

# Zucchini

**GRADE**  
**2-3**

**Month: September**

**Time Required: 30 minutes**

**Alternative Tastings: Tomato, Cucumber, Squash**

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will recognize zucchini as a type of summer squash.
- Students will be able to describe four key flavors to create a dressing.

## Materials

- |  |  |
|--|--|
| <input type="checkbox"/> 4 prepared "Season Signs"   | <input type="checkbox"/> Tablespoons (for educator to use)   |
| <input type="checkbox"/> Printed recipe cards; one per student   | <input type="checkbox"/> Various dressing ingredients (see Dressing Ingredient Options chart attached) |
| <input type="checkbox"/> Whole zucchini (or image of zucchini)   | <input type="checkbox"/> Paper plates and forks  |
| <input type="checkbox"/> Prepared bag of spiralized zucchini noodles (or demonstrate this during the lesson) | <input type="checkbox"/> Tongs for serving zucchini noodles  |
| <input type="checkbox"/> 4-5 small mason jars with lids  | <input type="checkbox"/> Cleaning wipes or spray and rags  |

## Preparation

- Process a mixture of green and yellow zucchini with a spiralizer to make noodles. Portion into food storage bags, one for each class.
- Select 8 dressing ingredients, using the Dressing Ingredient Options chart (attached).
- Write/draw labels to prepare four "season signs" for the Engage Activity: Winter, Summer, Spring, Fall.

## Recommended Books

- "Our School Garden!" by Rick Swann
- "How a Seed Grows" by Helene Jordan
- "Zora's Zucchini" by Katherine Pryor
- "Carlos and the Squash Plant" by Jan Romero Stevens

## Standards Connection

This lesson supports the following Iowa Core standards.

**Health Education**  
[Standards 1, 2, 3, 4, 5, 7, 8](#)

**Science** Second grade - [2-LS4-1](#).  
LS4.D: Biodiversity

Third grade - [3-LS4-3](#).  
LS4.C Adaptation

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- "Asking" Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Biodiversity (2nd) & habitats (3rd)

## Engage

### 1. Introduction: 2 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

In each of the four corners of the room, post a paper sign, denoting each of the four seasons (summer, fall, winter, spring). Set up “the ingredient station” at the front or center of the room, where all students can see it.

If this is your first lesson of the year, introduce yourself to the class and to Pick A Better Snack. Share with students, *When I come to your classroom every month, we're going to have fun trying foods together and learn about each other. So here's something I want to learn about you... (have students stand up in a circle)*

### 2. Engage Activity: 6 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

#### 4 Corners Activity:

*What is your favorite season? Think in your head - is it summer, fall, winter, or spring (can put fingers up to temples and close eyes)? When I say the magic word, “zucchini,” I want you to quietly walk to the sign that lists your favorite season - either summer, fall, winter, or spring. When you get to your spot, take turns sharing why you picked that season as your favorite season.*

- Give students time to think and make a decision; instruct them to move to their preference (or stand somewhere in the middle) and pair-share with others in their group. Ask one student from each group to share with the class.
- Remind students to make the decision for themselves and to not be swayed by where others stand.

Celebrate each “season” group with a “whoosh clap.”

## Explore

### 3. Experiential Learning: 12 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

Seat students in these 4 small groups, where they can work together (opportunity for 3 deep breaths).

*Summer is the season when we grow and eat summer squash. Show photo of a variety of summer squash. Why is summer the favorite time for vegetables like summer squash to grow in Iowa? Probably some of the same reasons why some humans like summer, too. Discuss warm temperatures, lots of sunlight, rainwater, no snow, etc. Today, we're going to taste a type of summer squash called a zucchini. What are we tasting today (choral response: “zucchini!”). Show an image or whole zucchini to the class. Zucchini might grow in Iowa in other seasons, but it will survive and thrive best in summer. Today we are going to taste fresh zucchini salad AND make a dressing to go with it.*

## Explore (cont'd)

### Salad Dressing Activity:

Have several ingredients on display in the middle of the room, “the ingredient station.” Explain, *dressing has a balance of four key flavors:*

- *Rich (olive oil), salty (sea salt, soy sauce), sour (lemon juice, mustard), sweet (dried fruit or honey)*
- *The key to making a delicious dressing is balancing these flavors based on what you like.*

Explain:

- *In groups, you’ll be writing your own dressing recipe. You should pick 4 ingredients as a group, and write them on your recipe cards: one rich flavor, one salty flavor, one sour flavor and one sweet flavor. Be open-minded and make sure everyone in your group is included in the decision.*
- *Once you’ve each created your own salad dressing recipe and written it on your cards, one person from your group will come up to me to get your group’s ingredients at the ingredient station.*
  - You may want to assign a group leader who will come up to gather ingredients.
  - Educator will measure ingredients into a mason jar for each of the 4 groups.
- *When you have your jar of ingredients, you’ll - keep it closed!- and take turns shaking the jar as a group, to get it all mixed together.*
- *Then, we’ll sample it with fresh zucchini!*

Move around the room with the help of the classroom teacher to support group decision-making and writing. As students are ready to gather ingredients at the ingredients station, you will fill their mason jars using the following salad dressing formula:

- Dressing = 2 Fat + 1 Sour + Small Pinch/Dash of Flavorings (Salty and Sweet)
- Example Dressing = 2 tbsp olive oil + 1 tbsp lemon juice + pinch of salt + dash of honey

Serving: Back at their tables, groups will take turns shaking their jars until all ingredients are mixed. Pass out small paper plates, forks and a few fresh zucchini noodles. Note: As students wait for their samples, encourage them to come up with a name for their dressing, and write the name on their ingredient cards. Dress the students’ zucchini noodles with some of their group’s dressing (keep it light in case they don’t love it!)

### **4. Tasting Activity: 3 minutes**

*The “Tasting Activity” section is when students get to try the fruit or vegetable. Don’t forget to review your food tasting norms (for example, “don’t yuck my yum”).*

Before you pass out any zucchini, be sure to review your brave tasting rules (for example, don’t yuck my yum, we all try together, etc.). As students receive their samples, ask them to use their senses to learn about zucchini while they wait.

## Reflect

### 5. Voting Activity: 2 minutes

*This is a time for students to give their opinion on what they tried!*

As students taste the zucchini and dressing, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

### 6. Reflection: 5 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion."*

#### Choral Response:

*I'm going to ask a question and you're going to quietly think to yourself. When I say our magic word, "zucchini," you can say your answer aloud. Let's practice...*

- *What month is it? (September)*
- *Whose class am I in?*
- *What vegetable did we try today? (Zucchini)*
- *What did you create to taste with your zucchini? (Dressing)*
- *How many flavors did you put into your dressing? (Four)*
- *What season does zucchini grow best in Iowa? (Summer)*

#### Asking Discussion:

*Raise your hand if you're excited to go home and tell your family about tasting zucchini.*

- *Ask a student with a raised hand: if you wanted to try this at home, how might you ask your grown-ups?*
- *You might also ask additional questions like, where could you buy zucchini? What is something else you remember about zucchini?*

\*Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.

# Dressing Ingredient Options

| RICH FLAVORS (fats)  | SOUR FLAVORS   | SALTY FLAVORS                                      | SWEET FLAVORS   |
|--|--|--|---|
| Olive oil<br>Sesame oil<br>Canola oil<br>Yogurt<br>Avocado                                   | Lemon/lime<br>Orange<br>Rice vinegar<br>Apple cider vinegar<br>Balsamic vinegar<br>Mustard | Table salt<br>Kosher salt<br>Sea salt<br>Soy sauce | Honey<br>Raisins<br>Other dried fruit<br>Apple slices or other<br>fresh fruit |
| **Select and offer 2 ingredients under each flavor, to allow for student led decision-making |  |  |   |

My Dressing Recipe is called: \_\_\_\_\_

| <u>Ingredients</u>  |
|---------------------|
| Rich Flavor: _____  |
| Salty Flavor: _____ |
| Sour Flavor: _____  |
| Sweet Flavor: _____ |

| <u>Directions</u>   |
|---|
| Step 1. Select 4 ingredients                                  |
| Step 2. Combine ingredients in a jar                          |
| Step 3. Put the lid on tight, and shake the jar               |
| Step 4. Pour dressing over vegetables, like zucchini noodles! |
| Step 5. Eat it up!  |

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 This material was funded by USDA's Supplemental Nutrition Assistance Program – SNAP. It was developed by the Iowa Department of Public Health in partnership with the Iowa Department of Human Services. December 2020



My Dressing Recipe is called: \_\_\_\_\_

| <u>Ingredients</u>  |
|---------------------|
| Rich Flavor: _____  |
| Salty Flavor: _____ |
| Sour Flavor: _____  |
| Sweet Flavor: _____ |

| <u>Directions</u>   |
|---|
| Step 1. Select 4 ingredients                                  |
| Step 2. Combine ingredients in a jar                          |
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## Additional Materials

### Physical Activity

“[Stories in Motion: A Visit to the Vegetable Patch](#)” (page 59)

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Zucchini

- You can eat all parts of summer squash – skin, seeds, and flesh – raw or cooked.
- Zucchini is usually dark green in color.
- Choose zucchini that has smooth, shiny skin and feels heavy for its size. Ripe zucchini is firm and gives slightly to pressure.
- Zucchini can be stored for one week in the refrigerator in a plastic bag. Wash before using.
- Once zucchini has been cut up, it can last for three days in a sealed bag or container in the refrigerator.

### Facts About Zucchini

- Zucchini is a warm season crop. It has a short growing season compared to melons and cucumbers. Once the fruit starts to grow, it can grow one inch per day.
- Zucchini is a summer squash. It is different from winter squash because it is harvested and eaten before it matures, so the rind is soft. It is the most common summer squash.
- Zucchini is best when picked small (about 6-8” long).
- Zucchini is considered a vegetable in our diet, but botanically it is the immature fruit of the plant.
- A zucchini plant has large, dark green leaves.
- Zucchini originated in Italy, but most squash varieties came to America from Europe.
- The Native Americans introduced squash as one of the “Three Sisters.” The three native plants used for agriculture were corn, beans and squash.

### Health Connection

- Zucchini is a good source of Vitamin C. Reinforce by putting up your defense shield (cross arms out in front of chest). Zucchini helps to ward off germs and keep us healthy.

### References and Resources

<https://spendsmart.extension.iastate.edu/produce-item/zucchini-2/>

<https://snaped.fns.usda.gov/seasonal-produce-guide/zucchini>

[https://harvestofthemonth.cdph.ca.gov/documents/Summer/021712/ED\\_Zucchini\\_Newsletter\\_Final.pdf](https://harvestofthemonth.cdph.ca.gov/documents/Summer/021712/ED_Zucchini_Newsletter_Final.pdf)

<https://hortnews.extension.iastate.edu/2003/4-1-2003/squash.html>

<https://homeguides.sfgate.com/zucchini-plants-start-vine-56658.html>

<https://www.gardenguides.com/80661-train-zucchini-vine-trellis.html>

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# Pear

**GRADE**  
**2-3**

**Month: October**

**Time Required: 30 minutes**

**Alternative Tastings: Apple**

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will be able to explain the sequential order of plant growth.
- Students will be able to identify that seeds and fruit grow from flowers.

## Materials

- 2-4 printed sets of “Seed to Fruit” cards (attached below)
- Paper plates or napkins
- Fresh pears or apples

## Preparation

- Print several decks of “Seed to Fruit” cards for small-group activity.

## Recommended Books

“How Did That Get In My Lunchbox? The Story of Food” by Chris Butterworth  
 “From Seed to Plant” by Gail Gibbons

## Standards Connection

This lesson supports the following Iowa Core standards.

**Health Education**  
[Standards 1, 2, 3, 4, 5, 7, 8](#)

**Science**  
 Second grade - [2-LS2-2](#).  
 Structure and function

Third grade - [3-LS1-1](#).  
 LS1.B: Growth and development of organisms

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- “Asking” Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Seeds (2nd) and plant life cycles (3rd)



## Engage

### 1. Introduction: 2 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

If this is your first lesson of the year, introduce yourself to the class and to Pick A Better Snack.

### 2. Engage Activity: 6 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

*As soon as we're born, we start growing and changing. This happens especially fast when we're young. Our bodies grow, we learn new skills, we like new things.* Share an example of some way that you've seen this classroom grow since the year before (or share an example of how you grow/learn as an educator).

Think-pair-share: *How do you know that you are growing?*

- *Think to yourself quietly.* Have students close their eyes, put their fingers to their temples, and think real hard.
- Then, have students turn to a partner and share their thoughts.
- After a couple minutes, bring the class back together and select students to share out. If you use “pick a stick,” this is a good way to randomly select students to share.

*Wonderful, thank you all for sharing. Just like we change when we grow, so does our food!*

## Explore

### 3. Experiential Learning: 10 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

#### Seed to Fruit Exploration

Pass out 2-4 sets of “Seed to Fruit” cards to small groups of students. Instruct students, *when I say go, your group will work together to put these pictures in order from first to last. I will know your group is finished sorting when I see you do 5 jumping jacks and then sit quietly on the carpet. Ready? Go.* With the teacher's help, move around the room to support each small group. Remind students to show that they are finished. Once all groups have sorted their cards and are seated, ask one group to share their work.

[Card Order: seed, seed sprout, taller plant/roots, leaf growth, more branches and leaf growth, flower growth, fruit growth]

Ask, *did anyone put their pictures in a different order? Why? How did you decide if the flower or the fruit should come first?* After a short class discussion and without revealing the correct order, give groups another minute to make any changes to their card order.

## Explore (cont'd)

Once all groups have discussed and made edits, show the correct order of the cards using the doc-cam. Explain the order of the cards, as they are arranged in a circle.

- *First, we plant a seed in the ground.* (card 1)
- *That seed sprouts into a baby plant.* (card 2)
- *That that baby plant grows roots, a stem, and a few leaves.* (card 3)
- *The little tree grows branches and leaves.* (card 4)
- *And even more branches and leaves* (card 5)
- *Then flowers grow.* (card 6)
- *The flowers change into fruit - with seeds inside!* (card 7)
- *Those seeds could be planted in the ground, and a new plant may grow!*

*These stages that show how living things grow and change is called a life cycle.*

*The flowers make fruit and seeds. What do the flowers make?* (choral response: “fruit and seeds!”)

