



LiveWell Kids

Garden and Nutrition Program

Lesson 4: Harvesting Cool-Season Crops

OBJECTIVES

By the end of this lesson, students will:

- Learn about cool-season vegetables and their health benefits. (K-5)
- Practice proper harvesting methods. (K-5)
- Participate in preparing and tasting a healthy dish. (K-5)

SUPPLIES

- **Supplies to bring from the shed to the garden:**

For the Harvesting Station

- Pruners
- 2 Large bowls (move to Food Prep Station after all produce is washed)

For the Washing Station

- Hand soap
- Paper towels (move to Food Prep Station after all produce is washed)
- 2 colanders
- 1 vegetable scrubber
- 1 or more washing tubs

For the Food Prep/Tasting Station

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|------------------------------------|---|
| ○ 3 small bowls | ○ Olive oil |
| ○ 2 large bowls | ○ Balsamic vinegar |
| ○ Food handling gloves | ○ Date syrup |
| ○ 1 or 2 cutting boards | ○ Ground <i>Chinese 5 Spice</i> |
| ○ 1 or 2 knives | ○ 1 orange |
| ○ Micro plane grater | ○ Salt grinder |
| ○ Juicer | ○ Plastic wrap |
| ○ Measuring spoons | ○ Large, clear, plastic storage bin |
| ○ 2 peelers | ○ Sanitizing wipes |
| ○ Whisk | ○ Paper food trays (1 per child) |
| ○ Large serving utensil for mixing | ○ Plastic forks (1 per child) |
| ○ Paper towels | ○ Folding table from shed (if applicable) |

- **Supplies to harvest from the garden – some items vary from garden to garden, so harvest what you have of:**
 - Peas
 - Beets
 - Carrots
 - Broccoli
 - Optional: other vegetables and herbs in the garden beds that you would like to add
- **Supplies to bring from classroom to garden - *arrange with the teacher ahead of time:***
 - Paper - one piece per student
 - Writing tools such as crayons, colored pencils, or markers

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. The information can also be found on the inside of the shed door.
- Since this lesson involves a tasting, allow **45 minutes** for set-up.
- It is important to **check with the teacher ahead of time about students with food or stinging insect allergies.**
- Suggest that parents send a small amount of their own allergy-free dressing for their child if they have an allergy to the following:
 - Olive oil
 - Date syrup
 - Balsamic vinegar
 - Ground *Chinese 5 Spice*
 - Orange
 - Salt

SET-UP INSTRUCTIONS

Supplies for each station are listed above.

- **SET UP THE HARVESTING STATION:**
 - Place the pruners and two large bowls near the garden bed so they're ready to use for harvesting.
- **SET UP THE WASHING STATION:**
 - Place the hand soap, paper towel roll and colanders on the sink.
 - Place the washing tub/s on the ground near the sink with the vegetable scrubber inside and fill 2/3 with water. Leave plenty of room for students to walk around between the wash tub/s and the sink.
- **SET UP THE FOOD PREP/TASTING STATION:**
 - Use the picnic tables for this station.
 - Place all tasting items (listed above) at one end of a table where you plan to stand and prep. If available and needed, you can also use the folding table from the shed.
 - Wipe out the large storage bin with sanitizing wipes and place the paper towels, food trays and forks inside.
 - Set the writing tools and blank paper on the shelf in the shed marked "Current Lesson" so you can easily retrieve them after the tasting.



INTRODUCTION & MINDFUL BREATHING (1 MINUTE)

- Introduce yourself and other volunteers.
- Guide students through a mindful breathing exercise.
- Explain the purpose of this lesson is to learn when and how to harvest cool-season crops, make connections between eating healthy and growing healthy foods and to prepare a healthy tasting.

HARVESTING, WASHING AND PREPPING COOL-SEASON CROPS

This section has three parts:

1. Harvesting produce from the garden
2. Washing the produce
3. Preparing the produce to eat

Harvesting Station (7 MINUTES for K - 2nd, 12 MINUTES for 3rd - 5th)

	<p>Harvesting Overview</p> <p><i>Supplies: You will need the large bowls and the scissors for harvesting as you walk with the class through the garden.</i></p>
Discussion	<ul style="list-style-type: none"> • Walk the class through the garden to observe and discuss what grew over the winter. • Ask if anyone remembers what they planted in the Fall. • Begin at your own garden bed for harvesting, allowing a couple students to harvest at a time. <ul style="list-style-type: none"> ○ Each student will pick one pea from your own bed. • 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, direct them to the washing station where they will wash their items. • Use the bowls to collect produce if needed.

