



LiveWell Kids

Garden and Nutrition Program

Lesson 4: Spring Harvest & Balanced Meals

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 been 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:

- Identify cool season vegetables and their health benefits
- Practice proper harvesting methods
- Make connections between eating healthy and growing healthy foods by looking at the food groups on MyPlate
- Understand the meaning of serving size and where to find this information on the Nutrition Facts food label
- Learn the importance of eating balanced meals and how to accomplish this
- Learn how to eat healthy at social gatherings

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.
- Coordinate classroom supplies with the teacher, including paper and writing tools, and 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.

Supplies

- 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.)
- Supplies to use from the garden shed:
 - ✓ Nutrition lesson laminates: (1) *MyPlate* and (2) *Nutrition Facts: Serving Size*
 - ✓ Pruners
 - ✓ Hand soap
 - ✓ Vegetable scrubber
 - ✓ Paper towels
 - ✓ Cafeteria trays
 - ✓ Donation bags
 - ✓ Sharpie
 - ✓ Several clipboards

Garden Stations Set-Up

1. Harvesting:

Take a pair of pruners and a bowl (or basket) from the shed and place them near the garden bed so they're ready to use for harvesting.

2. Washing:

Take the hand soap and vegetable scrubber from the shed and place at the sink. This will be the washing station.

3. Drying and Packing:

Set up the produce drying and packing station at the picnic tables with paper towels, cafeteria trays, donation bags and a Sharpie. If needed, you can use the folding table from the shed if you have one.

4. Message Writing:

Set the paper and writing utensils on the picnic table with the clipboards.

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 & MINDFUL BREATHING (2 MINUTES)

- Greet the class and introduce any new helpers.
- Guide students through a mindful breathing exercise.
- Introduce the lesson topics.
- Inform the students that they will be harvesting and participating in a food donation.

Sample Script

Hi everyone, Welcome back 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 fourth Beach Cities Health District LiveWell Kids lesson of the year! Today we are going to mindfully explore the garden crops that grew over the winter while we harvest them for donation. Also, for nutrition, we will talk about the five food groups, balanced eating, serving size and "sometimes foods." We have a lot to do, so let's get started!

GARDEN RULES REVIEW (1 MINUTE)

- Ask if anyone can tell you the “Garden Rules.” Allow students to respond until all rules have been stated:
 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.
- Let the students know that they will be doing two activities today: Garden Harvest and a nutrition activity.
- Divide the class into 2 groups, sending one group with the helper or teacher to do the nutrition activity while you take the other group to your garden bed to harvest.

WINTER CROP HARVEST & FOOD DONATION (13 MINUTES)

- Walk the class through the garden to observe and discuss what grew over the winter.
- Ask if anyone can tell you what “food donation” is and why we do it. Allow a few answers.
 - ◇ *Answer: We donate food so we could give nutritious food to people who don’t have enough food to eat.*
- Take your group to the garden bed and have a couple of students approach the bed at a time to harvest their item.
- Follow the harvest instructions below to pick from the garden, using the plant facts as a guide to discuss each plant.
- As each student harvests their item, direct them to the washing station where they will wash it.

K & 1st GRADES: CHINESE CABBAGE AND BEETS

Chinese Cabbage:

- Instruct students that when they pick a cabbage, they will take hold of the whole cabbage from the base with both hands and wiggle it back and forth to loosen the roots. Once they feel it loosen, they continue to wiggle it as they pull upward.
- Chinese cabbage forms a tight head, different from loose leaf lettuces. We pick the whole head which is different from loose leaf greens which can keep growing after picking just some of the leaves.
- There are over 400 types of cabbage.

Beets:

- To harvest a beet, instruct students to first check to see if it’s ready by looking at size of the crown of the beet. If it’s not visible, they can brush the soil away from the base of the leaves to reveal it and trace the girth to be sure it’s large enough (you determine.)
- They grasp all the leaves at the very base and wiggle the beet until it loosens, then continue wiggling as they pull upward. Beets have a large taproot and will sometimes break off at the leaves, staying in the ground if they aren’t loosened enough before pulling up.