*Excellent! It takes months for a flower to grow into a fruit. We’re going to watch a video that shows us a sped-up version of the process. Play and narrate video (link below).*

Youtube Video: “Pear flower opening to fruit swelling time lapse filmed over 8 weeks”

<https://www.youtube.com/watch?v=SHHkmOh942A>

(1:14, can speed up by increasing the playback speed under the video settings)

### 4. Tasting Activity: 3 minutes

*The “Tasting Activity” section is when students get to try the fruit or vegetable. Don’t forget to review your food tasting norms (for example, “don’t yuck my yum”).*

Before you pass out any samples, be sure to review your brave tasting rules (for example, don’t yuck my yum, we all try together, etc.). As students receive their samples, ask them to use their senses while they wait.

**\*\*Note:** as students receive their sample, have them look for signs of the old flower (on the bottom of the pear) and for seeds (inside the pear).

## Reflect

### 5. Voting Activity: 3 minutes

*This is a time for students to give their opinion on what they tried!*

As students taste the pear, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

### 6. Reflection: 6 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they’ve learned or tried in your lesson. This is an excellent place for students to practice the “Asking Discussion.”*

## Reflect (cont'd)

### Choral Response:

*I'm going to ask a question and you're going to quietly think to yourself. When I say the magic word, "pears," you can say your answer aloud. Let's practice...*

- *What month is it? (October)*
- *Whose class am I in?*
- *What food did we try today? (Pears)*
- *What are the two plant parts that flowers make? (Fruits and seeds)*

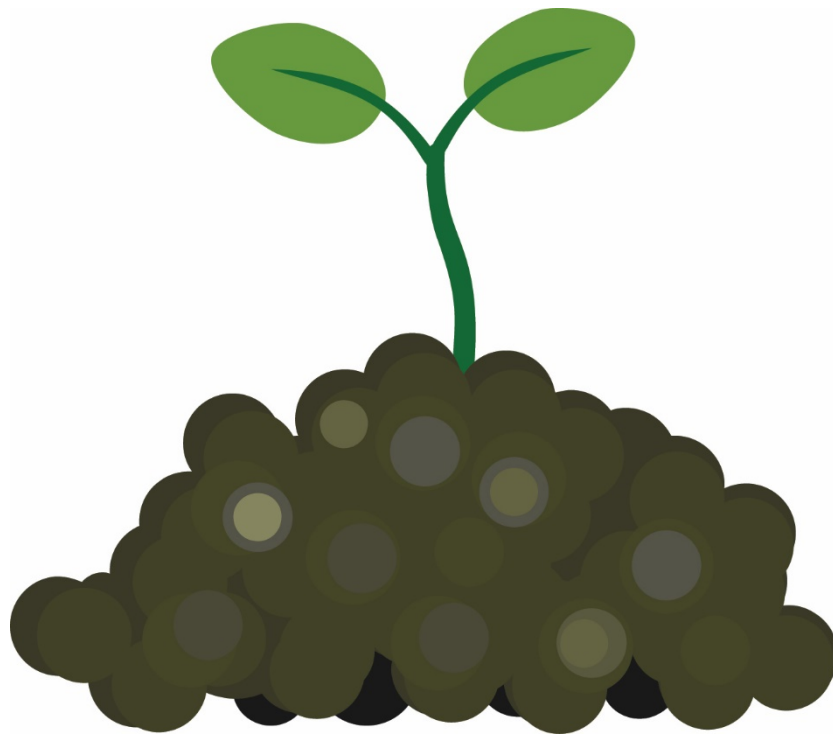
### Asking Discussion:

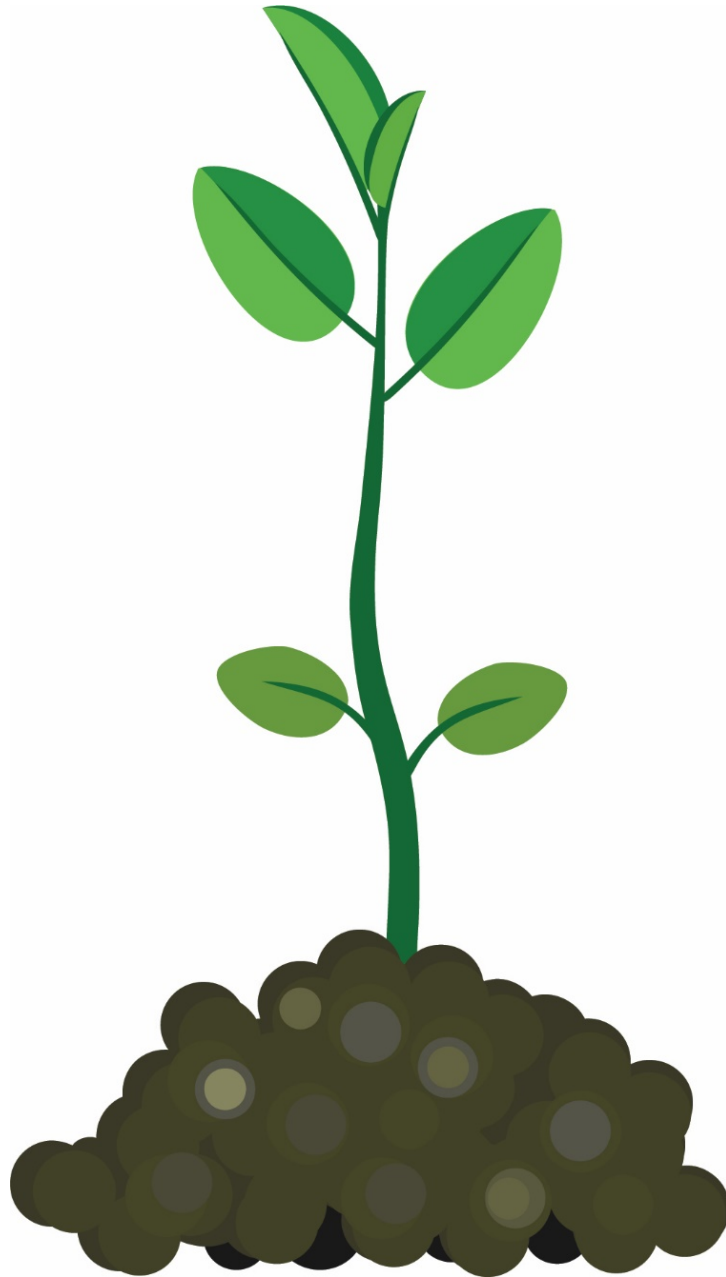
*Raise your hand if you're excited to go home and tell your family about tasting pears.*

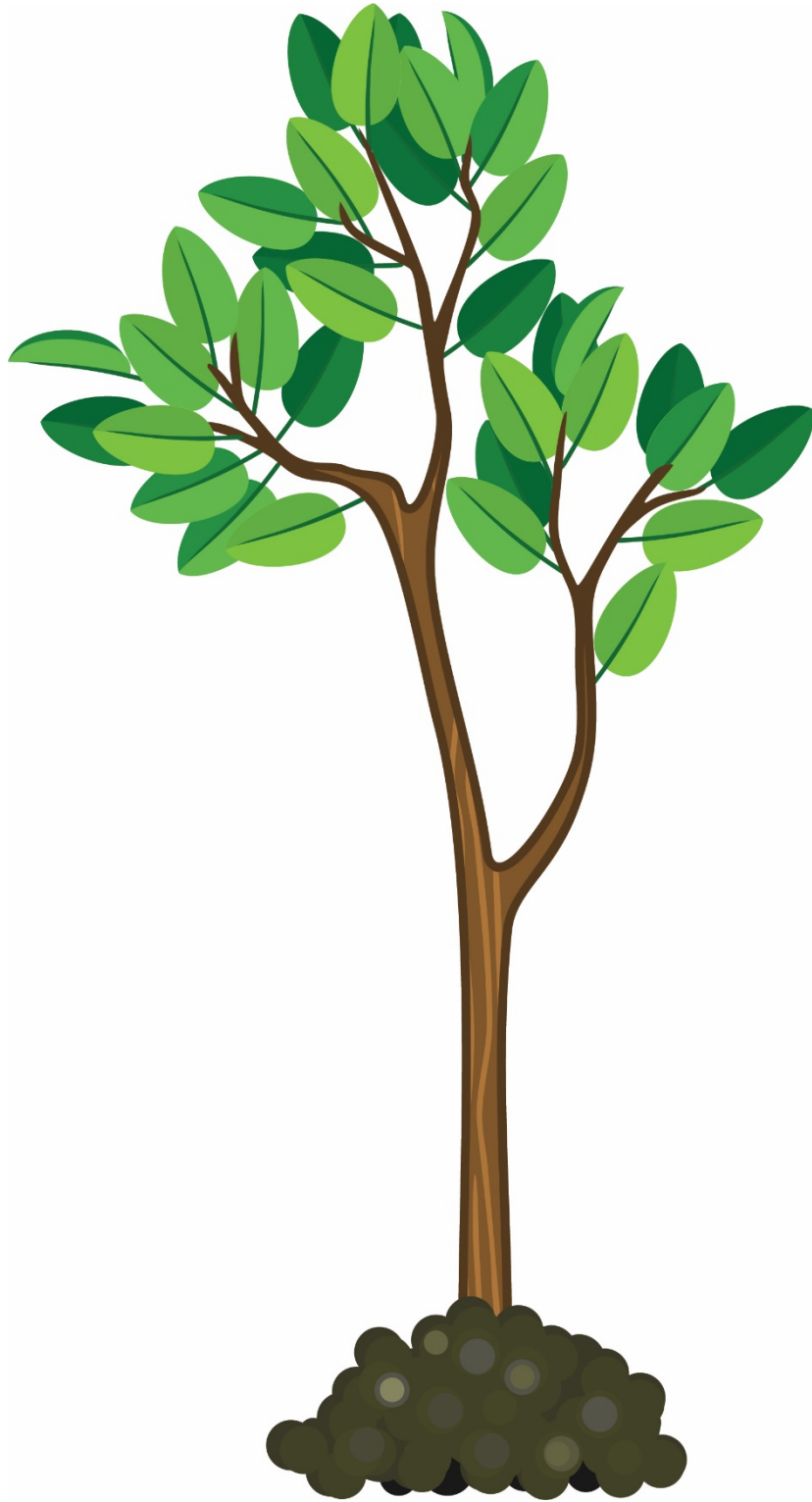
- Ask a student with a raised hand: *if you wanted to try this at home, how might you ask your grown-ups?*
- You might also ask additional questions like, *where could you buy pears? What else do you remember about pears?*

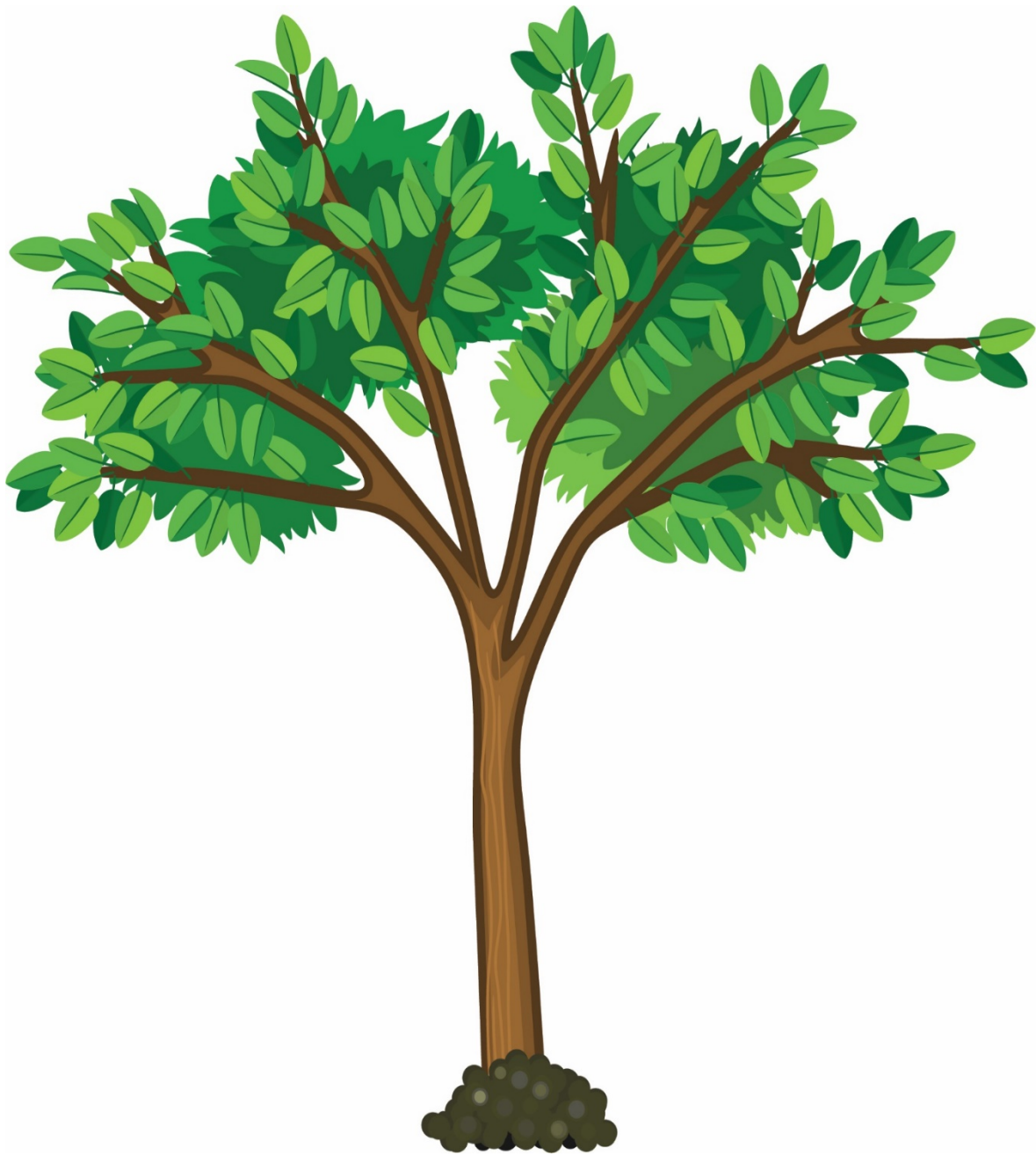
\*Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.