	<p>Peas</p>
Discussion & Activity	<p><u>HARVESTING DIRECTIONS:</u></p> <ul style="list-style-type: none"> • Bring the students to stand around a pea vine. • Instruct students that when they pick a pea, they take hold of the pea with one hand and use the other hand to “cut” the pea from the stem with their fingernail. <ul style="list-style-type: none"> ○ Do not attempt to pull the pea off the vine, this may cause the branch to break! • Feel free to have the students harvest leaves, tendrils, and stems. <ul style="list-style-type: none"> ○ If adding stems, use scissors to cut pieces of tender stem – they don’t tear/cut well with fingernails. <p><u>FACTS:</u></p> <ul style="list-style-type: none"> • All parts of the pea plant that grow above ground are edible: stems, tendrils, leaves, flowers, pods and peas.¹ • The flowers can be purple or white.

	<ul style="list-style-type: none"> • Peas can be eaten at any stage but picking the largest peas will keep them from becoming overgrown and stimulate the plant to make more. • Peas are in the same family as beans. They are legumes.² • Legumes form seeds in a pod. • The pod appears first, then the peas begin growing inside. • Once the pea pods (seeds) are large enough, they burst out of the pod by splitting it along a seam and falling to the ground.
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	Carrots
Discussion & Activity	<p><u>HARVESTING DIRECTIONS:</u></p> <ul style="list-style-type: none"> • To harvest a carrot, have the students grasp all the stems together at the very base and wiggle the carrot until it loosens. Once loose, continue wiggling while pulling 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. <p><u>FACTS:</u></p> <ul style="list-style-type: none"> • Carrots come in orange, white, yellow, red, magenta, and purple. The nutrients differ according to the color.³ • 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.⁴

	Beets
Discussion & Activity	<p><u>HARVESTING DIRECTIONS:</u></p> <ul style="list-style-type: none"> • To harvest a beet, instruct students to first check to see if it's ready by looking at the size of the crown of the beet. • If the crown is not visible, they can brush the soil away from the base of the leaves to reveal it and trace the girth with their finger to be sure it's large enough. (You determine.) • Grasp all the stems together at the very base and wiggle the beet until it loosens. Once loose, continue wiggling while pulling 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 being pulled up. <p><u>FACTS:</u></p> <ul style="list-style-type: none"> • Beets come in several colors such as golden, red/white, purple, and striped.⁵ • Beets can be eaten raw, steamed, or roasted. • Many people cook the beet greens which are full of nutrients.⁶

	Broccoli
Discussion & Activity	<p><u>HARVESTING DIRECTIONS:</u></p> <ul style="list-style-type: none"> • Choose a broccoli stem on a plant. • Follow it down to the base of the stem. • Using the pruners, cut the stem as close to the base as possible. <p><u>FACTS:</u>⁷</p> <ul style="list-style-type: none"> • The vegetables are a Brassicaceae family member, including cabbage, kale, and cauliflower.

	<ul style="list-style-type: none"> • There are two forms of broccoli: sprouting and heading. In the United States, heading broccoli is the most common. • Both the floret (flower head) and the stem are edible.
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Washing Station (4 MINUTES for K – 2nd, 6 MINUTES for 3rd – 5th)

*** Happening as an extension of the harvest activity.*

	Washing Produce
Instructions	<ul style="list-style-type: none"> • Have the teacher or helper monitor this station, as a line will most likely form. • The students will wash in the wash bin one at a time. They should be able to move quickly but might need some prompting. • Have the class stand in a line to avoid crowding around the washing area. • Instruct one student at a time to come forward and wash their item in the bin. • Items grown above ground will come clean by briefly swishing them in the water 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, have the students put their washed items in the colanders to allow excess water to drain. • As they finish washing their item, send them to the Food Prep/Tasting Station where they will be directed to sit at the tables to wait for the food prep demo.

Food Prep Station (12 MINUTES for K – 2nd, 18 MINUTES for 3rd – 5th)

***As students arrive, feel free to assign them a helping task if you feel comfortable. If you do so, instruct them to first go wash their hands at the sink and wear food handling gloves. The recipe is written out at the end of the lesson plan.*

	Setting Up
Instructions	<ul style="list-style-type: none"> • Put on the food handling gloves. • Wait to start the demo until all students are together at the Food Prep/Tasting Station, ready to listen. • Explain that you will now make a <i>Winter Crunch Salad</i> by combining the produce they harvested. • Inform them that all produce scraps will go into a bowl to be added to the composter.

