



LiveWell Kids Garden and Nutrition Program

Lesson 3: Soil Health & Nutrients

THIRD GRADE

OBJECTIVES

By the end of this lesson, students will:

- Explain how soil supports plants and holds water.
- Describe how compost and worms improve soil.
- Compare soil health to human health.
- Identify vitamins and minerals as nutrients found in food.

SUPPLIES AND SET-UP

Garden activity – “Does it Hold Water?”

- 3 filtered funnels
- Bag of cut-up sponges
- Bag of cut-up cardstock squares
- Bag of pebbles
- 3 plastic cups of water

Nutrition activity – “Vitamins and Minerals”

- Laminate: *Ready, Set, Riddle*

PREPARATION

- Refer to the [LiveWell Kids Volunteer Manual](#) on the [LiveWell Kids webpage](#) for details about preparing for the lesson one week prior and the day of.
- Allow **30 minutes** for set-up and preparation on the day of the lesson.



INTRODUCTION & MINDFUL BREATHING (2 Minutes)

- Introduce yourself and other volunteers.
- Lead a short mindful breathing exercise.
- Explain: *Today we'll learn how soil helps grow food, and how nutrients move from soil to our bodies.*

****Divide the class into 2 groups****

Split students into two groups.

One group goes with an adult volunteer to the nutrition activity.

One group goes with an adult volunteer to the garden activity.

GARDEN: DISCUSSION & ACTIVITY (15 Minutes)

*** Occurs at the same time as Nutrition Discussion and Activity*

Discussion: Soil Health (5 Minutes)

Ask: What do plants need to grow?

Guide students to include Water, Air, Nutrients.

Explain: **Soil health** means soil can do its job well over time. Healthy soil:

- Helps plants grow.
- Holds water.
- Supports living things.

Something for them to think about:

- Ask: What do you think happens if soil holds too much water?
- Ask: What do you think happens if soil lets water run through too fast?

Don't give answers yet; tell students they will test this to find out.

Discussion: Compost & Worms (5 Minutes)

Explain briefly: *Compost returns nutrients to soil.*

- Worms help by breaking down food scraps to release their nutrients within.
- Humans using worms to improve soil is called **vermicomposting**, or **vermiposting**.

Something to think about:

- Ask: Why might gardeners want soil that holds water but doesn't drown plants?
- *Answer: Gardeners want soil that holds water so plants can drink when they need it but also lets extra water drain away so plant roots don't get soaked and rot. Roots need oxygen too.*

Let's test different "soils" to see how they handle water.

Activity: "Does it Hold Water?" (5 Minutes)

Supplies: 3 filtered funnels, bag of cut-up sponges, bag of cut-up cardstock squares, bag of pebbles, 3 plastic cups of water

Set-Up Explanation (2 minutes)

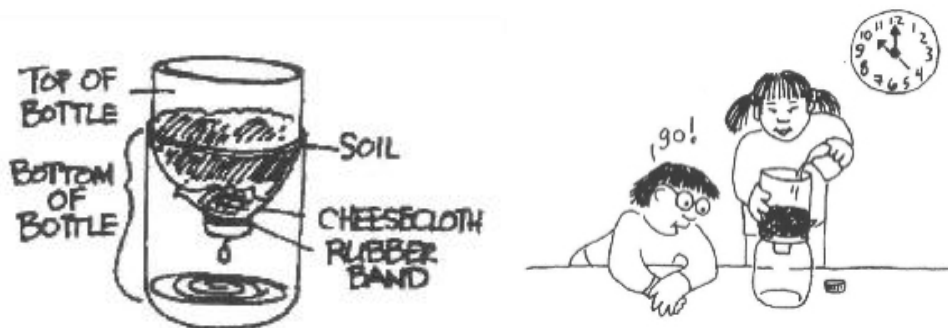
- Explain: Soil is made of rock pieces, organic matter, air, and water.
- In this activity:
 - Pebbles = sandy soil
 - Cardstock = clay soil
 - Sponges = loamy soil
- Ask students to predict by voting:
 - Which will drain fastest?
 - Which will hold water longest?

Test and Observe (5 minutes)

- Assign roles:
 - 3 "Pourers" - pour water at the same time.
 - 1 "Timekeeper" - counts to 30 seconds.
 - (The rest of the group) "Observers" - observe dripping, pooling, and drainage.

Discuss Results (3 minutes)

- Direct Questions to the Observers. Ask:
 - Which soil drained fastest?
 - Which held the most water?
 - Which would be best for planting?
- Explain the conclusion:
 - Healthy soil is a mix that drains water, holds moisture, and lets air in. This is called **loam**. Compost helps soil act like loam.



NUTRITION: DISCUSSION & ACTIVITY (15 Minutes)

**** Occurs at the same time as Garden Discussion and Activities**

Discussion: Nutrients (5 minutes)

- Ask: What do we need to grow and have energy? (*Allow a few answers.*)
Explain: **Nutrients** help bodies grow, repair, and function.
- Ask: Where do we get the nutrients?
Answer: *People get nutrients from food and water.*
- Show connection:
 - Soil provides nutrients to plants.
 - People get nutrients by eating plants, or by eating animals that ate plants.
 - Drinking water helps our bodies work properly, and it can also contain minerals (nutrients) that our bodies need.

Discussion: Vitamins and Minerals (5 minutes)

- Explain that 2 of the nutrients we need are:
 - **Vitamins** - come from plants and animals.
 - **Minerals** - come from soil and water.
- Ask:
 - How do minerals get from soil into our bodies?
 Guide students to answer:
 - Soil → plants → people
 - Soil → plants → animals → people

Activity: Ready, Set, Riddle (5 minutes)

Laminate: *Ready, Set, Riddle*

- Divide students into two teams.
- Read riddles from the laminate.
- Teams have 15 seconds to discuss.
- Award points for correct answers.

Encourage:

- Justifying answers.
- Using clues from nutrients discussed.

REFECTION PAGE (5 Minutes)

Have students draw a Reflection Page and take a few photos to share with BCHD at Mishell.Balzer@bchd.org.

CLOSING (8 Minutes)

- Regroup students.
- Ask recap questions:
 - What makes soil healthy?
 - Why does compost help?
 - What do nutrients help our bodies do?
 - How do nutrients move from soil to our food?

Allow a couple of answers for each question.

- Visit the garden bed to observe plant growth.
- Thank the students for joining you today and dismiss them.

***Remember to report your lesson as delivered with the online form!** *From your phone, scan this QR code below to report lessons as delivered. Once the page opens, select the 'grid view'. From the computer, click the link [LiveWell Kids Tracking Links 2025-26](#)*

