

Compost Workshop

Recycling Nutrients into the Soil



Duration: 10–15 minutes

Number of students: 5–20

Age Range: 3rd - 5th grade

Materials:

Greens & Browns

Pitch fork, Shovel, Trowels & Gloves

Thermometer

Compost Cake Poster

FBI Activity

CONTEXT: Compost is essential in the process of organic farming as it recycles nutrients back into the soil.

OBJECTIVE: To teach students what composting is and why we compost.

PREP: Make sure there are piles of greens, browns, and food scraps all at the compost pile. Set up Compost Cake, keep layers to the side for them to attach, and FBI folder.

THE FLOW: Intro to Composting– What? Why?

Show of hands: Who composts at home?

What do you think goes into compost?

Why do we compost?

We can only compost things that are biodegradable to save precious nutrients.

Does anyone know what biodegradable means?

Can you think of anything that you do not want to put in a compost pile?

Plastics and metals are NOT biodegradable.

COMPOST CAKE - compost has 6 ingredients, layered to make a compost cake!

Base layer - Carbon -- sticks and leaves - for ventilation

Green layer - Nitrogen - Grass clippings and fresh plant and leaf material - nutrients for plants

Manure layer - Fresh poop - lots of microorganisms!

Green layer -- Nitrogen-- Food scraps - more nutrients

Water - rain or hose for keeping moist environment - helps with decomposition - not too much!

Air - added in when compost is turned and from bottom ventilation - also important for decomposing

Questions:

Why do we layer it? Helps with evenly breaking it all down

Why do we tarp it? It keeps heat in and rain out, the cherry on top!

What does it become? Nutrient rich dirt!

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Now nature can do this same thing on its own, but it takes it much, much longer to do so. Can you guess how many years it takes the earth to naturally produce 1 inch of top soil (nature's name for compost)

- Let them guess popcorn style

IT TAKES THE EARTH 500 YEARS! To produce 1 inch!

How long do you think it takes us?

It only takes us 1 year to produce all this compost (point to the pile of finished compost.)

What do you all think is in this super-secret FBI folder?!

Has anyone heard of Decomposers?

Based on response, have them guess the acronym... (FBI—fungi, bacteria, and insects)

Or... explain they are the ones responsible for breaking down the layers into dirt.

Decomposers need air and water to break down a compost pile.

Show them the pictures of the different decomposers and then have them try and find them. (2-3 mins)

Bring them back together and ask— Did anyone notice the temperature of the piles?

Why does compost get hot?

Just like you and me, when we work hard, or play hard, we release heat, sweating!

They work hard as they eat to break the layers down, and just like when we eat, we all fart!

How hot do you think this pile is?

Have them guess and then test with the thermometer.

Last few questions...

So why do you think we compost on the farm?

Form of recycling waste, put nutrients back into the soil.

Where else might compost be useful?

At our farm - potting soil for starting seeds and growing baby plants before they can move outside into the land.

At home - garden beds and flower pots

OUTCOMES: What do you want the students to leave this lesson remembering?

Check for understanding— Ask them...

What are the 6 Parts of a Compost Pile? Carbon as Browns, Nitrogen as Greens and Food Scraps, Water, Air, Manure

What are the three types of Decomposers? Fungi, Bacteria, Insects

Why do we use compost on the farm? Nutrient rich and fertile— helps our fruits, vegetables and flowers grow and provide healthy nutrients to the people who eat them!