Composting

...from Trash to Treasure

**Sponsored by the University of California Cooperative Extension,
San Diego Regional Household Hazardous Waste Partnership,
the County of San Diego and the Solana Center for Environmental Innovation**

Why is Composting Important?

- Compost-amended soil retains moisture better than sandy soils native to this region, allowing us to water less often, and conserve.

- Compost helps clay soils native to this region accept water better, reducing surface runoff.

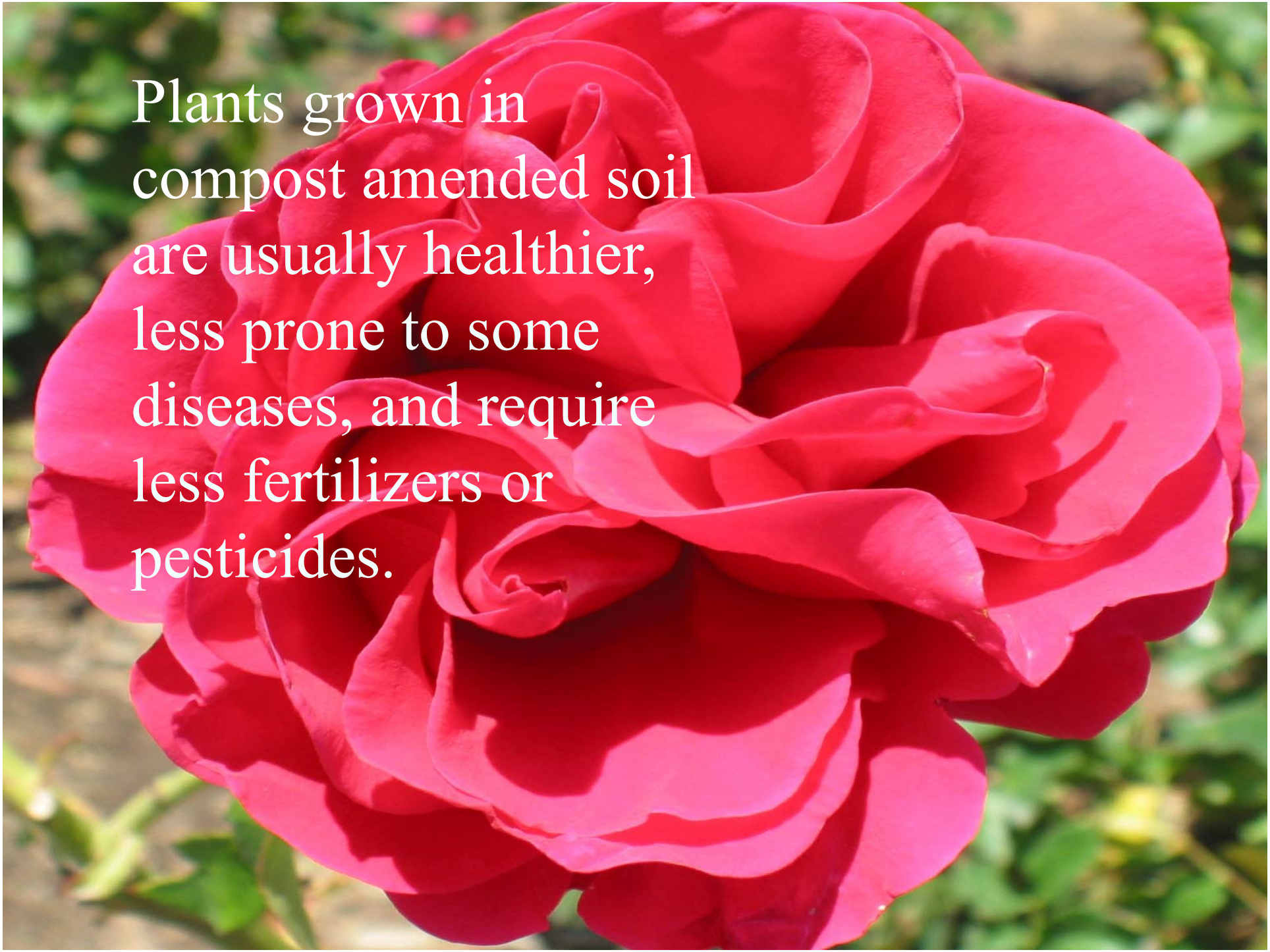
- Compost-amended soil on inclines improves seed germination and helps plants develop expansive root systems that stabilize slopes.

- Soils high in organic matter, such as those amended with compost, retain some nutrients better, and helps prevent fertilizers and potential toxins such as pesticides and from running off into our surface waters.

- In addition…
  - You are *diverting* organics from the landfill
  - *Helping* the County and Cities meet the AB939 goal

  and
  - You are *saving* on collection and disposal costs

What are the Many Benefits of Composting?


Plants grown in
compost amended soil
are usually healthier,
less prone to some
diseases, and require
less fertilizers or
pesticides.