- Beets come in several colors such as golden, red, purple and striped.

2nd & 3rd GRADES: CARROTS AND PEAS

Carrots:

- To harvest a carrot, have the students grasp all the leaves at the very base and wiggle the carrot until it loosens, then continue wiggling as they pull upward. Since carrots are large, swollen roots, they have a firm hold in the soil. They will sometimes break off at the leaves, staying in the ground if they aren't loosened enough before pulling up.
- Carrots come in orange, white, yellow, red, magenta and purple. The nutrients differ according to the color.
- People used to eat only the carrot's leaves and throw away the carrot until it was discovered that the root was edible and delicious.
- Carrots are in the same family as celery.

Peas:

- To harvest peas, instruct students to grasp the stem with one hand and use their fingernails to cut the pea from the stem with their other hand. Peas can be eaten at any stage but picking the largest peas will keep them from becoming overgrown and make nice donations.
- Peas are in the same family as beans – they are both legumes.
- Legumes form seeds in a pod. Once the seeds are large enough, they burst out of the pod by splitting it along a seam and falling to the ground.
- All parts of the pea plant that grow above ground are edible.

4th & 5th GRADES: Onions and Bok Choy

Onions:

- To harvest an onion, have the students grasp all the leaves at the base and wiggle it back and forth to loosen it. If the onion doesn't loosen, they can dig down around the base with their finger and try again. Once it loosens, continue wiggling as they pull upward.
- The onion is a bulb in the lily family, related to garlic, chives, leeks, scallions and shallots.
- Both the leaves and the roots of onions are edible.
- Onions are nutrient-dense, rich in minerals, fiber and Vitamin C.

Bok Choy:

- To harvest a Bok Choy, have the student grasp the base of the plant with both hands and give it a little wiggle to loosen its shallow roots. It will lift out of the ground easily.
- Bok Choy is loose leaf cabbage which continues to grow after some of the leaves are harvested.
- This plant is also rich in Vitamin C, as well as high in fiber – which is an important part of our diet and only found in plants.

Washing Station

** Happening at the same time as harvest activity.

- Have the teacher or helper 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.
- Items grown above ground will come clean by briefly holding them in the water stream to rinse off any surface dirt, while items that grew underground can use a gentle brushing off under the water with the vegetable scrubber.
- 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.

- 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 roots go on the bottom of the bag, the cabbages and peas go on the top.
- Use the cafeteria trays as a staging area for dried produce that's waiting to be packed in the donation bag.
- 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

- As students complete all tasks, you can choose how you'd like them to occupy their time while the rest of the group finishes. Options include:
 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 drying/packing 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.

**SWITCH GROUPS

NUTRITION ACTIVITY: BALANCED MEALS (13 MINUTES)

In this nutrition segment, discussion will focus on MyPlate (nutrition guidelines from the USDA), a balanced diet, serving size and “sometimes foods.” In addition, there are two activity options that incorporate interactive sharing of thoughts.

Topic	MyPlate Laminate - <i>My Plate</i>
K-5 th	<p>MyPlate uses a meal place setting to illustrate recommended portions of the five food groups in a healthy diet. The plate in MyPlate is divided into four main sections, with about 20% of the plate holding grains, 30% covered with vegetables, 30% filled with fruits, and 20% containing protein-rich foods. The fifth grouping is contained within a smaller circle in the shape of a glass or cup. It represents dairy products such as a glass of low-fat or nonfat milk or a cup of yogurt.</p> <p>DO:</p> <ul style="list-style-type: none"> • Explain MyPlate to the students. • Show the class the laminate, “MyPlate.” <ul style="list-style-type: none"> ◇ K-2nd grades: Name all five parts of MyPlate and give examples ◇ 3rd - 5th grades: Ask students if they can name all five parts of MyPlate <ul style="list-style-type: none"> → Dairy (yogurt, milk and cheese) → Grains (whole-wheat bread, oatmeal, whole wheat tortillas, brown rice) → Protein (chicken, beef, fish, beans, nuts, seeds and eggs) → Fruits (banana, strawberries, blueberries, apples) → Vegetables (carrots, lettuce, peppers, broccoli) • Point out that fruits and vegetables make up half the plate, which means that half of the food we eat during every meal should include fruits and vegetables. • Remind students about lesson 1 when they learned about the value of eating a variety of colorful fruits and vegetables.

