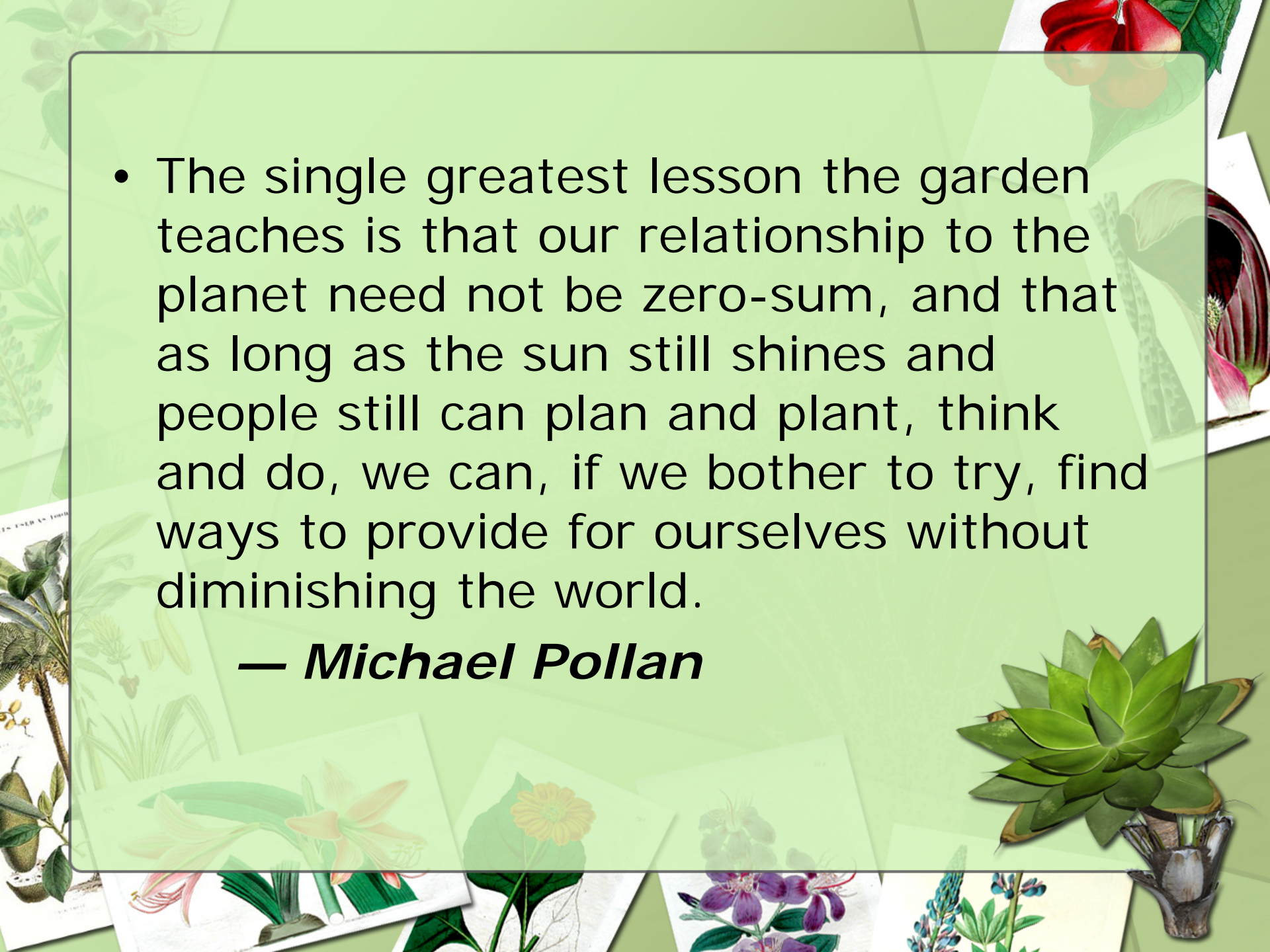


- The single greatest lesson the garden teaches is that our relationship to the planet need not be zero-sum, and that as long as the sun still shines and people still can plan and plant, think and do, we can, if we bother to try, find ways to provide for ourselves without diminishing the world.

