

AT-HOME COMPOSTING 101



OBJECTIVE:

In this activity students will learn the what, how, and why of composting organic waste.

WHAT IS COMPOST?

Compost is organic material that can be added to soil to help plants grow. Food scraps and yard waste together currently make up more than 30% of what we throw away and could be composted instead. Making compost keeps these materials out of landfills where they take up space and release methane, a potent greenhouse gas.

WHAT MAKES UP COMPOST?

All composting requires three basic ingredients:

- BROWNS- Materials such as dead leaves, branches, and twigs.
- GREENS- Materials such as grass clippings, vegetable waste, fruit scraps, and coffee grounds.
- WATER

Your compost pile should have an equal amount of browns to greens. You should also alternate layers of organic materials of different-sized particles.

The brown materials provide carbon for your compost, the green materials provide nitrogen, and the water provides moisture to help break down the organic matter.

WHAT CAN YOU COMPOST?

- Fruits and vegetables
- Eggshells
- Coffee grounds and filters
- Tea bags
- Nut shells
- Shredded newspaper
- Cardboard
- Paper
- Paper towels and napkins
- Yard trimmings
- Grass clippings
- Hay and straw
- Leaves
- Sawdust
- Wood chips
- Dryer and vacuum cleaner lint
- Hair and fur

WHAT NOT TO COMPOST:

- Dairy products and eggs- Create odor problems and attract pests
- Fatty foods and oils - Create odor problems and attract pests
- Meat or fish bones and scraps- Create odor problems and attract pests
- Diseased or insect-ridden plants- Diseases or insects might survive and be transferred back to other plants
- Anything with plastic
- Pet wastes- YUCK!

BENEFITS OF COMPOSTING:

- Reduces food waste
- Enriches soil for our plants
- Reduces the need for chemical fertilizers.
- Lowers your carbon footprint
- Saves money and resources

HOW DO I COMPOST AT HOME?

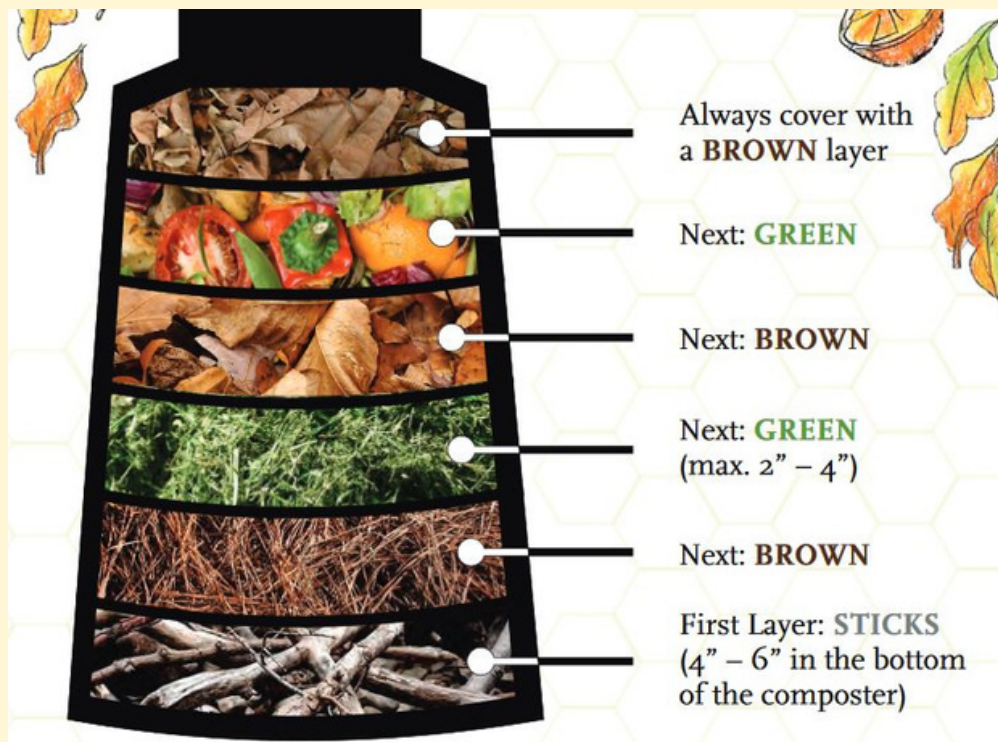
Backyard Composting: utilizing a bin or creating a pile, select a dry, shady spot near a water source. Add brown and green materials as they are collected, making sure larger pieces are chopped or shredded. Moisten dry materials as they are added.