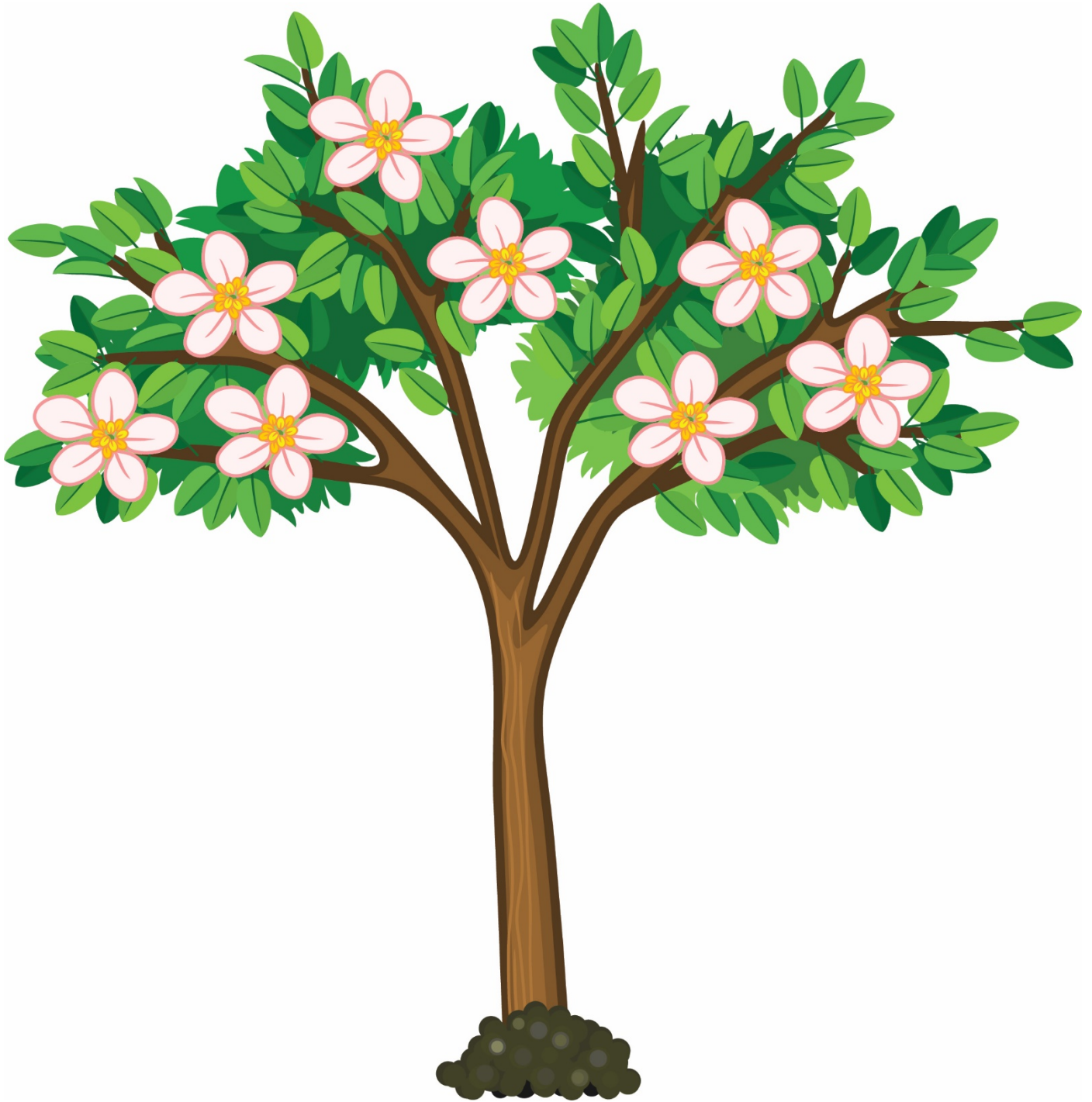


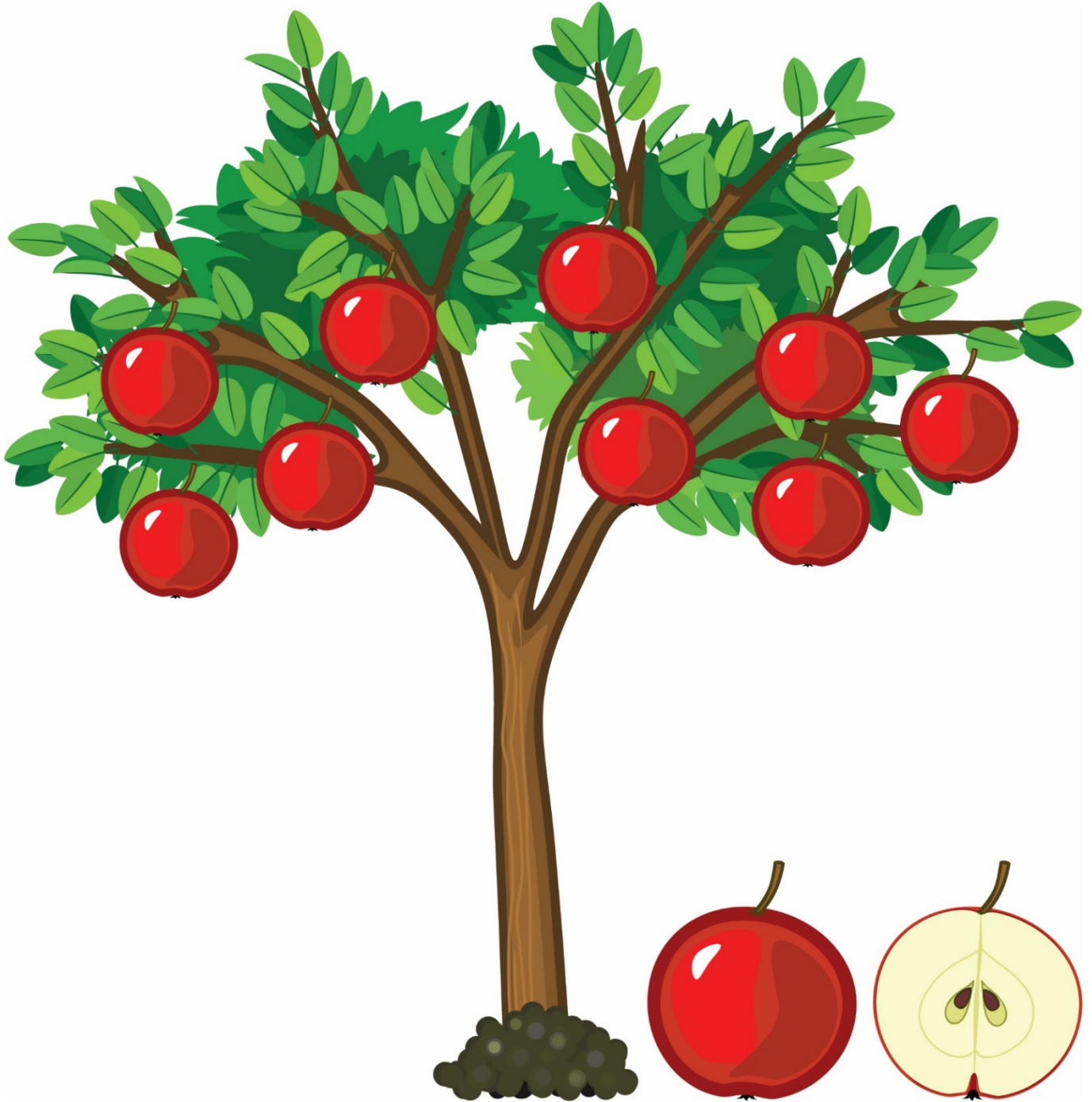












## Additional Materials

### Physical Activity

In Celebration of Farm to School Month: [“Stories in Motion: Helping on the Farm.”](#) (page 64)  
More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Pears

- Pears don't ripen well on the tree. They are harvested when fully grown but not yet fully ripe.
- Pears are hand-picked, placed in orchard bins and delivered to packing houses, where they are immediately cooled to help ripen consistently.
- To initiate ripening, bring pears to room temperature. Place them in a paper sack on the counter for faster ripening. Refrigerate pears after ripe or to slow the ripening process.
- Pears have a core, which is a hard center part that contains the seeds. We do not eat the core. Eating the skin of the pear increases fiber intake.

### Facts About Pears

- Pears are one of the world's oldest cultivated fruits.
- There are over 3,000 known pear types grown around the world. Look for Red and Green Anjou, Bartlett and Bosc, just to name a few.
- Most of the pears grown in the United States are grown in California, Oregon and Washington. The Bartlett pear is America's favorite pear.
- The wood of a pear tree is one of the best woods for manufacturing high quality woodwind instruments.

### Health Connection

- A medium pear is about 100 calories.
- It is a good source of Vitamin C. Reinforce with your defense shield (Cross arms in front of chest). It helps to fight off germs and heal cuts and scrapes.
- Pears lead the fruits in sources of fiber (especially with the skin on). Reinforce by rubbing your stomach to show how fiber keeps you full longer and helps with digestion.

### References and Resources

<http://usapears.org/pears-and-kids-nutrition/>; <http://usapears.org/pear-varieties/>  
<http://usapears.org/activity-sheets/>  
<https://harvestofthemonth.cdph.ca.gov/Pages/default.aspx>  
<https://snaped.fns.usda.gov/seasonal-produce-guide/pears>; <https://snaped.fns.usda.gov/seasonal-produce-guide/apples>  
<https://spendsmart.extension.iastate.edu/produce-item/pears/>  
<http://www.farmentoschool.org/>  
<http://www.idalsdata.org/fmnp/index.cfm?fuseaction=main.formFarmersMarketDirectory>

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# Sweet Potato

**GRADE**  
**2-3**

**Month: November**

**Time Required: 30 minutes**

**Alternative Tastings: Carrot, Radish, Jicama, Potato**

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will be able to practice naming and celebrating personal qualities.
- Students will be able to identify root vegetables as grown underground.

## Materials

- |  |   |
|--|---|
| <input type="checkbox"/> Picture of a sweet potato plant (above ground view) | <input type="checkbox"/> Water bottle with water                              |
| <input type="checkbox"/> Diagram of a sweet potato plant, showing roots      | <input type="checkbox"/> Rags   |
| <input type="checkbox"/> Whole, raw sweet potato                             | <input type="checkbox"/> Food storage bags                                    |
| <input type="checkbox"/> Cooler  | <input type="checkbox"/> Tasting materials (plates, napkins, etc.)            |
| <input type="checkbox"/> Cleaning wipes                                      | <input type="checkbox"/> Sweet potatoes for cooking (depending on class size) |
| <input type="checkbox"/> Electric skillet                                    | <input type="checkbox"/> Olive oil (or vegetable, canola, etc.)               |
| <input type="checkbox"/> Plastic tote (to transport electric skillet)        | <input type="checkbox"/> Salt   |
| <input type="checkbox"/> Spatula   | <input type="checkbox"/> Pepper   |
| <input type="checkbox"/> Power strip (with long cord)                        | <input type="checkbox"/> Preferred spices (ex: garlic, cumin, etc.)           |

## Preparation

- Wash sweet potatoes; peel and cut into ½” cubes.
- Portion sweet potatoes into food storage bags (one per lesson).
- Add olive oil and spices to the bag.

## Recommended Books

“The Little Sweet Potato” by Amy Beth Bloom  
“Oliver’s Vegetables” by Vivian French

“In the Garden with Dr. Carver” by Susan Grigsby  
“The Creepy Carrots” by Aaron Reynolds

## Standards Connection

This lesson supports the following Iowa Core standards.

### Health Education

[Standards 1, 2, 3, 4, 5, 7, 8](#)

### Science

Second grade - [2-LS4-1](#).  
Biodiversity

Third grade - [3-LS1-1](#).  
LS1.B: Growth and development of organisms

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- “Asking” Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Diverse plants

## Engage

### 1. Introduction: 2 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

\*You may want to preheat your electric skillet for the cooking activity and alert students to the hot skillet. Preheat to medium, depending on the skillet.

### 2. Engage Activity: 5 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

*We all have invisible qualities - personality traits, things we're good at, or things we like. These are things you can't always see just by looking at a person. Share one of your invisible qualities that you love about yourself (for example, maybe you love that you're an excellent cook).*

Think-pair-share: *What is an invisible quality that you love about yourself?*

- *Think to yourself quietly.* Have students close their eyes, put their fingers to their temples, and think real hard.
- Then, have students turn to a partner and share their invisible qualities.
- After a couple minutes, bring the class back together and select students to share out. If you use “pick a stick,” this is a good way to randomly select students to share.

## Explore

### 3. Experiential Learning: 13 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

Show an above-ground picture of a sweet potato plant. *There is something special about this plant that we can't immediately see. This is a sweet potato plant. Other fruits and vegetables we've trusted grow on the parts of the plant we can see above ground.* Then show a diagram of a sweet potato plant to reveal the sweet potatoes and roots. *However, sweet potatoes grow below ground, where we can't see them. This is why a sweet potato is called a “root vegetable.”* Show the raw, whole sweet potato and point out evidence that sweet potatoes are root vegetables (rough peel, root hairs, soil, etc).

Show the bag of prepared potatoes and explain how you washed and prepared them and how you'll be cooking them. Before you add the potatoes to the preheated electric skillet, ask students to listen very carefully for the “sizzle” noises. Add the sweet potatoes to the skillet. Leave uncovered. Stir occasionally. Cook for 10 minutes or until tender.

