



LiveWell Kids

Garden and Nutrition Program

Lesson 1: Harvesting Fresh Foods from the Garden

This year's LiveWell Kids lessons are being delivered in adherence with the Los Angeles County Department of Public Health's Reopening Protocols for K-12 Schools.

LiveWell Kids Program Summary

The LiveWell Kids Garden and Nutrition programs have combined to create a hybrid, farm-to-table program. The initiative is comprised of six interactive lessons, which focus on educating K-5 students on the process and benefits of growing their own food and making healthy eating choices. All lessons are delivered in the fresh air of the school gardens by trained volunteers.

Objectives

By the end of this lesson, students will:

- Learn about the harvest season for summer crops and optionally participate in donation to a food bank
- Understand the meaning of “nutrition” and “nutrients”
- Recognize the benefit of eating fruits and vegetables in various colors
- Increase daily consumption and willingness to try new fruits and vegetables

Lead Volunteer Responsibilities

Three components:

1. *Before* the lesson
2. *Teaching* the lesson
3. *Post-lesson* reporting and cleanup

Preparation

❖ One Week Before the Lesson

- Check in with your school's front office to ensure you and other participating volunteers are complying with all on-site volunteer requirements.
- Check with the teacher for any known allergies.
- Check the garden to see what is growing.
 - Check with your Lead Volunteer to see if produce is available to harvest and donate during the lesson.
- Coordinate classroom supplies with the teacher, including paper and writing tools, if you're planning to do the “Reflection Page” of the activity.
- If using the “Did You Know?” page, print out a copy to use during the lesson.

- Coordinate with co-volunteers, if any.
 - Electronically send the lesson plan and communicate with your co-volunteers about your respective roles.
 - Be sure that you and your co-volunteers read the lesson plan before the day of the lesson.

❖ Day of the Lesson

** Please allow 30 minutes for set-up and prep before the lesson. Request that your co-volunteer and helpers (if any) arrive early with you to help with the set-up.

- By the day of the lesson, you will have determined whether there is produce available to harvest and donate.
- If there is no produce to donate, then you will teach the lesson focusing on observing the garden.
- Details of the two options below:

Option 1: NOT Harvesting

- If there is no produce to harvest and donate, then you will teach the lesson focusing on observing the garden.
- Have the students complete a “Reflection Page” and share the “Did You Know? Fun Facts” with the class.
- Supplies to bring from classroom to garden (arrange with teacher ahead of time):
 - ✓ Paper (one piece per student)
 - ✓ Writing tools (1 per student - Due to COVID-19 protocols, no writing instruments should be shared among students).
 - ✓ “Benefits of Eating from the Rainbow” laminate

Option 2: Harvest & Donate

- Supplies to use from the garden shed:

<ul style="list-style-type: none"> ✓ Pruners ✓ Hand soap ✓ Vegetable scrubber ✓ Paper towels ✓ Cafeteria trays 	<ul style="list-style-type: none"> ✓ Donation bags ✓ Sharpie ✓ “Benefits of Eating from the Rainbow” laminate
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- Supplies to bring from classroom to garden (arrange with teacher ahead of time):
 - ✓ Paper (one piece per student, plus one for the donation bag)
 - ✓ Writing tools (1 per student - Due to COVID-19 protocols, no writing instruments should be shared among students).
- Garden stations set-up (for harvesting produce for donation):
 1. Harvesting
 - i. Get a pair of pruners from the shed and have them ready to use for harvesting.
 2. Washing
 - i. The sink will be the washing station.
 - ii. Take the hand soap and vegetable scrubber from the shed and place at the sink.
 - iii. Monitor this area while students file through to wash produce.
 - iv. Direct students to take washed produce to drying station.
 3. Produce Drying and Packing

- i. Set up the produce drying and packing station at the picnic tables with paper towels, cafeteria trays and donation bags. You can use the folding table from the shed if needed.
 - ii. Use the Sharpie to write the teacher’s name and grade on the outside of the donation bag and set on the table.
 - iii. Monitor this area while students gently dry and pack produce for donation.
4. Message Writing
- i. Set the paper and writing utensils on the picnic table.
 - ii. Monitor this area while students write messages to recipients.

