



**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

Carrot

In season:



**Summer and
Fall**

Dakota: *Pangi zizi*

Lakota: *p̣haŋǵí zizi*

Lesson Plan

Objectives

Participants will:

- identify carrots as a root vegetable from MyPlate.
- increase knowledge in the growth, selection, storage and use of carrots.
- identify a vegetable brush and vegetable peeler.
- demonstrate the use of carrots in a recipe.

Items Needed for the Lesson

- MyPlate poster
- Carrot Nutrition Information sheet
- Samples of a fresh carrot, frozen carrot packaging and can of carrots
- Carrot seeds
- ½ cup measuring cup
- Vegetable brush and vegetable peeler

Handouts or Take Home Items

- Pick it! Try it! Like it! Preserve it! fact sheet

Recipe Choices

- Braised Carrots with Fresh Herbs
- Glazed Carrots

Cooking and Food Safety Skill Sheets

- Handwashing
- Washing Fruits and Vegetables
- Measuring Liquid and Dry Ingredients
- Knife Safety and Cutting Boards
- Stove Top Safety

Other Cooking and Food Safety Skills

- Cooking terms - boil, blanch and simmer
- Using a vegetable brush
- Using a vegetable peeler

Supplies for Carrot Lesson

- Braised Carrots with Fresh Herbs
 - » Vegetable brush
 - » Vegetable peeler
 - » Cutting board
 - » Knife
 - » Can opener
 - » Liquid measuring cup
 - » Saucepan with lid
 - » Measuring spoons
 - » Spoon
 - » Plate or bowl
 - » Stove top or electric burner
- Glazed Carrots
 - » Vegetable brush
 - » Vegetable peeler
 - » Cutting board
 - » Knife
 - » Saucepan and lid
 - » Liquid measuring cup
 - » Measuring spoons
 - » Spoon
 - » Strainer
 - » Stove top or electric burner

What You Say:	What You Do:
<p>Every class we're going to learn about a different fruit or vegetable. I'm going to give you some clues and I want you to try to think of what it is. After each clue, raise your hand if you think you know what it is.</p> <ul style="list-style-type: none"> • One teaspoon can hold 2,000 of the seeds used to grow this vegetable. • It was the first vegetable to be canned commercially. • They can be orange, purple, white, red or yellow. • If you eat too much of this vegetable, your skin can have a yellow tint. <p>(Answer: Carrot.)</p>	<ul style="list-style-type: none"> • Name off each clue, allow a few guesses before moving on to the next clue. • After someone guesses the answer, or you tell them, show them visuals of carrots.
<p>Carrots are a long root vegetable that taper at 1 end. They are usually orange in color, but can also be purple, white, red or yellow. They are crunchy and have a sweet flavor.</p> <p>Carrots are a vegetable that are always in season. You can find them fresh as well as frozen and canned all year round.</p> <p>In South Dakota, carrots are in season from July through September.</p>	<ul style="list-style-type: none"> • Show a fresh carrot, a wrapper from frozen carrots and a can of carrots.
<p>There are 5 subgroups of vegetables: dark green, red and orange, beans and peas, starchy and others. We need to make sure that we are eating vegetables from each of these groups because each have different vitamins and nutrients in them.</p> <p>Do you know what subgroup carrots are in?</p> <p>(Answer: Red/orange.)</p>	<ul style="list-style-type: none"> • Call on people. • Show the Vegetable Subgroups visual.
<p>Different vegetables come from different parts of the plant.</p> <p>Vegetables are either a root, stem, leaf, fruit, flower or seed.</p> <p>What part of the plant do you think a carrot is?</p> <p>(Answer: Root.)</p> <p>Do you know why plants need their roots?</p> <p>(Answer: Roots provide support by anchoring the plant. Roots also absorb water and nutrients for the plant and store sugar and carbohydrates. Some plants have tubers for extra storage of nutrients as is the case with carrots.)</p>	<ul style="list-style-type: none"> • Show the Parts of the Plant visual. • Call on someone who would like to answer.