— *Michael Pollan*



Composting & Conservation

October 7, 2020

City of
Greeley Colorado
Water Conservation



Ruth Quade

I am with the city of Greeley Water
Department/ Water Conservation

I have been with the city for 23
years

Master Gardener

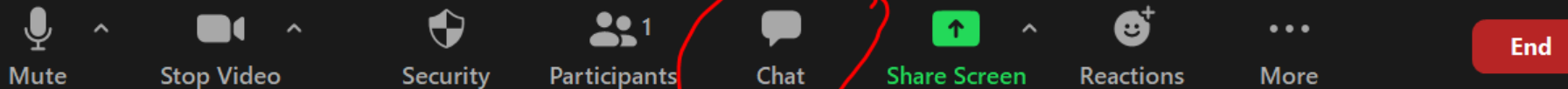
Master Composter

Ruth.quade@greeleygov.com



WEBINAR –Housekeeping

- Welcome to our Conservation Landscape Lecture Series-- turned webinar
- Viewers will be muted and your video will not be shown during the presentation.
- Ask your questions in the chat box You can type your questions into the chat box at the bottom of the screen and we will read the ones that fit more than one person first and if we have time, we can address some of the other more specific questions.
- If we refer to a webpage and they are not on screen, we can put them in the chat box or send them later.



Door Prize



- Go to our Xeric Demo Garden at 2503 Reservoir Road
- Take a photo of a fall blooming flower
- Or Fall color at the garden
- Email it to me at conserve@greeleygov.com





From Garbage to Garden



It's Compost Time!



Benefits to Composting



- Compost added to soil enriches native soil and helps retain water in root zone
- Adds organic material
- Saves money
- Saves on fertilizing
- Enrich your soil
- Helps clay or sandy soils
- Enhances microbial activity



Benefits to Composting



- Keep precious resources out of the landfill
- Ultimate recycling
- Grow healthier /stronger plants and soil
- Helps reduce erosion
- Helps soils sequester CO₂
- Exercise
- Fun