Physical activity: While the sweet potatoes are cooking, gather students in a large circle for a game of “hot potato.”

- Play music and start passing around a whole sweet potato to the person next to you.
- If the music stops on you, you need to show the class your favorite dance move. Have the rest of the students copy their move.
- Repeat until desired time.

## Explore (cont'd)

### 4. Tasting Activity: 3 minutes

*The “Tasting Activity” section is when students get to try the fruit or vegetable. Don’t forget to review your food tasting norms (for example, “don’t yuck my yum”).*

Before you pass out any samples, be sure to review your brave tasting rules (for example, don’t yuck my yum, we all try together, etc.). As students receive their samples, ask them to use their senses while they wait.

## Reflect

### 5. Voting Activity: 2 minutes

*This is a time for students to give their opinion on what they tried!*

As students taste the potato, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

### 6. Reflection: 5 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they’ve learned or tried in your lesson. This is an excellent place for students to practice the “Asking Discussion.”*

#### Reflection questions:

- *Will someone share what they liked or loved about the sweet potatoes?* Select a couple students to share.
- *Will someone share what they would change about the sweet potatoes?* Select a couple students to share.
- *Where do root vegetables grow?* Below ground
- *What else do you remember about sweet potatoes?* Rough peel, root hairs, soil on them
- *Raise your hand if you’re excited to go home and tell your family about tasting sweet potatoes.*
  - Ask a student with a raised hand: *if you wanted to try this at home, how might you ask your grown-ups?*
  - You might also ask additional questions like, *where could you buy sweet potatoes?*

Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.









## Additional Materials

### Physical Activity

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Sweet Potatoes

- The sweet potato grows underground; it is the root of the plant. Because it grows under the ground, we scrub the outside to remove soil and germs before we cut it open.
- It is very hard when harvested; when you cook it, it becomes soft.
- Sweet potatoes can be long and thin or short and fat, but always taper at the ends.
- Store sweet potatoes in a cool, dry, well-ventilated container. Do not store in the refrigerator as it will produce a hard center and unpleasant taste.
- Sweet potatoes are usually the size of regular white potatoes. The smooth, thin skin can be eaten. Choose firm sweet potatoes with no signs of decay. Look for uniform shape for even cooking. Some sweet potatoes grow in Iowa.
- Find them in the grocery store fresh, canned or frozen.

### Facts About Sweet Potatoes

- The Native Americans were growing sweet potatoes when Columbus came to America in 1492. By the 16th century, sweet potatoes were being grown in the southern states.
- North Carolina is the top-producing state of sweet potatoes. They produce 50 percent of the nation's annual crop.
- Sweet potatoes are “cured” (placed in a newspaper-lined box) after harvest for about two weeks. During this time, the sweet potato starch changes to sweet sugar.
- Sweet potatoes are different from yams. Most “yams” labeled in the U.S. are actually sweet potatoes.

### Health Connection

- Sweet potatoes are part of the red/orange group in the MyPlate vegetable group. This group is important for our eyes and skin as it has a lot of Vitamin A. Reinforce with super goggles. (Use your fingers to make goggles for your eyes.)
- Sweet potatoes have a lot of Vitamin C, which is important to help cuts heal and keep us healthy. Reinforce with the Vitamin C shield by crossing arms in front of chest.

### References and Resources

<https://snaped.fns.usda.gov/seasonal-produce-guide/sweet-potatoes-yams>

<https://spendsmart.extension.iastate.edu/produce-item/sweet-potato-2/>

<https://harvestofthemonth.cdph.ca.gov/Pages/Downloads.aspx>

[https://fns-prod.azureedge.net/sites/default/files/growit\\_book4.pdf](https://fns-prod.azureedge.net/sites/default/files/growit_book4.pdf)

<https://ncsweetpotatoes.com/>

<https://www.fns.usda.gov/tn/myplate>

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# Kiwi

## GRADE 2-3

**Month: December**  
**Time Required: 30 minutes**  
**Alternative Tastings: Banana**

### Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

### Lesson Objectives

- Students will be able to explain how a kiwi grows
- Students will be able to describe how they support and are supported by their community

### Materials

- ½ kiwi per student
- 1 hula-hoop
- Images of kiwi growing on vines

### Preparation

- If serving halved kiwis, wash and cut into equal halves and store in a clean container.
- If using online pictures and videos, have loaded at the beginning of the lesson.

### Recommended Books

“A Fruit is a Suitcase for Seeds” by Jean Richards  
“I Love to Eat Fruits and Vegetables” by Shelley Admont

### Standards Connection

This lesson supports the following Iowa Core standards.

#### Health Education

[Standards 1, 2, 3, 4, 5, 7, 8](#)

#### Science

Second grade - [2-LS2-2](#).  
Structure and function

Third grade - [3-LS1-1](#).  
LS1.B: Growth and development of organisms

### Lesson Checklist

- Physical Activity
- Tasting
- Voting
- “Asking” Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Plant parts (2nd) & plant growth and development (3rd)

## Engage

### 1. Introduction: 2 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

### 2. Engage Activity: 10 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

Gather students in a large circle. *Today we'll be talking about kiwis, a fruit that grows on a special plant that provides **support**.* Note vocabulary word: support. Define, write out, and repeat the word support. *To give support means you help others grow by giving them what they need. To have support means you're taken care of; you have what you need to grow.* Educator shares a personal example of someone who supports them.

*Now think to yourselves, who supports you? It could be teachers, grandparents, aunts/uncles, neighbors, parents, siblings, friends, people in our community. Think of someone who supports you. Stand up when I call that person...* One by one, share an example of someone who supports the students. Ask several students to share examples of *how* they feel supported by the community member they acknowledge as they stand and sit. After you have run through the list, ask “*did we miss anyone?*” to see if students have any additions.

If time permits, run a similar activity with the prompt, “*think of someone or something you support.*” Educator shares a personal example of someone they support. Ask students to think of someone in their head, and have them stand up when they are ready to share. Once all students are standing, invite them to share aloud. After several/all students have shared, thank them and transition into physical activity.

*Now, we're going to play a game that shows how we can all support each other by working together as a team.* Explain and lead students in the Hula-Hoop Challenge.

Physical Activity: Hula-Hoop Challenge (from [PlayWorks](#))

- Have group form a circle, holding hands. Demonstrate how to get body through the hula-hoop without using hands. Check for understanding.
- Place the hula-hoop over two people's interlocked hands so it cannot escape the circle.
- Explain that the goal of the game is to get the hula-hoop all the way around the circle without anyone letting go of their teammate's hands.
- Have group cheer each other on.

\*\*After completed once, discuss successes and challenges and try again.

Follow-up reflection questions to the game:

- What felt hard about the challenge?
- What did we learn to make it easier for all of us?
- How did we support one another to be successful?

## Explore

### 3. Experiential Learning: 8 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

Have students sit where they will eat (opportunity for 3 deep breaths).

*We're going to taste a fruit called a kiwi. Kiwis grow on **vines**. Note vocabulary word: vine. Define, write out, and repeat the word vine. A vine is a long stem that supports the plant. Just like we need support to grow, vines need support as they grow. Show a [picture of kiwifruit growing on vines](#). The vine grows up and around these posts, using them for support. The bunches of kiwifruit hang off of the vine and are supported by the vine. We're going to watch a short video that shows us how vines grow up a big tree that gives them support.*

Vine video: <https://www.youtube.com/watch?v=fGBIT4ly-Vs> Watch until 1:21 (longer or shorter). Answer any questions and consider re-watching if time permits.

With teacher or student helpers (those passing out fruit must wear gloves), pass out halved kiwis to all students. As students receive their samples, ask them to use their senses while they wait. *Kiwis have fruit and seeds on the inside and skin on the outside.* Ask students to point to the spot on the kiwi where the fruit was attached to the vine (look for small indentation/nub at the long end of the fruit). With partners or table groups, ask students to feel the kiwifruit skin and describe what it feels like to their partner(s). Collect describing words from small groups and write on the board for all to see and read.

*Kiwi skin is special because it's a part of the fruit that we can eat. We don't have to peel it or cut it off; we can eat the fruit whole - the skin on the outside and the fruit and seeds on the inside. So let's try it!*

### 4. Tasting Activity: 3 minutes

*The "Tasting Activity" section is when students get to try the fruit or vegetable. Don't forget to review your food tasting norms (for example, "don't yuck my yum").*

Be sure to review your brave tasting rules (for example, don't yuck my yum, we all try together, etc.). Students are invited to taste the kiwi, first tasting the edible skin on the outside and then the inside fruit.

## Reflect

### 5. Voting Activity: 2 minutes

*This is a time for students to give their opinion on what they tried!*

As students taste the kiwi, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

## Reflect (cont'd)

### 6. Reflection: 5 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion."*

#### Reflection questions:

- *Will someone share what they liked or loved about the kiwi? Select a couple students to share.*
- *Will someone share what they would change about the kiwi? Select a couple students to share.*
- *Will someone share how the skin on the outside of the kiwi tasted compared to the fruit on the inside?*
- *What do kiwis grow on? Vines*
- *What is in the middle of the kiwi? Seeds*
- *Raise your hand if you're excited to go home and tell your family about tasting a kiwi.*
- *Ask a student with a raised hand: if you wanted to try this at home, how might you ask your grown-ups?*
- *You might also ask additional questions like, where could you buy kiwis?*

Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.



## Additional Materials

### Physical Activity

[“Stories in Motion: 3-2-1 Blast-off! A Trip to the Moon”](#) (page 55) (a tie into the lesson on fueling our bodies like rockets).

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Kiwi

- Kiwi is usually eaten raw. It can be eaten whole like an apple or cut into quarters like an orange. You can cut the kiwi in half and scoop out the flesh with a spoon. The skin can be eaten or the kiwi can be peeled. Be sure to wash the kiwi first.
- Kiwi grows on vines on a trellis, much like how grapes are grown.
- Kiwi is a berry and is available year-round. It is usually sold individually. Select firm, unblemished fruit. The size does not affect the flavor.
- Ripe kiwi is plump and gives slightly to pressure. If it is too hard, it is not ready to eat yet. You can help ripen it faster by putting it in paper bag with an apple or banana. Kiwi will keep several days at room temperature and up to four weeks in the refrigerator.
- The serving size for school food service is two whole kiwi (2 whole kiwi = ½ cup serving).

### Facts About Kiwi

- Kiwi originated in China over 700 years ago where it was called Yang Tao. In 1906, the seeds were sent to New Zealand and renamed Chinese Gooseberry. Later, the Chinese Gooseberry was renamed “kiwifruit” after New Zealand’s national bird the “kiwi.”
- Kiwi can be used as a natural meat tenderizer (meaning it helps make the meat more tender). Just rub a cut end of kiwi over the meat and let stand 10-15 minutes.
- California produces 98 percent of kiwi grown in the United States. Italy, New Zealand, Chile, France and Japan also grow kiwi.

### Health Connection

- High in Vitamin C to fight off germs and heal cuts and wounds; good for our gums. Reinforce with defense shield (Cross arms in front of your chest).
- Good source of fiber to help with digestion and help you feel full. Reinforce by rubbing stomach.
- Phytochemicals: natural plant chemicals that may help prevent disease and promote good health. Some phytochemicals give fruits and vegetables their color so it’s important to eat a variety of different colored fruits and vegetables.

### References and Resources

<https://spendsmart.extension.iastate.edu/produce-item/kiwi-fruit/>

<https://snaped.fns.usda.gov/seasonal-produce-guide/kiwifruit>

<http://harvestofthefmonth.cdph.ca.gov/Pages/Downloads.aspx>

<https://fruitsandveggies.org/fruits-and-veggies/kiwifruit/>

This institution is an equal opportunity provider.  
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# Garbanzo Beans

**GRADE**  
**2-3**

**Month:** January

**Time Required:** 30 minutes

**Alternative Tastings:** Edamame, Black Beans, Black Eye Peas

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will be able to recognize garbanzo beans, and other beans, as seeds.
- Students will be able to determine that seeds come in all different shapes, sizes, and colors.

## Materials

- |   |   |
|---|---|
| <input type="checkbox"/> Food storage bags with assorted seeds in different shapes, sizes, and colors | <input type="checkbox"/> Hand towel                             |
| <input type="checkbox"/> 6 egg carton halves  | <input type="checkbox"/> Cleaning wipes                         |
| <input type="checkbox"/> Cooler   | <input type="checkbox"/> Air fryer or electric skillet          |
| <input type="checkbox"/> Water bottle with water (for cleaning)                                       | <input type="checkbox"/> Power strip and extension cord         |
| <input type="checkbox"/> Serving cups or napkins  | <input type="checkbox"/> Olive oil (or canola, vegetable, etc.) |
| <input type="checkbox"/> Serving utensil  | <input type="checkbox"/> Salt, pepper, other spices             |
| <input type="checkbox"/> Gloves   | <input type="checkbox"/> 15 oz can garbanzo beans               |

## Preparation

- Rinse the garbanzo beans and pat dry with a paper towel. Store in a container or food storage bag. The drier the bean, the faster they'll cook and the crispier they'll be. You may want to pat dry again immediately before cooking.

## Recommended Books

"The Sandwich Swap" by Queen Rania Al Abdullah and Kelly DiPucchio

"One Bean" by Anne Rockwell

"Oh Say Can You Seed?" by Bonnie Worth

## Standards Connection

This lesson supports the following Iowa Core standards.

### Health Education

[Standards 1, 2, 3, 4, 5, 7, 8](#)

### Science

Second grade - [2-LS2-2](#).  
Structure and function

Third grade - [3-LS1-1](#).

LS1.B: Growth and development of organisms

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- "Asking" Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Seeds and plant diversity

## Engage

### 1. Introduction: 5 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the days lessons.*

As soon as you arrive in the classroom, immediately plug in the electric skillet or air fryer and preheat. Explain to students how you’ll cook the garbanzo beans and how to stay safe while using heat sources.

