



LiveWell Kids

Garden and Nutrition Program

Lesson 2: Planting Cool Season Crops – From Garden to Pizza

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:

- Learn about different crops and the seasons in which they grow.
- Understand how to prepare soil for planting.
- Learn and experience proper seed planting procedure.
- Recognize that gardening is a form of moderate exercise and contributes to daily physical activity.
- Increase understanding of the range of food options from whole foods to highly processed foods.
- Comprehend that the Nutrition Facts label lists ingredients in order of prevalence.

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.

- 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 it out.
- Coordinate with co-volunteers.
 - 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-volunteers arrive early with you to help with the set-up.

- Set up garden for planting.
 - There is a **Planting Guide** posted on the inside of the shed door that you will refer to during the planting section.
- Supplies to bring from the shed to the garden:

<ul style="list-style-type: none"> ✓ 1 Ziploc bag, labeled by grade, containing 2 seed packs and plant labels ✓ Nutrition Facts laminate ✓ 2 Sharpies ✓ Cultivators ✓ Rake 	<ul style="list-style-type: none"> ✓ Watering cans ✓ Scissors ✓ Yarn ✓ Ruler ✓ Seed packet laminates ✓ Kneelers ✓ Optional: Gloves
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- Supplies to bring from classroom to garden (arrange with teacher ahead of time; only needed if there is time for Reflection Page at the end of the lesson):
 - ✓ 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).
- Supply instructions follow:
 - Set cultivators near (but not right next to) the garden bed.
 - Set the rake near (but not right next to) the garden bed.
 - Fill the watering cans and set near (but not right next to) the garden bed.
 - Cut a piece of yarn to be longer than the length of your bed and tie to a popsicle stick on each end. **Check to see if there is one hanging on the inside of the shed door that's already been used. If the beds are the same size, you can reuse it.**
 - Take to the garden bed:
 - ✓ Ruler
 - ✓ Yarn with popsicle sticks
 - ✓ Bag of seeds and labels
 - ✓ 2 Sharpies
 - ✓ Seed packet laminates

✓ Nutrition Facts laminate

- Set the cut piece of yarn (tied to sticks) and the ruler near the bed and place everything else near (but not right next to) the garden bed.
- Optional: Place gloves and kneelers near (but not right next to) the garden bed.
- Remove the irrigation from the garden bed and place it away from where the kids will be working.

LESSON OUTLINE

NOTE: You are not required to memorize a script to deliver the lesson. Below is a sample script with suggested wording. Complexity of discussion is grade dependent. We encourage you to use your own words, so it feels more natural for you. Also, 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 second lesson is to explore the garden while also learning about nutrition.
 - Planting cool season crops.
 - Learning/reviewing the difference between whole foods and processed foods.
 - Knowing how to read a Nutrition Facts Label.
 - The goal for younger kids who are unable to read is to be aware of the Nutrition Facts label and what it is used for.
- Use seeds from peas (or other seed packet you have for this lesson) to help students visualize the number of peas/ other that come from one seed packet.
 - Also intended to get their attention!

Sample Script

“Hi everyone, my name is _____. Welcome to the second Beach Cities Health District LiveWell Kids lesson of the year! 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).

Do you know that I can hold more than 200 peas in my hand? How is this possible? (Allow a few students to respond. Then pour the pea seeds from the packet into your hands). This is how! Each seed develops into a pea plant which will produce many peas. You will learn more about it this year, beginning with today’s lesson when you get to plant cool season crops. You will:

- 1. Prepare the soil for planting.*
- 2. Plant and label the seeds.*
- 3. Water the seeds.*

In a few months, during the spring harvest, you will pick and donate these crops to people in need of food. Today, before we begin planting, we'll talk about the difference between whole and processed foods and how to understand the ingredients list on the Nutrition Facts label. Ready? Let's begin!

