LESSON 3

COMPOSTING
What is Composting?

Composting is a way to convert kitchen and yard waste into mulch.

BENEFITS OF BACKYARD COMPOSTING

Recycling: Backyard composting is one of the most economical and effective methods of recycling organic materials like yard trimmings and food scraps.
Saves energy and air pollution: By avoiding the collection, transportation and burying of yard trimmings in landfills, energy is saved.
Saves money & water Save money on purchase of soil amendment. Soil penetration and water retention is improved with compost use reducing water bills.
Compost improves garden soil: This gives healthier plants.

FOUR MAIN COMPONENTS OF COMPOST

50% Greens Greens are Nitrogen rich materials that when combined with carbon (found in the browns) allow for efficient decomposition.
Fruit and vegetable remnants fresh cut grass coffee grinds leaves garden debris manure.

50% Browns Browns are carbon rich materials that balance out the nitrogen and help with decomposition. Dry dead leaves, twigs eggshells, tea bags yard trimmings, wood chips cardboard, paper

Water Extremely important for the decomposition of material. A warm moist environment is necessary for the microorganisms to do their job effectively. Too much water will cause the material to rot and too little causes the process to grind to a halt.

Air The organisms that break down the waste in your compost pile need air to survive. Aerating your compost pile by turning it will reduce odor and make the waste decompose faster, which mean's your compost will turn into fertile soil sooner.

WHAT *DOES NOT* BELONG IN COMPOST

Meat, fish, bones Green weeds with seeds Dairy, lard, grease
Dog and Cat manure Charcoal and Duraflame ashes Treated wood products

Rule of Composting: If in doubt, leave it out!

COMPOST MAKING ACTIVITY:
Have the kids start a small compost bin at home or school. Place it in the balcony or yard. They will be surprised to see how things decompose.

What you will need

A 6-12 inch plastic or wood container with holes on the top. An adult can make holes) Teachers can change the size of the bin depending on age of the group or if this is an individual or class group project.

Making Compost

Place the bin in shade or partial shade.

Line your bin with a few inches of clean potting soil. Add dry leaves, sand and small pieces of black and white newspapers.

Vegetable and fruit scraps (potato and carrot peeling, apple cores, banana peels, etc) are a great addition to your compost bin. These items will add moisture so you will also need dry matter to keep the moisture level from getting too high.

Avoid meats, dairy, fish, or bones--they decompose very slowly and the smell they create will attract animals. Also no glossy magazine paper or materials from the side of the street (they might contain chemicals or other debris).

Dry matter can include dry leaves, straw (not hay), grass clippings, and even sawdust from untreated wood.

Add a layer of moist matter covered by a layer of dry matter. Turn and mix (aerate) your compost bin contents every 2 days. If you feel heat coming from the mixture you know that your bin is working properly. Mixture should be kept moist not wet as it helps speed up decay and convertion into compost.

Compost should be ready in 3-6 weeks. Depending on the size of the box, amount of turning and moisture care.

In simple terms fertilizers feed plants. Compost feeds the soil by adding nutrients to the soil. Fertilizers are cold/ room temperature. Compost is warm to touch. Ideal compost temperature is between 100- 130 degree F.

Compost is a like a living thing as it breadths out gases that help plants grow.
It is warm to touch as it is releasing nitrogen gas. It is warm to touch

ACTIVITY

Learning objectives

1. Checking to see if you have made good compost.
2. Understanding the difference between compost and chemical fertilizer

You will need:
Compost
Chemical Fertilizer (you can also use regular soil or sand)
Kitchen Thermometer or Compost thermometer

Place the thermometer in the compost. Check the temperature.
Compare the temperature with Chemical Fertilizer, soil, sand etc.