Healthier Soil and Plants

Helps Provide Cleaner Water

Helps with the Protection of Wildlife & Natural Resources

Less Soil Erosion • Better Slope Stabilization

Decreased Need for Pesticides and Fertilizers

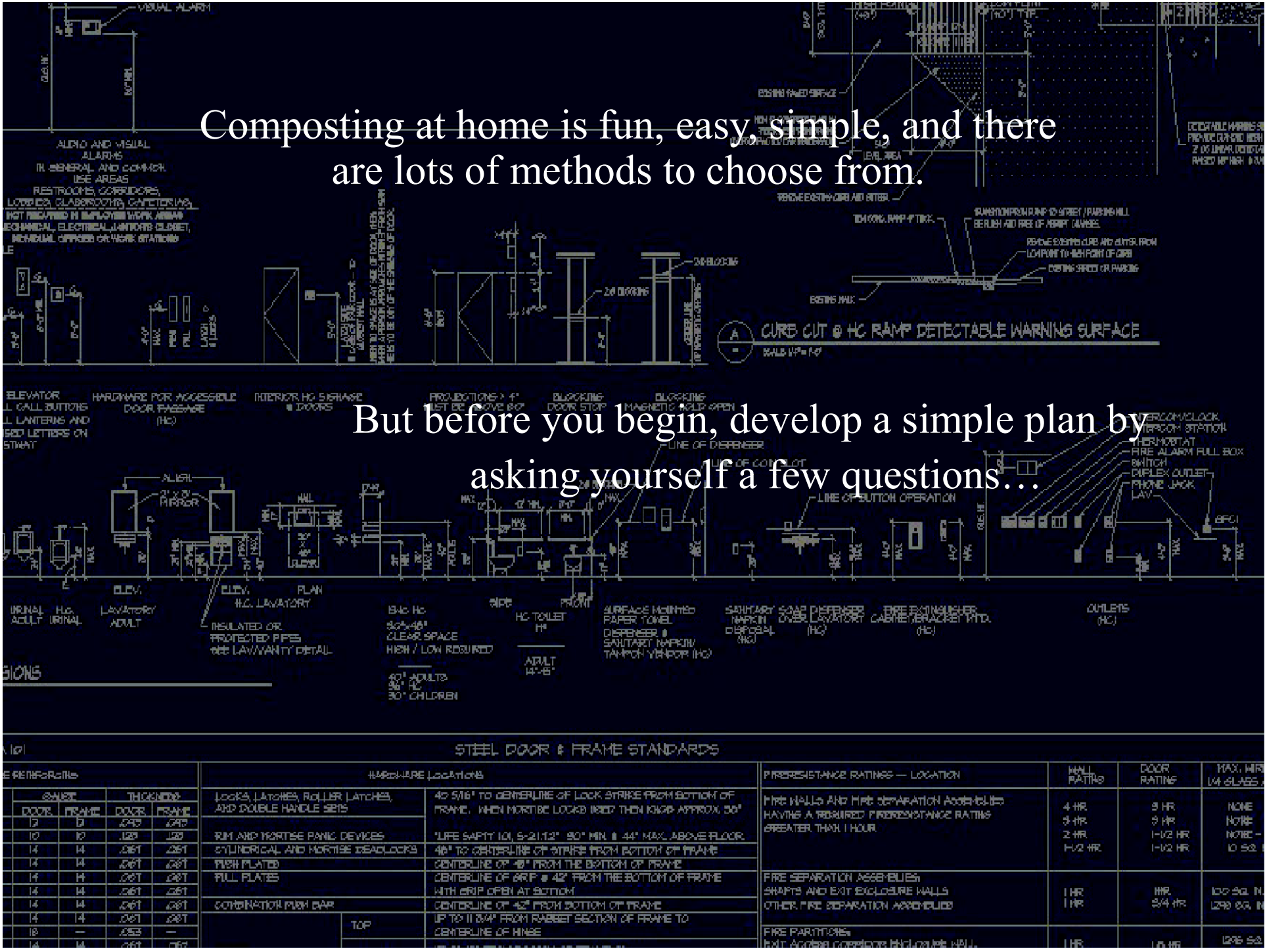
What is compost and how do I make it?


Compost is…

…the soil-like material produced by decomposing organic discards such as yard trimmings, food scraps, and manure.

In other words, things we commonly throw away and often consider “waste,” such as table scraps, leaves, grass, plant trimmings, and manures, among many others, are actually resources.

These raw organic materials are valuable ingredients necessary for creating compost and returning organic matter and nutrients back to our soil.


Composting at home is fun, easy, simple, and there are lots of methods to choose from.
But before you begin, develop a simple plan by asking yourself a few questions…
CURB CUT @ HC RAMP DETECTABLE WARNING SURFACE
STEEL DOOR & FRAME STANDARDS

- What organics do you generate at your house?

  Determine what materials you have available for composting…

  - Leaves, grass and yard trimmings?
  - Food scraps only?
  - Horse manure?

