- Corn cobs, corn stalks
- Cotton and wool rags
- Dryer and vacuum lint
- Dry Leaves/pine needles/pine cones (not from weeds that may seed or diseased plants)
- Sawdust and wood shavings from untreated wood
- Straw
- Nut shells

Include (Greens/Nitrogen)

- Seaweed, Algae
- Coffee grounds/filters/Tea bags
- Hair
- Manure (horse, cow, pig, sheep, goat, chicken, rabbit)
- Kitchen scraps (fruit, vegetables, only plant-based)
- Egg shells (Calcium)
- Houseplants
- Green leaves
- Grains

Avoid

- Coal ashes or charcoal briquettes
- Droppings from birds, cats, dogs
- Meat, fat, grease, oils, bones
- Dairy products
- Diseased or insect-ridden plants
- Chemically treated items
- Cat litter
- Colored paper
- Treated wood
- Human waste

Why? “Some of these are toxic and hazardous to plants and humans, and, while some others would decompose eventually, they generate odors and attract pests.” Green Living Guide.

Basic Steps to Composting (HOW)

LO - Learners will describe the basic steps to successful composting.

1. Chop up, shred ingredients.
2. Ensure proper ration of carbon-rich materials (BROWN) and nitrogen-rich (GREEN) materials – 25:1.
3. Buy a composting bin or make a site that is 3ft x 3ft – shaded.
4. Start with several inches of coarse dry browns that will let air circulate at base.
5. Top with several inches of green.
6. Add few inches of garden soil.
7. Add a layer of brown.
8. Moisten.
9. Continue layering green, then brown with a little soil mixed in until it is 3 feet high.
10. Turn it every few often with a pitch fork or shovel.
11. Keep pile moist, but not soggy.

Trouble-shooting

LO - Learners will solve common composting problems.

Symptom	Probable Cause	Remedy
Odor – like rotten eggs	Not enough air. Pile too wet, or too much nitrogen	Turn pile. Add dry, brown materials, such as straw, pine needles to soak up water and balance blend
Odor – like ammonia	Too much green, not enough carbon.	Add brown materials, like straw, dry leaves, shredded newspaper, etc.
Moisture – too much	Overwatering.	Add dry, brown leaves or straw and turn pile.
Moisture – not enough	Low moisture.	Turn pile and water it in the center of the pile. Moisture is required for composting to degrade.
Temperature – pile not heating up	Not enough nitrogen. Not enough air. Too cold. Compost is finished.	Add green materials, like manure, or grass clippings, turn the pile. Turn the pile. Cover the pile or use a bin. Compost is dark, crumbly and smells earthy.
Temperature – warm only in center	Pile is too small.	Add more materials.
Attracting pests (rodents, flies, raccoons).	Materials that should be avoided may be present like meat, bones, fatty foods).	Remove materials from pile. Cover pile with layer of soil and turn the pile to increase temperature.
Attracting ants.	Pile too dry. Not hot enough, or has kitchen scraps too close to surface	Add more water to increase moisture. Ensure proper mix/ratio of materials and turn pile.
Attracting worms.	Good :)	Not a problem.