GREEN LIVING SCIENCE

ACTIVITIES

FOR EDUCATORS

PREPARED BY:

GREEN LIVING SCIENCE EDUCATORS

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COMPOST

Objectives: Students will understand how nature recycles nutrients as things are composted.

Time Needed: 30 Minutes

Participant Information: 3rd-5th grade, 30 kids

Appropriate Settings for Activity: Outdoor Classroom, After School

Supplies/Materials Needed:

- Food scraps (banana peels, apple cores, coffee grounds)
- Garden clippings (weeds, leaves, hay or straw)
- Sticks
- 2-liter bottles for each student or a large container for group compost pile
- Small shovel

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COMPOST

Procedures:

- Show samples of different soil types (sand, silt, loam, clay). Discuss soil and poor soil. Introduce the term composting and decomposition. Explain that compositing is a way to improve the physical properties of soil.
- For compositing without the addition of earthworms, a plastic tub or empty fish tank will serve as the composting site in the classroom. Can have students make a small compost pile to take home with them by using two-liter bottles and cutting the top off in a way that can allow it to be placed back on. Tell the students that they will be building a small compost pile to learn about the process.
- Prepare the compost materials. Have students bring in chopped up yard wastes, including leaves, grass, hedge clippings, and weeds. The smaller the waste is chopped up, the faster it will break down into compost. The mixture should contain a combination of materials high in nitrogen and high in carbon.

Examples

- High in Nitrogen: coffee grounds/tea, egg and nut shells, vegetables, fruit/peels

- High in Carbon: hay or straw, leaves, shredded paper, weeds and garden waste

Build the compost pile by following these steps.

1. place layer of coarse materials (sticks, brush, bark) on bottom of the container to create a space for water to drain and air to circulate
2. mix the chopped carbon wastes together, the more variety the better. Lay a one to two inch layer on top of the coarse bottom layer
3. cover each layer with a one inch layer of soil
4. follow with a layer of chopped nitrogen, layer and top with soil

- It will be important to adjust the moisture in your compost pile. Add shredded paper. If the pile is too dry, add water using a spray bottle. The materials in the pile should be damp to the touch but not too wet.
- Review the chart below with students:

COMPOST

Procedures:

DO Compost:
Leaves and grass
Small garden clippings
Bark
Cut wood ashes
Peanut and nut shells
Weeds
Vegetables and fruits

DO NOT Compost:
Meat and fish
Bones
Vegetable oils/fats
Dairy products
Poultry/chicken
Plastics
fats

- Instruct students to maintain the compost pile until it is done. Using a small shove, mix or turn the pile weekly. This adds air and mixes up the different wastes, preventing the compost from getting smelly. The compost is done when it is crumbly, not sticky, dark in color, but no black and smells earthy not rotten. This might take one or two months.
- Explain that students can then use this material for their garden!

*Adapted from Green Living Science's partner Keep America Beautiful curriculum Waste In Place

Modifications:

Make sure that students have the opportunity to get their hands dirty.

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ABOUT US

NONPROFIT ORGANIZATION

Green Living Science is a 501(c)3 nonprofit organization founded in 2011 as a result of the City of Detroit recognizing the need to improve the environmental sustainability efforts of the city.

Funded through grants, corporate sponsorship, and individual donors our programs engage the youth, neighborhoods, and businesses in and around Detroit.

OUR MISSION

To transform Detroit by teaching about waste and recycling.

Green Living Science is dedicated to working alongside Detroiters to increase recycling participation and awareness of environmental issues and personal responsibility through education.

OUR VISION

Universal environmental literacy, advocacy, stewardship, and justice.

Green Living Science envisions a Detroit with a robust circular economy and citizens who are mindful about our environment and natural resources.

TO LEARN MORE ABOUT GREEN LIVING SCIENCE FIND US ONLINE AT: WWW.GREENLIVINGSCIENCE.COM