What You Say:	What You Do:
<p>How many of you have grown carrots in your garden before?</p> <p>Carrots are usually planted in the spring as soon as the soil gets warm.</p> <p>Lumps in the soil should be broken up and the soil worked up well 8-9 inches deep so that the carrot root can grow downward easily.</p> <p>Plant seeds ¼-½ inch deep, 2-3 seeds per inch, in rows that are 12-18 inches apart.</p> <p>Carrots germinate within 2 weeks, but they may not all come up at the same time. Young carrots grow slowly. Weeds should be kept under control.</p>	<ul style="list-style-type: none"> • Allow discussion of growing carrots. • If possible, show a packet of carrot seeds.
<p>Carrots are ready to be harvested after about 60 days or when the roots are at least ½ inch in diameter.</p> <p>Digging carrots rather than pulling, helps to remove them from the soil without damage.</p> <p>Carrots can be left in the ground until a killing frost.</p>	
<p>To store carrots after harvest, cut the tops off leaving about 1 inch of the green. Store them in a perforated plastic bag in the refrigerator for 4-6 months. Do not store carrots at room temperature.</p> <p>Carrot greens are also edible. They can be added to soups and stews. The greens should be stored separately and used within a few days.</p>	<ul style="list-style-type: none"> • If possible, demonstrate cutting the tops off a fresh carrot or show a carrot that has had the top cut off to 1 inch.
<p>Scrub all soil from the carrots with a vegetable brush before eating or cooking. If desired, they can also be peeled with a vegetable peeler.</p> <p>If the stem end of the carrot is green, cut it off. It will taste bitter.</p>	<ul style="list-style-type: none"> • Show a vegetable brush and vegetable peeler. • If there is an example of a carrot with a green stem end, show participants.
<p>What are some ways that we can eat carrots?</p> <p>Carrots can be eaten raw as a snack or used in salads. They can be shredded, chopped or cooked whole. They can be roasted, boiled, steamed, grilled or stir-fried. They go well with many other vegetables.</p>	<ul style="list-style-type: none"> • Allow discussion of the uses of carrots.

What You Say:	What You Do:
<p>Carrots can be canned at home using a pressure canner.</p> <p>Carrots can also be frozen. To freeze carrots, they are blanched for 2-5 minutes first, depending on the size of the carrot.</p> <p>Does anyone know what blanch means?</p> <p>(Answer: Place vegetables in boiling water for a short time to slow or stop enzyme that can cause loss of flavor, color or texture. The vegetables are then cooled rapidly in ice water.)</p> <p>After the carrots are blanched and cooled, they can be packaged in zip-top bags and placed in the freezer.</p>	<ul style="list-style-type: none"> • Call on someone who wants to answer.
<p>When choosing carrots, at the supermarket or grocery store, look for crisp, firm carrots without cracks and that have a deep orange color. Avoid overgrown carrots as their centers can be woody.</p> <p>Baby carrots grow 3-5 inches long and are about 1/2 inch thick.</p> <p>"Baby cut carrots" are fully grown carrots that have been cut down to 2 inch pieces.</p>	<ul style="list-style-type: none"> • If using carrots in the food activity, show a whole carrot. • Show a package of baby cut carrots.
<p>How many of you have seen this before?</p> <p>MyPlate shows us how to eat healthier by dividing a "plate" into 4 food groups and the dairy group is shown as a glass of milk. If we look at the plate, 1/2 of it is fruits and vegetables, the other 1/2 is grains and proteins.</p> <p>Carrots, as we have discussed, are from the vegetable group.</p> <p>Depending on your age and gender, we should be eating between 1-4 cups of vegetables a day.</p>	<ul style="list-style-type: none"> • Point to the MyPlate poster. • Refer to the Daily Recommendations visual for specific servings.

What You Say:	What You Do:
<p>Why would we want to eat carrots?</p> <p>One half cup of sliced carrots is about the same as 1 medium carrot or 4 baby carrots. That ½ cup serving of carrots, whether fresh or cooked, provides more than 200% of the recommended Daily Value for Vitamin A.</p> <p>Does anyone know what vitamin A is used for in our body?</p> <p>(Answer: Vitamin A is good for our vision, keeps our skin healthy and also helps us to fight infection.)</p> <p>Carrots also contain vitamin C and fiber.</p> <p>Vitamin C keeps our immune system healthy and helps to heal cuts and bruises.</p> <p>Fiber helps keep our digestive system healthy.</p>	<ul style="list-style-type: none"> • Allow someone to answer. • Show a ½ cup measuring cup and if possible, a medium size carrot and 4 baby carrots to illustrate a ½ cup serving. • Call on someone who would like to answer. • Refer to Carrot Nutrition Information sheet.
<p>Wild Carrot</p> <p>Dakota Name - Pangj zizi</p> <p>A favorite amongst tribes, harvested for food, very nutritious and could be stored for a long time, eaten raw or added to soups. When looking for wild carrots they would often watch rabbits or look for where rabbits were digging them up. The root, or edible part, is white rather than orange. High in vitamin A and C and contains a high mineral content, good for skin and eye health.</p> <p>Dakota word translated by a member of Hunkpati Dakota.</p>	<ul style="list-style-type: none"> • Read the Dakota perspective.
<p>Who is ready to use carrots in a recipe?</p> <p>What is the first thing we need to do before preparing food?</p> <p>(Answer: Wash our hands.)</p>	<ul style="list-style-type: none"> • Review Handwashing skill sheet.

