MAY

SPINACH

DARK GREENS

GRADE K-1

RECOMMENDED BOOK	"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)
NEEDED SUPPLIES	Fresh spinach leaves for tasting. (Optional: salad dressing for dipping) Potting soil, spinach seeds, paper cups for each student Unsharpened pencil marked ½ inch, spray bottle with water, extra cups or plastic spoons for scooping dirt
NEEDED RESOURCES	"Stories in Motion: Working in the Garden" "Plant Growth Observations" worksheet "Play Your Way. One Hour A Day." posters Spinach photo
21ST CENTURY SKILL	Students will learn the importance of vegetables in a healthy diet. • Practice preventive health behaviors. • K-1: Identify healthy foods.
OBJECTIVES	• Students will gain knowledge of spinach (how to recognize, how to eat, how it grows). • Students will taste spinach and learn it is a vegetable. • Students will learn that friends and educator eat fruits and vegetables.
PHYSICAL ACTIVITY	"Stories in Motion: Working in the Garden" Or: "Shakedown." Explain to students that they will need to remember two details. First, they need to remember "**5-4-3-2-1**." Educator, count down using your fingers. Second, students need to remember "hand, hand, foot, foot." Demonstrate this by flicking out one hand, then the other; then kick out one foot, then the other. Explain to students that they will combine the two things they memorized. Have them practice counting down while doing the motions. Then, lead students in the "Shakedown." Students and instructor flick out one hand five times, counting down out loud "**5-4-3-2-1**." Repeat with other hand. Then, kick out one foot five times, counting down "**5-4-3-2-1**." Repeat with the other foot. Repeat all the motions again, counting down **4** times, then **3**, then **2**, then **1**. You may want to only count down from **3** for younger students and repeat the activity a couple of times.
RECAP FROM LAST LESSON	Did anyone try peaches at home? Were they fresh, canned or frozen? What time of year is the best time to eat fresh peaches? Why? If you want your grown-ups to get peaches for you, what should you do? (ask politely, tell grown-ups that you tasted peaches at school and liked them, be sure to eat them when served, say thank you).

DARK GREENS FEATURED TASTING:
SPINACH

ALTERNATIVE:
KALE

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FUN 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.
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.
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.
DISCUSSION	What do you like to do to be physically active? Educators, tell students how you stay active. Allow students to respond. Idea: Have all students simultaneously stand in place and, using no words ("Show me; don't tell me"), act out a physical activity they enjoy. Or, toss a soft ball around the room. When students catch the ball, they answer the question. Another idea: show students the Play Your Way posters. Which of these activities is your favorite? If you were in the poster, what would you be doing? Those are all great activities. Another activity you may not have thought of is gardening. You use your whole body when you garden. You push a wheelbarrow with your arms and legs; rake with your arms; bend with your knees; squat with your legs; dig, pick and pull with your hands and reach with your arms and abdomen. Today we're going to taste a vegetable that grows fairly easily in the garden. It can even grow in a container, like a large flowerpot, outside. The vegetable we'll taste is spinach.

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ACTIVITIES	Let's start a garden now. Students plant spinach seeds in a paper cup. Fill cup ¾ full with potting soil. Make three holes in the soil ½ inch deep. Show how deep the seeds go into the soil with a pencil or your finger. Place a seed in each hole and cover with soil. Spray water over top of soil. Set cups in a sunny spot or under grow lights. Have the children check the cups weekly to see the progress. Use the "Plant Growth Observations" worksheet to chart growth, if desired. If planting is not feasible, pass around spinach seeds, allowing each child to touch them. Explain how spinach grows and that it is ready for harvest in about 40 days. Show students a photo or actual spinach plant. Another option: Place several varieties of leafy greens, including spinach, at different stations in the room for students to explore. Can the students identify spinach? How does it feel? (thick or thin, smooth or bumpy, light or heavy, soft or hard) How is it like the other leafy greens? How is it different? (Adapted from USDA's Grow It, Try It, Like It: Book 3.)
CLOSING DISCUSSION	What leafy vegetable did we taste today? What will you tell your grown-ups about spinach? Where can you get spinach? Will you grow it at home? How will you eat it? (raw in a salad, smoothie, or on a sandwich; steamed with a little olive oil; cooked in pizza or lasagna)
TAKE-HOME MATERIALS	Pass out "Ask me about…spinach" stickers. Send home the family newsletter.
REFERENCES AND RESOURCES	Click here Team Nutrition Grow It, Try It, Like It: Book 3 Spinach Lane Click here Spend Smart. Eat. Smart. Produce Basics: Greens/Lettuce Click here SNAP-Ed Connection: Spinach Click here Fruits and Veggies More Matters: Spinach Click here California Harvest of the Month: Spinach Click here Earthcare 4 Veggies video (:40) Click here Kids Gardening "Lettuce Be Healthy" lesson Click here Together Counts physical activity lessons (pg. 70-101)
OTHER WAYS TO EAT SPINACH	Steam, boil, microwave, sauté or stir-fry; add to soups, lasagna or other vegetable dishes; salad with strawberries, mandarin oranges, dressing; salad on a stick; pick a leaf off a plant, wash and eat; smoothies; sauté with garlic; blanch and freeze in ice cube trays; spinach pasta; spinach wraps; pinwheels; quiche or omelets; spinach soup; baby spinach; spinach rolls w/veggies; wrap around strawberry and dip in raspberry vinaigrette; make salad in a baggie.

Iowa Nutrition Network
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Stories in Motion

In-Class Activity Breaks

Continue each bulleted activity or set of activities for 15-30 seconds.

Working in the Garden

- Put your gloves on! We've got lots of work to do in the garden today. First, we need to rake the dirt to make sure the ground is ready for planting.
- Next, we have to dig holes for our tomato plants. Hold your shovel, push down into the ground, and throw the dirt off to the side. Keep it up!
- Now, crouch down and set all of the tomato plants into the holes.
- Pick up the shovel again! We need to scoop some dirt and spread it around the bottom of each tomato plant. Make sure you fill every hole!
- Great job! Now, squat down and pat the dirt with your hands.
- Since we are finished planting tomatoes, we should pick those weeds trying to grow. Stay near the ground and pull as many as you can.
- We don't want any wildlife eating our plants, so let's build a fence. Pick up the stakes one at a time, pound each stake into the ground with a hammer. Make sure to use all of your muscles!
- Then, wrap the fencing wire around the stakes to make a square around our plants. Just be careful not to trap yourself inside the fence! Good work.
- We are almost done. Grab the watering can and pour some water on all of the tomato plants.
- That was hard work! Reach up to the apple tree and find a good looking apple to have as a treat.

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Plant Growth Observations

Type of seeds planted: _____ Date seeds planted: _____

1	2	3
4	5	6

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PLAY YOUR WAY!

one hour a day!

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