CLASSROOM CONNECTIONS

TASTEFUL HARVEST

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.

BROCCOLI

Nutrition Facts		
Serving Size:	1/2 cup cooked broccoli (78g)	
Calories 27	Calories from Fat 0	
		% Daily Value
Total Fat 0g		0%
Saturdated Fat 0g		0%
Trans Fat 0g		
Cholesterol 0mg		
Sodium 32mg		1%
Total Carbohydrate 6g		2%
Dietary Fiber 3g		10%
Sugars 1g		
Protein 2g		
Vitamin A 24%	Calcium 3%	
Vitamin C 84%	Iron 3%	

EXPLORING OKLAHOMA BROCCOLI TASTE TESTING

What You Will Need: (per student group):

- ¼ cup each of broccoli prepared in a minimum of three ways (e.g., raw/fresh, microwave from fresh, microwave from frozen)
- Nutrition Facts labels
- Paper and colored pencils*

Activity:

- Try each kind of broccoli noting differences in taste, smell, color, and texture.
- Compare the Nutrition Facts labels for the different broccoli preparations.
- Discuss which forms are more nutritious and why.
- Rate the prepared broccoli varieties from least to most favorite, using a numeric scale (ex 1 to 5).
- Survey other students and develop a pie chart depicting the different broccoli preferences.

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

COOKING IN THE CLASSROOM

Creamy Garlic Dip

Ingredients:

- 2 cups fat free sour cream
- 1⅓ cups salsa
- ¾ cup chopped green onions
- 2 teaspoons garlic salt
- 8 cups broccoli, cut into small pieces
- Small plates and napkins

Directions:

1. Combine sour cream, salsa, green onions, and garlic salt in a bowl. Stir well.
2. Place ¼ cup broccoli on each plate. Serve with 2 tablespoons dip.

Makes 32 servings at ¼ cup broccoli and 2 tablespoons dip.

Nutrition information per serving: Calories 26, Carbohydrate 6 g, Dietary Fiber 1 g, Protein 1 g, Total Fat 0 g, Saturate Fat 0 g, Trans Fat 0g, Cholesterol 1 mg, Sodium 165 mg

Adapted from: Kids...Get Cookin'! Network for a Healthy California, 2009.

For additional recipes to cook with your students, visit: www.cde.ca.gov/ls/nu/he/kidscook.asp

ABOUT BROCCOLI

- Broccoli has been served up for dinner for at least 2,000 years.
- By 2010 Americans were eating 900% more broccoli than they were eating in 1990.
- The name “broccoli” comes for the Latin word brachium, which means “branch,” or “arm.” Roman farmers called broccoli “the five green fingers of Jupiter.”
- Broccoli is a plant of the cabbage family, Brassicaceae, formerly known as Cruciferae.
- It is related to cabbage, cauliflower, kale, collard greens, and Brussels sprouts.
- Broccoli is a cool season crop. It can be grown as a spring or fall crop, but it is susceptible to frost, especially when the plants are small and tender.

STICK TO THE FACTS

- There are many varieties of broccoli, but the most common varieties of B. oleracea are Calabrese and purple sprouting broccoli. Worldwide, they are marketed generically as “broccoli.”
- Broccoli is a cool season vegetable. It grows well in Oklahoma gardens in early spring and in the fall.
- Ounce for ounce, broccoli has as much calcium as a glass of milk and more vitamin C than an orange! A 1/3 pound stalk of broccoli has more vitamin C than 2 1/2 pounds of oranges or 204 apples. It is one of the best sources of vitamin A and has more fiber than a slice of wheat bran bread.
- Broccoli is also a good source of potassium, folacin, iron and fiber. It contains a few important phytochemicals: beta-carotene, indoles and isothiocyanates. Phytochemicals prevent carcinogens (cancer causing substances) from forming. They also stop carcinogens from getting to target cells and help boost enzymes that detoxify carcinogens.

STUDENT DISCOVERY: BROCCOLI RESEARCH

- Look up the definition for phytochemicals.
- Identify three important phytochemicals found in fruits and vegetables.
- What are their roles in maintaining a healthy body?
- Broccoli contains natural sodium. What is the benefit of natural sodium?
- What is the difference between natural sodium and table salt (sodium chloride)?
- What does the dark green color of broccoli indicate?
- How does plant spacing affect broccoli during growth?
- What are the top three commercial broccoli-producing counties in California?
- What are the various forms in which broccoli is processed and sold?

For information, visit: www.fruitsandveggiesmatter.gov/month/broccoli.html and www.cfaitc.orghttp://urbanext.illinois.edu/veggies/broccoli.cfm

LESSON ACTIVITIES

Bring on the Brassica Veggies! - 3-5
https://agclassroom.org/ok/lessons/lessons/cruciferous.pdf

Plant Parts We Eat - PK-1
https://agclassroom.org/ok/lessons/primary/parts.pdf

Broccoli & Cauliflower - K-4
http://www.vermontharvestofthemonth.org/uploads/2/8/9/6/28966099/10_broccoli-cauliflower_lesson.pdf

SCHOOL GARDEN: WEATHER AND FOOD

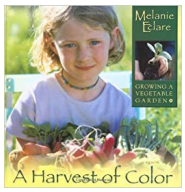
If your school has a garden, here is an activity you may want to implement. Look for donations to cover the cost of seeds, tools, irrigation systems, electric pumps, and any salary incurred by garden educators or others.

