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.

CARROTS

Nutrition Facts	
Serving Size:	1 medium carrot (61g)
Calories 25	Calories from Fat 1
	% Daily Value
Total Fat 0g	0%
Saturdated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	
Sodium 42mg	2%
Total Carbohydrate 6g	2%
Dietary Fiber 2g	7%
Sugars 3g	
Protein 1g	
Vitamin A 204%	Calcium 2%
Vitamin C 6%	Iron 1%

EXPLORING OKLAHOMA CARROTS

What You Will Need (per student group):
Raw carrots, peeled and sliced into sticks; one stick per student
Canned carrots; enough to taste
Paper and pencils
Printed Nutrition Facts labels for fresh and canned carrots*
**Download labels from www.harvestofthemonth.com.*

Activity:
Taste raw carrots and note the color, texture, smell, flavor, and sound.
Repeat activity with the canned carrots.
Compare and contrast the similarities and differences, including the nutrition information.
Graph the results.
Have the students write a story about carrots.

TASTE TESTING: RAW VS COOKED

Raw carrots contain vitamin C and polyphenols, which reduce the risk of heart disease and cancer.

When cooked, carrots supply more beta-carotene which your body converts to vitamin A. This is also true of spinach, asparagus, cabbage, peppers, and many other vegetables.

Which do you prefer?

COOKING IN THE CLASSROOM

Carrot Pinwheels

Ingredients:
8 oz cream cheese softened
1 cup of mayonnaise
1 pkg. ranch dressing
1tsp. of dried dillweed or 1 tbls. Minced fresh dill
8 8in flour tortillas
3 cups finely chopped veggies:
carrots, broccoli, cauliflower and green bell peppers.

Directions:
In a medium bowl, combine cream cheese, mayonnaise, ranch dressing mix, and dill
Working with one tortilla at a time, or working an assembly-line fashion, spread about 1/4 cup of the cream cheese mixture evenly over each tortilla, going all the way to the edge. Divide vegetables and cheese evenly over tortillas.
Starting at one end of the tortilla, roll tightly towards the filling. Continue rolling until the filling is tightly wrapped and the cream cheese holds the rollup together.
Continue with the remaining tortillas until all have been assembled. Wrap each tortilla rollup tightly in plastic wrap. Chill the wrapped rollups in the refrigerator until serving time. To serve, trim any unfilled ends away. Slice each tortilla into 8 equal pieces.

INFORMATION ABOUT CARROTS

• Carrots are an excellent source of beta-carotene, which our bodies turn into vitamin A. Carrots provide 30 percent of the vitamin A in the US diet.
• Carrots only need a small amount of space and are very easy to grow. They need well-worked, sandy soil so they will grow long, straight roots. Lumps and stones in the soil will cause the carrots to grow crooked.
• Carrots taste best when grown in cool weather. When the weather is too hot, the carrots grow bitter. In Oklahoma, some people grow carrots in their fall gardens.
• Carrots are worth approximately $300 million per year to US growers.

STICK TO THE FACTS

• Carrots are members of the parsley family, characterized by the feathery green leaves. Other members include parsnips, fennel, dill and celery.
• Carrots are a taproot, a type of root which grows downwards into the soil and swells. Carrots come in many sizes and shapes: round, cylindrical, fat, very small, long or thin.
• Carrots only need a small amount of space and are very easy to grow.

STUDENT DISCOVERY LAB

Hands-on Activity: How Fast Can a Carrot Rot?

Everyone knows carrots are good for you, but they are also good for experiments about decomposition by soil microbes.

Summary:
Students conduct experiments to determine what environmental factors favor decomposition by soil microbes. They use chunks of carrots for the materials to be decomposed, and their experiments are carried out in plastic bags filled with dirt. Every few days students remove the carrots from the dirt and weigh them. Depending on the experimental conditions, after a few weeks most of the carrots have decomposed completely. This engineering curriculum aligns to Next Generation Science Standards (NGSS).

Click on this link to see the lesson and activity in detail:
https://www.teachengineering.org/activities/view/duk_decomposers_mary_act

LESSON ACTIVITIES

Plant Parts We Eat K-2
https://agclassroom.org/ok/lessons/primary/parts.pdf

Dig 'Em Up K-2
https://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=320&search_term_lp=carrot

Oklahoma Roots and Leafy Greens K-4
https://www.agclassroom.org/ok/lessons/lessons/roots.pdf

Four Terrific Carrot Themed Activities PK-4
https://justaskjudy.net/2018/03/4-terrific-carrot-themed-math-literacy-activities/

SCHOOL GARDEN

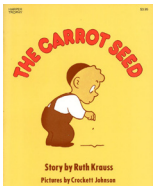
If your school has a garden, here is an activity you may want to implement. Look for donations to cover the cost of seeds, tools, irrigation systems, electric pumps, and any salary incurred by garden educators or others.