WHOLE VS. PROCESSED FOODS (6 MINUTES)

DO:

- Inform students that the vegetables they will be planting are whole foods.
- Define “whole food” and provide an example.
 - “Whole foods” are unprocessed or minimally processed foods.
 - An example of an *unprocessed food* is a freshly picked strawberry.
 - An example of a *minimally processed food* is a fruit or vegetable that has been washed, peeled, sliced, juiced, frozen, dried and/or pasteurized.
- Explain that when we eat whole/unprocessed and minimally processed foods, we get nutrients that come from nature which our body needs to grow and stay healthy.
- Describe how processed foods are different. Instead of going directly from gardens and farms to stores where we buy it, the food first goes to a factory where it's changed from how it's found in nature.
 - *Processed foods* can be milled, refined, crushed and/or exposed to chemicals.
 - *Highly processed foods* can be baked, fried, smoked, toasted, puffed, shredded, artificially flavored or colored.
 - A few examples include:
 - Candies: Skittles, M&Ms, Gummy Bears
 - Chips: Doritos, Cheetos, Pringles
 - Cereals: Lucky Charms, Froot Loops
 - Drinks: Slurpees, sports drinks
- Introduce the Nutrition Facts label.
- Explain that Nutrition Facts is found on most packaged foods.
 - It shows the percentage of nutrients and lists what is in the food or drink.
 - The label has a variety of information, such as serving size, sugar, fat, sodium (salt) and so forth.
- Inform the students that the first 3-5 ingredients make up the largest portion of the food.
- Read and compare the product ingredients listed on the Food Label laminate.
 - DO NOT pass laminate around due to COVID-19 restrictions.
- Remind the students that, when possible, it's healthier to choose whole/unprocessed and minimally processed foods because we get nutrients that come from nature which our bodies need to grow and stay healthy.

Sample Script

*“What do you think is more nutritious— a bowl of fresh fruit or fruit punch? – an apple or apple pie? (Wait for a response.) The fruits are healthier than fruit punch and apple pie because they are **WHOLE FOODS**. They are not processed, which means they are as close to their purest form as possible. In contrast, the fruit punch is processed with added sugar, flavorings and other ingredients. Apple pie is processed with added sugar, fat and salt.*

*Therefore, processing food means doing something to it to change it from its natural state. Some foods are **MINIMALLY PROCESSED**, which means they are cut, dried or cooked but not much is added*

or taken from them. Can someone give me an example of a minimally processed food? (Possible answer is a sliced banana or steamed chopped broccoli).

HIGHLY PROCESSED foods have many other ingredients added to them, such as sugar, oil, salt, food coloring, flavorings and other preservatives to keep the food fresh for a long time. Rather than going from gardens and farms to stores/farmers markets where we buy it, the food first goes to a factory where it is changed from its natural state. Can anyone name some processed foods? (Allow about 15 seconds for students to give examples.) You're correct, processed foods are often packaged and include chips, sweets, fast food and more – probably many of the snacks you eat!

Sometimes we must process a food. For example, it's not safe to eat raw chicken. You need to cook the chicken first. Depending on what you add to the recipe, it could be minimally processed, such as adding some fresh garlic and a little olive oil. Or the chicken can become highly processed when you make fried chicken.

How can you tell if a food is processed? (Wait for a response.) Look at the ingredients list on the NUTRITION FACTS label. The Nutrition Facts is found on most packaged foods. If there are a lot of ingredients listed, many which you don't recognize, then the food is most likely highly processed. Also, keep in mind that the first 3-5 ingredients on the list make up the largest portion of the food.

For example, let's look at these two food labels (on Nutrition Facts laminate). One is fresh corn on the cob and the other is a can of cream style sweet corn. (Read ingredients of each to class.) Which food is less/more processed? Healthier for you?

Here is the take home message: The healthiest, most nutritious foods we can eat are those that are the least processed because we get nutrients that come from nature which our bodies need!

Now it's time for some planting! By the way, are the vegetables that will grow in our garden whole foods or processed foods? Correct! They are whole foods!"

PREPARING THE SOIL FOR PLANTING (12 MINUTES TOTAL)

****NOTE:** Each grade will plant two different cool season crops. At harvest time, all students will pick from all beds.

- ❖ Kindergarten and 1st grade will plant **Chinese cabbage** and **beets**.
 - Chinese cabbage grows as a head of greens, above ground.
 - Beets are root vegetables and grow underground.
- ❖ 2nd and 3rd grades will plant **carrots** and **peas**.
 - Carrots are root vegetables and grow underground.
 - Onions are bulbs and grow underground.
- ❖ 4th and 5th grade will plant **onions** and **bok choy**.
 - Onions have bulbs that grow underground and leaves that grow above ground.
 - Bok choy grows as loose-leaf greens.