	Prepping Beets
Instructions	<ul style="list-style-type: none"> • Share beet nutrition facts while prepping: <i>Beets are high in fiber and potassium and very healthy for your heart.</i>⁸ • Take one of the beets from the colander and pat it dry with a paper towel. • Explain that you will dice it and all items using the knife and cutting board. <i>**Optional: Beet stems and leaves are edible and can be added to the salad if you choose.</i> • Cut the greens off, leaving a few inches to use as a “handle” to hold it by. • Turn the beet around and cut off the root. • Using the peeler, gently peel the beet skin off. • Discuss knife safety while they watch you demonstrate slicing a few slices of the beet (first), then cutting those slices into matchsticks.

	<ul style="list-style-type: none"> • Put the matchstick pieces into the large bowl. • Put the root in the bowl for compost. • Hand it over to your helper to complete while you demonstrate prepping the next item.
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Prepping Carrots	
Instructions	<ul style="list-style-type: none"> • Share carrot nutrition facts while prepping: <i>Carrots are great for your heart and eyes, with large amounts of vitamin A.</i>⁹ • Take a carrot and pat it dry with a paper towel. • Using the peeler, peel the outside of the carrot off until you have removed the outer layer and deposited outer layers in the bowl for compost. You can choose not to peel it if it's thin and scrubbed well. <ul style="list-style-type: none"> • Cut the carrot in half, then lengthwise slices, then dice a little bit. Add to the bowl. • <i>**Optional: Carrot greens are edible, and they can be diced and added to the salad if you choose.</i> • Have the helper finish while you move on to prep the next item.

Prepping Peas	
Instructions	<ul style="list-style-type: none"> • Share pea nutrition facts while prepping: <i>Peas contain protein, fiber, minerals and vitamins such as folate, iron, potassium and magnesium.</i>¹⁰ • Pods: <ul style="list-style-type: none"> ○ Hold up a pea in its pod for all to see. Tell the students that both the pods, as well as the peas inside, are edible. ○ Inform them that they can choose to either open them to eat just the peas inside or eat the pod and peas as one. ○ Slice up a pea and add to the bowl. • Leaves: <ul style="list-style-type: none"> ○ Hold up a pea leaf and let them know that this, and all parts of the plant above ground, are edible. Add it to the bowl. ○ Have the helper add any other picked leaves to the bowl – they don't need any prep. • Tendrils: <ul style="list-style-type: none"> ○ Hold up a tendril and let the students know that they are a delicacy item, sold at farmer's markets and specialty markets. ○ Have your helper add any other tendrils in the bowl - they don't need any prep. • Stems: <ul style="list-style-type: none"> ○ Hold up a piece of tender stem to show the students. ○ Have your helper dice and add to the bowl.

Prepping Broccoli	
Instructions	<ul style="list-style-type: none"> • Share broccoli nutrition facts while prepping: <i>Broccoli is high in fiber, vitamin C and other important vitamins and minerals</i> • Remove any leaves from the stem. • Cut the floret off the stem. • Dice a little bit of the stem and add to the salad bowl.

	<ul style="list-style-type: none"> • Have your helper finish dicing the broccoli as you move on to the next demonstration. • Add any scraps to the compost bowl.
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	<p>Dressing the Salad</p> <ul style="list-style-type: none"> • In a smaller bowl, add the following ingredients: <ul style="list-style-type: none"> ○ 3 tablespoons of extra virgin olive oil ○ 1 ½ teaspoons of date syrup ○ 2 teaspoons of balsamic vinegar ○ 1/16 teaspoon of ground <i>Chinese 5 Spice</i> (a pinch) ○ A couple of grinds of salt ○ The zest and juice of one orange - zest the orange BEFORE cutting and juicing
Instructions	<ul style="list-style-type: none"> • Directions: <ul style="list-style-type: none"> ○ Using the micro plane grater, zest the orange and add the zest to the bowl. Be careful not to zest any white part (the layer under the orange layer) as it's bitter. ○ Cut the orange in half and juice it with the juicer, adding the juice to the bowl. ○ Add all remaining ingredients to the bowl. ○ Using the whisk, incorporate ingredients and drizzle over salad and toss. ○ Have your helper take the food trays and forks out of the storage bin. ○ Spoon 1-2 tablespoons of the salad onto each food tray. ○ Add at least one pea per food tray and serve with a paper towel.