Compost

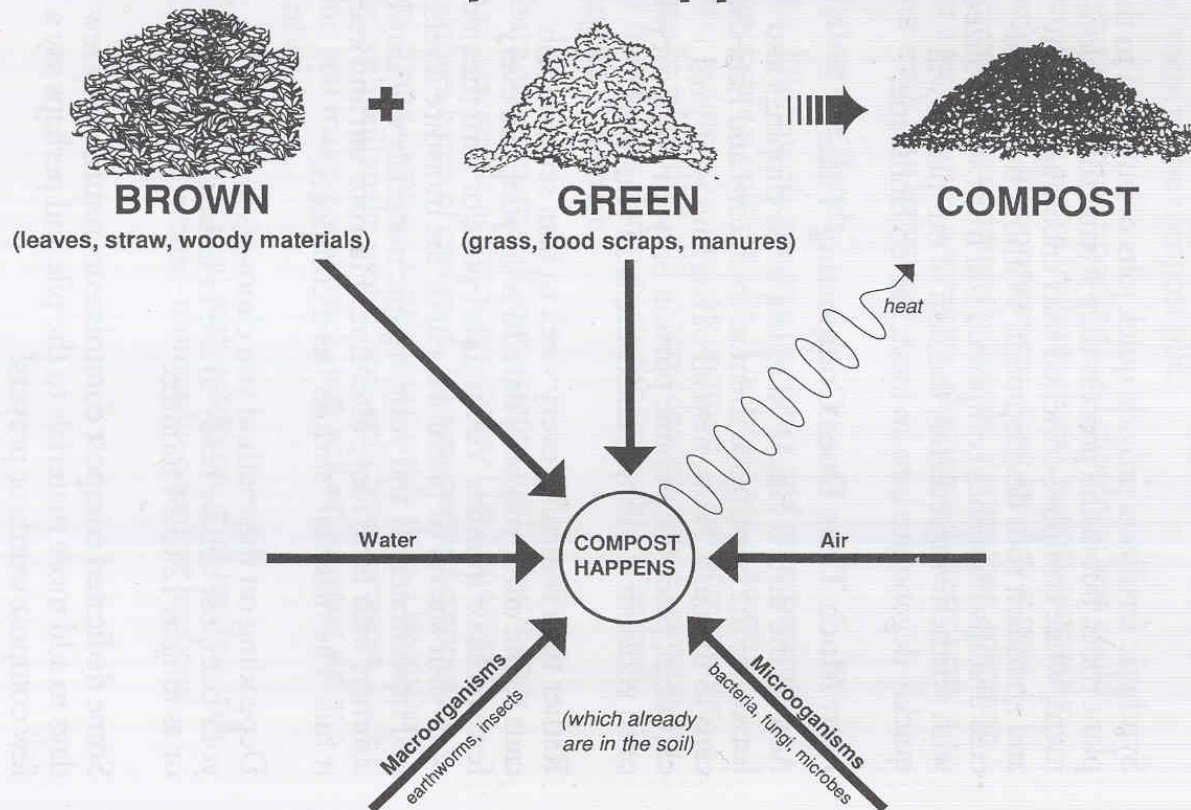
- What it is
- What it isn't
- How to make it
- Worms
- Trouble shooting
- Soils and uses





Compost

Compost Happens



Moisture

- Compost should **not** be soggy
- Moist sponge
- Add water when you turn the pile
- Add water when you add materials