Topic	Balanced Diet
K-5 th	<p>Our body needs nutrients from all five food groups to be healthy. Eating healthy options from all five food groups provides nutrients the body needs in the right amount, including vitamins, minerals, protein, carbohydrates and fats. This is a balanced diet.</p> <p>DO:</p> <ul style="list-style-type: none"> • Explain the meaning of a balanced diet and how it is good for our bodies. • Acknowledge that sometimes when we try to eat balanced meals, we get stuck eating the same foods each time. For example, we may eat apples for our fruit, whole-grain bread for our grains and carrots for our vegetable. • Mention that while these foods are healthy, adding variety to our meals is a great way to develop healthy eating habits and to expand the kind of nutrients we get each day. Plus, it can be fun and the students may discover something new they really like.

Topic	Serving Size & Servings Per Container Laminate – Nutrition Facts: Serving Size
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K-5 th	<p>The Nutrition Facts food label includes serving size. Serving size tells you the amount of food in 1 serving.</p> <p>Servings per container is the total number of servings in the entire package.</p> <p>DO:</p> <ul style="list-style-type: none"> • Remind the students how MyPlate is one way to think about the amount of food to eat during a meal. • Show the laminate, “Nutrition Facts: Serving Size,” and indicate this food label is another way to think about serving size. • Point out on the laminate where to find “serving size” and “servings per container.” • Explain what these terms mean. • Note that servings are based on what an adult, not children, typically eats at one time. <ul style="list-style-type: none"> ◇ Depending on the size, age and activity level of the child, the appropriate serving size might be less. • Since the food label shows what is in one serving, if you eat more than the serving size, then you might be eating too much fat, sugar or salt – which isn’t good for your health. • Illustrate with an example: <ul style="list-style-type: none"> ◇ If there are 16 servings in a bag of pretzels and each serving is 17 pretzels, then you have 272 pretzels in the bag. This is enough pretzels for an entire soccer team! (Consider using simpler example for younger kids.) ◇ Math is helpful with food labels!
Topic	<p>“Sometimes Foods” are foods that you eat once in a while. Typically, “sometimes foods” have less nutrients and may have added sugars and/or contain more fat and salt.</p>
K-5 th	<p>DO:</p> <ul style="list-style-type: none"> • Recognize that sometimes it’s easy to eat a healthy variety and other times it can be a challenge, especially if you’re at a birthday celebration, watching sports or hanging out with your friends • Ask the students if they are familiar with the phrase “sometimes foods.” • Explain the meaning and give examples (chips, cake, cookies...) • Point out that we don’t want too much added sugar, salt, fat and food coloring in our bodies. • Highlight that filling up on the healthier choices and having a small amount of “sometimes food” is better for our bodies. • Share some tips for eating healthy at social gatherings (may be more appropriate for older kids): <ul style="list-style-type: none"> ◇ Have something to eat before event so you’re not very hungry when you arrive. ◇ Allow yourself to have “sometimes foods,” but without overdoing it. ◇ Bring your own food with you.

Activity Options

Option #1: “My Menu Planner”

- It's important to have balanced meals and that includes breakfast.
 - ◊ Ask the students how many have fruit for breakfast? How about vegetables?
 - ◊ What about lunch and dinner? Do you get fruits and vegetables in those meals too?
- For this activity, tell students that they will plan their dinner for today and tomorrow. When they do this, remind them about MyPlate and suggest that they think of ways to include fruits and vegetables in their meals.
- Allow students to work in pairs or groups.
- Ask for volunteers to share their responses.