LESSON OUTLINE

NOTE: You are not required to memorize a script to deliver the lesson. Throughout the lesson plan you will find “sample script” with suggested wording, but we encourage you to use your own words, so it feels more natural for you. Complexity of discussion is grade dependent. Since this is a dense lesson, please feel free to adjust the script based on the age group, flow and timing of your lesson.

INTRODUCTION AND MINDFUL BREATHING (2 MINUTES)

DO:

- Introduce yourself and other volunteers.
- Guide students through a mindful breathing exercise.
- Explain the purpose of this first lesson is to explore the garden while also learning about nutrition.
- If there is enough ripe produce, inform the students that they will be harvesting and participating in a food donation.

Sample Script

“Hi everyone, my name is _____. Welcome to your school garden! Let’s start with a mindful breathing exercise. You can close your eyes, or look down at the ground, and slowly take a deep breath in, pause for a moment, and then slowly let it out. Let’s do it one more time, deep breath in, pause, and slowly let it out. Now open your eyes. How do you feel?” (Allow a few students to respond.)

This is our first Beach Cities Health District LiveWell Kids lesson of the year! Today we are going to mindfully explore the garden crops that grew over the summer. Also, we’ll talk about the benefits of eating colorful fruits and vegetables, some of which are growing right here in your garden. (Optional) We’ll also pick some produce to donate to people in need of food. We have a lot to do, so let’s get started!”

GARDEN RULES (1 MINUTE)

DO:

- Point out the “Garden Rules” sign and go over the rules together.

Sample Script

“We’ll begin by going over the garden rules.

1. Always walk when in the garden.
2. Stay on the paths.
3. Always ask before using any tool or picking any crop.
4. Respect each other and all living things in the garden.”

SUMMER CROPS (AND OPTIONAL FOOD DONATION) (2 MINUTES)

DO:

- Walk the class through the garden while sharing with them what occurred in the garden during the summer. For example, Garden Angels and other volunteers took care of the school gardens by clearing old plants, making repairs, harvesting and donating produce that was ripe in the summer, and planting seeds so new plants would grow for a fall donation.
- Explain what “food donation” is and why we do it.

Sample Script

“Let’s take a walk through the garden to see what’s growing. Over the summer, a group of volunteers called the Garden Angels took care of your garden. We also had a big event called LiveWell Kids Garden Prep Day where about 100 volunteers worked at all the school gardens to prepare them for this year’s lessons. Any ripe produce was donated to food donation sites, such as churches and food banks, so we could give nutritious food to people who don’t have enough food to eat. In addition, the volunteers planted seeds so that food would be growing now so you could pick it and donate it this Fall.

EATING FROM THE RAINBOW: COLORFUL PRODUCE (7 MINUTES)

DO:

- Explain why it’s important to eat “nutritious” food and not just any food.
- Define “nutrition.”
 - Nutrition is the study of food and how it works in your body.
- Define “nutrient” and give examples.
 - A nutrient is a substance found in food that helps our body grow and stay healthy and alive.

Sample Script

“I mentioned the word ‘nutritious.’ Why does it matter that the food we donate is nutritious? Nutrition is the study of food and how it works in your body. Do you think all foods work the same in your body? (Listen to a few answers). Foods that are nutritious, such as those that come from your school garden, give your body the energy it needs to move, grow, think and be healthy. Everything we eat and drink matters!

But what’s in a food that makes it nutritious? I’m looking for a particular word. Does anyone know it? Here’s a hint: It sounds like nutrition. (Listen for a few answers.) Nutrients! A nutrient is a substance found in food that provides the nourishment we need to grow and thrive. There are some big words in that definition, so this image may be helpful...

Think of a carrot that you built out of Legos. Each Lego piece is a different nutrient. Different nutrients, or Lego pieces, do different things that our bodies need. Nutrients can be vitamins, such as vitamin A, which is found in carrots and spinach for example. So, your Lego carrots and spinach would have lots of vitamin A Lego pieces. Nutrients can also be minerals, such as potassium, which is in bananas and potatoes. Carbohydrates, fats, proteins, and water are other examples of nutrients. Keep in mind that foods can have a bunch of different nutrients in them. Therefore, your Lego carrot not only has vitamin A Lego pieces, but it also has vitamin K, vitamin C, potassium, fiber, calcium and iron Legos too. That’s a lot of good-for-you nutrients – or Legos!

