

GRADES OF GREEN STUDENT COMPOST TEAM PROCEDURES PRESENTATION OUTLINE

A. Overview: Composting is nature’s way of recycling. Leftover food scraps, leaves, and yard trimmings can easily be broken down into humus through the composting process. Composting helps to reduce the amount of waste that goes into our landfills and creates nutrient-rich humus that can be used in campus gardens and landscaping. This humus benefits garden soil by adding nutrients and retaining moisture, thereby reducing the need for water.

B. Requirements: The composting process requires a balance of “greens”, “browns”, moisture, air, and heat to work properly.

1. “Greens” - consist of fruit and vegetable scraps, fresh plant and grass trimmings, eggshells, and coffee grounds. Greens are the nitrogen source for the composting process.
2. “Browns” – consist of leaves, landscape trimmings, sawdust, woodchips, shredded newspaper and cardboard, and unbleached paper towels. Browns are the carbon source for the composting process and should be added at a 2:1 ratio to greens.
3. Moisture – To optimize the composting process, the compost mixture should be kept as moist as a wrung out sponge. Water can be added with a hose or watering can.
4. Air – The compost process requires sufficient oxygen. Air can be added by mixing or rotating the compost pile.
5. Heat – The sun heats up the compost pile accelerating the decomposition process.

C. Science: Composting occurs as components work together to create an ideal environment for scavengers and bacteria to decompose materials.

1. Greens, browns, water, and air form basis of the compost pile.
2. Scavengers such as worms, pill bugs, and millipedes populate the pile and begin eating and breaking down the greens and browns into smaller pieces.
3. The sun heats up the pile and encourages decomposers (microorganisms such as bacteria and fungi) to populate the pile.
4. Browns (carbon-based) provide the energy food for microorganisms in the compost pile
5. Greens (nitrogen-based) provide the protein that microorganisms need to break down the carbon food
6. Oxygen supports the populations of scavengers and decomposers

Decomposers further break down pieces left by scavengers, turning the material into nutrient-rich humus.

D. Student Participation: Students benefit greatly from participating in the compost process. This is an opportunity for the students to have a hands-on role in the science of decomposition. Students also get to experience making a tangible difference in their school environment. Students can effectively run the composting procedure from start to finish.

1. Student Compost Team (SCT) helps the students sort waste at lunch ensuring that only compostable waste is placed in the tumbler.
2. SCT adds browns to the tumbler in a ratio of approximately 2:1.
3. SCT checks moisture level of the pile daily. When pile is too dry, they add water with a hose or watering can. When pile is too wet, they add more browns.
4. SCT turns the compost tumbler daily to ensure adequate air flow and speed up the decomposition process.
5. SCT team harvests the finished compost: When one side of the tumbler fills up it should be closed and allowed to decompose completely. When the process is complete, students can shovel the finished compost through a screen made of ½ inch hardware cloth and into a wheelbarrow. Larger pieces left on top of the screen can be placed back into tumbler to further decompose. Screened compost can then be used in campus gardens or stored until needed.
6. Optional Step: Students can collect soiled, brown paper towels from classrooms and bathrooms to be used as a supplemental source of browns.