VERMICOMPOST 101

THE BASICS

The nutrient (or decomposition) cycle happens naturally in undisturbed outdoor spaces. Kitchen composting is an attempt to harness this process in a smaller, controlled environment. In a garden, we remove the organic material when we harvest. In order to replenish the nutrients, you need compost. So the benefits of composting is two-fold: eliminate organic waste AND create nutrients for your plants.

Compost is created through a combination of Oxygen, Water, Carbon, and Nitrogen. Decomposers like bacteria, fungi, and worms make compost.

WHY VERMICOMPOSTING

Vermicomposting is when you use worms to compost your food waste, and it's a highly efficient way to process food scraps. A worm bin with a pound of worms can eat 180-250 pounds of organic waste per year.

SUPPLIES NEEDED:

10-15 gallon shallow tub (NOT clear, has lid, at least 6" deep), Drill, Worms, Newspaper, Bedding (finished compost, leaves, coco peat, peat moss, cardboard, etc.)

BUILDING A BIN:

STEP 1: Get worms. We recommend a pound of worms for the size bin we are making. Buy them online or get some from a friend with a bin – worms reproduce very quickly!

STEP 2: Get a shallow 10-15 gallon bin (NOT clear) and a lid. Should be at least 6" deep.

STEP 3: Drill holes in the sides of the tub to allow for air flow.

STEP 4: Create a "bed" for your worms by layering the bedding (compost, leaves, etc.) and newspaper strips. Create a layer of 1" of bedding (compost). Shred the newspaper into 1" strips and soak in water, layer the newspaper on top of the first layer of bedding. Repeat the layering, until the bedding is 6" deep.

STEP 5: Create a 1" ditch, put in your worms, cover them back up.

STEP 6: Leave off the lid and don't feed for a few days, **keeping the light on**. (Worms don't like the light, and this will help them burrow and get oriented to their new home).

STEP 7: In 3-4 days, start feeding your worms. We recommend feeding in a rotation of places in the bin - a different corner each day. When you feed, bury the scraps, rather than just dumping them on top. This is beneficial for the bacteria and worms in your bin and will help prevent a smell.

Oklahoma Science Standards

- 7.LS2.1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
- B.LS2.3 Construct and revise an explanation based on evidence for the cycling of matter and the flow of energy in aerobic and anaerobic conditions.
- 7.LS2.3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.