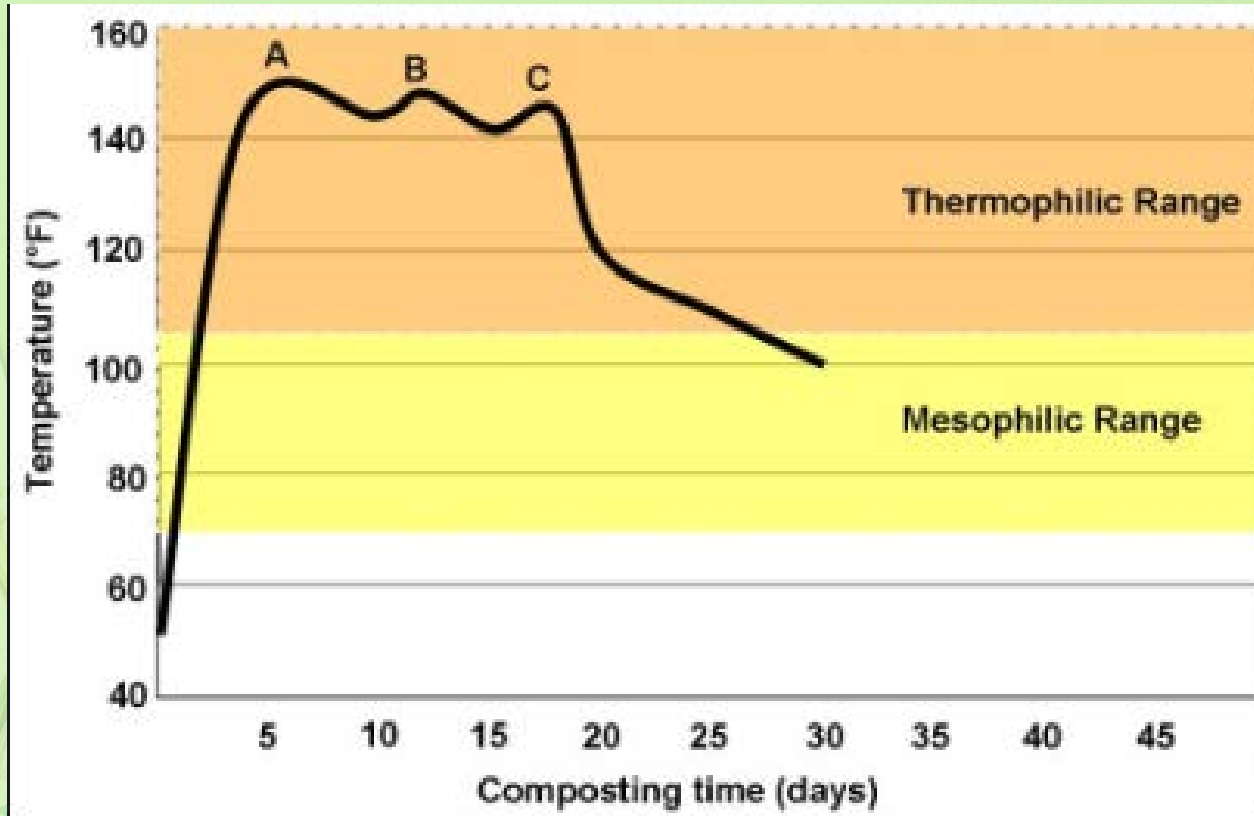
Temperature



- Heat is a good indicator of the composting process
- Temperatures over 105° kill pathogens
- Temperatures over 131° kill human pathogens
- Temperatures over 145° kill most weed seeds
- As active composting slows, temp drop below 100°



Temperature



How Big should it Be?

- Larger than 3x3x3 feet
- Smaller than 5x5x5 feet



Turning the Pile

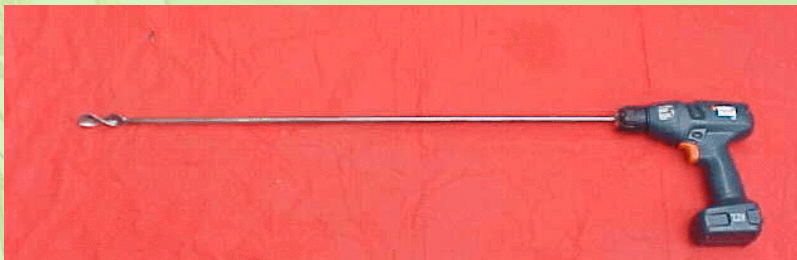


- Turning will solve most problems
- Turning aerates the pile
- Aerating tools
- Is good Exercise

Questions?



Tools and Gadgets



Site Selection

- Choose a site that is convenient
- Near the garden or kitchen
- Not in a drainage way
- Out of site
- Out of wind
- In the shade



Compost Recipe

- Combination of art & science
- Browns Carbon (C)
- + Greens Nitrogen (N)
- + Oxygen (O_2)
- + Water (H_2O)
- = Compost
- Average C:N ratio
 - 25:1 to 30:1