Follow these cooking instructions:

- Air fryer: Preheat to 390 degrees. Once preheated, add your drained and dried chickpeas, 1 tbsp oil, and seasoning. Set the timer to 10 minutes. Shake the basket once or twice throughout the lesson. After 10 minutes, check for crispiness.
- Electric skillet: Preheat skillet with 1-2 tbsp oil over medium or medium-low heat (this depends on your electric skillet). Once hot, add dry chickpeas and seasoning and leave uncovered. Set a timer to 10 minutes. Stir occasionally. After 10 minutes, check for crispiness.

\*\*\*Cooking Tips:

- Feel free to delegate responsibilities with the teacher. Have them stir the beans, while you work with the class. Or vice versa.
- Email the teacher ahead of time to let them know you plan on using a heat source and will need a table close to an outlet, if possible.
- If you notice students getting distracted by the noise, smells, sights of cooking, use that as a teaching moment. Pause and ask students to smell the air together. Or listen very quietly for any sizzling noises. These are good interruptions!

### 2. Engage Activity: 10 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

#### The Great Wind Blows

Have students gather in a circle, and introduce the game, The Great Wind Blows. Explain that a person will stand in the middle of the circle and say something that they like about themselves. Give an example such as, *I like that I’m good at drawing*. Explain, *If that’s true for you then move to a new seat in the circle. If there’s no more left, then you’re the person in the middle, and they get to say, “I like that...”* Have everyone quietly think to themselves about something they like about themselves, then play several rounds of the game, so everyone gets to move.

This engage activity is also the physical activity. As students catch on, feel free to introduce more physical activity, such as hopping to their new spot. Or crawling to their new spot.

When you finish, transition by saying, *Everyone in this class is all so different, and some of you shared characteristics*. Give examples from the activity that demonstrate shared characteristics.

## Explore

### 3. Experiential Learning: 7 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

As you know, today we're trying garbanzo beans, which are a type of bean. Did you know that all beans are seeds? Seeds are the part of the plant that can grow into a new plant. And just like you all, seeds can have lots of different and similar characteristics, like size, shape, or color.

#### Seed Sorting Activity

We're going to investigate and sort several kinds of seeds that have different traits. Pass out assorted seeds (be sure to include some assorted beans) and halved egg cartons to small groups. Have groups inspect the beans and sort into egg cups by color, size, or shape. Encourage students to discuss their observations with their groups. At the end of the activity, select 2-3 students to share their observations. *Did anyone see any seeds that looked familiar? Did anyone see beans?*

\*\*\*Cooking tip: While students are doing this activity, check in on the chickpeas. While students continue working, start prepping samples to be passed out once the activity is done.

### 4. Tasting Activity: 3 minutes

*The "Tasting Activity" section is when students get to try the fruit or vegetable. Don't forget to review your food tasting norms (for example, "don't yuck my yum").*

Before you pass out any samples, be sure to review your brave tasting rules (for example, don't yuck my yum, we all try together, etc.). As students receive their samples, ask them to use their senses while they wait.

## Reflect

### 5. Voting Activity: 2 minutes

*This is a time for students to give their opinion on what they tried!*

As students taste the crispy garbanzo beans, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

### 6. Reflection: 3 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion."*

## Reflect (cont'd)

### Choral Response:

A choral response is where you pose a question to the class that has a clear answer and can be answered in a few words or less and you have the students all answer at once. It's nice to have a visual cue to teach the kids. For example you could say, *I'm going to raise my arms and ask a question to the class. When I lower my arms that means it's the class' turn to answer. Let's practice...*

- *What month is it?* (January)
- *Whose class am I in?*
- *What food did we try today?* (Garbanzo beans)
- *What part of the plant are beans?* (Seeds)
- *Why are seeds important to plants?* (They can grow into new plants.)

### Asking Discussion:

*Raise your hand if you're excited to go home and tell your family about tasting garbanzo beans.*

- Ask a student with a raised hand: *if you wanted to try this at home, how might you ask your grown-ups?*
- You might also ask additional questions like, *where could you buy garbanzo beans?*

Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.

## Additional Materials

### Physical Activity

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Garbanzo Beans

- Available in dried, canned and frozen forms.
- Beans and peas contain plant protein, iron and zinc, similar to nutrients in meat, poultry and fish, so they can be represented in the protein group.
- Beans and peas contain dietary fiber, folate and potassium, which can be represented in the vegetable group. They can count as a protein serving or a vegetable serving.
- One-half cup of cooked beans provides about 8 grams of protein.
- Beans and peas are mature forms of legumes and include kidney beans, pinto beans, black beans, black-eyed peas, garbanzo beans (chickpeas), split peas and lentils.
- Chickpeas grow in pods on small bushes; one seed pod contains 2-3 chickpeas.

### Facts About Garbanzo Beans

- One of the world's oldest cultivated crops. Cultivation goes back 7,000 years in some parts of the world.
- Chickpea and garbanzo beans are the same thing and are a member of the pea family.
- The garbanzo bean has a small beak that looks like a chick's beak, giving it the name chickpea.
- The kidney bean is shaped like a kidney.
- Some heirloom varieties of beans are: Eyes of Goat, Tongues of Fire and Mortgage Lifters. Heirloom vegetables are grown from seeds that have been passed down through generations.

### Health Connection

- Chickpeas are a good source of protein. Reinforce by flexing muscles.
- They are also high in fiber. Rub stomach to reinforce they help food move through the digestive tract and help keep us full longer.

### References and Resources

[https://fns-prod.azureedge.net/sites/default/files/diginposter\\_dancing.pdf](https://fns-prod.azureedge.net/sites/default/files/diginposter_dancing.pdf)  
<https://spendsmart.extension.iastate.edu/recipe/after-school-hummus/>  
<https://www.eatright.org/food/planning-and-prep/recipes/pizza-hummus-recipe>  
<https://www.agmrc.org/commodities-products/vegetables/chickpeas>  
<http://www.iowapbs.org/iowaingredient/story/1829/growing-black-beans>  
[https://fns-prod.azureedge.net/sites/default/files/gd\\_flashcards\\_0.pdf](https://fns-prod.azureedge.net/sites/default/files/gd_flashcards_0.pdf)

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# Pineapple

**GRADE**  
**2-3**

**Month:** February  
**Time Required:** 30 minutes  
**Alternative Tastings:** Banana

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will conclude that pineapples grow far away from Iowa.
- Students will be able to compare the food miles of different fruits.

## Materials

- |   |   |
|---|---|
| <input type="checkbox"/> Paper plates and/or cutting boards                           | <input type="checkbox"/> ½ pineapple per 25 students      |
| <input type="checkbox"/> Disposable or reusable plastic kid-knives (for each student) | <input type="checkbox"/> 4 bananas per 25 students        |
| <input type="checkbox"/> Forks  | <input type="checkbox"/> Tajin seasoning (optional)       |
| <input type="checkbox"/> Knife  | <input type="checkbox"/> A whole pineapple                |
| <input type="checkbox"/> Cutting board  | <input type="checkbox"/> Fruit images (see below)         |
| <input type="checkbox"/> Whole pineapple  | <input type="checkbox"/> Recipe card template (see below) |
| <input type="checkbox"/> 1 ½ apples per 25 students                                   | <input type="checkbox"/> Food mile index (see below)      |

## Preparation

- Cut the pineapple into 1 ½ inch cubes (or big enough for a student to cut into 2 or more pieces).
- Wash the apples.
- You may cut apples and bananas in advance, but there will likely be browning.

## Recommended Books

“Before We Eat: From Farm to Table” by Pat Brisson  
 “Pineapple Pete’s Remarkable Feat” by Josephine Baskin Minow  
 “How Did That Get in My Lunchbox?” by Chris Butterworth

## Standards Connection

This lesson supports the following Iowa Core standards.

**Health Education**  
[Standards 1, 2, 3, 4, 5, 7, 8](#)

**Science**  
 Grade 2 - [2-LS4-1](#)  
 LS4.D Biodiversity

Grade 3 - [3-ESS2-2](#)  
 ESS2.D Climate

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- “Asking” Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Plant diversity (2nd) and climate (3rd)

## Engage

### 1. Introduction: 2 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

Show students three large, printed images of fruit and have them say the fruit names with you (choral response): apple, pineapple, banana. Place the pictures in a line across the classroom: the apple toward the front of the room, the pineapple in the middle of the room, and the banana at the back of the room.

### 2. Engage Activity: 8 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

With students seated at their desks or carpet, say, *I want you to think quietly to yourself and decide, of these three fruits, which one is your favorite to have as a snack? Apples, pineapples, or bananas? Think in your head and when I say “go,” you will quietly walk to the picture of your favorite fruit.* Give students 5-10 seconds to think; say “go.” In groups, have students discuss their favorite fruit. Ask if students know where those fruits are grown; do they grow near Iowa or far away from Iowa?

Introduce the concept of food miles. Explain, *The United States gets most of its pineapples from Costa Rica. That means that when you eat a pineapple it's traveled thousands of miles to get to you. In fact, all of the fruits we have available this time of year were grown outside of Iowa, like pineapple. What makes it hard for plants to survive in our winter weather?* Standing at the front of the room (closest to the apple group), explain, *Apples grow really well in Iowa during the summer and fall, but it's winter, so we have to get apples from FAR away states like Washington where they have not-so-cold winters.* Write the word “far” on the board. *Pineapples grow even FARTHER away, in hot and wet tropical areas like Costa Rica.* Write the word “farther” on the board. *And bananas grow the FARTHEST away in tropical areas like Peru.* Write the word “farthest” on the board. Have students repeat these words.

Optional Visual: Students can move to the front of the room to look at the visuals together.

[Google Earth map of locations](#): show to demonstrate near, far, and farther (select *Present* and move through 7 slides to show apples in Washington, pineapples in Costa Rica, bananas in Peru).

[Google Map of locations](#): show lines and distances between Washington, Costa Rica, and Peru.

#### Physical Activity

With students gathered together in the front of the room or at their seats, say, *We're going to play a movement game while listening to a song about the meaning of the words “near” and “far.” When you hear the word “near,” you should squat down onto the ground (demonstrate). When you hear the word “far,” you should jump up into the air (demonstrate). Ready?* On smart screen/projector, play the [Sesame Street - “Near and Far” Song](#).

Feel free to get creative with these older grades. For example, you can make this even more fun by doing dance moves when they hear the words “near” or “far.”

### 3. Experiential Learning: 8 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

Have students sit at their desks (opportunity for 3 deep breaths).

#### Far, Farther, Farthest Fruit Salad

While holding up a whole pineapple, say, *For our tasting today, we're going to try our "farther fruit" from our activity: pineapple. We can eat the bright yellow inside of the pineapple after we chop off the crown and the skin* (demonstrate if preparing tasting from fresh, whole pineapple or explain that this has already been done). *You're going to be a chef today and prepare your own fruit salad using the fruits from our earlier activity: pineapple, apple, and banana. This is called a Far, Farther, Farthest Fruit Salad, to describe where our fruit came from.* Using choral response: *the apple grows **far**, the pineapple grows **farther**, and the banana grows **farthest** away from Iowa.* This is also an excellent time to remind students that apples can grow near, right here in Iowa, but not during the cold winter months. In Iowa, they are typically ripe and harvested in the fall.

Before passing out materials, be sure to review the following safety:

- Always cut down.
- Always place your knife down on the table when you're not using it.
- Use pinching fingers or the bear claw to protect your fingers.

Pass out paper plates to each student. Paper plates can serve as both their cutting board and their plate, if you're not using reusable cutting boards. *Before* passing out knives, pass out the first piece of fruit and demonstrate how to properly cut it up. *Then* pass out knives. (Passing out plates and fruit first means no idle hands holding knives while waiting for fruit).

Continue passing out fruit, demonstrating how to cut.

### 4. Tasting Activity: 2 minutes

*The "Tasting Activity" section is when students get to try the fruit or vegetable. Don't forget to review your food tasting norms (for example, "don't yuck my yum").*

Explain to students that *we're going to taste the pineapple first.* Be sure to review your brave tasting rules (for example, don't yuck my yum, we all try together, etc.). Ask students to use their senses while they wait until the entire class is ready to taste the pineapple together.

# Reflect

### 5. Voting Activity: 2 minutes

*This is a time for students to give their opinion on what they tried!*

As students taste the fruit salad, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.



## Reflect (cont'd)

### 6. Reflection: 8 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion".*

Far, Farther, Farthest Fruit Salad Recipe Cards (recipe card worksheet below).

*To finish today's lesson, you're going to write a recipe for your very own "Far, Farther, Farthest Fruit Salad. You must include today's Pick a Better Snack: pineapple!"* Pass out recipe cards and have students think up two other fruits that they'd like to add to their own fruit salad.

Once students have written down their names and the names of three fruits, display the Food Miles Index (attached below) on the board. Instruct students to look up the food miles for their fruits, then circle whether that fruit is far, farther, or farthest.

#### Asking Discussion:

*Raise your hand if you're excited to go home and tell your family about tasting pineapple.*

- Ask a student with a raised hand: *if you wanted to try this at home, how might you ask your grown-ups?*
- You might also ask additional questions like, *what is something you remember about pineapple? where could you buy pineapple?*

Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.

## Food Miles Index

These are estimates of how far away our foods often travels to get to Iowa. If there's a \* next to a fruit that means it can also be grown right here in Iowa!

