

# Spinach

**GRADE**  
**K-1**

**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 associate play and energy.
- Students will be able to identify what plants need to make energy.
- Students will be able to identify the function of leaves.

## Materials

- Bag of leaves collected from various trees and garden plants
- K-1 photosynthesis image (attached)
- Fresh spinach (optional: dressing)
- Napkins or paper plates
- Play Your Way One Hour A Day cards (attached)
- Optional book: "Our Community Garden"
- Optional planting activity: small cups, soil, spinach seeds, small cups for watering

## Preparation

- Print attached Play Your Way One Hour A Day 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

"Our Community Garden" by Barbara Pollak  
 "Muncha! Muncha! Muncha!" by Candace Fleming  
 "Sylvia's Spinach" by Katherine Pryor

"Tiny Green Thumbs" by C.Z. Guest  
 "From the Garden" by Michael Dahl  
 "Frog and Toad Together" by Arnold Lobel (Chapter 2: The Garden)

## Standards Connection

This lesson supports the following Iowa Core standards.

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

**Science**  
 Kindergarten - [K-LS1-1](#)  
 LS1.C: Plants need water and light

First grade - [1-LS1-1](#)  
 LS1.A: Structure and function

## Lesson Checklist

- Physical Activity
- Tasting
- Voting
- "Asking" Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Plant survival needs (K) and function of leaves (1st)

## 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. Say, *Think of a way you like to play. It could be your favorite game, a dance, a sport, something you like to do outside or at recess. Think about this in your head and when I say the magic word, “leaves,” act out your favorite way to play. “Leaves.”* Give students a minute or so to act out their activity, then randomly select a few students to share.

*Thank you all for sharing! When we move our bodies by playing (insert student examples), we get energy. What do we get when we move our bodies? Choral response: energy! Today, we're going to learn about how leaves make energy.*

Book Option: If time allows, consider reading a book such as Barbara Pollak's [“Our Community Garden.”](#)  
Connection to lesson: *We're going to read a book about kids who like to play outside in a garden.*

## 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.*

Seat students in a circle (opportunity for 3 deep breaths). 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.
- Option: have students work in partners or small groups to compare and contrast their leaves.

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 have an important job. Leaves make energy for plants by taking in **sunshine** and **air**. Then, leaves combine sunshine and air with **water** from the plant's roots to create energy.* Show attached image for a helpful visual (this image is simplified from grade 2-3 photosynthesis lesson). Repeat these three terms 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).

## Explore (cont'd)

There are many types of leaves that we can eat. Today, we're going to try a leaf called spinach. Just like leaves make energy for plants, we get energy when we eat leaves like spinach! With student or teacher helpers, pass out tasting materials.

Optional spinach seed planting: Bring materials to plant spinach seeds with students, or leave these materials for the classroom teacher to plant with students at a later time.

### 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 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: 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."*

Play Your Way One Hour A Day: *Playing gives us energy. Wouldn't it be fun to play every day this summer! Write and draw some of your favorite ways to play that you can do this summer.* Pass out "Play Your Way One Hour A Day" cards.

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)*
- *What food did we try today? (Spinach)*
- *Whose class am I in?*
- *What plant part is spinach? (A leaf)*
- *What three things do leaves need to make energy for plants? (Sunshine, water, air)*

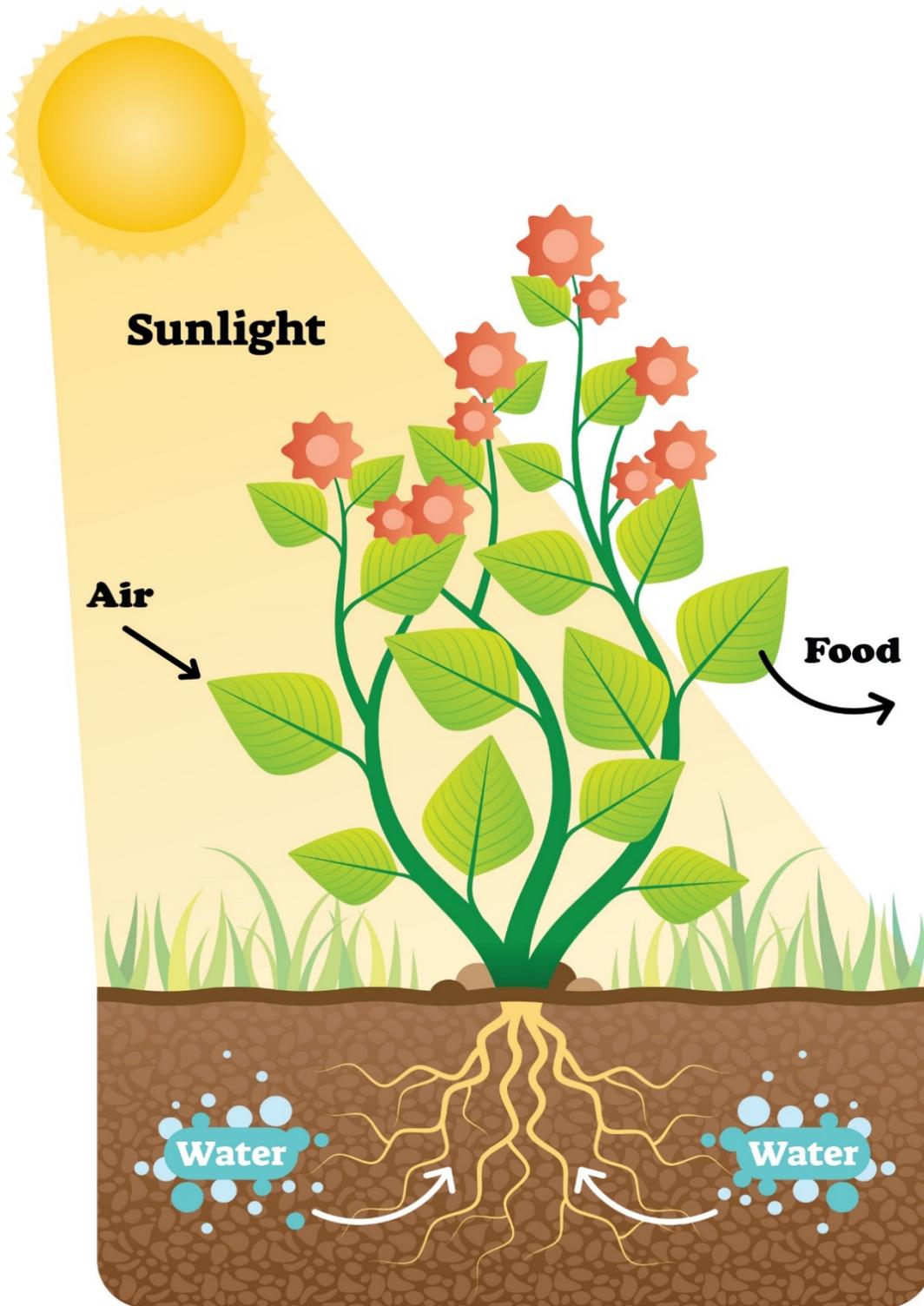
### Asking Discussion:

*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, what is something you remember about spinach, where could you buy spinach?*

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

Leaves make **energy** for plants.



# Play Your Way One Hour A Day!

This summer, I will play:

1.

2.

3.

Draw a picture of play!

This institution is an equal opportunity provider. 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



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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://harvestofthemoth.cdpd.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)

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