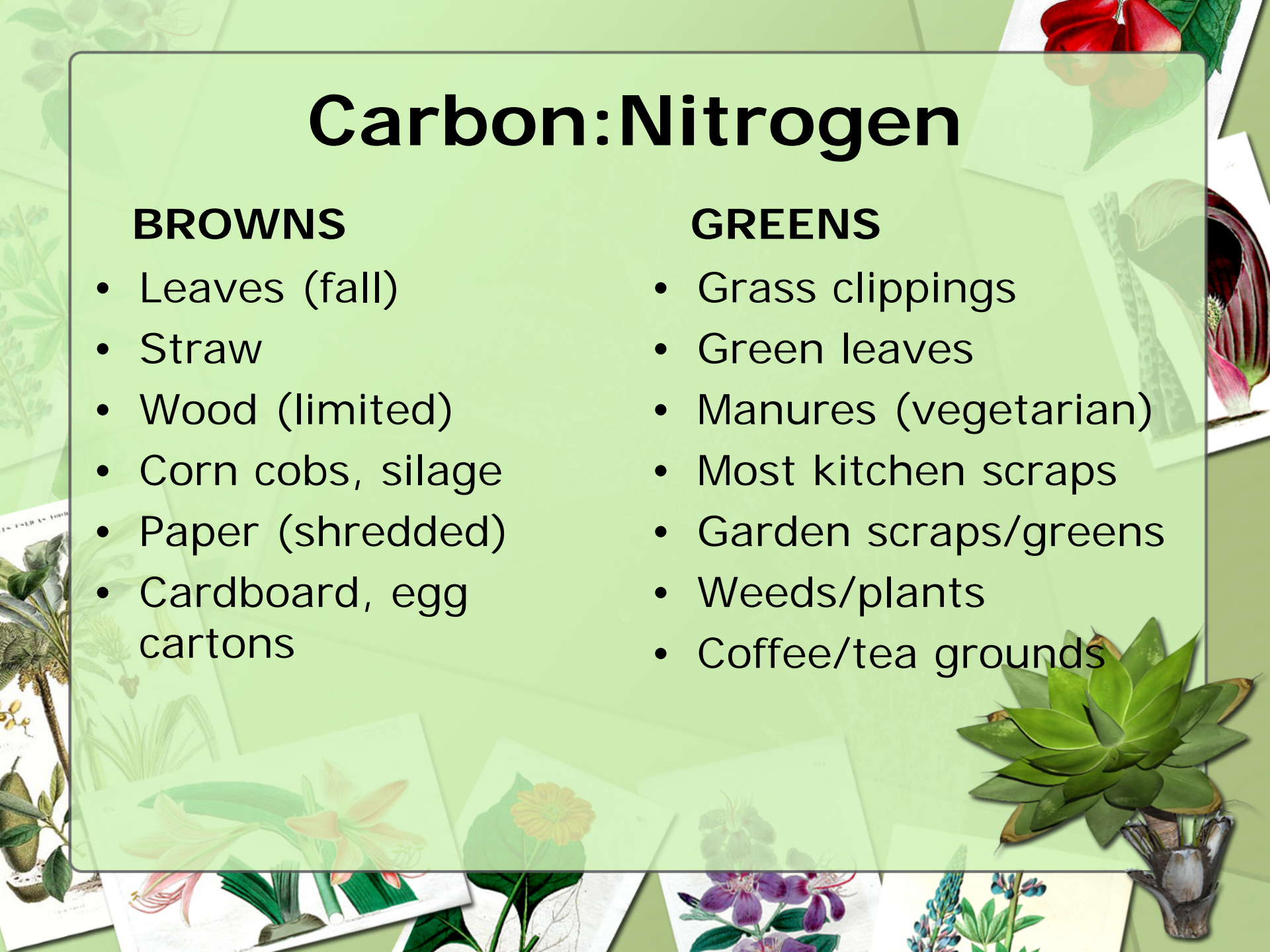
Carbon:Nitrogen

BROWNS

- Leaves (fall)
- Straw
- Wood (limited)
- Corn cobs, silage
- Paper (shredded)
- Cardboard, egg cartons

GREENS

- Grass clippings
- Green leaves
- Manures (vegetarian)
- Most kitchen scraps
- Garden scraps/greens
- Weeds/plants
- Coffee/tea grounds



Recipe: Art or Science?