- In home composting, we divide these materials into "greens" and "browns"

- “Greens” are materials high in nitrogen, such as green leaves, grass clippings, food scraps, and manures.

- But don’t let the name fool you…

  While many “greens” are indeed the color green, some, such as coffee grounds, are not.

- “Browns” are materials that are high in carbon. They also provide the bulk, or fluffiness of a pile necessary for “hot,” aerobic composting.

→ Dry, dead leaves, straw, paper, and woodchips are examples of “browns.”

In general, any material once living, or made from something once living, can be composted. Some of these things we recommend composting at home…

- Yard trimmings such as leaves, grass, cuttings and prunings, and chipped brush.
- Table scraps from vegetables, pastas, and breads.
- Fruit peelings, vegetable cuttings, tea bags, coffee grounds, and soiled paper.

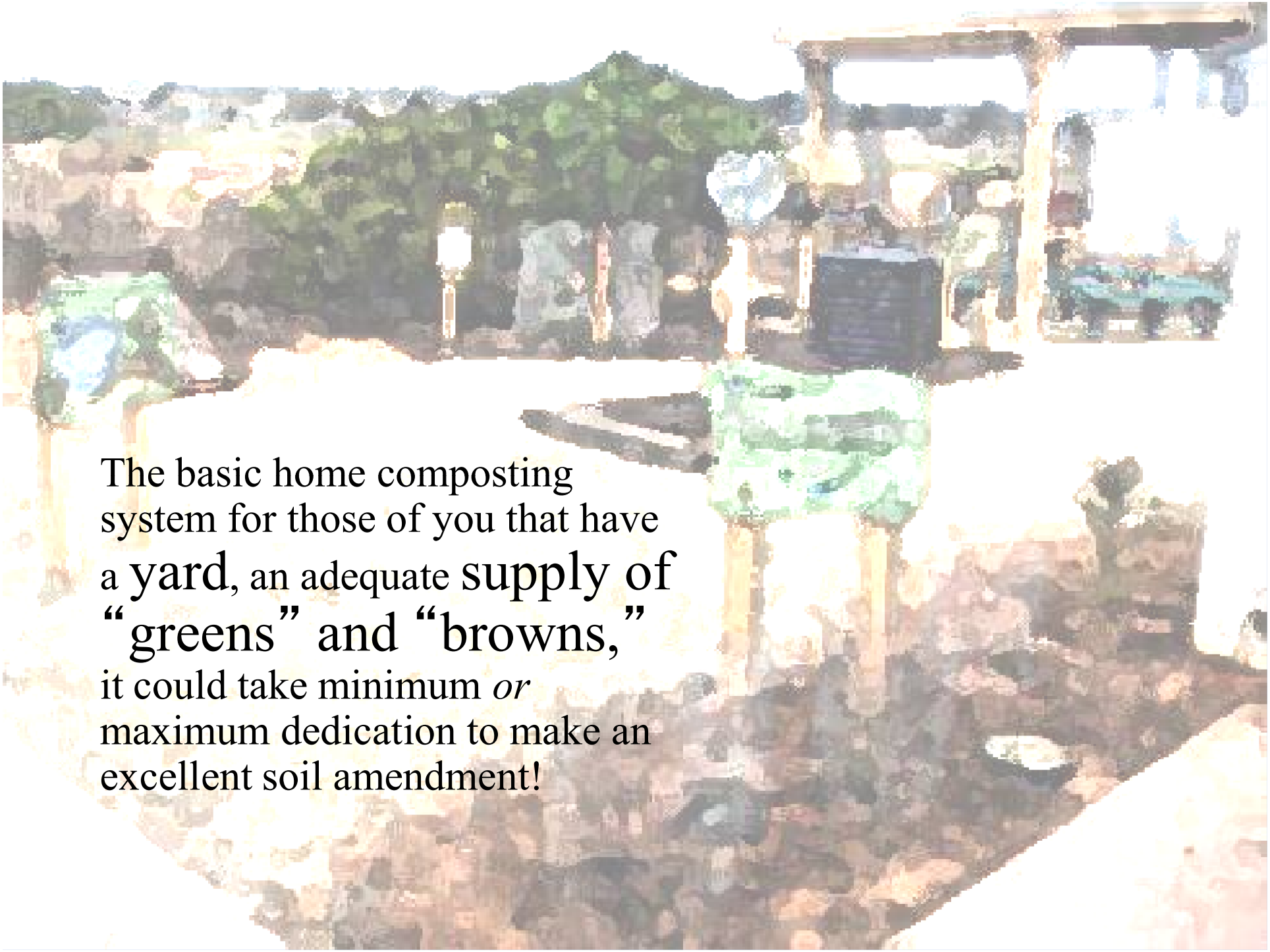
There are some things we recommend keeping out of your home compost pile…

- Meat, chicken, fish, and their bones as well.
- Oils, grease, and sauces.
- Dog and cat feces.

Determine your specific composting situation:

- Do you have a large yard or parcel of land with ample compostable material?

- Are you an apartment dweller with only food scraps?