Use this page if you are going to prepare Braised Carrots with Fresh Herbs

Equipment List

- Vegetable brush
- Vegetable peeler
- Cutting board and knife
- Can opener
- Liquid measuring cup
- Saucepan with lid
- Measuring spoons
- Spoon
- Plate or bowl
- Stove top or electric burner

What You Say:	What You Do:
<p>Today we are going to be making Braised Carrots with Fresh Herbs.</p> <p>Let's read through the recipe together before we begin.</p> <p>We are going to be making the Braised Carrots on the stove top. What are some things we want to remember about stove top safety?</p>	<ul style="list-style-type: none"> • Pass out the recipe. Read through the recipe with participants. • Refer to Stove Top Safety skill sheet.
<p>The first thing we are going to do is scrub and peel the carrots.</p> <p>We will be using a vegetable brush and vegetable peeler.</p>	<ul style="list-style-type: none"> • Demonstrate how to scrub and peel the carrots. • Review Washing Fruits and Vegetables skill sheet. • Discuss safely using a vegetable peeler.
<p>We are going to cut the carrots into pieces that are about the same size. Why do you think we want even sized pieces?</p> <p>(Answer: So they cook evenly.)</p>	<ul style="list-style-type: none"> • Call on someone who would like to answer. • Review Knife Safety and Cutting Boards skill sheet.
<p>We will be measuring some beef broth. What kind of measuring cup should we use to do this step?</p> <p>(Answer: A liquid measuring cup.)</p>	<ul style="list-style-type: none"> • Go over how to measure a liquid, referring to the Measuring Liquids and Dry Ingredients skill sheet.
<p>The recipe states to bring the beef broth to a boil. What does the cooking term "boil" mean?</p> <p>(Answer: To heat a liquid until bubbles break continually on the surface.)</p> <p>After the carrots, honey, butter and parsley are added to the boiling beef broth, the pan is covered, and the contents are allowed to simmer. What does the cooking term "simmer" mean?</p> <p>(Answer: To cook slowly in liquid over low heat at a temperature of about 180 degrees. The surface of the liquid should be barely moving, broken from to time by slowly rising bubbles.)</p>	<ul style="list-style-type: none"> • Allow participants to answer. • Define the cooking terms "boil" and "simmer".

Use this page if you are going to prepare Glazed Carrots

Equipment List

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • Vegetable brush • Vegetable peeler • Cutting board and knife | <ul style="list-style-type: none"> • Saucepan and lid • Liquid measuring cup • Measuring spoons | <ul style="list-style-type: none"> • Spoon • Strainer • Stove top or electric burner |
|--|--|---|

What You Say:	What You Do:
<p>Today we are going to be making Glazed Carrots.</p> <p>Let's read through the recipe before we begin.</p>	<ul style="list-style-type: none"> • Pass out the recipe. • Read the recipe aloud and have participants follow along.
<p>We are going to be using the stove top to prepare the Glazed Carrots. What are some things we need to remember when using a stovetop?</p>	<ul style="list-style-type: none"> • Allow participants to answer. • Refer to Stove Top Safety skill sheet.
<p>How do we prepare the carrots for this recipe? (Answer: Scrub and peel, then cut into 1-inch pieces.)</p> <p>We will be using a vegetable brush, vegetable peeler, a knife and a cutting board.</p>	<ul style="list-style-type: none"> • Show a vegetable brush and peeler and demonstrate their uses. • Go over Knife Safety and Cutting Boards skill sheet. • Discuss safely using a vegetable peeler.
<p>When measuring the water, what kind of measuring cup should we use? (Answer: A liquid measuring cup.)</p>	<ul style="list-style-type: none"> • Review how to measure a liquid using the Measuring Liquid and Dry Ingredients skill sheet.
<p>The carrots are simmered on the stove top for about 15 minutes.</p> <p>What does the cooking term "simmer" mean? (Answer: To cook slowly in liquid over low heat at a temperature of about 180 degrees. The surface of the liquid should be barely moving, broken from time to time by slowly rising bubbles.)</p>	<ul style="list-style-type: none"> • Define the cooking term "simmer".

Visuals



The leaves of the carrot plant



A farmer harvesting carrots



Carrots that have to grow around rocky soil can become misshapen but they are still edible



Carrots can be grown in many different colors

Carrot Nutrition Information

Type	Serving Size/Weight in grams	Calories	Fiber (g)	Vitamin A (International Units)	Vitamin C (mg)	Potassium (mg)	Folate (mcg)
Carrots, raw	1 med./ 61 g	25	1.7	215%	4	195	12
Carrots, cooked	½ cup/ 78 g	27	2.3		3	183	11
Carrots, baby, raw	8 med./ 80 g	28	1.4		7	190	26
Daily Recommendations RDA=Recommended daily allowance AI=Adequate intake	1-4 cup servings of vegetables per day depending on age	Varies according to age and activity level	AI (depending on age) ranges from 14-33.6 g	Daily Value based on a 2,000 calorie per day diet	RDA (depending on age) ranges from 25-90 mg	AI (depending on age) ranges from 3,000-4,700 mg)	RDA (depending on age) ranges from 150-400 mcg)