- Layer your browns and greens
- Add water
- Mix
- Let it do its thing

Before, During & After



Before, During and After



Bins and Systems

- Holding units
- Turning units
- Heaps
- Soil incorporation
- And worms



Bins and Systems



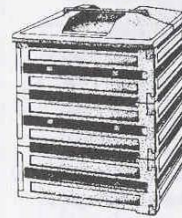
Earth Machine



Garden Gourmet

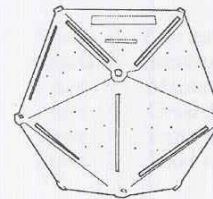
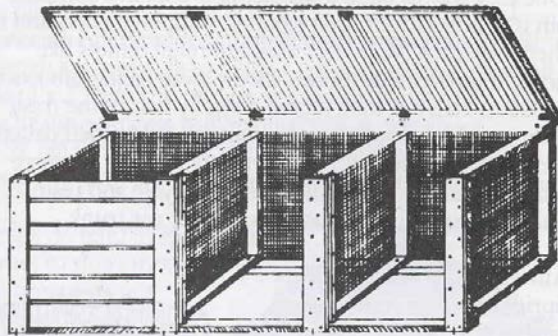


Gedye Bin

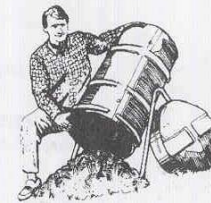


Biostack

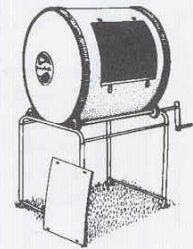
Wood and Wire Stationary 3-Bin System



Tumblebug



Compost Tumbler



Kemp

Multiple Bin Systems



Single Bins



Using Compost

- One-time applications
e.g. new lawns
- Annually vegie
and annual
beds gardens
- Top dressing
- Planting holes
for trees,
shrubs and
perennials
- House plants



HUH??

- Class I – use for edibles
- Class II – a combination of plant and animal materials
- Class III
- Class IV
- Screened
- Planters Mix or Amended Top



Troubleshooting

- Compost smells
- Center is dry and not composting
- Outside is dry
- Animals are getting in the pile
- Temperature isn't getting warmer
- Compost isn't breaking down
- Lack of O₂ or too much water
- Need to add water
- Need to add water
- May need an enclosed bin or to bury new food deeper (meat?)
- May need to add some nitrogen (grass/manure)
- May need to turn it more often, water or cut things smaller

Questions?



Other Methods of Composting

- Vermiculture
- Furrow composting
- Grasscycling
- Mulching
- Or use the city's GROW Recycling Center on east 8th Street





Vermiculture

- Good for apartments, townhouses etc.
- Good for composting in the cold weather
- Earthworm castings are valuable
- Kids love it!

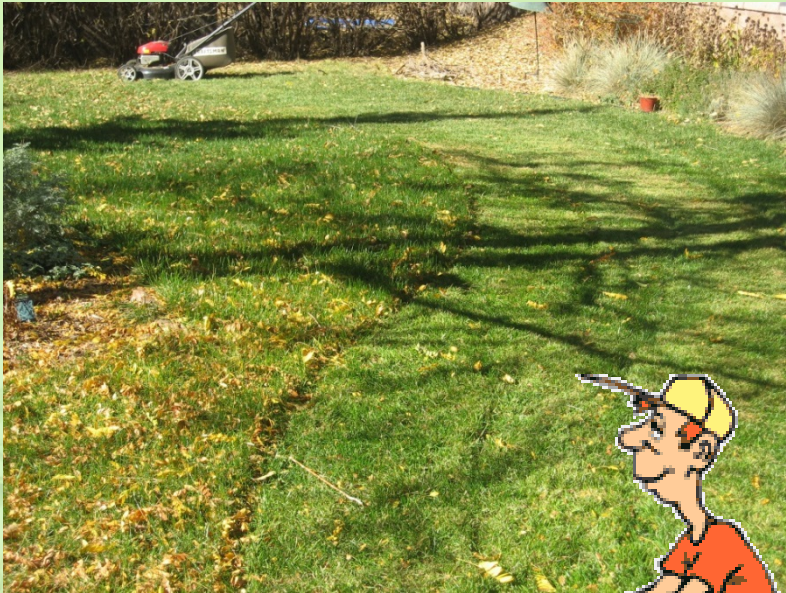


Furrow Composting

- Dig kitchen waste right into garden
- Grass clippings
- Fall leaves
- This is the method of commercial composters