The basic home composting system for those of you that have a yard, an adequate supply of "greens" and "browns," it could take minimum *or* maximum dedication to make an excellent soil amendment!

There are a lot of bins to select from

You can purchase one… or choose to build your own.

Compost bins are available at a subsidized price for residents of Unincorporated San Diego County.

See the Solana Center staff for more details.

Visit www.solanacenter.org

Or Build Your Own Bin…

- Although most bins available for purchase are a bit smaller, the ideal size if you build your own should be large enough to hold at least one cubic yard of material, or 3’ high by 3’ wide by 3’ deep.
- You can build a bin out of wire mesh, wood pallets, cinder blocks, or other materials. Visit www.solanacenter.org for more details.
- Keep in mind your homemade bin will be housing a damp, microbially active environment. Choose materials that are resistant to rust and decay and last longer, but be careful of treated wood which could leach into the compost!

For hot composting, you'll also want a bin that can either be easily disassembled and rebuilt, or allow ample access from the top or side to aerate the material.

Are you an apartment/home dweller with *only* food scraps?

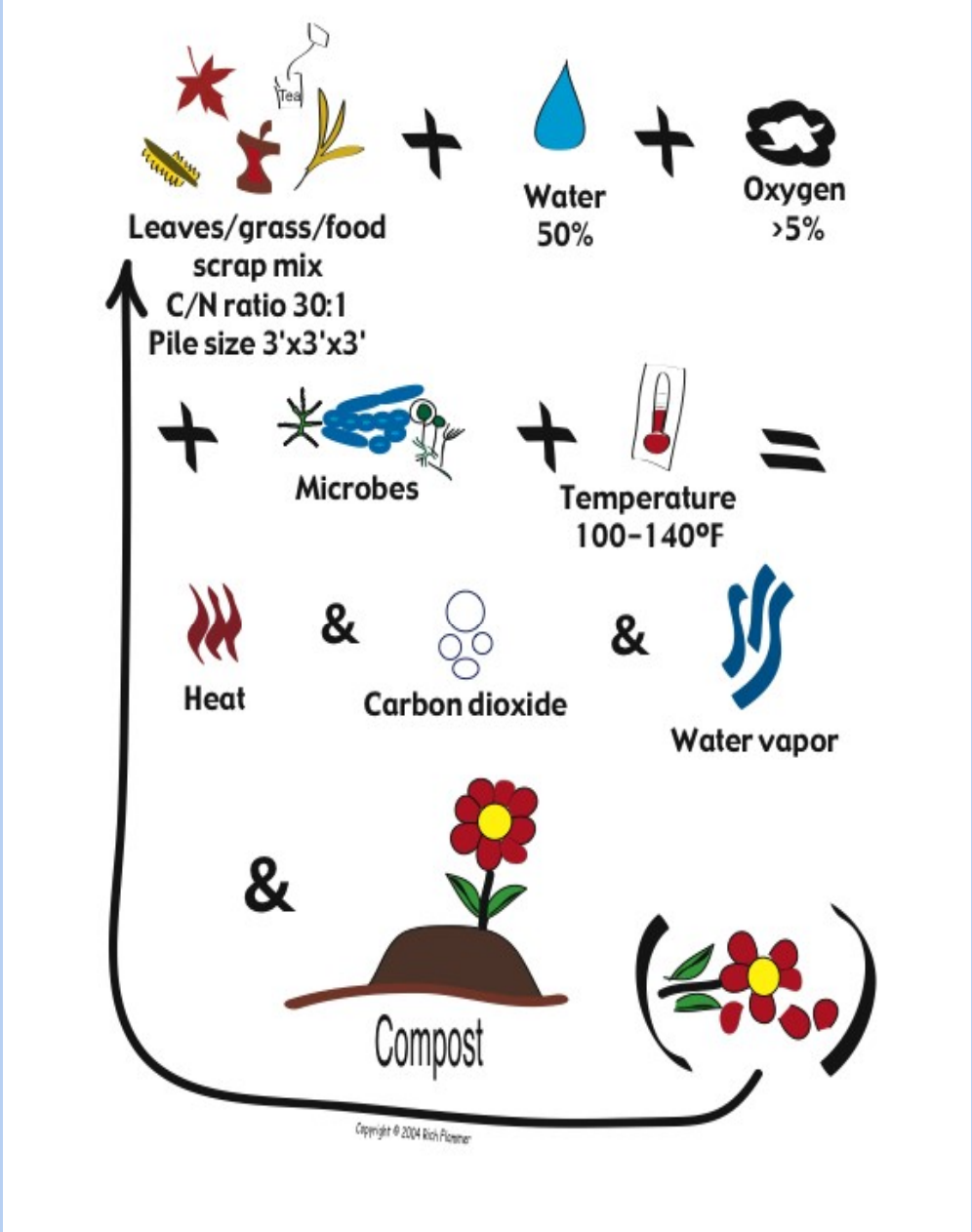
Try vermicomposting (composting with worms)!
Stay tuned…