Carrot Sources

Recipe

- myplate.gov/recipes/supplemental-nutrition-assistance-program-snap/glazed-carrots

Clues

- vegetablefacts.net/vegetable-facts/carrot-facts/

Carrot Information

- extension.illinois.edu/veggies/carrot.cfm
- eatfresh.org/discover-foods/carrots
- fruitsandveggies.org/fruits-and-veggies/carrots/
- snap-ed.michiganfitness.org/
- .pickyourown.com

Cooking Terms

- reallifegoodfood.umn.edu/kitchen-skills-and-tips/cooking-terms-glossary

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SOUTH DAKOTA STATE
UNIVERSITY EXTENSION

Carrot

In season:



Summer and
Fall

Dakota: *Pangi zizi*

Lakota: *p̣haŋǵí zizi*

Pick it!

Baby carrots are slightly shorter carrots that have been peeled, trimmed, and packaged.

Select carrots with dark orange color for more beta-carotene.

Carrots can also be white, yellow, red and purple.

Avoid huge overgrown carrots, as centers can be woody.

Keep fresh for several weeks in the crisper drawer of the refrigerator, in pierced plastic bags with green tops trimmed.

Scrub all soil from carrots before eating or cooking; if desired, peel.

Try it!

Carrots match well with almost any vegetable.

Raw carrots are good for snacking and adding to salads.

Cook by steaming, microwaving, roasting, grilling or stir-fry. Carrots can also be added to soups or stews.

Carrots can be shredded and baked into cakes and breads.

Green carrot tops can be added to soups and stews; store separately for just a few days.



Types of Carrot

Orange: Most common, 7-10 inches long, many varieties

Baby: Tender and sweet, 3-5 inches long, 1/2 inch thick

Purple, Red, Yellow, White: Different pigments result in different colors



Did you know...

Beta-carotene is an antioxidant in brightly colored fruits and vegetables. The brighter the color, the higher the beta-carotene. Our bodies use beta-carotene to make vitamin A.

Like it!

Braised Carrots with Fresh Herbs

Ingredients

- 1 pound baby carrots, whole or carrot sticks 2-3 inches long, halved or quartered
- 1 cup beef broth
- 1 teaspoon honey
- 1 Tablespoon margarine
- 2 Tablespoons fresh parsley, chopped or 1 Tablespoon dried

Directions

1. Rinse, scrub and peel carrots.
2. In medium sauce pan, bring beef broth to a boil, add carrots, honey, butter and parsley. Cover and simmer for 4-5 minutes.
3. Remove carrots from the liquid to a warm plate.
4. Continue simmering the broth 15-20 minutes longer, until its a thickened liquid glaze.
5. Return carrots to pan and cover them with the glaze. Serve.

Yields 4 servings

Nutrition Facts per Serving:
Calories 90; Fat 3.5g; Cholesterol 0mg; Sodium 125mg;
Carbohydrates 13g; Fiber 3g; Sugar 7g; Protein 2g

Glazed Carrots

Ingredients

- 2 Tablespoons margarine
- 1 ½ pounds carrots
- 1 cup water
- ¼ teaspoon pepper
- 2 teaspoons sugar

Directions

1. Rinse, scrub and peel carrots. Cut in half lengthwise, then into 1-inch pieces.
2. Melt the margarine in a heavy saucepan on low heat.
3. Add the water, salt and pepper. Cover and simmer for about 15 minutes, until tender.
4. Drain the water, add the sugar.
5. Cover the pan. Shake the pan back and forth on the burner for 1 minute.
6. Cook for 1 more minute, until the carrots are glazed, but not brown.

Yields 6 servings

Nutrition Facts per Serving:
Total Calories 80; Total Fat 4g, Saturated Fat 1g;
Cholesterol 0mg; Sodium 102mg; Carbohydrates 11g;
Dietary Fiber 3g, Total Sugars 6g, Added Sugars included 1g; Protein 1g

Source: myplate.gov/recipes/supplemental-nutrition-assistance-program-snap/glazed-carrots

Dakota Perspective (wild carrots)

Dakota name: Pangzi zizi

A favorite amongst tribes, harvested for food, very nutritious and could be stored for a long time, eaten raw or added to soups. When looking for wild carrots they would often watch rabbits or look for where rabbits were digging them up. The root or edible part is white rather than orange. High in vitamins A and C and contains a high mineral content, good for skin and eye health.

Translation and information provided by a member of Hunkpati Dakota.

**Find more recipes
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