Grasscycling



- Returns nitrogen to the grass
- Reduced need for inorganic fertilizer
- Less work
- Recycling
- Does NOT add to thatch





Resources



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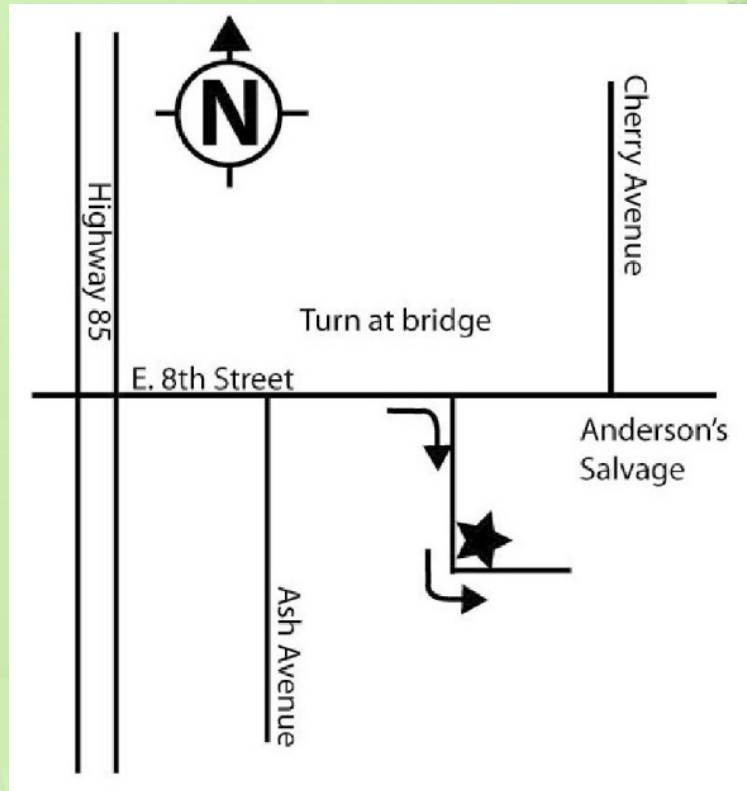
Colorado Master Gardener



<https://extension.colostate.edu/publications-2/>

Yard Waste

- GROW Recycling Center
- Leaves
- Branches
- Grass clippings
- Clean Lumber
- 1130 E. 8th St
- <http://greeleygov.com/services/recycling>



Common Good Compost



- Home composting service
- <https://www.commongoodcompost.org/>
- Local 970-308-7508
- CommonGoodCompost@gmail.com
- FREE finished compost

What should I do with Household Hazardous Waste?

- Batteries
- Old paint/stain
- Oil/gasoline/anti-freeze
- Pesticides/poison
- CFL light bulbs
- Weldgov.com
- 1311 N. 17th Ave
 - Greeley
 - Open Tue & Sat
8am-5pm
- DACONO FACILITY TEMPORARILY CLOSED
- Product reuse

Pharmaceuticals: To flush or not to flush?

- Saturday, Oct 24th
 - Greeley Police Dept.
 - UNC
 - Sam's Club Evans
- Drug take-back day
- Cannot accept
 - Needles
 - Mercury
 - Chemo drugs
 - Illicit drugs

<http://greeleycalendar.com>

Life After Lawn

- Replace healthy bluegrass with Xeric plantings
- Front yards only
- Get rebated \$1/sf
- Greeleygov.com/conserve



Before Retrofit



After



Questions?

- Ruth Quade
- ruth.quade@greeleygov.com
- Good Night and thank you for attending



This quote applies to compost too.

- Gardening is about enjoying the smell of things growing in the soil, getting dirty without feeling guilty, and generally taking the time to soak up a little peace and serenity.

~*Lindley Karstens,*