MINDFUL TASTING (5 MINUTES for K – 2nd, 7 MINUTES for 3rd – 5th)

	<p>Mindful Tasting</p>
Activity	<ul style="list-style-type: none"> • Now that we have reviewed what eating mindfully means, we are going to practice by using our senses and having a mindful tasting. • During a mindful tasting we should: <ul style="list-style-type: none"> ○ Be respectful: don't throw food on the ground. ○ Not say "yuck" or "gross." Just because you don't think you may like it, it doesn't mean someone else won't, so you don't want to "Yuck someone else's yum!" ○ Try to take at least one bite. ○ Use all your senses. • Engage the students with the following questions: <ul style="list-style-type: none"> ○ See <ul style="list-style-type: none"> ▪ What is the food's name? ▪ How is it grown - on a tree, bush, vine or underground? ▪ Notice the size, shape, and color of the food. ○ Smell <ul style="list-style-type: none"> ▪ Lift your plate and slowly smell the food. ▪ Does the scent remind of you a place, a person or experience? ▪ How would you describe the scent? ▪ Does it smell tangy, sweet, strong, or spicy? ○ Touch <ul style="list-style-type: none"> ▪ Use your finger and touch the food.

	<ul style="list-style-type: none"> ▪ Does it feel soft? Spongy? Hard? Slippery? ▪ How does it feel in your hand? Heavy or light? ○ Taste and Hear <ul style="list-style-type: none"> ▪ Choose something to take a small bite of and let it sit on your tongue for a few moments, experiencing the taste. ▪ Pay attention to how it feels in your mouth. Chew a few times but don't swallow right away. ▪ Notice the flavors. Is it sour? Bitter? Sweet? Salty? ▪ Do you hear anything when you chew? Perhaps you hear a crunching sound when you bite down.
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CLOSING (1 MINUTE)

- Bring students together to close the lesson and thank the students, teacher, and other volunteers.
- Recap what they learned and inform them that they will be planting new seeds in their next lesson.
- If time allows, have students draw/write a 'Reflection Page' after the lesson, either in the garden or with the teacher when they return to class. If you see any that you'd like to share with BCHD, take photos of their work and email them to Mishell.balzer@bchd.org.
- Have students dispose of their plates and paper towels in the trash can as they leave the garden.
- Thank the students for joining you today and dismiss them.

***Don't forget to report your lesson as delivered with the online form!**

Scan this QR code with your phone for scheduling and reporting lessons as delivered:



From the computer, click the link that was emailed to you by your Lead Volunteer:

[LiveWell Kids Tracking Links 2024-25](#)

DID YOU KNOW? FUN FACTS!

- ❖ *Miniature carrots aren't grown that way. They are actually larger carrots that have been shaved down to a smaller size.¹²*
- ❖ *Carrots were originally only white in color.¹³*
- ❖ *Beets have the highest sugar content of any vegetable. About half of the sugar made all over the world is made from beets!¹⁴*
- ❖ *While the ancient Greeks primarily used beets as medicine, the ancient Romans were the first to cultivate them as food.¹⁵*
- ❖ *A 100-calorie serving of peas contains more protein than a whole egg or tablespoon of peanut butter (approximately 6 g).¹⁶*
- ❖ *In 1984, Janet Harris broke a Guinness World Record by consuming 7175 peas in 60 minutes... using chopsticks!¹⁷*
- ❖ *Cruciferous vegetables, like broccoli, are named after the Latin word for crucifix because the blossoms of these plants resemble a cross.¹⁸*
- ❖ *Italian immigrants first introduced broccoli to the United States in the 1800s. However, it did not become widely known until the 1920s.¹⁹*



DICED WINTER CRUNCH SALAD

Review the ingredients with your teacher in consideration of any food allergens.

This recipe is for a class of 35 students.

Salad ingredients:

- 2 beets
- 1 broccoli stem/flower
- 2 carrots
- 1 pea per child
- 1 pea tendril per child
- Optional: beet greens, pea stems, carrot greens, or any other edible produce growing in your garden beds

Vinaigrette Ingredients:

- 3 Tablespoons of extra virgin olive oil
- 1 ½ Teaspoons of date syrup
- 2 Teaspoons of Balsamic vinegar
- 1/16 teaspoon of *Chinese 5 Spice* (a pinch)
- A couple of grinds of salt
- The juice and zest of one orange

Directions:

- Peel outer skin from beets and carrots (if needed.)
- Cut beets and carrots into slices first, then into matchsticks, then dice. Add to the salad bowl
- Remove any leaves from the broccoli stalk.
- Cut broccoli stalk into slices, then matchsticks, then dice. Add to the bowl.
- Dice all peas and any pea stems. Add to the bowl.
- Dice any other items that you harvested (onion, herbs, carrot tops, beet greens, etc.) and add to the bowl.