Broccoli is a popular vegetable that is packed with vitamin C and vitamin K, and also contains calcium, folate, and fiber. This cool-weather crop is best grown in spring or fall, and tastes sweetest when it matures in autumn, when nights turn chilly.

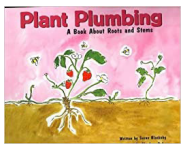
Ask students to answer some predictive and research questions, such as:
What do you think the weather will be like this year?
What kind of climate do you live in?
What kind of weather conditions are best for growing broccoli?
Will the weather be good for growing broccoli in your area?
What is the impact of heat on growing broccoli?
What vegetables would grow best where you live?

For other weather related lessons & activities visit: https://www.agclassroom.org/teacher/matrix/search_result.cfm

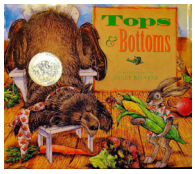
LITERATURE CONNECTIONS



Harvest of Color by Melanie Eclare



Plant Plumbing by Susan Blackaby



Tops & Bottoms by Janet Stevens

Perfect Soup By Lisa Moser

HISTORY OF BROCCOLI

- Broccoli has been around for over 2,000 years and has been grown in the United States for more than 200 years.
- Broccoli was first introduced to France in the 1500s and to England in the 1700s.
- Thomas Jefferson was an avid gardener and seed collector and grew broccoli at his Virginia home, Monticello, prior to becoming the third U.S. President in 1801.
- Broccoli was first grown in the Italian province of Calabria and was given the name Calabrese. Today there are many varieties. In the United States, the most common type of broccoli is the Italian green or sprouting variety. Its green stalks are topped with umbrella-shaped clusters of purplish green florets.
- The first commercially-grown broccoli was grown and harvested in New York, then planted in the 1920's in California.

FARM TO ECE
EARLY CARE EDUCATION

Exploring Leaves and Photosynthesis
Harvesting Broccoli & Cauliflower

Materials:
·Broccoli and cauliflower crowns
(from the garden or purchased)
·Basket or bucket
·Knife (teacher use)

Directions:
1. As a class go visit the broccoli and/or cauliflower in the garden. Identify parts of the plant (even if the crowns are not ready for harvest). Ask -where are the roots? That's right, underground. Next, ask -where is the stem and where are the leaves? Finally, ask-where is the flower? The broccoli and cauliflower crown is the flower. When we eat broccoli and cauliflower we eat the plant's young flower. If we left this crown on the plant, it would grow tiny yellow flowers with seeds inside.

2. Harvesting: The broccoli and cauliflower plant can grow quite tall and has large blue green leaves growing from underneath the head. When the head is about 6 inches long (it may be smaller or larger depending on its growing area) and the flower buds are deep green (broccoli) and tightly packed, the broccoli or cauliflower crown has hit its full size and begins to stop growing but starts to loosen up. The individual florets will get fatter and will spread apart slightly and take on a less tightly packed quality. This is ideal time for harvest. Use a knife to cut the stem about 4 inches below it at an angle. Leave the rest of the broccoli plant in the ground as small bonus florets will keep growing and these can be harvested later on, though each cauliflower plant will only produce one crown.

3. Washing: As a class wash hands and wash the broccoli and cauliflower crowns. Keep one whole for the class to examine. Cut the remaining crowns into bite size florets.

4. Comparing the crowns: While holding up a broccoli and cauliflower crown ask the class –how are they different? How are they the same? Compare their size, shape, color, texture, smell.

5. Taste Test: Explain that broccoli and cauliflowers are vegetables. Discuss that vegetables help us grow healthy. Broccoli and cauliflowers give us energy to play and grow. Broccoli and cauliflower are vegetables we can eat raw-that means we don't need to cook them or we can cook them and eat them steamed, in stir fries and stews.

CAFETERIA CONNECTIONS

- Coordinate a school wide Fruit and Vegetable Challenge.
- Promote the challenge by visiting classrooms and providing a "Fruit and Vegetable Chart." Order chart from www.fns.usda.gov/tn/Resources/fvchallengepacket.html.
- After lunch, students can record the number of fruits and vegetables they ate at breakfast and lunch, and as snacks, using their classroom's Challenge Chart.
- Use the cafeteria bulletin board to track the progress of each participating classroom.
- Have other staff encourage participation by awarding extra points to students caught eating fruits or vegetables (in meals or as a healthy snacks).
- Provide incentives for winning classrooms such as a taste testing or smoothie party.

For more ideas, reference: Fruits and Vegetables Galore, USDA, 2004.