We know that fruits and vegetables are an important part of what we eat because they’re packed full of nutrients that help our bodies feel their best. Like the rainbow, fruits and vegetables come in many colors. There’s a reason for these colors. Each color is evidence of some of the nutrients in the food. For example, green fruits and

vegetables tend to have calcium. Calcium is an important nutrient for bone strength. Therefore, by eating spinach, you are helping your bones grow stronger.

Let's talk some more about the benefits of colorful fruits and vegetables (select a few examples from the list below, being mindful of time):

- *Red produce contains lycopene which promotes a stronger heart. Can you name some red fruits and vegetables?*
 - *Examples: strawberries, tomatoes, apples, red pepper and watermelon*
- *Orange produce has vitamin A which improves vision. Can you name some orange fruits and vegetables?*
 - *Examples: peaches, oranges, orange peppers and carrots*
- *Yellow produce is rich in vitamin C, which helps fight off sickness. Can you name some yellow fruits and vegetables?*
 - *Examples: bananas, lemon, yellow peppers and pineapple*
- *Blue or purple produce has lots of antioxidants. These are substances that can protect your body from heart disease, cancer and other diseases. Antioxidants are also good for your brain. Can you name some blue and purple fruits and vegetables?*
 - *Examples: blueberries, grapes, eggplant, plums and red onions*
- *We already mentioned spinach as a green vegetable with calcium. Can you think of other green fruits and vegetables?*
 - *Examples: Peas, celery, cucumber, and broccoli*

(ADD FOR 3RD – 5TH GRADES) *The colors come from ‘phytochemicals’ which occur naturally in plants and can help our bodies fight off sickness. Therefore, by eating a variety of colorful fruits and vegetables, you get a range of protective nutrients that you can only get by eating plants.*

So, now with our understanding of nutrition and nutrients and the benefits of eating colorful fruits and vegetables, it's easier to appreciate why we are better able to help those in need by sharing fresh food from your school garden. That being said, let's start harvesting!”

GARDEN OBSERVATION (AND OPTIONAL HARVESTING) (15 MINUTES)

DO:

- Take the class through the garden, using the harvest instructions below as talking points to teach the students how the plants grow and how they will be harvested when they are ripe.
- If your LiveWell Kids Lead Volunteer has determined that there is food to harvest and donate, follow the harvest instructions below to pick from the garden.
 - Tip: You can use the sample script and grade level talking points for “peas” (below) as a guide to determine how you want to discuss each plant.
 - Facts for each plant are detailed below. Use these facts as discussion points.
 - If harvesting, direct each student to the washing station where they will wash their item after picking. Each student will pick 1 item.

1) **Peas**

DO:

- Bring the students to stand around a pea vine.
- Instruct students that when they pick a pea, they will take hold of the pea with one hand and use the other hand to “cut” the pea from the stem with their fingernail.
 - **DO NOT PULL THE PEA** or the whole branch will follow and break!

FACTS:

- Peas are eaten fresh and cooked.
- Peas have lots of healthy nutrients including protein, fiber, iron, zinc and more!
- Pea protein, made from ground/dried peas, is a popular product, often used instead of meat.
- Pea plant characteristics:
 - They are vining, with stems that end in tendrils.
 - The tendrils are designed for grabbing onto anything it can reach as it grows so it can climb.
 - For this reason, stakes and twine are used to train it upward.
 - The flowers can be purple or white.
 - Once the pea pod appears, peas begin developing inside.
 - All parts of the plant above ground are edible: stems, tendrils, leaves, flowers, pods and peas.
 - When the peas are picked, the plant is stimulated to make more.

GRADE	GRADE LEVEL TALKING POINTS
K & 1 ST GRADE	Peas – The curly tendrils on the pea plant are actually leaves.
2 ND & 3 RD GRADE	Peas – The tendrils on the pea plant are actually leaves. These leaves are <i>modified</i> (adapted, altered, changed) so the plant can climb.
4 TH & 5 TH GRADE	Peas – The tendrils on the pea plant are actually leaves. These leaves are <i>modified</i> (adapted, altered, changed) so the plant can climb. They are thigmotropic , (<i>pronounced “thig-muh-TROP-ick”</i>) which means that they have a growth response of plants to touch. The tendrils grow in a spiral direction, always looking for an object to cling to. When they brush against something, they grab on!

