ASPARAGUS

TASTEFUL HARVEST

Nutrition Facts		
Serving Size:	1/2 cup cooked asparagus (90g)	
Calories 20	Calories from Fat 0	
		% Daily Value
Total Fat 0g		0%
Saturdated Fat 0g		0%
Trans Fat 0g		
Cholesterol 0mg		
Sodium 13mg		1%
Total Carbohydrate 4g		1%
Dietary Fiber 2g		7%
Sugars 1g		
Protein 2g		
Vitamin A 18%	Calcium 2%	
Vitamin C 12%	Iron 5%	

COOKING IN THE CLASSROOM

Asparagus Appetizer

Makes 36 servings at 2 tablespoons each

Ingredients:

- 1 pound fresh baby asparagus, washed, trimmed at ends
- 1 (15-ounce) can black beans, drained and rinsed
- 6 tablespoons balsamic vinaigrette

Directions:

- Cut asparagus into one-inch pieces and place in large bowl.
- Add black beans to the bowl.
- Toss asparagus and beans with the vinaigrette until coated.
- Place 2 tablespoons on paper tray. Serve immediately.

Nutrition information per serving: Calories 20, Carbohydrate 4 g, Dietary Fiber 1 g, Protein 1 g, Total Fat 0 g, Saturated Fat 0 g, Trans Fat 0 g, Cholesterol 0 mg, Sodium 64 mg

Adapted from: Tasting Trio Team, Network for a Healthy California, 2010.

CLASSROOM CONNECTIONS

Healthy Nutrition and Learning Success

The classroom is one of the best places to teach students about the importance of eating healthy and being physically active. Studies show a relationship between good nutrition and academic performance. Tasteful Harvest connects with core curricula and links the classroom, cafeteria, and families.

EXPLORING OKLAHOMA ASPARAGUS: TASTE TESTING

Getting Started:

Talk to your school nutrition staff about getting asparagus from a local grower.

What You Will Need (per group):

- One cooked* spear per student plus two additional raw spears per group
- Cutting board and knives (two per group)
- White board and pens

**Pre-cook asparagus by microwaving or coordinate with school nutrition staff to cook and bring to the classroom.*

Activity:

- Distribute two raw spears to each student group.
- Have students feel and observe one spear; identify and record the parts of the spear.
- Have students slice and taste the second spear; record observations.
- Have students cut the first spear crosswise and lengthwise; identify and record internal structure.
- Distribute one cooked spear to each student.
- Discuss changes that occur as asparagus cools (e.g., smell, color, texture).
- When cool, have students slice spears into thirds and taste the tip, center, and end; record differences.
- Poll students to find out if they prefer raw versus cooked asparagus and one section of the spear over another and why. Graph results.

ABOUT ASPARAGUS

Asparagus can be harvested in three different colors: green, white, and purple.

- Green asparagus is most commonly grown.
- White asparagus is grown by burying the crowns under a foot of soil preventing photosynthesis.
- Purple asparagus spears turn green when cooked.

While there are several varieties of each color, they are most commonly marketed by their color (e.g., green asparagus, etc.).

Asparagus grows well in Oklahoma gardens. In the spring, tiny asparagus tips poke their noses out of the ground. If you don't pick them right away, they grow into big lacy ferns.

STICK TO THE FACTS

- Asparagus is an excellent source of folate and vitamin K.
- A good source of vitamin C, vitamin A, and thiamin.
- A source of vitamin E, fiber, iron, potassium, riboflavin, and niacin.
- Asparagus is a long-lasting perennial plant (about 15 to 20 years) that requires about three years from time of planting to establish permanent roots and produce quality spears.
- The plants are most commonly grown from one-year-old crowns (an underground stem from which the spears shoot), providing a crop more quickly than if grown from seed.
- The edible stalks are shoots that develop into fern-like plants in warmer temperatures if uncut. Asparagus requires a period of dormancy.
- In the first year, it is essential for ferns to develop and for the spears to not be harvested in order for the roots to develop.

STUDENT DISCOVERY: ASPARAGUS RESEARCH

1. In what food sources is vitamin E found? What are the eight common forms in which vitamin E occurs?

2. Asparagus is a source of many vitamins, including both water-soluble and fat-soluble vitamins. Make a list of these water-soluble and fat-soluble vitamins found in asparagus. How does each vitamin function in your body? Identify your Recommended Daily Intakes (RDI) for these vitamins. Make a list of foods that are good or excellent sources for each vitamin. *(Hint: Use the Pantry tool available at www.nutritiondata.com to record your meals and assess nutrient intake.)*

3. White asparagus is grown from the same crown as green asparagus. Research how farmers grow the white variety. Hypothesize what process occurs (or does not occur) to make the white variety. Identify on a map the regions that produce white asparagus. Compare and contrast nutrient values for white and green and purple asparagus.