Indoor Composting: you can compost materials indoors using a special type of bin, which you can buy at a store or make one yourself.

Vermicomposting: a worm composting bin utilizes live worms to speed up the decomposition of organic waste.

WHEN WILL THE COMPOST BE READY?

When the waste looks like crumbly, dark humus and you can no longer recognize what the original materials were, your compost is ready! To use your compost, strive to use a ratio of 5% compost to soil. Compost can be directly incorporated into soil or applied to the surface for soil building benefits.



Sources: epa.gov, knoxvilletn.gov, ijams.org

COMPOST IN A BAG

SUPPLIES PROVIDED:

- Gallon plastic bag
- Dirt
- Shredded Paper
- Observation Log
- Butcher Paper

ADDITIONAL SUPPLIES NEEDED :

- Food scraps
- Leaves or grass clippings
- Marker
- Water

KEY QUESTIONS

- How does this activity reduce waste?
- What do you think will happen to your compost bag after 1 week, 2 weeks, and 3 weeks?
- What other things do you think you can compost?

This month we will be creating a mini compost pile in a bag. This activity will take place over the next few weeks. You will create your compost then record observations. Let's get started!

STEP 1

Collect food scraps for a few days to fill 1/4 of your bag.

STEP 2

Tear up your food scraps and your paper into small pieces. This will help it breakdown faster. Record on your observation log what you will be putting in your compost bag.



STEP 3

Before adding anything to the dirt in your compost bag, wet the soil. The soil should be damp but not mud like.

Visit www.keepknoxvillebeautiful.org for more activities

STEP 4

Add in your paper scraps and food scraps.



STEP 5

Seal your plastic bag make sure to keep air in it. Shake the bag and mix the contents together until everything is well combined.



STEP 6

Label your bag with the date the compost was created. Log on your observation sheet how the compost looks now. Over the next three weeks log how the compost is changing. Can you still tell what was put in the bag?

STEP 7

After about 30 days, pour a little of your compost on the butcher paper provided. Can you still see what you put in there? What broke down easily? What didn't break down? Log your observations on the sheet provided.

STEP 8

Once all your items have broken down, it is time to use your compost! Add it to an existing compost pile, to a garden, or even house plants. Be sure to wash your plastic bag to reuse for another compost in bag or to store non-food items (such as pencils).

Visit www.keepknoxvillebeautiful.org for more activities

OBSERVATION LOG



WHAT FOOD SCRAPS DID YOU ADD TO YOUR COMPOST BAG?

Empty yellow rectangular area for writing the answer to the question above.

HOW DOES YOUR COMPOST IN A BAG LOOK AT FIRST? WHAT DO YOU THINK WILL HAPPEN?

DATE:

Empty yellow rectangular area for writing the answer to the question above.

HOW DOES YOUR COMPOST IN A BAG LOOK AFTER 1 WEEK?

DATE:

Empty yellow rectangular area for writing the answer to the question above.