Students who work directly with plants or in a garden are more likely to understand the important role plants and agriculture play in our lives. Discuss how plants contribute to our society and health. Students can then plant a "container garden" to give to a person or organization, such as a children's hospital, nursing home, neighbor, or take home to their family.

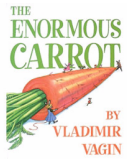
What You Will Need:
Small plant containers
Variety of plants
Bagged soil mix*
Basin for moistening soil*
Note: Garden soil is too heavy for small containers and often contains weed seeds.

Fill container with moistened soil mix. Loosen plant from its original pot by gently squeezing the bottom of the container or gently tapping it on the ground to loosen the root ball. Carefully move to new container and plant at same depth as it was in the old pot. Gently form the soil in around the plant. Place container in a spot where it can drain, such as a sink basin or on the ground outside. Use a watering can to water the soil very gently, being careful not to create pockets around settled soil. Create plant labels and decorate note cards with care instructions to accompany each plant container.

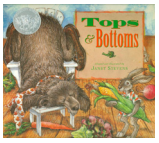
LITERATURE CONNECTIONS



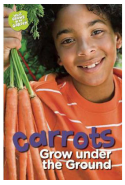
The Carrot Seed
by Ruth Kraus



The Enormous Carrot
by Vladimir Vagin



Tops & Bottoms
by Janet Stevens



Carrots Grow Under the Ground by Anne Rooney

Too Many Carrots
by Katy Hudson

HISTORY OF CARROTS

• Carrots originated in central Asia, near Afghanistan, several thousand years ago.

• Ancient ancestors of the modern carrot were not yellow-orange, but of purplish colors ranging from lavender to almost black. The yellow-orange root came from a mutant variety that lacked the purple pigment.

• Purple and yellow-orange varieties spread west to the Mediterranean, where ancient Greeks and Romans used them for medicinal purposes.

• In the 14th century, carrots arrived in China, which is now the world's leading carrot producer.

• Around the 1600s, the purple variety nearly became extinct, and the yellow-orange variety was introduced to America and Japan.

• The high beta carotene content of carrots was discovered in the 19th century. During World War II, the British worked to develop a variety of higher beta carotene carrots to help their aviators see better at night.

FARM TO ECE
EARLY CARE EDUCATION

Planting in the Garden

Goals
Students choose what to grow, how to grow it, and when to plant a fall garden.

Materials
-Fall seeds (with seed packets that have planting/spacing directions on them) or plant starts (with plant tags that have planting/spacing directions on them)
-Wood craft sticks cut to 1" in length
-Trowels
-Watering cans
-Fall vegetables to taste (optional)

Vegetable Selection
Come up with a list of fall vegetable planting options- depending on your region beets, carrots, radishes, lettuce, spinach, turnips, and onions may be good choices. Have a vote on which fall vegetables the students want to grow. Discuss how each vegetable prefers to grow at a certain time of year. Which vegetables can grow in cool weather? If you have frost and freezes in your area, which vegetables can grow in those conditions? When purchasing your seeds or plant starts, take note of the suggested seed spacing on the seed packets or plant tags so that you can plan how many seeds or plant starts to purchase and plant in your garden space. While planting seeds is a more economical choice, plant starts offer instant gratification in planting and will allow you to harvest sooner. You can plant a combination of seed and plant starts.

Garden Rules
If your class already has garden rules then review these before going out to the garden. If not, brainstorm with the students some important rules that everyone should follow in the garden. For example: work together, share tools, walk in the garden, keep dirt in the garden beds, stay on paths, etc.

Planting in the Garden
Divide the class into groups and assign a specific vegetable for each group to plant. Lead the students in planting their seeds and/or plant starts. If the soil has clumps you can start by having students gently break up clumps with their hands. With your finger (or use a string or baking flour) draw a line for the row where the seeds will go. Guide the students in counting out the wooden craft stick pieces to measure the space between each seed or plant start and guide them in how deep top plant seeds and/or plant starts. After everything is planted have the students take turns watering the newly planted garden.

CAFETERIA CONNECTIONS

• Work with school nutrition staff to find out which form of raw and/or cooked carrots students prefer.
• Conduct taste tests during lunch.
• Older students or a math class may be interested in conducting the taste test and determining cost, student preference, and nutrient analysis.
• Students can taste test the various ways in which raw carrots may be served, such as whole, sticks, baby, mini, sliced, and shredded. Students can also test cooked carrots.
• After the taste tests, feature the school's "choice" on the school lunch menu. On the same day, fill a jar with the "favorite carrot choice" and ask students to guess how many carrots it took to fill the jar. Provide incentives and/or awards as appropriate for your school.

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

www.okfarmtoschool.com

OKLAHOMA FARM to SCHOOL