DO:

- For soil prepping and planting, use the talking points to educate students about the importance of each task.
- Help with jobs, as needed.
- Direct the students to the opposite side of the garden bed from you.
- Explain to students that they will plant in the garden bed.
 - If sharing the bed with other classes, then show them where your class will be planting.
- Inform students that the Garden Angels removed the warm season plants and amended the soil (unless the students are clearing them).
 - Define “amend.”
 - To amend soil is to add and mix in nutrients (usually in the form of compost) to the existing soil.
 - Clarify the reason for amending soil.
- Explain “cultivating” soil.
 - Cultivating (fluff up) the soil “aerates” it, which means creating air spaces throughout the soil.
- There are several benefits to aerating soil, including:
 - Decomposers living in the soil need air spaces so that they can breathe and move around.
 - Fragile seedlings need soil to be light and fluffy for pushing their hair-like roots through.
 - Water needs soil to be soft and loose so that it can soak in and reach the deeper layers.
- Divide the class. Determine how many students you can manage at the garden bed and send the rest with the other volunteer for the “Garden to Pizza” Activity or “Garden Trivia Game.”

Sample Script

“Time for planting! I’m going to stand on one side of the garden bed and all of you will stand on the other side. This way you can see me. We are going to use this section (point) of the garden bed to plant our vegetables. (Name vegetables to be planted depending on grade). The plants from the warm season have already been removed by the Garden Angels. They also amended the soil.

Does anyone know what it means to AMEND soil? (Wait for an answer). To amend soil is to add and mix in nutrients, usually in the form of compost, to the soil that is already there.

Does anyone know why we amend soil? (Wait for an answer). We amend soil because the previous plants that grew in the same place already took the nutrients, leaving the soil depleted (without enough nutrients for the new plants).

The first thing we’re going to do to prepare the soil for planting is to cultivate, or fluff up, the soil. Cultivating the soil “aerates” it, which means creating air spaces throughout the soil. Aerating soil is very helpful. Here are a few reasons why:

- 1) *Decomposers living in the soil need air spaces so that they can breathe and move around.*
- 2) *Fragile seedlings need soil to be light and fluffy for pushing their hair-like roots through.*
- 3) *Water needs soil to be soft and loose so that it can soak in and reach the deeper layers.*

Now I'm going to divide the class in half. Everyone will have a chance to cultivate the soil, but it will be easier with smaller groups. Some of you will stay with me to cultivate and the others will go with {insert NAME} to play a game. Then we'll switch.

PREPARING THE SOIL FOR PLANTING - Group 1 (5 MINUTES)

****If you have a bag of soil resting against your bed, this means that your soil level is low. Tear the bag open and spread contents on top of cultivated soil before raking.**

DO:

- Pass out the cultivators to the students that are left at the garden bed.
- Instruct the students to spread out around the box and cultivate as deeply as they can (kneelers and gloves may be used).
 - Some plants have long roots that go deep down in the soil. The nutrients need to be that far down in the ground for the plant to absorb and make it healthy.
- Give students 3-4 minutes before switching groups.
- After the last group cultivates, gently rake the soil until it is level.

Sample Script

"I'd like for each of you to spread out around the garden box. This is a cultivator. You will use this tool to cultivate the soil as deeply as you can. (Demonstrate) Some plants have long roots that go deep down in the soil. The nutrients need to be that far down in the ground for the plant to absorb and make it healthy. That's why we need to dig deep. (After 3-4 minutes for Group 1, switch groups). Now we're going to switch places with the other group, and you'll have time to play a game."

GARDEN TO PIZZA ACTIVITY OR GARDEN TRIVIA GAME - Group 2 (5 MINUTES)

**** Happening at the same time as the planting activity.**

DO:

- Determine how many students can be managed at the garden bed and send the rest with the co-volunteer.
- The co-volunteer will take the students to an area nearby.
- The co-volunteer will follow the instructions for either the "Garden to Pizza" or "Garden Trivia" game provided towards the end of this lesson handout.
- Allow for students to join and leave as directed by the lead volunteer who is at the garden box.

PLANT & LABEL THE SEEDS (12 MINUTES)

****Refer to the Planting Guide inside the garden shed door to show you where to plant within the garden beds.**

DO:

- Gather the class together at the bed.
- Explain that they will now plant crops that like to grow during the cool season.
 - These plants do NOT like the long, intensely warm summer days. If we were to plant them in the summer, they wouldn't grow as well as they do in the cooler months. They like cooler air and soil, less intense sunlight, and less hours of light in a day than warm season plants.
- Retrieve the measuring tool (yarn tied to sticks) and ruler to create rows for planting.