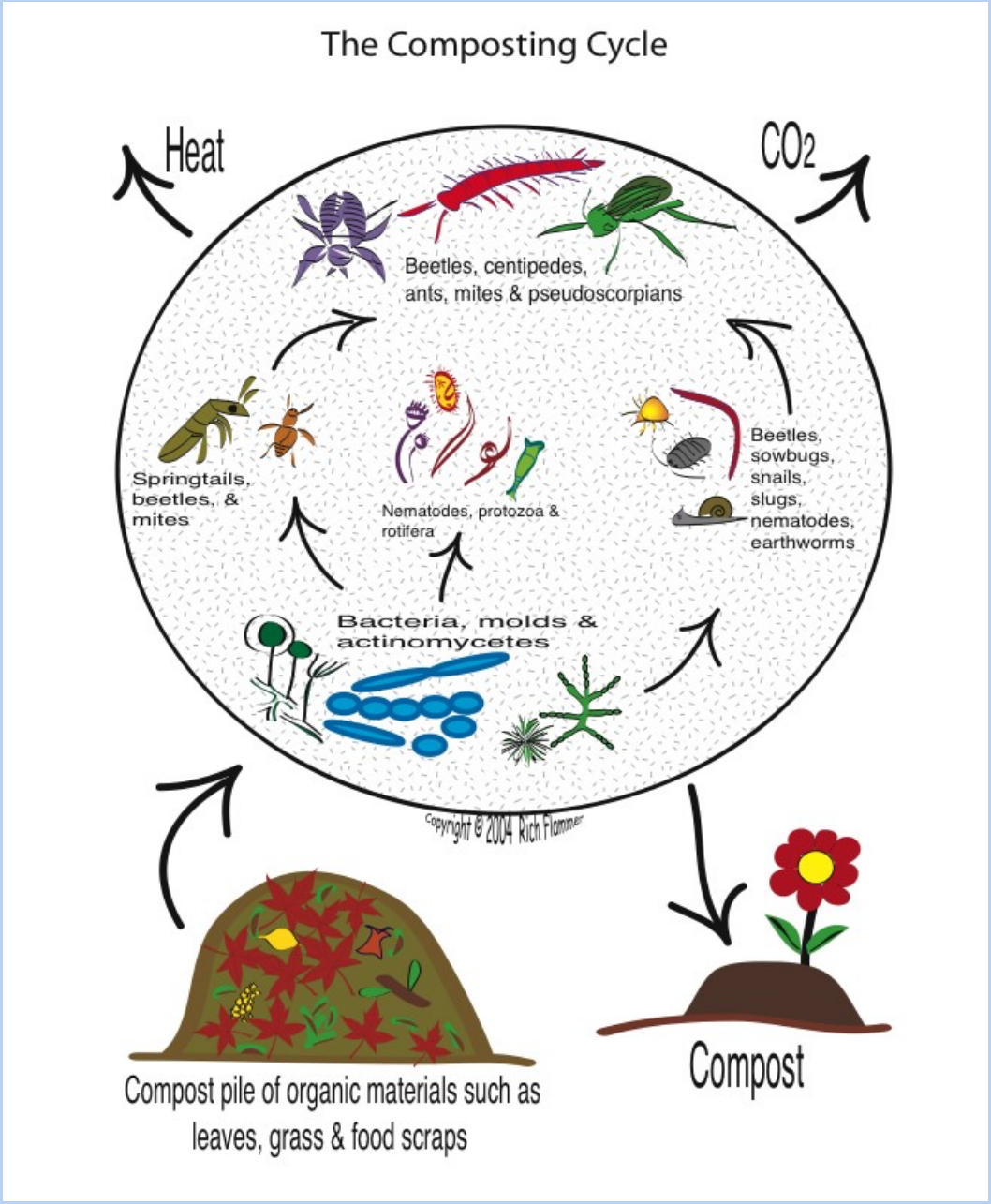
What exactly is composting?

and

What is vermicomposting?

Composting is a controlled, biological process where we attempt to create optimum conditions for microscopic decomposer organisms to thrive.



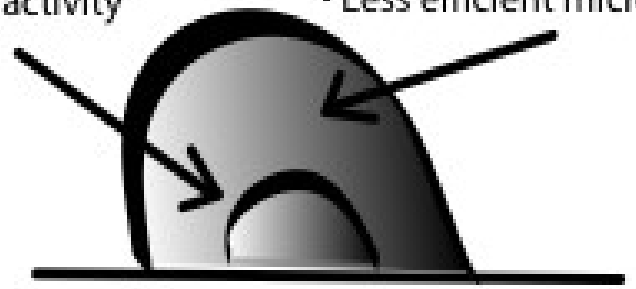


A dynamic web of organisms participate in the decomposition cycle, converting discarded organic materials into compost.

