

Name _____

Period _____

Due date _____



COMPOST PROJECT

WHAT IS COMPOST?

Compost is rich, dark soil produced from the breakdown of kitchen scraps and yard waste. Gardeners often call compost “Black Gold” because it is so rich in minerals. Compost creates excellent soil for gardening and landscaping. The decomposition process is fueled by millions of microscopic bacteria and fungi (decomposers) living in your pile. A healthy compost pile has no odor, just a nice earthy smell.

HOW TO COMPOST:

1. Select a location for your compost pile or bin. Your site should be sunny & level, close to your garden, and out of sight of the neighbors.
2. Add GREENS and BROWNS in about a 50/50 ratio. Break up large pieces to increase surface area.

GREENS (50%)	BROWNS (50%)
Break down fast	Break down slow
Fruits Vegetables Grass clippings Coffee grounds Tea bags (no staple) Egg shells (rinsed) Manure (Cow, horse, chicken) Bread Rice Pasta (no sauce or oil) Landscape trimmings	Fall leaves Twigs (broken up) Pine needles Hay Sawdust Paper (no colored inks) Paper towels Napkins Dryer lint Hair (human, dog, cat) Corrugated cardboard

3. What not to compost:

DO NOT ADD		
Meat	Dairy (milk, cheese, yogurt)	Cat or dog poop
Fish	Oils, butter, or grease	Bones

4. TURN YOUR PILE about once a week to mix the ingredients and to provide oxygen for the decomposers.

5. TROUBLESHOOTING – If your pile is not breaking down, add some water and some more greens, then mix it up.

If you pile is too wet, or is smelly, add some browns and mix it up.



6. TYPES OF COMPOSTING SET-UPS – There are various ways to compost as shown below:



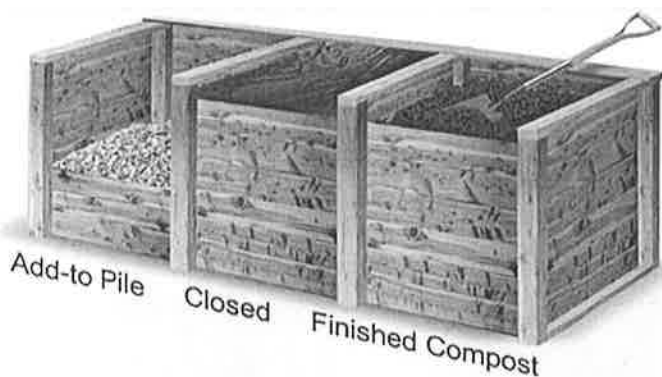
Free standing pile



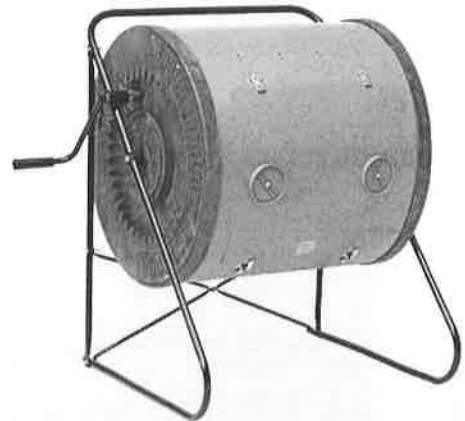
Enclosed pile



Plastic bin



Alternating bins

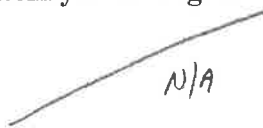
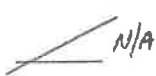


Compost tumbler

DIRECTIONS: In this project, you will contribute one item per week to your class compost pile. You will also make observations of temperature, decomposition, and organisms living in your pile over time.

COMPOST JOURNAL

Week # 1

Week of	Temperature of pile:		OBSERVATIONS (Describe each of the following)
	_____		Look of the pile & its ingredients
	Item you brought:	Green(G) or Brown(B)	
	 N/A	 N/A	Changes from last week
	5 other items added to pile:	Green (G) Or Brown(B)	
			Aroma & Texture
			Insects & Animals
		This week's weather conditions	

COMPOST JOURNAL

Week # 2

Week of	Temperature of pile: _____		OBSERVATIONS (Describe each of the following)
	Item you brought:	Green(G) or Brown(B) _____	Look of the pile & its ingredients
	5 other items added to pile:	Green (G) Or Brown(B)	Changes from last week
			Aroma & Texture
			Insects & Animals
			This week's weather conditions

COMPOST JOURNAL

Week # 3

Week of	Temperature of pile: _____		OBSERVATIONS (Describe each of the following)
	Item you brought:	Green(G) or Brown(B) _____	Look of the pile & its ingredients
	5 other items added to pile:	Green (G) Or Brown(B)	Changes from last week
			Aroma & Texture
			Insects & Animals
			This week's weather conditions

