



# GRADE 4

## Farm to School Lesson Plan

**Topic:** Healthy Soil—Waste Management (suggested month: **October**)

**Monthly Essential Question:** What is the relationship between healthy soil and healthy food?

**Content Areas Addressed:** Agricultural Education, Science

### Standards Addressed:

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. (CCSS.ELA-LITERACY.RI.4.1)
- Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area. (CCSS.ELA-LITERACY.RI.4.4)
- Engage effectively in a range of collaborative discussion (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly. (CCSS.ELA-LITERACY.SL.4.1b, c, d)
- Identify the reasons and evidence a speaker provides to support particular points. (CCSS.ELA-LITERACY.SL.4.3)
- Read with sufficient accuracy and fluency to support comprehension. (CCSS.ELA-LITERACY.RF.4.4a, c)
- Know the origins of food items. Understand the nutrient cycle. Be able to explain the connection between healthy soil and healthy food. (D.4.1)
- Use data they have collected to develop explanations and answer questions generated by investigations. (C.4.5)
- Investigate how organisms, especially plants, respond to both internal cues (the need for water) and external cues (changes in the environment). (F.4.2)
- Using the science themes, develop explanations for the connections among living and non-living things in various environments. (F.4.4)

<b>Key Terms:</b>	Organic	<b>Materials Needed:</b>	Healthy Soil PowerPoint	Blank paper
Recyclable	Reusable		Writing utensils	Sampling food and supplies
Renewable	Non-recyclable			

**Introduction: (5 min)** \*Introduce essential question—“What is the relationship between healthy soil and healthy food? What can I do with the water bottle from my lunch? Record answers (put in garbage, put in recycling, reuse it). “I had some other items in my lunch as well.” Show the slide with the lunch pictures—sandwich, apple, granola bar and napkin. “What other waste might be left over from my lunch? (empty sandwich container apple core, wrapper, used napkin). We can organize our waste into different categories.” Introduce key terms by reviewing slides containing definitions. Organic Examples: apple cores, banana peels, vegetable scraps. Recyclable Examples: Aluminum products (like soda, and tomato juice cans), plastics (grocery shopping bags, plastic bottles), glass products (juice or soda bottles), paper products (envelopes, newspapers and magazines, cardboard boxes) Reusable Examples: Cloth grocery bags, bringing your own mug rather than using a disposable cup, reusable water bottles, donating unwanted items to charity rather than throwing them away, etc. Renewable Examples: Oxygen, fresh water, solar energy, timber. Renewable resources may also include goods such as wood and paper, because they come from trees which can be replaced by planting new ones. Non-recyclable/trash examples: Styrofoam, food wrappers, pizza boxes. Show the slide listing all five terms and have students help sort the lunch waste. (organic—apple core, recyclable—water bottle, reusable – sandwich container, renewable—napkin, non-recyclable—empty wrapper).

**Development: (20 min)** “Today we are going to do an activity with these terms and discuss how waste is related to food.” Break students into 4 groups. Provide each group with a piece of paper and writing utensil. Assign each group a key term and corresponding lunch item (apple core, used napkin, empty wrapper, water bottle). Explain the no group was assigned the sandwich container because it is reusable. Instruct each group to write their lunch item on their paper. “Imagine that you are planting a seed in a jar along with the lunch item you were assigned. Keeping in mind what you already know about plant needs, make a prediction about what will happen to the seeds in your jar. I want you to record your predictions about what will happen to your seeds on your paper. Be specific in your details and provide reasoning for why you believe your prediction to be true.” Give students time to work. “Now we are going to watch a video about the importance of healthy soil.” Watch “Soil Matters for Food” video.

**Sampling & Closure: (5 min)** Conduct local fruit or veggie tasting. Instruct each student to take a ‘polite bite’ (eat at least one bite and only say polite things). \*Review essential question—What is the relationship between healthy soil and healthy food? Come back together as a larger group to share jar predictions. “What did your group predict would happen to your seeds? First tell us your category, then share your prediction.” Have each group share their jar prediction. “Some of you thought that your seeds would sprout and others thought that they would not. Pretend that the soil put in your jar was where you lived and that you needed those seeds to grow to feed your community. How would you feel about your seed and the waste that is with it? If we don’t take care of our soil in our communities what might happen to the space we need to plant food? (less room for food, soil is less healthy). What are some things we can do to protect our soil that would help us also protect the food that needs that soil to grow?” (reduce waste to maintain room for food, dispose of waste properly so it doesn’t leak into food sources) Adapted from: [www.getactivewoodcounty.org](http://www.getactivewoodcounty.org)