Profile of a Compost Pile

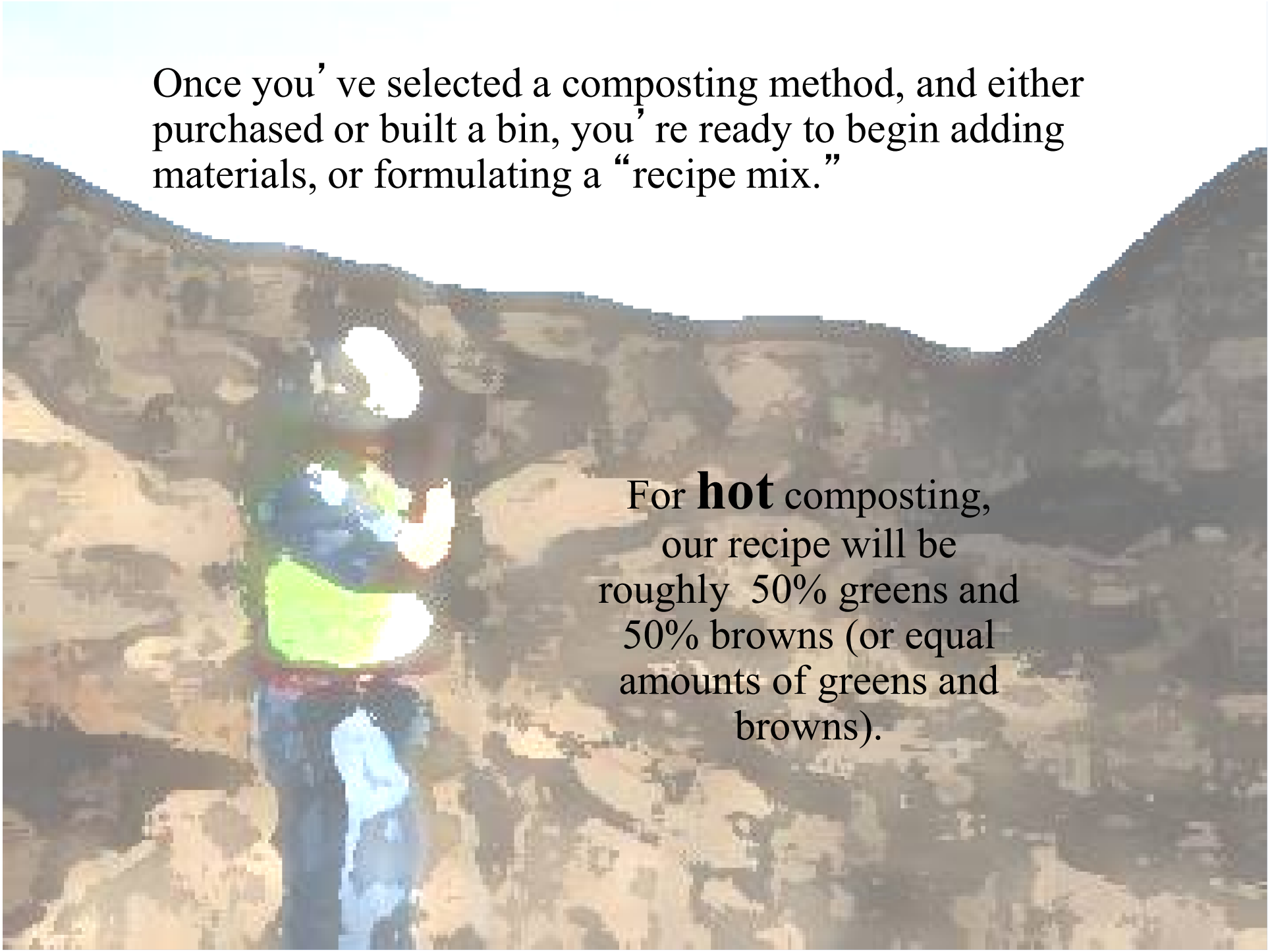
Core of pile:
Highest temperatures
and most efficient
microbial activity

Insulating layer:
- Helps retain heat
- Porous enough for airflow
- Less efficient microbial activity



Optimum dimensions: 3' x 3' x 3' ,at least
- Good blend of greens and browns
- Enough bulk in material for porosity and airflow
- Density of outer material to insulate core
- Space allowance for turning to move outer layer of material into core

Once you've selected a composting method, and either purchased or built a bin, you're ready to begin adding materials, or formulating a "recipe mix."



For **hot** composting, our recipe will be roughly 50% greens and 50% browns (or equal amounts of greens and browns).

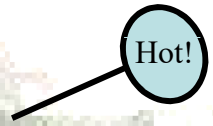
The recipe can be adjusted as we go, so it's not critical we get it perfect when initially building our pile.