Sample Script

“This is a pea plant that was planted during the summer. Everyone can take a turn to come see the plant up close. If you want to touch it, you will feel that its tendrils will easily form around your finger. Don’t stand there too long or it will try to attach to you! Gently feel both sides of the pea pod between your fingers so you can tell how large the peas are inside. The younger the pea, the flatter and sweeter it will be. However, peas can be eaten at any stage of development. In fact, you can eat all parts of the pea plant that are above ground, including stems, tendrils, leaves and flowers.”

2) CILANTRO OR BASIL

DO:

- Bring students to stand around a cilantro or basil plant.
- Tell them that when they are harvesting any leafy herb, they will pinch off a leaf or segment of a stem with their fingernail, “cutting” it cleanly to separate it from the plant.
- If harvesting, demonstrate first and then have them try it.

FACTS:

- Pinching off leaves will stimulate the plant to produce more leaves.
- Leafy green herbs can be consumed in many ways: fresh in salads or other cold dishes, to flavor water, cooked in dishes, baked into baked goods and more.
- Cilantro is also called “Chinese Parsley” and is closely related to parsley but tastes and smells very different.
- There are more than 100 different kinds of basil.

3) ONIONS

DO:

- Bring students to stand around the onions.
- Let them know that if they pull an onion out of the ground, the bulb-end of the onion has soil on it, since it was underground, so it will need to be washed off.
- If they are harvesting, grab hold of the onion at the very base, as close to the soil as you can and gently rock it to loosen it from the soil. Once you feel it loosen, continue to wiggle it as you pull it out of the ground.

FACTS:

- The green parts above the ground are the onion's leaves.
- The leaves have a milder taste than the more intense bulb-end, which develops underground.
- There are different ways to harvest onions depending on your intended use.
 - You can either pull it out of the ground and use the entire onion or you can cut some of the green leaves only, leaving just a few inches above ground so the onion can continue to grow.

4) TOMATOES

DO:

- Bring students to stand around the tomatoes.
- When it's time to harvest a tomato, make sure that there is no green color on the fruit that you are choosing.
- The stem should be turning brown where the tomato connects to the branch.
- If you are harvesting, gently grasp the tomato and give it a twist. If it's ripe, it should easily fall off in your hand.

FACTS:

- Tomatoes come in all sizes, colors, shapes and flavors. Most people think of them as round and red, but they come in dark purples, pinks, orange, green striped, white, yellow and more. They can be large and lumpy or tiny and round like a pea.

5) RADISHES

DO:

- Bring students to stand around the radishes.
- To determine if a radish is ready to harvest, take a finger and brush away the soil at the base of the leaves to reveal the crown of the radish.
- If it seems like the size you desire, grab hold of all the greens together, as far down the base as you can, with your fingers against the crown of the radish.
- If harvesting, wiggle the radish until you feel it loosen. Then wiggle and lift upward at the same time.
- If you just pull the leaves, sometimes they break off in your hand and no radish!

FACTS:

- Radishes grow underground.
- They are referred to as "root vegetables."
 - A root vegetable is a vegetable that is grown for the sake of eating the swollen taproot.

IF HARVESTING

Washing Station

** Happening at the same time as harvest activity.

DO:

- Monitor this station, as a line will most likely form.
- The students will wash in the sink one at a time. They should be able to move quickly but might need some prompting.
- Have the class stand in a physically distanced line to allow enough space around the sink area.
- Instruct one student at a time to come forward and to wash their item under the faucet.
 - Most items will come clean by briefly holding them in the water stream to rinse off any surface dirt. There shouldn't be much dirt.
- Tomatoes need very gentle rubbing with fingers to remove any surface dirt, while onions, radishes and squash can handle the vegetable scrubber to gently remove any soil.
- When handling delicate items, let students know that they are very fragile and need gentle handling.
- As they finish their turn, send them to the drying and packing station where they will be directed to dry their item.