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>*Apples - 1,700 miles</b>     | <b>Lime - 1,900 miles</b>         |
| <b>*Apricots - 2,000 miles</b>   | <b>Lychee - 6,500 miles</b>       |
| <b>Banana - 3,520 miles</b>      | <b>Mango - 7,500 miles</b>        |
| <b>*Blackberry - 1,650 miles</b> | <b>*Nectarine - 6,500 miles</b>   |
| <b>*Blueberry - 1,700 miles</b>  | <b>Orange - 1,300 miles</b>       |
| <b>*Cantaloupe - 2,000 miles</b> | <b>*Peach - 6,500 miles</b>       |
| <b>*Cherry - 2,000 miles</b>     | <b>*Pear - 1,700 miles</b>        |
| <b>Clementine - 2,000 miles</b>  | <b>Pineapple - 3,400 miles</b>    |
| <b>Cranberry - 1,100 miles</b>   | <b>*Plum - 6,500 miles</b>        |
| <b>*Grape - 2,000 miles</b>      | <b>Pomegranate- 7,500 miles</b>   |
| <b>Grapefruit - 5,000 miles</b>  | <b>Prickly Pear - 1,900 miles</b> |
| <b>Guava - 8,000 miles</b>       | <b>Quince - 1,900 miles</b>       |
| <b>*Honeydew - 2,000 miles</b>   | <b>*Raspberry - 2,000 miles</b>   |
| <b>Kiwi - 5,100 miles</b>        | <b>*Strawberry - 1,900 miles</b>  |
| <b>Lemon - 1,900 miles</b>       | <b>*Watermelon - 2,000 miles</b>  |

\_\_\_\_\_’s Far, Farther, Farthest Fruit Salad Recipe

|  |  |  |
|--|--|--|
| <u>Fruit:</u>  | <u>Fruit:</u>  | <u>Fruit:</u>  |
| <u>Miles:</u>  | <u>Miles:</u>  | <u>Miles:</u>  |
| Circle if this fruit is <ul style="list-style-type: none"> <li>● Far</li> <li>● Farther</li> <li>● Farthest</li> </ul> | Circle if this fruit is <ul style="list-style-type: none"> <li>● Far</li> <li>● Farther</li> <li>● Farthest</li> </ul> | Circle if this fruit is <ul style="list-style-type: none"> <li>● Far</li> <li>● Farther</li> <li>● Farthest</li> </ul> |

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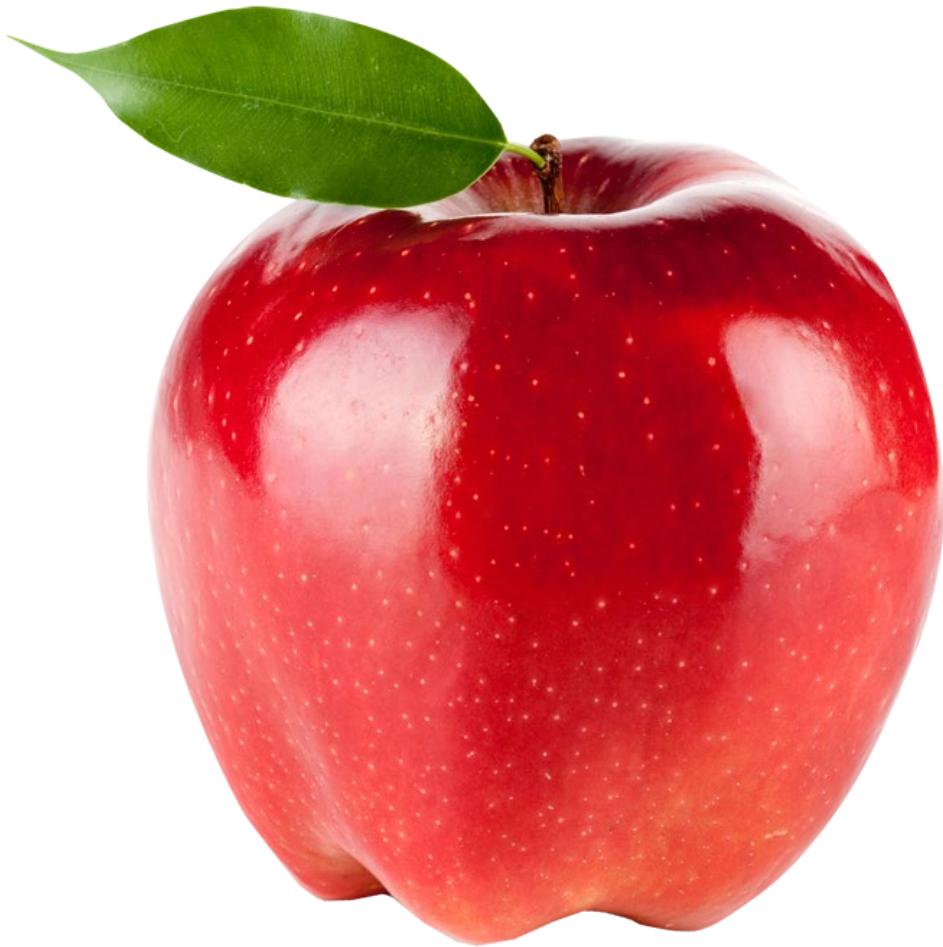
\_\_\_\_\_’s Far, Farther, Farthest Fruit Salad Recipe

|  |  |  |
|--|--|--|
| <u>Fruit:</u>  | <u>Fruit:</u>  | <u>Fruit:</u>  |
| <u>Miles:</u>  | <u>Miles:</u>  | <u>Miles:</u>  |
| Circle if this fruit is <ul style="list-style-type: none"> <li>● Far</li> <li>● Farther</li> <li>● Farthest</li> </ul> | Circle if this fruit is <ul style="list-style-type: none"> <li>● Far</li> <li>● Farther</li> <li>● Farthest</li> </ul> | Circle if this fruit is <ul style="list-style-type: none"> <li>● Far</li> <li>● Farther</li> <li>● Farthest</li> </ul> |

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**APPLE**



**BANANA**



# PINEAPPLE



## Additional Materials

### Physical Activity

[“Stories in Motion: Planes, Trains and Automobiles”](#) (page 67)

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Pineapple

- Pineapple does not grow in Iowa. It requires a tropical or subtropical environment. It can grow year-round in Hawaii, Southern California and Southern Florida.
- Purchase pineapples that are plump and fresh-looking with a fresh green crown top. Avoid soft or dark spots with dry-looking leaves. A ripe pineapple is usually mostly yellow, especially at the base. The inside can be nearly white to yellow.
- The leafy crown, rind and core are usually cut off before eating.
- Pineapples do not ripen after they have been picked.
- Pineapple is sold fresh, canned, dried, as juice and frozen.

### Facts About Pineapple

- Pineapple originated in Brazil and Paraguay in South America.
- Christopher Columbus may have carried it back to Spain.
- The name pineapple in English (or piña in Spanish) comes from the similarity of the fruit to a pinecone.
- The pineapple crown is used to plant a new plant.
- It takes 18-20 months to get the first fruit. The next crop takes another 15 months.
- The pineapple is a symbol of hospitality.

### Health Connection

- Pineapple is high in Vitamin C, which helps us fight off germs, heal cuts and wounds and keep our gums healthy. Reinforce with defense shield (Cross arms in front of chest).
- Pineapple is a good source of fiber, for healthy digestion and to make you feel full. Reinforce by rubbing stomach.

### References and Resources

<https://snaped.fns.usda.gov/seasonal-produce-guide/pineapples>

<https://fruitsandveggies.org/fruits-and-veggies/pineapple/>

[How to Grow A Pineapple for Kids - YouTube](#)

[https://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/figure\\_food\\_production.html](https://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/figure_food_production.html)

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# Sugar Snap Peas

**GRADE**  
**2-3**

**Month: March**

**Time Required: 30 minutes**

**Alternative Tastings: Green Peas, Snow Peas, Okra**

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will be able to identify that peas grow in pods.
- Students will be able to describe how peas plants climb using trellises.

## Materials

- |   |   |
|---|---|
| <input type="checkbox"/> 2 tbsp sesame or olive oil   | <input type="checkbox"/> Water bottle with water (for cleaning) |
| <input type="checkbox"/> 1 lb sugar snap peas, washed   | <input type="checkbox"/> Tasting plates or cups                 |
| <input type="checkbox"/> 1 tsp minced garlic (in a jar)   | <input type="checkbox"/> Serving utensil                        |
| <input type="checkbox"/> 1 tbsp reduced-sodium soy sauce or tamari (a gluten free alternative, but check label to verify) | <input type="checkbox"/> Gloves                                 |
| <input type="checkbox"/> 1 tsp chili oil (optional)   | <input type="checkbox"/> Hand towel                             |
| <input type="checkbox"/> Sesame seeds (optional)  | <input type="checkbox"/> Cleaning wipes                         |
| <input type="checkbox"/> Cooler   | <input type="checkbox"/> Electric skillet                       |
| <input type="checkbox"/> Ice pack   | <input type="checkbox"/> Power strip and extension cord         |
| <input type="checkbox"/> Measuring spoons   |   |

## Preparation

- Wash the peas.
- Search the internet for pictures of pea trellises. There are some really creative ones out there!

## Recommended Books

“First Peas to the Table” by Susan Grigsby

“Gregor Mendel: The Friar Who Grew Peas” by Cheryl Bardoe

## Standards Connection

This lesson supports the following Iowa Core standards.

**Health Education**  
[Standards 1, 2, 3, 4, 5, 7, 8](#)

**Science**  
Second grade - [2-LS2-2](#)  
Structure and function

Third grade - [3-LS1-1](#)  
LS1.B: Growth and development of organisms

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- “Asking” Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Plants structures (2nd) & plant life cycles (3rd)



## Engage

### 1. Introduction: 5 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

As soon as you arrive in the classroom, immediately plug in the electric skillet and preheat. Explain to students how you'll cook the sugar snap peas and how to stay safe while using heat sources. Use the following instructions (the recipe is also attached):

Follow these cooking instructions:

1. Heat sesame oil in a skillet over medium heat or medium-low heat (this depends on how hot your electric skillet gets).
2. Add sugar snap peas to hot oil. Cook for 5-7 minutes, uncovered.
3. Add garlic and soy sauce or tamari, stir. Cook for another 1-2 minutes. Be careful not to burn the sauce; tamari and soy sauce burn quickly.
4. Remove from heat and toss in chili oil. Sprinkle with sesame seeds. Enjoy!

\*\*\*Cooking Tips:

- Feel free to delegate responsibilities with the teacher. Have them stir the peas, while you work with the class. Or vice versa.
- Email the teacher ahead of time to let them know you plan on using a heat source and will need a table close to an outlet, if possible.
- If you notice students getting distracted by the noise, smells, sights of cooking, use that as a teaching moment. Pause and ask students to smell the air together. Or listen very quietly for any sizzling noises. These are good interruptions!

### 2. Engage Activity: 3 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

At the carpet, *There's a special saying about good friends - that they're “2 peas in a pod” (write saying on board or on doc cam). Let's read that together: (together) “2 peas in a pod.” This means that 2 people are like each; that they enjoy doing the same things; that they're close.* Educator shares example: *I'm “2 peas in a pod with \_\_\_\_\_” because we both like to \_\_\_\_\_.” I want to know, who are you 2 peas in a pod with?*

Choral Response:

- *When I say the magic word, “peas,” I want all of you to say the name of your good friend. Ready? Peas!* Pause to listen to answers. Listen and try to pick out a couple names you heard, repeat them back to the class.
- *Everybody quietly think of your favorite activity to do with your good friend. When I say the magic word, “peas,” I want you to say your answer. Ready? Peas!* Listen and try to pick out a couple activities you heard, repeat them back to the class.

When you finish, transition by saying, *Excellent! Isn't it great to have someone who you get along with.*

**3. Experiential Learning: 10 minutes**

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

Today we're trying snap peas. On a snap pea plant, the peas - which are seeds - grow inside of a pod that we can eat (draw diagram on board or doc cam). The pod protects the seeds. Note vocabulary word: pod. Define, write out, and repeat the word pod. Many peas grow inside of 1 pod. There can be 2 peas in a pod, or many more!

We're going to watch a video of a dancing pea plant to see how they grow. [Dancing Pea Plant](#) - watch video and do a dance. Show the video multiple times and have students contribute a dance move each time. The beat drops at 30 seconds. Introduce your own dance: start at the ground, bouncing, then when the beat drops, start waving your arms and "pull" yourself up like a pea plant. Transition: *When I say the magic word, "peas," we'll quietly move to sit at our desks* (opportunity for 3 deep breaths).

**Trellis Activity:** We saw how the pea plant waved around in the air as it was growing (reenact dance move). Those curly waving arms are pea shoots want to hold on to something for support. To grow tall and strong, the pea plant needs to climb a **trellis**. Note vocabulary word: trellis. Define, write out, and repeat the word trellis. *The purpose of a trellis is to support climbing plants; the climbing pea plant can wrap around it and add decoration to a garden.* Show creative examples of pea trellises found on the internet. In small groups or individually, support students to design a fantastical, imaginative, pea trellis of their dream, using the sheet provided. Share an example of your own!

\*\*\*Cooking tips:

- While students are doing this activity, check in on the peas. While students continue working, start prepping samples to be passed out once the activity is done.
- Have another lesson and don't have time to wash the skillet? Simply squirt water into the hot skillet to cool it down, then wipe it clean with a rag. Do not wait more than 4 hours before washing with soap.

**4. Tasting Activity: 5 minutes**

*The "Tasting Activity" section is when students get to try the fruit or vegetable. Don't forget to review your food tasting norms (for example, "don't yuck my yum").*

Before you pass out any samples, be sure to review your brave tasting rules (for example, don't yuck my yum, we all try together, etc.). As students receive their samples, ask them to use their senses while they wait.