Like baking, hot composting requires attention to:

- Ingredients (greens, browns, water, and air)
- Temperature (100º-140º F is ideal)
- Time (from 3 to 6 months is a reasonable average for making compost)

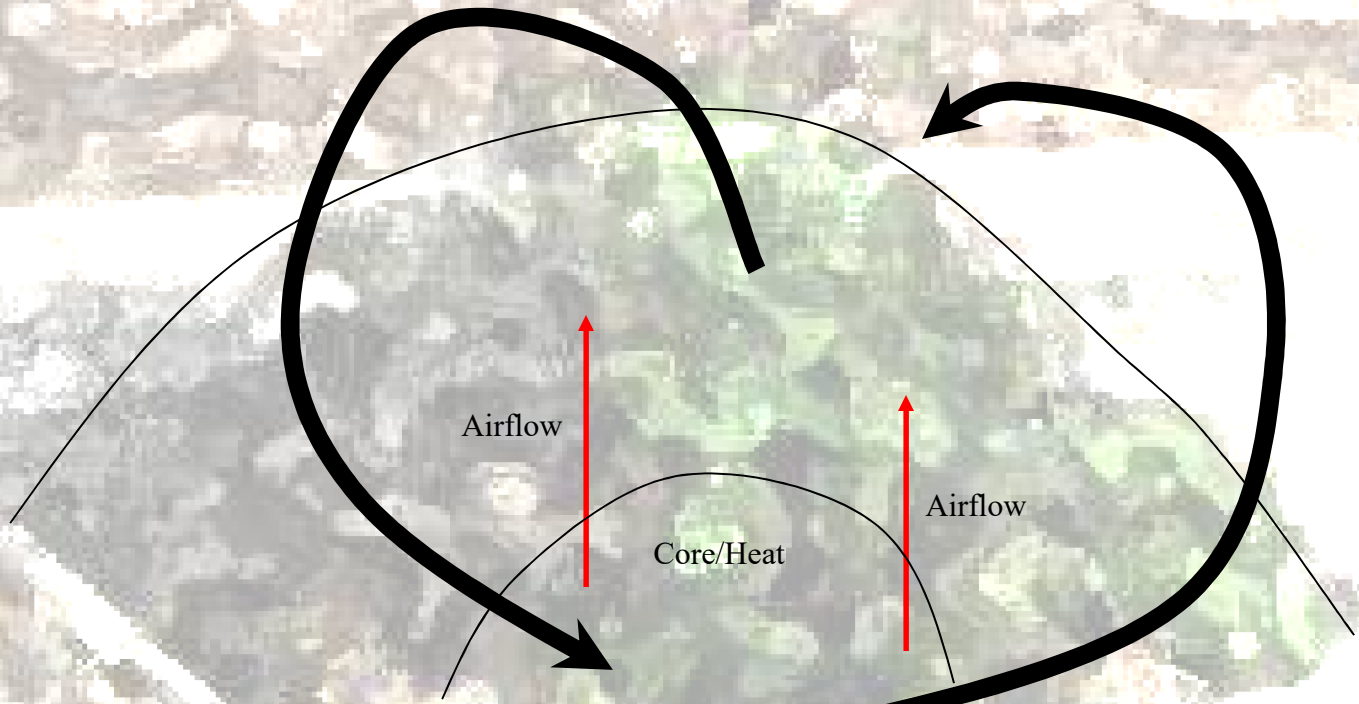
- Moisture content should be kept at about 50%, or the same as a damp, wrung-out sponge.

- You'll know if your pile has a good mix of greens and browns, and ample water and air, if the temperatures climb to and stay between 100º and 140º F.



- You can monitor temperature with a small, inexpensive thermometer about 16" in length and available at local home and garden stores.

- Turn your pile at least once a week, and remember to fluff it up as much as possible, to improve airflow.



Turn to alternately expose all material in the pile to the core, where temperatures are highest.

A few tips…

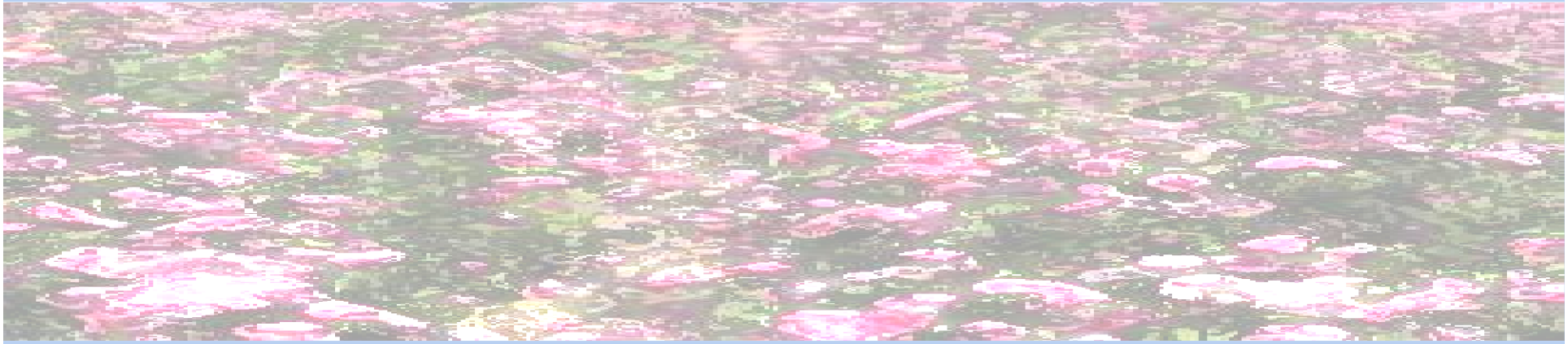
- If your pile **smells**, it lacks oxygen due to compaction, too many greens and not enough browns, or because it's too wet. Make adjustments as necessary.