Dressing:

- Zest the orange into a medium bowl before cutting and juicing it. Then add the juice to the bowl.
- Add all other dressing ingredients to the bowl and whisk together first, then drizzle over salad and gently toss.
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Serve:

- Have your helper assist you by taking the food trays and forks out of the storage bin.
- Spoon 1-2 tablespoons of the salad onto each food tray.
- Add 1-3 peas to each food tray.
- Serve with a fork and paper towel.

RESOURCES

- ¹ Tong, Cindy. "Growing Peas in Home Gardens." *Extension.umn.edu*, 2022, extension.umn.edu/vegetables/growing-peas.
- ² Boston, 677 Huntington Avenue, and Ma 02115 +1495-1000. "Legumes and Pulses." *The Nutrition Source*, 28 Oct. 2019, www.hsph.harvard.edu/nutritionsource/legumes-pulses/#:~:text=A%20legume%20refers%20to%20any.
- ³ Staff, Editorial. "Do Multi-Colored Carrots Have Less Beta-Carotene?" *Tufts Health & Nutrition Letter*, 7 Apr. 2017, www.nutritionletter.tufts.edu/general-nutrition/do-multi-colored-carrots-have-less-beta-carotene/
- ⁴ Ferrie, A. (2016). *Apiaceae - an overview | ScienceDirect Topics*. *Www.sciencedirect.com*. <https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/apiaceae>
- ⁵ Martin, O. (n.d.). *Growing a Goosefoot Trio: Spinach, Beets and Chard*. Retrieved February 24, 2023, from <https://agroecology.ucsc.edu/documents/for-the-gardener/beets.pdf>
- ⁶ (PDF) *Beet Greens Benefits*. (n.d.). ResearchGate. https://www.researchgate.net/publication/333808500_Beet_Greens_Benefits
- ⁷ Moyer, Karyn. "15 Interesting Facts about Broccoli." *Blog.aghires.com*, blog.aghires.com/15-interesting-facts-about-broccoli/
- ⁸ *The Health Benefits of Beets*. (2022, August 19). Cleveland Clinic. <https://health.clevelandclinic.org/the-health-benefits-of-beets/>
- ⁹ *Reasons Why Carrots (of All Colors) Are Healthy For You*. (2021, March 23). Health Essentials from Cleveland Clinic. <https://health.clevelandclinic.org/reasons-why-carrots-of-all-colors-are-healthy-for-you/>
- ¹⁰ Lakshmi Mahan, Lauren Foster, and Wendy J. Dahl. (2020, January). *FSHN13-06/FS229: Beans, Peas, and Lentils: Health Benefits*. Edis.ifas.ufl.edu. <https://edis.ifas.ufl.edu/publication/FS229>
- ¹² Contributors, W. E. (2022, August 22). *Health Benefits of Baby Carrots*. WebMD. <https://www.webmd.com/diet/health-benefits-baby-carrots>
- ¹³ *Why are carrots orange? | Ask Dr. Universe | Washington State University*. (2020, April 17). Ask Dr. Universe; Washington State University. <https://askdruniverse.wsu.edu/2020/04/17/why-are-carrots-orange/>
- ¹⁴ *This Institution is An Equal Opportunity Provider Fresh Fruit and Veggie Program VEGGIE OF THE MONTH FRUIT OF THE MONTH Beets Kiwi*. (n.d.). https://dcps.dc.gov/sites/default/files/dc/sites/dcps/page_content/attachments/Feb%20-%20Beets-Kiwi.pdf
- ¹⁵ Levinson, J. (2020, February). *Beets — The History, Myriad Uses, and Health Benefits of These Beloved Roots - Today's Dietitian Magazine*. *Www.todaysdietitian.com*. <https://www.todaysdietitian.com/newarchives/0220p26.shtml>
- ¹⁶ U.S. Department of Agriculture. (2020). *Protein Foods | MyPlate*. *Www.myplate.gov*. <https://www.myplate.gov/eat-healthy/protein-foods>
- ¹⁷ *IDEA PUBLIC SCHOOLS Child Nutrition Program - Harvest of the Month Recipe*. (2022, April).
- ¹⁸ Bjarnadottir, Adda. "Broccoli 101: Nutrition Facts and Health Benefits." *Healthline*, 10 May 2019, www.healthline.com/nutrition/foods/broccoli#benefits.
- ¹⁹ Moyer, Karyn. "15 Interesting Facts about Broccoli." *Blog.aghires.com*, blog.aghires.com/15-interesting-facts-about-broccoli/.