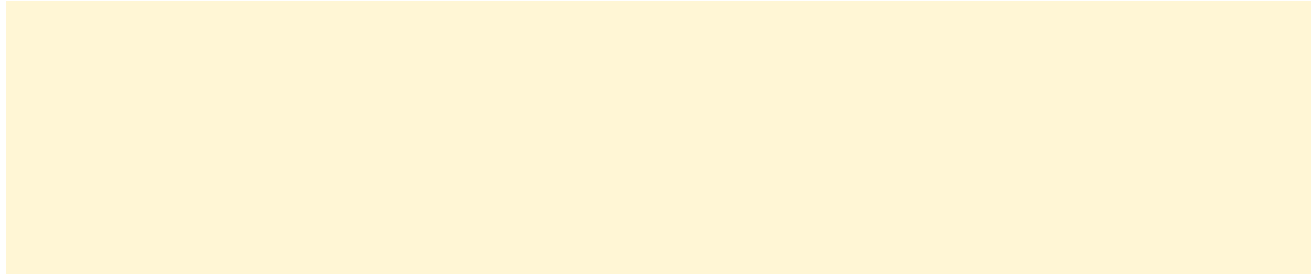
HOW DOES YOUR COMPOST IN A BAG LOOK AFTER 2 WEEKS?

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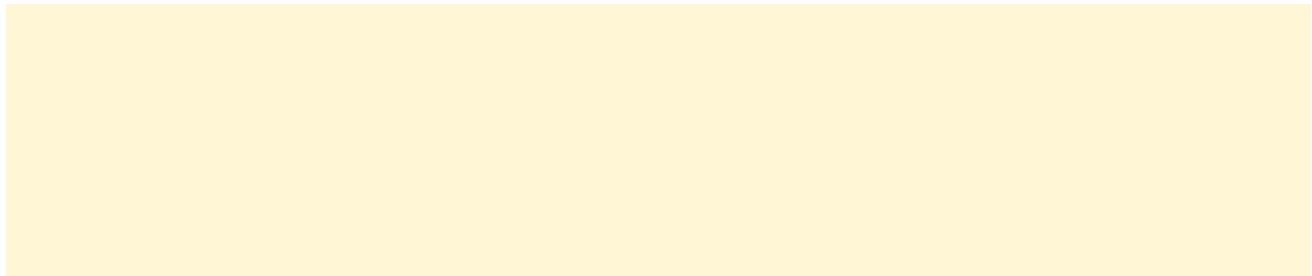
HOW DOES YOUR COMPOST IN A BAG LOOK AFTER 3 WEEKS?

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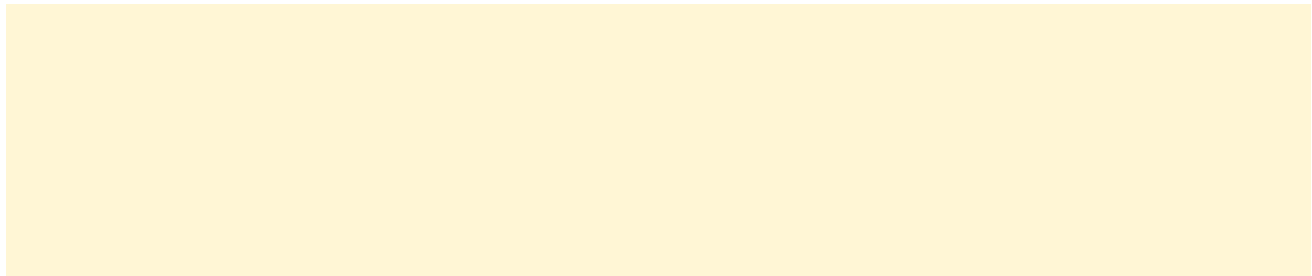


(STEP7) NOW THAT IT HAS BEEN A MONTH, WHAT DOES YOUR COMPOST LOOK LIKE? CAN YOU TELL WHAT WAS ORIGINALLY PUT IN THE BAG? WAS THERE ANYTHING THAT DID NOT BREAKDOWN OVER THE MONTH?

DATE:



WHAT WILL YOU USE YOUR COMPOST FOR NOW THAT IT IS READY?



HOW WILL YOU REUSE YOUR PLASTIC BAG? CAN YOU THINK OF ANY COOL WAYS IT CAN BE USED AGAIN?