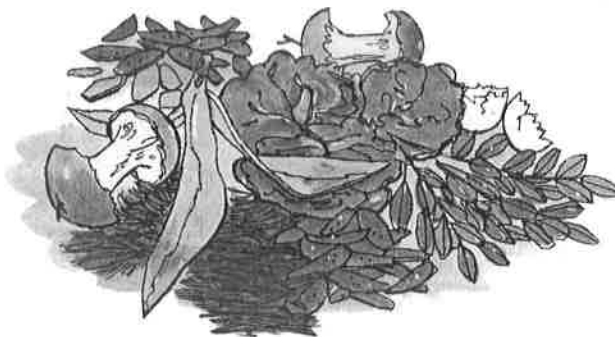
COMPOST JOURNAL

Week # 4

Week of	Temperature of pile: _____		OBSERVATIONS (Describe each of the following)
	Item you brought:	Green(G) or Brown(B) _____	Look of the pile & its ingredients
	5 other items added to pile:	Green (G) Or Brown(B)	Changes from last week
			Aroma & Texture
			Insects & Animals
			This week's weather conditions

ANALYSIS & CONCLUSIONS

DIRECTIONS: Read each of the following passages then answer the corresponding questions.



Composting is Good for the Garden

The most obvious benefit of composting is that compost is great for the garden. Whether added to seed-starting mixes, container plantings, garden beds, or lawns, compost does several important jobs:

- Microorganisms in compost help break down organic matter into plant-available nutrients, so plants grow stronger.
- When added to the soil, compost increases the amount of moisture the soil retains, so you have to water less.
- Compost can clean up and repair contaminated soil, including soils that have been destroyed by prior pesticide use.
- Compost can help prevent erosion.
- Compost improves soil structure. It helps sandy soil retain more moisture, and helps break up clay soils

Composting is Good for the Planet

The other reason to compost is that it's just good for the planet in general. The fruit and vegetable scraps, eggshells, coffee grounds, grass clippings, fallen leaves, and animal manures we compost are turned into something useful (compost) instead of being trucked off to the dump where they'll produce methane (the most damaging of the greenhouse gases), further harming the atmosphere as they decompose. There is no trucking away, no heavy machinery necessary to deal with the waste -- when we compost, the only tools we need are a strong shovel and (maybe) a strong back.

A healthy garden and a healthy planet -- two absolutely perfect reasons for composting!

_____ 1. What can you add compost to?

- | | |
|------------------------|---------------------|
| A. Container plantings | C. Lawns |
| B. Garden Beds | D. All of the above |

2. TRUE or FALSE: Compost increases the water retention of soil. _____

_____ 3. What is one disadvantage of not composting?

- A. More waste at the dump
- B. More methane gas created
- C. More exhaust fumes from trucks
- D. All of the above

Benefits of composting

1. Composting reduces the waste sent to landfills.

Think of how much less stuff we'd be sending to the landfill if we composted instead of hauling everything to the curb! When combined with recycling, we can really reduce the amount that we landfill each year.

LANDFILL COMPOSITION INCLUDES:

- Paper (35%)
- Food scraps (12%)
- Yard waste (12%)
- Wood (6%)

2. Composting saves your money on garden improvements. Improving the quality of your soil is the number one thing that you can do to increase the health and productivity of your garden. You can do this without buying chemicals, fertilizers, pesticides, herbicides, etc. if you use compost. Granted, it's hard for a single home to produce enough compost for all of it's gardening needs (even though a little bit of compost goes a long way). But still, you can save money on commercial soil amendments.

3. Composting is educational. If you have kids, this is a great way to give them a hands-on education in the science principles that they hear about in school. (Even if you don't have kids, you'll learn something yourself!) Kids love to stick their hands in the compost and see all the organisms like snails and worms at work. They'll learn about the principles of natural decomposition and can see how the balance between oxygen, water, carbon & nitrogen affects the process. And it's interesting to see how a pile changes from a heap of leaves and food scraps to compost over time.

4. Composting is natural. There are no chemicals involved; it's a completely natural process. There is ZERO guilt about composting...for people who always feel guilty about their ecological impact, this is a GREAT thing.

1. What percentage of landfill contents are actually compostable? (HINT: Add up all the percentages listed in the box.)

_____ %

2. TRUE or FALSE: Compost can substitute for chemicals, fertilizers, pesticides, & herbicides.

TRUE

FALSE

3. Do you "...love to stick your hands in the compost and see all the organisms like snails and worms at work?"

YES

NO

_____ 4. What natural process turns food & yard waste into compost?

A. Decomposition

B. Precipitation

C. Cellular respiration

Using the "How to Compost" section on the first page of this project, identify each item as:

GREEN (G)

BROWN (B)

NOT TO BE COMPOSTED (N)

Fall leaves _____

Fruit scraps _____

Paper towels _____

Cheese _____

Grass clippings _____

Meat scraps _____

Butter _____

Hair _____

Dog poop _____

Coffee grounds _____

Cow manure _____

Landscape trimmings _____

OUR COMPOST PILE

1. What impressed or surprised you the most about composting?

2. Give 2 items that were added to the compost that you noticed decomposed quickly:

3. Give 2 items that were added to the compost that did not compost quickly:

4. How did the weather conditions impact the compost pile?

5. On a scale of 1 to 10, how would you rate your composting experience? (circle one)

1 2 3 4 5 6 7 8 9 10

Please Please
Please don't ever
make me do this again!

This is fantastic!
I can't wait to
compost at home!



Ziff Davis Inc.