- Show the students how you use the tool to create four equally spaced rows in the bed by dividing the bed into quarters.
 - Every child will plant seeds in the garden bed.
- Select two students to come forward and use the yarn tool to create a guide for the first row of seeds.
- Instruct them to stretch it out lengthwise across the bed and secure it in the soil.
- Explain that when planting different plants in the same bed, it's best to understand how each plant grows so we can create the optimal growing situation for them.
 - As plants grow, the taller plants block the sun from the shorter plants, while other plants spread out and crowd their neighbors. We can find some of the information that we need on the back of the seed packet.
- Tell students that all seeds like to be planted at a specific depth.
- Inform them that when planting seeds, we must read the instructions on the back of the packet to ensure that we are properly following directions for that seed, or we risk the seeds not sprouting.
 - Show them the seed packet laminates and point out the information on the back, calling attention to the **depth** highlighted in yellow.
- Demonstrate how you measure that depth on your finger with the ruler, starting at the tip of your index finger and measuring down your finger.
 - This gives a visual of how far to push your finger into the soil when they make their planting hole.
- Hand off the ruler to your helper to assist the students with measuring the depth on their fingers.
- Have the students form two lines in front of the bed for planting while you pass out seeds.
 - Remind the students to cover their seeds with their other hand to avoid losing it.
- Have the students approach the box two at a time and follow the yarn guideline to plant their seed beneath, making a straight row.
- Remind them of the seed depth that was highlighted on the laminate and measured on their finger. Direct them to follow this depth as they poke a small hole, drop in the seed.
- Place the popsicle stick in the soil “above” the spot where their seed is to mark the spot, then cover their seed with soil.
 - The next student approaching the box can see where the last seed was planted as indicated by the popsicle stick and determine where to plant their own seed. They will then move the popsicle stick to mark their spot.
- After planting, have each student move to the back of the line to receive another seed.
- When the row fills up, select two new students to come forward.
- Demonstrate how to pinch a hole closed by gently pinching the dirt together over each seed hole, leaving it fluffy and not patting the dirt down.
 - Allow them to finish pinching the holes in the row, starting from the middle and working out to the sides.
- If students are capable, select two new students to come forward and label the row.
 - Give them a sharpie and a plant label.

- Have the write the date on one side and the plant name on the other.
- Instruct them to insert it at the end of the row.
- If they are too young, have your co-volunteer or helper write the label and give it to the students to put in the soil.
- Select two new students to come forward. Assist them in measuring and moving the yarn guide to the next row.
- Continue until two rows of each seed type are planted (four rows total).
- Make sure to select a new pair of students each time to move the yarn and write the labels.

Sample Script

“Each of you will be able to plant seeds in the garden bed today. We will be planting crops that like to grow during the cool season. These plants do NOT like the long, intensely warm summer days. If we were to plant them in the summer, they wouldn’t grow as well as they do in the cooler months. They like cooler air and soil, less intense sunlight, and less hours of light in a day than warm season plants.

I’ll show you how to use the ruler and this homemade tool (yarn tied to sticks) to create rows for planting. I’m measuring four equally spaced rows in the bed by dividing the bed into quarters. Now it’s your turn. (Select two students to come forward and use the yarn tool to create a guide for the first row of seeds). Stretch the yarn tool out lengthwise across the bed and secure it in the soil.

When planting different plants in the same garden bed, it’s best to understand how each plant grows so we can create the best growing situation for them. As plants grow, the taller plants block the sun from the shorter plants, while other plants spread out and crowd their neighbors.

All seeds like to be planted a specific depth. We can find some of the information that we need on the back of the seed packet. When planting seeds, we must read the instructions on the back of the packet to ensure that we are properly following directions for that seed, or we risk the seeds not sprouting.

Please look at this picture. (Show them the seed packet laminates and point out the information on the back). The yellow highlights the depth you should plant the seed. This is how you can measure the depth using your finger and a ruler. (Starting at the tip of your index finger and measure down your finger). This will help you figure out how far to push your finger into the soil when you make your planting hole.

Now it’s your turn. (Hand off the ruler to your helper to assist the students with measuring the depth on their fingers).

I’d like you to form two lines in front of the bed for planting while I pass out seeds. Please cover your seed with your other hand to avoid losing it.

Now approach the box two at a time (follow the yarn guideline) to plant your seed beneath. We’re going to make a straight row of seeds. Remember that the seed depth was highlighted on the laminate and measured on your finger. Follow this depth as you poke a small hole. Then drop in the seed.