## Reflect

**5. Voting Activity: 3 minutes**

*This is a time for students to give their opinion on what they tried!*

As students taste the stir fry, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

## Reflect (cont'd)

### 6. Reflection: 5 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion."*

#### Choral Response:

*I'm going ask a question and you're going to quietly think to yourself. When I say the magic word, "peas," you can say your answer aloud. Let's practice...*

- What month is it? (March)*
- Whose class am I in?*
- What food did we try today? (Sugar Snap Peas)*
- What do peas grow in? (Pods)*
- Why is the pod important? (It protects the seeds/peas)*
- What do peas grow on? (A trellis)*

#### Asking Discussion:

*Raise your hand if you're excited to go home and tell your family about tasting sugar snap peas.*

- Ask a student with a raised hand: if you wanted to try this at home, how might you ask your grown-ups?*
- You might also ask additional questions like, where could you buy sugar snap peas?*

*\*Share printed copies of Sugar Snap Pea Stir Fry recipe for students to take home.*

*Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.*

## Design your Dream Pea Trellis.

|                     |
|---------------------|
| <b>DESIGN NAME:</b> |
| <b>DESIGN:</b>      |

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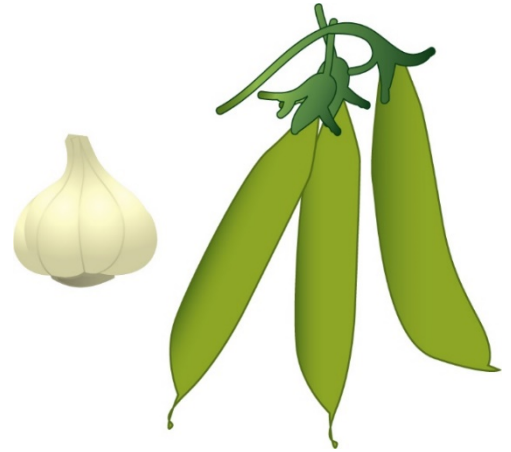
## Sugar Snap Pea Stir Fry

### Ingredients:

- 2 tbsp. sesame oil (olive oil will work too)
- 1 lb. sugar snap peas
- 1 tsp. minced garlic
- 1 tbsp. reduced-sodium soy sauce (or tamari – check for gluten free)
- 1 tsp. chili oil (optional)
- Sesame seeds (optional)

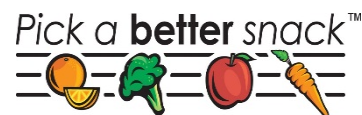
### Directions:

1. Heat sesame oil in a skillet over medium heat.
2. Add sugar snap peas to hot oil. Cook for 5-7 minutes, uncovered.
3. Add garlic and soy sauce or tamari, stir. Cook for another 1-2 minutes. Be careful not to burn the sauce; tamari and soy sauce burn quickly.
4. Remove from heat and toss in chili oil. Sprinkle with sesame seeds. Enjoy!



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## Sugar Snap Pea Stir Fry

### Ingredients:

- 2 tbsp. sesame oil (olive oil will work too)
- 1 lb. sugar snap peas
- 1 tsp. minced garlic
- 1 tbsp. reduced-sodium soy sauce (or tamari – check for gluten free)
- 1 tsp. chili oil (optional)
- Sesame seeds (optional)

### Directions:

1. Heat sesame oil in a skillet over medium heat.
2. Add sugar snap peas to hot oil. Cook for 5-7 minutes, uncovered.
3. Add garlic and soy sauce or tamari, stir. Cook for another 1-2 minutes. Be careful not to burn the sauce; tamari and soy sauce burn quickly.
4. Remove from heat and toss in chili oil. Sprinkle with sesame seeds. Enjoy!



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## Additional Materials

### Physical Activity

[“Get Movin’ Energizer: Hit the Deck”](#) (page 12)

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Sugar Snap Peas

- Peas grow in Iowa. They may be eaten raw or cooked.
- Peas can be found in the grocery store fresh, canned or frozen.
- Peas are a member of the legume family, which includes plants with pods enclosing fleshy seeds. Peas do not take as long to cook as dried legumes, such as split peas and pinto beans.
- Sugar snap peas have an edible, crunchy pod with sweeter, full-sized peas inside.
- Fresh sugar snap pea pods should be firm, bright green and appear ready to burst.
- Keep unwashed sugar snap peas in the refrigerator for up to three days.
- Snow pea pods should be shiny and flat, with very small peas that are barely visible through the pod.

### Facts About Sugar Snap Peas

- Today only 5% of peas grown are sold fresh. Most are canned.
- Peas have been around since ancient times. Some date back to 10,000 years ago.
- Sugar snap peas began in the 1960s by crossing green peas and snow peas.
- The third president of the United States of America, Thomas Jefferson, planted more than 30 kinds of peas in his garden in Monticello, VA.
- There are two types of peas: those with edible pods (sugar snap peas and snow peas) and those with inedible pods (green peas, also called sweet peas or garden peas).
- Sugar snap peas are edible pod peas that are called mange tout, a French term meaning “eat all.”
- Sugar snap peas convert their sugar to starch just hours after harvest. Keep the peas cold to slow down the conversion of sugar to starch to help them stay sweet.

### Health Connection

- Sugar snap peas, snow peas and green peas are excellent sources of Vitamin C, to help heal cuts and wounds and keep our immune system strong. Reinforce with defense shield (Cross arms out in front of chest.)
- Green peas are a good source of Vitamin A, to help keep our eyes healthy. Reinforce with super goggles (Make goggles with your hands over your eyes.)
- Green peas are a good source of fiber, to help you feel full longer and move food through your body. Reinforce by rubbing stomach.

### References and Resources

<https://www.extension.iastate.edu/news/ask-isu-extension-garden-experts-about-growing-peas>

<https://snaped.fns.usda.gov/seasonal-produce-guide/peas>

[https://educateiowa.gov/pk-12/nutrition-programs/school-meals/communication-tools#Program\\_Promotion](https://educateiowa.gov/pk-12/nutrition-programs/school-meals/communication-tools#Program_Promotion)

<https://www.eatright.org/food/resources/national-nutrition-month>

<https://schoolnutrition.org/>

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September 2020



# Peach

**GRADE**  
**2-3**

**Month:** April

**Time Required:** 30 minutes

**Alternative Tastings:** Plum, Apricot, Avocado

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will be able to define pollination.
- Students will be able to give examples of how plants and animals help each other.

## Materials

- Pollination Demonstration necklaces (attached, one per student)
- Sticky notes (pollen)
- Beach ball (bee)
- Peach tasting (fresh - sliced, frozen, canned or dried)
- Napkins

## Preparation

- Make cards for Pollination Demonstration:
  - Print the attached flower/fruit cards (enough for one per student), and fold the paper in half horizontally, so the flower and the fruit are on opposite sides.
  - Punch a hole in the top of paper, and run a long piece of yarn through the hole to create a necklace.
  - Consider laminating the cards for re-use from class to class.
- (Optional) Prepare bee beach ball: use black tape to transform a yellow beach ball into a bee!

## Standards Connection

This lesson supports the following Iowa Core standards.

### Health Education

[Standards 1, 2, 3, 4, 5, 7, 8](#)

### Science

Second grade - [2-LS2-2](#)  
LS2.A: Interdependent relationships in ecosystems

Third grade - [3-LS4-3](#)  
LS4.C: Adaptation

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- "Asking" Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Pollination & interdependent relationships within a habitat

## Recommended Books

"What is Pollination?" by Bobbie Kalman

"What if There Were No Bees?: A Book About the Grassland Ecosystems" by Suzanne Slade

"You Wouldn't Want to Live without Bees" by Alex Woolf

"Flight of the Honey Bee" by Raymond Huber

## Engage

### 1. Introduction: 2 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

### 2. Engage Activity: 6 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

Gather students in a large circle. *Today, we're going to taste a fruit that needs help from animals to grow. But first I want to know, What are ways you help others? Think about this in your head, and when I say “buzzzz,” turn to a partner and share your thoughts. “Buzzzz.”* Give students time to discuss, making sure all students have a partner and time to share. *“Buzzzz”* again to get students attention. *Another question I have is, what are things you like getting help with? Again, when I say “buzzzz,” turn to a partner and share your thoughts.* Randomly select a few students to share aloud (pick a stick would work well here).

Discuss responses and then say, *just like we help each other by (insert students' examples), plants and animals help each other, too.*

## Explore

### 3. Experiential Learning: 12 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

Seat students (opportunity for 3 deep breaths). *Bees are one of the animals that help plants grow. Bees get their food - nectar and pollen - inside flowers. Let's watch a video of bees flying from flower to flower to eat.* Play and narrate a portion of this 1-minute video: [Bees in slow motion pollinating apple blossoms](#).

*Something else important is happening as the bee is eating: **pollination**.* Note vocabulary word. Write out and repeat with students. *When a bee visits a peach flower to eat, pollen - the yellow powder that flowers make - sticks to the bee's body. Looking for more food to eat, the bee carries the pollen to the next flower. Here, some of the pollen falls off the bee's body and onto this new flower. Now, that flower is fertilized and can grow fruit and seeds. Now, this flower can grow into fruit because it has been **pollinated** (say this word together; compare the word to pollinator).* *Let's watch the video again.* Play and narrate the entire 1-minute video: [Bees in slow motion pollinating apple blossoms](#) (pause to show a picture of pollen).

*The bee gets food and the flower grows into fruit! This is how bees and peaches help each other. In fact, they could not survive without each other. Later today we will taste peaches, a fruit that grows thanks to bees pollinating the peach tree flowers. First, let's play a game to simulate (act out) the process of pollination.*



## Explore (cont'd)

### Pollination Simulation

(Adapted from Science and Health Education Partnership Pollination lesson)

- Set-up: Have students stand in a circle, wearing flower-fruit necklaces (cards attached). The flower side of their necklace should be facing forward, with a small sticky note attached to the center (this represents pollen). Use a beach ball to represent the bee, a pollinator.
- Start by telling students they are flowers. Toss the beach ball to a student in the circle. *The bee just left the hive in search of food. This one bee can pollinate many flowers.* This first student attaches the sticky note to the ball and tosses the ball to another student. *The bee is now carrying pollen to another flower.*
- The second student takes the sticky note off the beach ball (flower is now pollinated) and attaches their sticky note to the ball. When this happens, the flower turns over their flower-fruit necklace to show that they turned into a fruit. *The flower is now pollinated and will become a fruit!*
  - Option: have students say “*thank you, bee*” as they become pollinated and toss the ball to another flower. Educator can respond as the bee, “*thank you flower.*”
- Students continue tossing the ball and becoming pollinated, taking and leaving a sticky note on the ball and turning their necklaces until all flowers are pollinated. The demonstration ends when all of the flowers have been pollinated and turned into fruits. *Wow, look around and see how one bee can help many flowers. The bee can survive thanks to food from the flower, and the flowers can survive thanks to pollination.*
  - Option: students may sit down once they become pollinated, to make it clear they have already caught the beach ball.

Transition to tasting: Instruct students to deposit their necklaces in a specific location and pick-up a peach segment and napkin before returning to their desks.

#### **4. Tasting Activity: 3 minutes**

*The “Tasting Activity” section is when students get to try the fruit or vegetable. Don’t forget to review your food tasting norms (for example, “don’t yuck my yum”).*

Before students receive samples, be sure to review your brave tasting rules (for example, don’t yuck my yum, we all try together, etc.). As students receive their samples, ask them to use their senses while they wait.

## Reflect

#### **5. Voting Activity: 2 minutes**

*This is a time for students to give their opinion on what they tried!*

As students taste the peach, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

## Reflect (cont'd)

### 6. Reflection: 5 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion."*

#### Choral Response:

*I'm going to ask a question and you're going to quietly think to yourself. When I say "buzzzz," you can say your answer aloud. Let's practice...*

- What month is it? (April)*
- Whose class am I in?*
- What food did we try today? (Peaches)*
- How do flowers help bees survive? (By providing food/nectar)*
- How do bees help flowers survive? (Pollination)*

#### Asking Discussion:

*Raise your hand if you're excited to go home and tell your family about tasting peaches.*

- Ask a student with a raised hand: if you wanted to try this at home, how might you ask your grown-ups?*
- You might also ask additional questions like, where could you buy peaches?*

*\*Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.*



# CANTALOUPE





# CRANBERRIES





**MANGO**





# STRAWBERRY





**PEAR**





**KIWI**







**PEACH**



## Additional Materials

### Physical Activity

Select a student volunteer. Ask student to choose a physical activity for the class to perform for 15 seconds. Then student chooses another activity. See “[Energizers Movement Bank](#)” (page 52) for activity ideas. Select a new student leader as appropriate.

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Peaches

- Peach season is May to October, peaking in June, July and August.
- Peaches discolor quickly when cut open. To keep from discoloring, sprinkle peach with lime or lemon juice.
- Nectarines are a type of peach with smooth skin (no fuzz). Choose peaches with no blemishes.
- Peach trees are short-lived (only about 20 years).
- Peaches don’t get sweeter once picked, so pick at peak ripeness for the best taste.

### Facts About Peaches

- The peach originated in China.
- The Latin name for peach means Persian plum, because Romans imported it from Persia (now Iran) 2000 years ago.
- The Spanish brought the peach to America. It became a favorite of the Native Americans.
- Most peaches grow in California, Georgia and South Carolina in the United States. Georgia is known as the “peach state.” California leads the country in peach and nectarine production.
- The United States is the world’s leading grower of peaches.
- Peaches can be fresh, frozen, dried or canned. Enjoy them plain for a snack or with a meal as well as in appetizers and entrees.

### Health Connection

- Peaches are a good source of Vitamin C. Reinforce with defense shield. (Cross arms in front of chest to ward off the germs).
- Peaches have Vitamin A. Reinforce with super goggles. (Make goggles with your hands over your eyes).
- Peaches have fiber, to help you feel full and move food through your body. Reinforce by rubbing your stomach.

### References and Resources

<https://spendsmart.extension.iastate.edu/produce-item/peaches/>

<https://snaped.fns.usda.gov/seasonal-produce-guide/peaches>

<https://fruitsandveggies.org/stories/5-facts-about-canned-foods/>

<https://kidsgrowingstrong.org/pollinator-works/>

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/pollinate/>

<https://www.nrdc.org/sites/default/files/bee-deaths-FS.pdf>

<https://gardenatschool.wordpress.com/2012/06/16/pollination-games/>

[https://www.youtube.com/watch?v=zy3r1zIC\\_IU](https://www.youtube.com/watch?v=zy3r1zIC_IU)

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This material was funded by USDA’s Supplemental Nutrition Assistance Program – SNAP. It was developed by the Iowa Department of Public Health in partnership with the Iowa Department of Human Services. September 2020



# Spinach

**GRADE**  
**2-3**

**Month:** May

**Time Required:** 30 minutes

**Alternative Tastings:** Kale

## Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- Students will be able to name community members who make and provide food.
- Students will be able to describe the function of leaves.

