LESSON: Compost

GRADE: 3

OBJECTIVE
Students will learn about their foods life cycle, and how food scraps can be used to fertilize a garden while minimizing our impact on the Earth.

NEXT GENERATION SCIENCE STANDARDS
- Plants and animals have unique and diverse life cycles (3-LS1-1)

BACKGROUND INFORMATION (FOR EDUCATORS)
To make the best compost, it is important to use an ideal ratio of “browns” to “greens.” Greens are materials high in nitrogen, while browns are materials high in carbon. Browns are things like hay, paper, corn stalks and leaves, while greens are things like grass clippings, fruit and vegetable scraps, coffee grounds, eggshells and animal manure. The best ratio of carbon to nitrogen is about 30:1. So when adding to the compost pile, take into consideration that you want about 30x more brown materials than green materials.

INTRODUCTION (15 MIN)
All living things need food in order to grow, right? But how exactly do plants get their food? Well, from the sun and the soil! But where do the nutrients come from in the soil? Have students reflect on what they notice when the seasons change. When spring comes, do they still see big leaf piles that were racked up in the fall? What happens to a lot of those leaves and how come they’re not all gone? Well they break down, and the break-down process can take some time. Nutrients in the soil comes from broken down materials like leaves, apples, and manure. We can help get more nutrients into the soil by composting. Ask students if they are familiar with composting— does anyone do it at home? Composting is collecting food scraps into a pile or bin and letting it break down. Over time with proper care, the compost pile will turn into very healthy soil that we can put into our garden beds. When we practice composting, we help reduce our impact on the Earth. What are other things we do to reduce our impact on the Earth? What about recycling? Composting is like recycling but using food scraps instead of paper. How does composting change the soil? It helps the soil hold on to water, improves drainage, prevents the soil from blowing in the wind (erosion), and improves the texture of the soil.

GARDEN/GREENHOUSE ACTIVITY

Build a Vermicomposting System

Materials Needed: 2 storage bins, a drill, shredded paper, red wigglers, water, food scraps, Nourish Composting Video, weighing scale

Using the Nourish composting video, follow Laura’s instructions for building a vermicomposting system. Worms are decomposers which help break down materials into a more usable form for plants. Vermicomposting can easily be maintained in a classroom with snack scraps. Try having a competition with other classrooms to see whose bin can generate the most finished compost!

Have students keep track and weigh how much plant scraps go into the bin, and how much finished compost is generated. Do the two equal out? Why or why not?
LESSON: Compost
GRADE: 3

IN CLASS ACTIVITY + MATERIALS NEEDED

Designing a Compost Guide & Flashcard Review

Materials Needed:
- Nourish Composting flash cards
- White Poster Board
- Markers
- Clip-art for students to color
- Glue
- Scissors

Familiarize students with the different components of composting with the Nourish Composting flash cards. Once kids get a grasp, shift gears to design a Composting Guide on the poster board. Collect clip art of various fresh foods, dairy products, meat products, leaves, plants etc. and distribute one page to color to each student. On the poster board draw a line down the middle and label one side compostable, and the other side not compostable. Once students have colored their pages and cut out their clip art, have them come up to the poster board and try to determine which side their coloring sheet belongs.