(NOTE: Place the popsicle stick in the soil “above” the spot where their seed is to mark the spot, then cover their seed with soil. The next student approaching the box can see where the last seed was planted as indicated by the popsicle stick and determine where to plant their own seed. You will then move the popsicle stick to mark their spot).

After you have planted your seed, please move to the back of the line to receive another seed. (When the row fills up, select two new students to come forward).

I’m going to show you how to pinch a hole closed by gently pinching the dirt together over each seed hole. I’m making sure to leave the dirt fluffy and not pat it down. Now it’s your turn. You can finish pinching the holes in the row, starting from the middle and working out to the sides.

(If students are capable, select two new students to come forward and label the row). *Here is a Sharpie and plant label. You can write the date on one side and the plant name on the other. Then insert it at the end of the row. (If they are too young, have your co-volunteer write the label and give it to the students to put in the soil).*

(Select two new students to come forward. Assist them in measuring and moving the yarn guide to the next row. Continue until two rows of each seed type are planted - four rows total. Make sure to select a new pair of students each time to move the yarn and write the labels).

WATER THE SEEDS (4 MINUTES)

***Note: Now that the seeds are in the ground, they will remain in a dormant state until they are watered. Water stimulates the seeds to burst open, reach a root downward and a sprout upward. The sprout is the baby stage of the new plant. The root is both the sprout’s anchor and its source for obtaining nutrients.*

DO:

- Have your co-volunteer retrieve the half-filled watering cans and set them down in front of the bed.
- Instruct students to form a line behind each watering can to take a turn watering.
- Demonstrate how to lightly distribute the water by constantly moving the can side to side over the newly planted seeds, pausing to avoid flooding.
 - Inform them that we always use a sprinkle top watering can for new seeds. It is designed for gentle watering that simulates rain by distributing the water widely, allowing it to soak into the soil.
 - We don’t use watering cans with a stream spout for new seeds because the seeds would get pushed out of place from the big blast of water that would come out. This would happen because new seeds don’t have roots to anchor them in place.
 - Allow the selected students to each have a 5-second turn before passing the can to the next student.
- Once they finish their turn, have them return to the co-volunteer for “Did You Know? Fun Facts.”

Sample Script

“Lastly, we need to water the seeds. Please form a line behind each watering can. You’ll take turns watering. We’ll be using a sprinkle top watering can. We need to be gentle with new seeds, so this type of can makes the water come out over a wide space, like rain. Notice how I’m moving the can side to side. We don’t want to flood the soil.

When you finish your turn watering, go back to {insert volunteer’s name} and he/she will share some fun facts with you!

CLOSING (1 MINUTE)

- Bring students together to close the lesson and thank the students, teacher and other volunteers.
- Recap what students learned in the lesson and tell them that when they return for the next lesson, the garden should have their cool-season crops growing.
- 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 time allows, have students help clean up.
- Thank the students for joining you today and dismiss them.

Sample script

“Thank you for joining me today. I also want to thank {insert teacher and volunteer names}. We had fun planting {insert vegetables here} as well as talking about whole and processed foods and the importance of the ingredients list on the Nutrition Facts label. At home, you can go through your food pantry and look at the Nutrition Facts of different foods you like to eat. I’m sure your family will be very impressed by your knowledge! When you return for our third lesson, the garden should have your cool season crops growing. See you next time!

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
- Give the seeds another thorough soaking after the class has left.
 - Use the ‘mist,’ ‘sprinkle’ or ‘shower’ setting on your hose nozzle; the other settings are too strong for the seeds and might wash them away.
- Clean up and put all supplies away in the shed.
- Report your lesson as delivered with the online form: <https://publish.smartsheet.com/86d1bf6fe32b40daa08d15a2879bd2a4> or scan the QR code on the inside of the shed door.
- Return the shed key to the front office.

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.

Option 1: Garden Trivia Game

Have the students spread out and ask them to remain standing. Explain to them that this a “True and False” game. You will read each statement out loud and they will decide if they think it is true. If they think it’s true, they stay standing. If they don’t think it’s true, they will sit down. You will reveal the answer to see how many got it right. Have all students return to standing and repeat with the next statement. If you want, you can have students raise their hands and call on a student to explain why they believe a statement is true or false. Feel free to come up with your own questions, too!