Drying and Packing Station

** Happening at the same time as harvest activity.

DO:

- As the students arrive at this station with their washed item, an adult will guide them in drying and packing.
- Instruct each student to dry their item using a paper towel.
- Instruct students how to pack produce in the donation bag.
 - The sturdier items go on the bottom of the bag, such as squash and onions. The more delicate items, like tomatoes will go on top of the sturdier items. Lastly the fragile items, like basil, can be packed on top.
 - If students with fragile items arrive first, have them place their dried item on the trays. After sturdier items have been packed, the items from the trays can be added on top.
- After their item is packed (or put on the trays to wait), the student can write a message or draw a picture on the paper for the donation center.

After Harvesting/Washing/Drying (1 to 5 MINUTES)

DO:

- As students complete all tasks, you can choose how you'd like them to occupy their time while the rest of the class finishes:
 1. They can stay near the final station and discuss what they learned with the adult at that station.
 2. You can print out the "Did You Know?" page for the volunteer at the last station to share with them.
 3. You can allow them to quietly observe the final students harvesting.
 4. You can provide paper and writing tools (from the classroom) for them to create a 'Reflection Page,' instructing them to draw or write about something that they experienced in the lesson.

CLOSING (1 MINUTE)

- Recap what students learned in the lesson and inform them that they will be planting new seeds in their next lesson.
- Thank your co-volunteers and teacher.
- Thank the students for joining you today and dismiss them.
- Send back any classroom supplies with the teacher.

Sample script

“Thank you for joining me today. We learned a lot about the summer harvest and the kind gesture of sharing our garden’s food with people in need. At home, you can discuss ways that you might be able to help as a family in your community. We also talked about nutrition and nutrients and why colorful fruits and vegetables are good for us. Try eating from the rainbow at home! See you next time when we’ll plant cool season crops together and learn about whole foods and the Nutrition Facts label.”

POST-LESSON TASKS

- If time allows, take a few photos of any ‘Reflection Pages’ to share with us: Mishell.Balzer@bchd.org or Tami.Kachel@bchd.org
- Clean up and put all supplies away in the shed.
- Report your lesson completed on the online form: <https://publish.smartsheet.com/86d1bf6fe32b40daa08d15a2879bd2a4> or use the QR code on the inside of the shed door.
- Return the shed key to the front office.
- If you have harvested for donation, notify Mishell Balzer immediately to arrange for pick-up/drop-off to the donation site: 310-739-0665.

Education Standards

LiveWell Kids applies California Health Education and Common Core standards in each lesson. For more information, please visit our website at www.bchd.org.

Did You Know? Fun Facts!

- ❖ *All legumes, such as peas and beans, are excellent sources of nutrients: protein, fiber, manganese, magnesium, iron, zinc, potassium and folate (a B vitamin).*
- ❖ *Cilantro is also called “Chinese Parsley” and is closely related to Parsley but tastes and smells VERY different.*
- ❖ *Fruits and vegetables contain important vitamins, minerals and plant chemicals (such as nitrogen, oxygen and carbon.)*
- ❖ *On many fruits and veggies such as carrots, apples and cucumbers, a good percentage of the nutrition is stored in the skin. That means when you peel them, you’re peeling away some of the nutritional benefit.*
- ❖ *A diet high in fruit and vegetables can help protect you against illness and disease.*
- ❖ *Vegetables and fruits are an important part of a healthy diet, and variety is just as important as quantity.*
- ❖ *No single fruit or vegetable provides all the nutrients you need to be healthy. Eat plenty of colorful fruits and vegetables every day.*
- ❖ *There are about 2000 different kinds of fruit in the world and our country eats only about 200 different kinds.*
- ❖ *Fruits and vegetables contain fiber which is like “nature’s scrub brush” for your intestines, keeping particles from sticking to the inside walls as it moves through.*
- ❖ *In the days before modern plumbing when water became plentiful, people [used to carry around watermelons on long trips to stay hydrated](#). Due to its thick skin and the fact that it’s 92% water, explorers and desert-faring folks carried the fruit around, so they had something to drink.*
- ❖ *If you want your fresh herbs to last longer, pick the lower leaves off the stem and display them in a flower vase like a floral arrangement.*
- ❖ *There are more than 100 different kinds of basil.*