Adapted from: https://harvestofthemonth.cdph.ca.gov/documents/Spring/Asparagus/Asparagus%20-%20Educator%27s%20Newsletter_Final.pdf

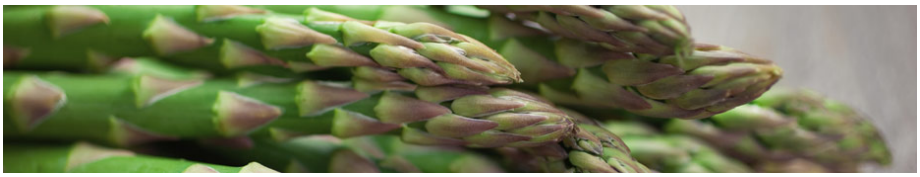
LESSON ACTIVITIES

Asparagus: The Mighty Spear - PK-1
https://agclassroom.org/ok/lessons/lessons/asparagus.pdf

Homegrown in Your State: Fruits & Vegetables - K-2
https://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=767

Esperanza Rising - 3-5
https://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=179&author_state=0&search_term_lp=Asparagus

Farm to Fork: Augmented Realty - 6-8
https://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=70



SCHOOL GARDEN CONNECTIONS: POLLINATORS

If your school has a garden, here is an activity you may want to implement. Look for donations to cover the cost of seeds, tools, irrigation systems, electric pumps, and any salary incurred by garden educators or others.

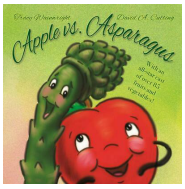
Many animals and insects help pollinate plants, which supports fruit and seed production. They also eat insect pests and add beauty to the garden. In this activity, students will explore their school garden to identify how many different pollinators they can find.

What You Will Need (per team of two students):
- Notebooks for journaling
- Colored pencils or crayons
- Magnifying glasses

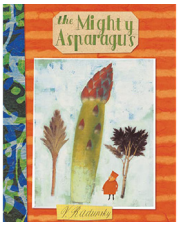
Activity:
- Teams select a plant to observe for pollinators in the garden.
- Use the magnifying glasses to look for clues of pollinators.
- Record the type of plant observed and what types of pollinators are spotted.
- Draw pictures in notebooks matching the color and appearance of the plants and pollinators. Share findings as a class.
- Have a class discussion on other ways plants can be pollinated (e.g., wind, rain).
- Ask students to write a story about why it is important for plants to be pollinated.

Adapted from: www.lifelab.org
For more ideas, visit: www.kidsgardening.com

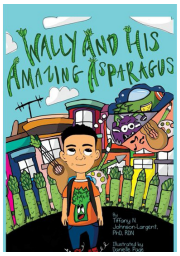
LITERATURE CONNECTIONS



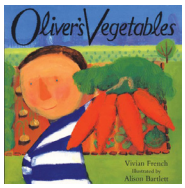
Apples Vs. Asparagus by Tracy Wainwright



The Might Asparagus by Vladimir Radunsky



Wally and His Amazing Asparagus by Tiffany N. Johnson-Largent, PhD



Oliver's Vegetables by Vivian French

HISTORY OF ASPARAGUS

- Ancient Greeks and Romans began cultivating asparagus more than 2,500 years ago.
- It was valued both as a food and for medicinal remedies.
- Early English and Dutch colonists brought asparagus to North America.
- Beginning in the 1950s, U.S. farmers began to grow more green asparagus than white asparagus due to consumer preference.
- Asparagus has been cultivated for more than 2,500 years by people worldwide. It continues today to be a universal vegetable, grown and consumed in Asia, Europe, South America, and North America.

FARM TO ECE

EARLY CARE EDUCATION: WE EAT FOOD THAT'S FRESH

Objectives:

- Children interact during a read-aloud and book conversation.
- Children learn about different ways to prepare foods.
- Children sing or dance along with the "We Eat Food That's Fresh!" theme song.
- Children learn to recognize asparagus.

What you might need:

Book: We Eat Food That's Fresh by Angela Russ-Ayon
A few asparagus spears to pass around while reading

What you might do:

- Pass around the asparagus before reading the story, or while you are reading. Invite the children to feel and smell the vegetables as they pass them along.
- Ask the children to think about the different ways foods are prepared as you read the book. While you read, point out the different ways foods are prepared in the book: boiled, canned, grilled, and baked. After you read, ask the children how foods are prepared in their homes.
- When you get to the last page of the book, make sure to point out the asparagus. Ask children if they recognize the vegetable. Remind them – this is asparagus!
    - While you are reading, ask children questions, like: Has anyone tasted asparagus? What does it taste like?
    - Has anyone ever seen asparagus growing in a garden or on a farm? Has anyone ever harvested asparagus?
    - How does asparagus grow? (Above the ground.)

After you read the book, play the song from the CD that comes with the book.
Encourage the children to sing along and dance to the music.

Resource: http://www.harvestforhealthykids.org/?page_id=291

CAFETERIA CONNECTIONS

Conduct an Asparagus Trivia Contest in the school cafeteria.

Share this newsletter with school nutrition staff to create sets of trivia information, questions, and answers. Here are a few ideas to get started.

- Create table tents with trivia using asparagus facts.
- Place tents on cafeteria tables.
- Create trivia questions and distribute questionnaire to students in lunch line (or as students enter cafeteria).

Students find answers while eating meal (from facts on table tents) and enter their questionnaire into a drawing for prizes.