ALL GRADES

- Removing old plants makes room for the new developing plants to grow. *True*
- Removing old plants helps aerate the soil, creating air spaces between the soil particles which have become compacted over time. *True*
- A seed has everything it needs to nourish itself while it grows until its roots are formed. *True*

KINDERGARTEN

- Carrots grow as roots under the ground with the feathery leaves above ground. *True*
- You can eat beet greens. *True*
- Vegetable roots grow above ground. *False: Roots grow underground.*

1ST GRADE

- Both walking and running are allowed in the garden, but no jumping. *False: No running in the garden.*
- Soil needs to be soft and loose so that water can soak in and reach the deeper layers. *True*
- Beets grow on a shrub. *False: Beets grow underground.*

2ND GRADE

- All carrots are warm season crops. *False: Carrots are cool season crops.*
- Sometimes a plant won’t grow because it’s not planted deep enough, or it’s planted too deep. *True*
- Decomposers that live in the soil need air spaces so that they can breathe and move around. *True*

3RD GRADE

- Onions grow above ground as a bulb-shaped stem. *False: Onions grow as underground bulbs with their green leaves above ground.*
- Most greens like to grow in the warm season. *False: Most greens like to grow in the cool season.*
- Sometimes plants won’t grow because the seeds are too old. *True*

4TH GRADE

- You can plant peas in both the warm and cool seasons, and it will grow and thrive just the same. *True*
- Soil needs to be light and fluffy so fragile seedlings can push their hair-like roots through. *True*
- You can plant a good seed in poor soil, and it will still grow and thrive. *False: Seeds need to take in nutrients from the soil to grow and thrive.*

5TH GRADE

- Carrots are in the same family as beets, growing an edible root underground with greens on top.
*False: Carrots are in the **Apaceae** family, along with celery and parsley, while beets are in the *Beta Vulgaris* family, along with Swiss Chard.*
- It doesn't matter how deep you plant a seed, if it gets plenty of water it will thrive.
False: Each seed type requires a specific depth to grow and thrive.
- We amend soil because the previous plants that grew in the same place already took the nutrients, leaving the soil depleted. *True*

Option 2: Garden to Pizza Activity

Take a close look at the production of pizza. Examine how all the ingredients begin as a whole food in their natural state and turn into a variety of processed foods when added together to form a pizza.

For example:

- Crust: Plants to Flour to Dough to Crust
- Sauce: Plants to tomatoes to tomato sauce
- Cheese: Cow to milk to cheese (Cow eats plants to have the energy needed to produce milk.)
- Additional topping options

Did You Know? Fun Facts!

Cabbage

- Cabbage is a relative of broccoli, cauliflower, Brussel sprouts and more. They are part of a group called “*Cruciferous*” vegetables.
- Cabbage is Russia’s national food.
- Cabbage has been cultivated for 4,000 years.

Peas

- Just one serving of freshly frozen garden peas and petits pois contains as much vitamin C as two large apples!
- On average everyone in Britain eats nearly 9,000 peas per year.
- They’re very low maintenance – being freshly frozen, there’s absolutely no preparation needed and there’s zero waste.

Beets

- The leaf, leaf stalks and roots of beet plants are edible. The leaves are high in vitamin A and minerals including calcium, iron, potassium and magnesium.
- Beets have been around since 800 BC and used commonly by 812 AD. By 1975, the beet was made into a Borscht soup and sent to the Apollo 18 astronauts.
- While beets themselves are rich in calcium, vitamin A, iron and other healthy minerals, their leaves are excellent sources of vitamin A, vitamin C, protein and dietary fiber.

Onions

- Onions are part of the lily family, the same genus as garlic, leeks and shallots.
- More than 450 semi-truck loads of onions are eaten every single day!
- You can peel or cut a cold onion without crying if you cut the root end last, or you cut it while holding it under cold running water.

Bok Choy

- Green leafy vegetables are very healthy, chock-full of vitamins, minerals, antioxidants and other substances that provide a myriad of health benefits for the body. Most tend to be very high in vitamins A, C & K.
- Bok choy is also known as: bok choy, buk choy, white cabbage, Chinese chard, Chinese cabbage, Chinese savoy, Chinese white cabbage, white Chinese cabbage, Chinese mustard, Chinese mustard cabbage, spoon cabbage, pak choy and pak choy.
- Eating greens is vital to staying healthy, strong and protecting our immune system.

Carrots

- Carrots were originally white **or** purple. Then a yellow carrot appeared through mutation and the familiar orange carrot was bred from it.
- The biggest carrot recorded is more than 19 pounds and the longest is more than 19 feet!
- Carrots clean your teeth and mouth. They scrape off plaque and food particles just like toothbrushes or toothpaste.