- If your pile **fails to heat up**, be sure it's large enough (at least 3'x3'x3'), has an adequate moisture content, and has an ample supply of nitrogen (greens).

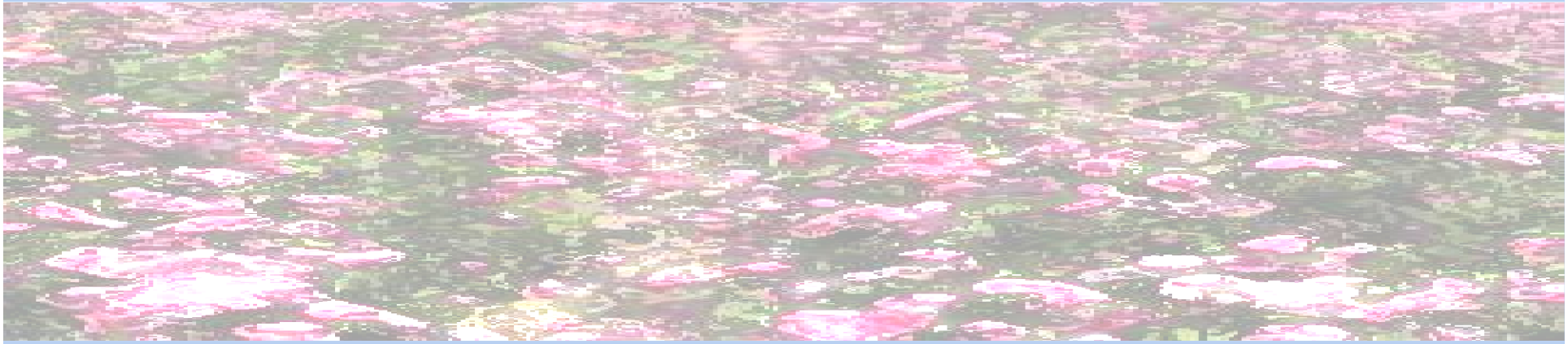
- When compost is finished, it'll be dark brown or black in color, crumbly, and have an earthy smell.

Don't have the time? You can passively compost, or "cold compost!"

Just throw your yard trimmings in a bin or open pile and let the microbes work at their own slow pace. They will make compost in about a year.



- Or, you can simply till greens into your garden
  and let them break down right in the soil.



Grasscycling is another great idea. It helps return nutrients to your soil, improve its structure and water holding capacity, and saves landfill space.

Grasscycle:

- Grass clippings are recycled by leaving them on the lawn after mowing

- The clippings decompose quickly, and recycle nitrogen and other nutrients back into the soil.

How to Grasscycle:

- Use a mulching mower
- Or use a standard mower with a sharp blade and block the clippings chute
- Mow lawn when grass is dry
- Set mower height so no more than 1/3 of the grass blade gets cut
- Leave clippings on lawn

What is worm composting?

Red wiggler worms breakdown organic materials such as food scraps and paper. They are the decomposers!

Worms are able to process large amounts of organic material and turn it into rich "castings".

How do I Compost with Worms?

- Start with a homemade bin or a manufactured worm bin.

- Create bedding to start (shredded newsprint [by hand or machine] coconut fiber, woodchips, or peat moss)

- Add worms (approximately 1 lb.)

Next:
Place food in your worm bin (start with small amounts (i.e. lettuce)

What goes in the worm bin?

- **any fruit and vegetable waste**
- **plate scraps such as pasta, salad or potatoes**
- **coffee grounds, coffee filters, and tea bags and leaves**
- **shredded newspaper and other non-chlorine paper.**

Finished compost has several primary uses…

- Till it directly into garden soil at a rate in volume of approximately 20% (1-2 inches of compost tilled into the top 6-8 inches of soil).

- Put it into potting mixes at the same ratio.

- Screen it at 3/8” or less and spread it in a thin layer directly on to your lawn.

- Use it with soil in backfill mixes at about 20% when planting shrubs and vines.

Finished compost, and even partially composted material, make an excellent mulch.

An important reminder…

To properly dispose of any household hazardous waste such as pesticides, fertilizers, paint, or cleaners, please call 1-877-R-1-EARTH (877-713-2784)

…or visit www.1800CLEANUP.org

Ask about joining the
County of San Diego Composting List Serve!


Composting, amending our soil with compost, and using mulch is critical to keeping San Diego County a healthy, beautiful place to live.
Thanks for your involvement and cooperation!