## Materials

- Flipchart paper and markers
- Bag of leaves collected from various trees and garden plants
- Photosynthesis image (attached)
- Fresh spinach (optional: dressing)
- Napkins or paper plates
- Photosynthesis recipe cards; print one per student (attached)
- Optional book: "Before We Eat"

## Preparation

- Print attached photosynthesis recipe cards and cut in half; prepare one per student.
- Collect 25-30 leaves outdoors, from various trees or garden plants (examples: kale, collards, spinach, maple, oak, lettuces, cabbage, herbs, etc.).

## Recommended Books

"Water, Weed, and Wait" by Edith Hope Fine  
 "Sylvia's Spinach" by Katherine Pryor  
 "Our School Garden!" by Rick Swann  
 "Before We Eat" by Pat Brisson

## Standards Connection

This lesson supports the following Iowa Core standards.

**Health Education**  
[Standards 1, 2, 3, 4, 5, 7, 8](#)

**Science**  
 Second grade - [2-LS2-1](#)  
 Plants depend on water and light

Third grade - [3-LS1-1](#)  
 LS1.B: Growth and development of organisms

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- "Asking" Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Photosynthesis

## Engage

### 1. Introduction: 2 minutes

*The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

### 2. Engage Activity: 8 minutes

*The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

Gather students in a circle. Ask, *Who helps you get the food you eat? Think in your head and when I say the magic word, “leaves,” share your thoughts with a partner. “Leaves.”* Give students a minute or so to take turns sharing with a partner. Randomly select a few students to share their responses aloud, and begin recording these responses on large flipchart paper, the board, or doc-camera. As you record ideas and support student brainstorming, ask students, *Who prepares the food we eat at school? Who helps with the food we get at a store? Who makes the food we eat at a restaurant?* Adapt the questions and conversations to fit your school and broader community. Review the list as a class.

*Now, let's say thank you! Pick someone on this list and when I say our magic word “leaves,” we'll all say “thank you” and then you say who you're thinking of. Ready? “Leaves.” As a class, Thank you \_\_\_\_\_! It is great that so many people in our community help make the food we eat. Today, we're going to learn about how leaves make food for plants.*

Book Option: If time allows, consider reading a book such as Pat Brisson's [“Before We Eat.”](#) Ask, *Who are the people who helped make the dinner that the people ate? Who else helped?* (Adapted from FoodCorps Lesson: People Who Feed Us)

Sample list of community food helpers:

- Cafeteria cook
- Corner store clerk
- Family members who cook
- Farmer, gardener
- Fisher
- Food packager
- Food pantry volunteer
- Food truck driver
- Grocery store clerk
- Restaurant cook

## Explore

### 3. Experiential Learning: 10 minutes

*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

## Explore

Sitting in a circle, pass out an assortment of leaves to students; one per student. Leaves can be collected outside on trees or from the garden (examples: kale, collards, spinach, maple, oak, lettuces, cabbage, herbs, etc.). Ask students to examine their leaves. *What do you see? What does the leaf feel and smell like? Where do they think the leaves came from?*

- Option: break the classroom into 2 groups. The classroom teacher can support one group while the PABS educator works with the other.

Tell students, *We're all holding leaves. These leaves came from different plants, such as* (share plant source; consider sharing pictures of full plants over the doc-cam). *Leaves make food for plants. What do leaves do?* (choral response: *make food for plants*). *This process is called **photosynthesis**.* Write out and repeat vocabulary word: photosynthesis. Show simple photosynthesis image (attached). *Leaves are like the kitchen of the plant - where the food is made. Leaves use a special three-ingredient recipe to make plant food: sunlight + water + air. Leaves absorb sunlight and air. Then, leaves combine sunlight and air with water from the roots, and turn it into food for the plant to eat.* Repeat these three ingredients with kinesthetic movements several times:

- *Sunlight* (wave hands and fingers overhead)
- *Water* (rain hands down from overhead to the ground)
- *Air* (put hands around mouth and blow out).

*There are many types of leaves that we can eat. Today, we're going to try a leaf called spinach.* With student or teacher helpers, pass out photosynthesis recipe cards (attached) and tasting materials. *While we pass out spinach samples, fill in the blanks on your photosynthesis recipe card* (leave photosynthesis image up on doc-camera).

### 4. Tasting Activity: 2 minutes

*The "Tasting Activity" section is when students get to try the fruit or vegetable. Don't forget to review your food tasting norms (for example, "don't yuck my yum").*

Before students receive samples, be sure to review your brave tasting rules (for example, don't yuck my yum, we all try together, etc.). As students receive their samples, ask them to use their senses while they wait.

## Reflect

### 5. Voting Activity: 2 minutes

*This is a time for students to give their opinion on what they tried!*

As students taste the spinach, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

### 6. Reflection: 6 minutes

*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion."*

## Reflect (cont'd)

### Make a thank you card for the folks who feed us!

Have students write and color a thank you card for someone on the list you made at the beginning of the lesson. Consider asking students how they will get their cards to the person they're thankful for, and if you can support them in any way.

(Note: Celebrate [National School Lunch Hero Day](#). Consider organizing a classroom or school wide "thank you!" for school food service staff.)

### Choral Response:

*I'm going to ask a question and you're going to quietly think to yourself. When I say "leaves," you can say your answer aloud. Let's practice...*

- *What month is it? (May)*
- *Whose class am I in?*
- *What food did we try today? (Spinach)*
- *What plant part is spinach? (A leaf)*
- *What are the three ingredients plants use to make food through photosynthesis? (Sunshine, water, air)*

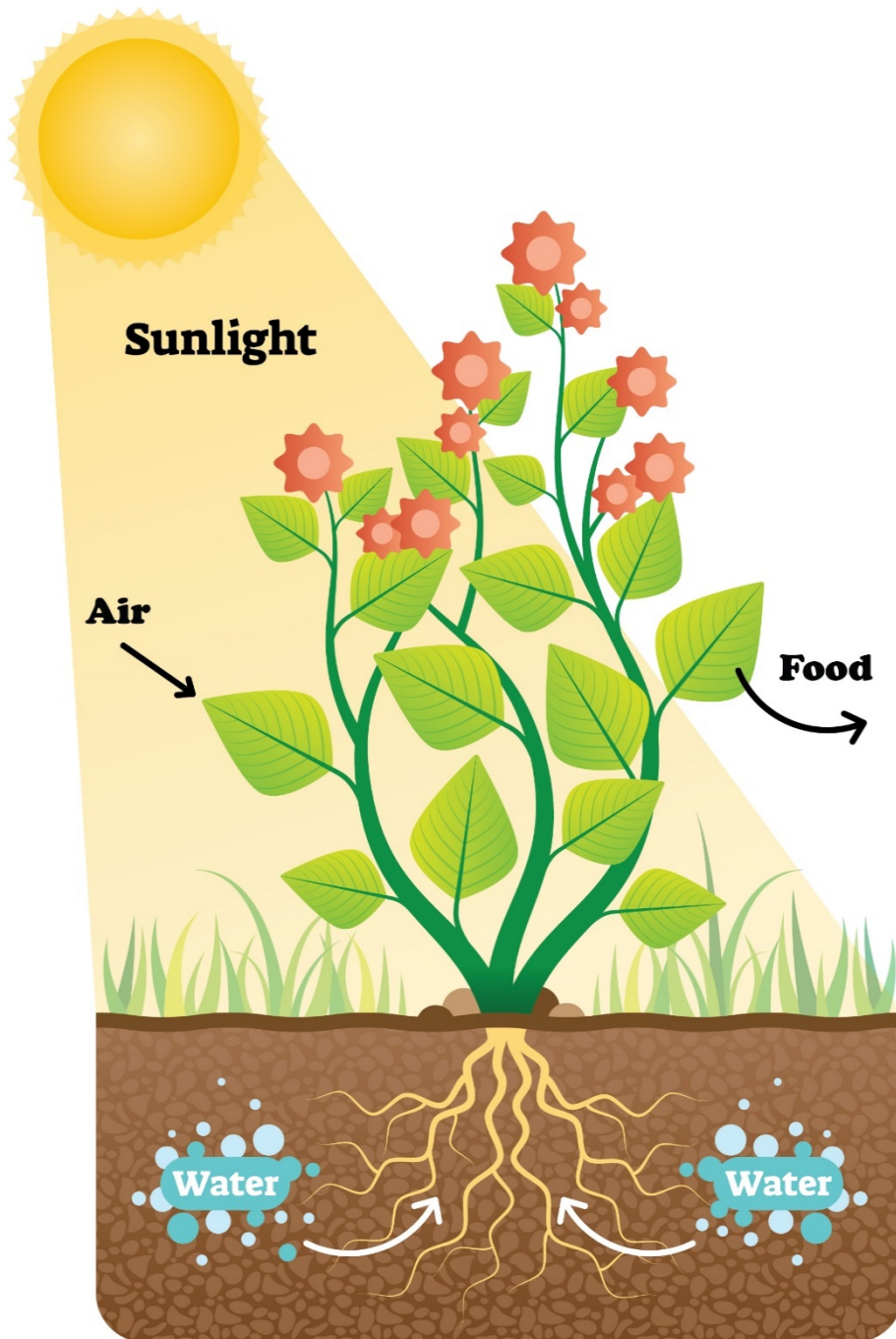
### Asking Discussion:

*Raise your hand if you're excited to go home and tell your family about tasting spinach.*

- Ask a student with a raised hand: *if you wanted to try this at home, how might you ask your grown-ups?*
- You might also ask additional questions like, *where could you buy spinach?*

\*Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.

# Leaves make food through **Photosynthesis.**

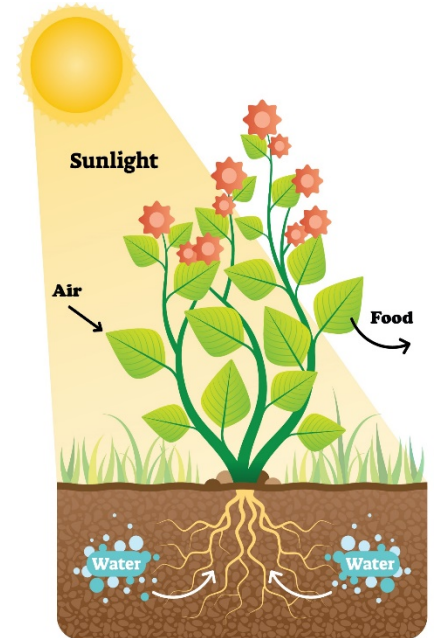


# Photosynthesis: A Recipe for Plant Food!

## Ingredients:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Plant food is made in the \_\_\_\_\_.



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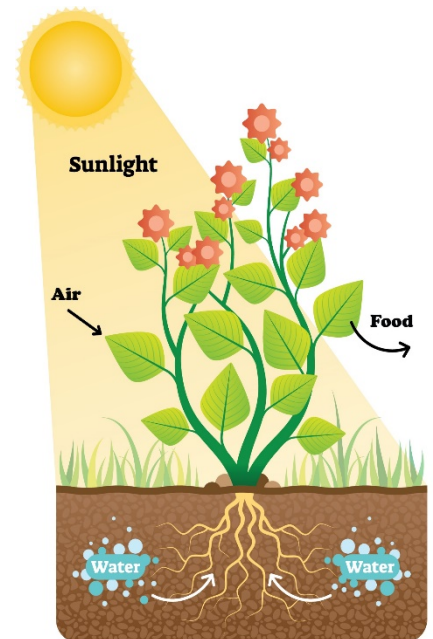


# Photosynthesis: A Recipe for Plant Food!

## Ingredients:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Plant food is made in the \_\_\_\_\_.



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## Additional Materials

### Physical Activity

“[Stories in Motion: Working in the Garden](#)” (page 54). Or “[Shakedown](#)” (page 13). More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

### What You Need to Know About Spinach

- Choose spinach with fresh, crisp green leaves with no spots or signs of damage.
- Spinach is a dark green vegetable. While all lettuces are healthy, darker leafy greens generally offer more nutrition (e.g., spinach v. iceberg lettuce).
- Spinach is available fresh, frozen and canned.
- Wash fresh spinach under clean, running water before eating. Bagged spinach is pre-washed and ready to eat.
- Spinach is an annual plant, so it must be planted each year.
- Spinach can grow in Iowa and grows best in cool, damp weather. Peak seasons are spring and fall.

### Facts About Spinach

- Spinach originated in Persia (modern Iran). It was not commonly eaten in the U.S. until the early 19th century.
- Spinach was the first frozen vegetable available commercially.
- Many Americans associate spinach with Popeye, a 1929 cartoon character who ate spinach to gain his strength.
- Annual consumption of spinach increased drastically from 1992 to 2002 according to USDA’s Economic Research Service, mostly due to availability of pre-cut, bagged spinach.
- California produces the most spinach grown for commercial use in the U.S. Other states that produce much of the commercially grown spinach are Arizona, New Jersey and Texas.

### Health Connection

- Spinach is high in vitamin C, which helps to heal and protect the body. Reinforce with defense shield and cross arms in front of chest.
- Spinach is high in Vitamin A, which is important for eyes, skin and growth. Reinforce with super goggles and make circles with hands over eyes.
- Spinach is an excellent source of fiber, which helps with digestion and helps us feel full longer. Reinforce by rubbing stomach.

### References and Resources

<https://spendsmart.extension.iastate.edu/produce-item/greenslettuce/>  
<https://snaped.fns.usda.gov/seasonal-produce-guide/spinach>  
<https://harvestofthemonth.cdph.ca.gov/Pages/default.aspx>  
<https://www.youtube.com/watch?v=w3yIT3yCIJ0>  
<https://www.cdc.gov/healthyschools/physicalactivity/guidelines.htm>  
[http://togethercounts.com/wp-content/uploads/2017/11/K-2\\_Curriculum\\_ALL-1.pdf](http://togethercounts.com/wp-content/uploads/2017/11/K-2_Curriculum_ALL-1.pdf)  
[https://fns-prod.azureedge.net/sites/default/files/growit\\_book3.pdf](https://fns-prod.azureedge.net/sites/default/files/growit_book3.pdf)  
<https://lifelab.org/2013/04/garden-jokes/>

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