Option #2: "Guess My Plant-Part Breakfast"

- This activity combines nutrition and plant parts.
- Begin by informing students about the different parts of a plant that people eat: roots, stems, leaves, flowers, fruits and seeds.
- Tell the class that you had a delicious breakfast of plant parts.
- Name the plant parts and ask the students to figure out what you ate for breakfast.
- For example:
 - ◊ You ate a bowl of oval, flat seeds and dried, brown wrinkled fruit with scented, crushed bark sprinkled on top. Answer: a bowl of oatmeal with raisins and cinnamon
 - ◊ You drank a cup of dried leaves soaked in water with a spoonful of crushed stems and a slice of yellow fruit. Answer: a cup of tea with a spoonful of sugar and a slice of lemon
- Depending on time, you can ask students to get in pairs or groups and have them do this activity amongst themselves, where they come up with creative, plant-part food combinations.

CLOSING (2 MINUTES)

- Recap what students learned in the lesson and inform them that they will be learning all about 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/us today. We learned a lot about the cool-season harvest and the generosity 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 MyPlate, how to eat a balanced meal, serving size and "sometimes foods." Try helping out at home by planning a menu of balanced meals for your family.

See you next time when we'll learn about seeds as well as the role of protein, fats & carbohydrates in the body.

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: Mishell.Balzer@bchd.org or cell: 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 <https://www.bchd.org/LiveWellKids>

RESOURCES

<http://foodfacts.mercola.com/green-peas.html>
<https://authoritynutrition.com/foods/carrots/>
<https://cleancuisine.com/carrot-nutrition-are-carrots-good-for-you/>
<https://www.healthline.com/nutrition/what-does-magnesium-do#brain-benefits>
<https://www.medbroadcast.com/channel/nutrition/supplements-and-nutraceuticals/iron-quick-facts>
<https://www.medicalnewstoday.com/articles/304448.php>
<https://www.wikipedia.org/>
<http://justfunfacts.com/interesting-facts-about-cabbage/>
<https://www.factretriever.com/beet-facts>
<http://tenrandomfacts.com/bok-choy/>
<https://www.onehundreddollarsamonth.com/10-fun-facts-about-onions/>
<https://www.gardeners.com/how-to/how-plants-climb/5373.html>
<https://www.myplate.gov>
<https://dug.org/school-garden-curriculum>
ntgo2013.pdf (ucdavis.edu)

Did You Know? Fun Facts!

- ❖ Miniature carrots aren't grown that way. They are actually larger carrots that have been shaved down.
- ❖ Bok choy is sometimes called a “soup spoon” because of the shape of its leaves.
- ❖ Onions have been around since the Bronze Age - the oldest known onion harvest dates back to around 5,000 BC, over 7,000 years ago!
- ❖ Carrots were originally white or purple.
- ❖ Red cabbage makes an excellent all-natural dye in food or on fabric. Try dying your easter eggs baby blue this year with a simple red cabbage dye.
- ❖ Diogenes, the Greek philosopher, ate nothing but cabbage and drank nothing but water.
- ❖ Early American colonists used beets to create pink cake frosting.
- ❖ According to the Guinness Book of World Records, the largest onion ever grown, weighed 10 pounds 14 ounces. It was grown by V. Throup of Silsden, England.
- ❖ While the ancient Greeks used beets primarily as medicine, the ancient Romans were the first to cultivate them as food.
- ❖ A 100-calorie serving of peas contains more protein than a whole egg or tablespoon of peanut butter.
- ❖ In 1984, Janet Harris broke a Guinness World Record by consuming 7175 peas in 60 minutes...using chopsticks!
- ❖ Cabbage comes from wild mustard. It is a card-carrying member of the Brassica family, an extensive family that includes collard greens, Brussels sprouts, broccoli and cauliflower.