



**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

Beet

In season:



Summer

Lakota: p̣haŋǵí šašá

Lesson Plan

Objectives

Participants will:

- identify beets as a vegetable from MyPlate.
- increase knowledge in growing beets as well as the selection, storage and preparation of beets and beet greens.
- demonstrate the use of beets and the skills needed to prepare a recipe.

Items Needed for the Lesson

- MyPlate poster
- ½ cup measuring cup
- Parts of a Plant visual
- Fresh beet to identify variety and size
- Nutrition Facts from beets

Handouts or Take Home Items

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

Recipe Choices

- Beets with Dijon Dressing
- Red Beet and Apple Salad

Cooking and Food Safety Skill Sheet

- Handwashing
- Washing Fruits and Vegetables
- Oven Safety

Other Cooking and Food Safety Skills

- Safely storing leftovers
- Cooking terms- toss, roast and grate

Supplies for Beets Lesson

- Beets with Dijon Dressing
 - » Knife
 - » Bowls
 - » Measuring spoons
 - » Roasting pan
 - » Timer
 - » Liquid measuring cup
 - » Whisk
 - » Cutting board
 - » Disposable gloves
- Red Beet and Apple Salad
 - » Knife
 - » Large bowl
 - » Grater
 - » Measuring spoons
 - » Small bowl
 - » Spoon

What You Say:	What You Do:
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. • These may be eaten raw or cooked and are rich in folate. • They are in the same plant family as spinach. • They are also known as blood turnips. • The red coloring that comes from them is processed into food coloring that is sometimes used to improve the color of tomato paste, sauces and jams. • Their coloring can even be used to make red colored mulches for landscaping. (Answer: Beet.)	• 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 beets.
The table beet is a popular garden vegetable that is grown throughout the United States. In South Dakota, beets are available from July to mid-October. Beets come from the red and orange subgroup of vegetables. Different vegetables come from different parts of the plant. They may be the root, stem, fruit, seed, leaf or flower. What part of the plant do you think beets are? (Answer: Root.) Why are roots important to plants? 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.	• Show the vegetable subgroup diagram. • Show the Parts of a Plant visual. • Allow discussion regarding roots.
MyPlate shows us how to eat healthier. If we notice, ½ of the MyPlate diagram is fruits and vegetables. Depending on your age and gender, we should be eating between 1 and 4 cups of vegetables a day. One half cup of raw or cooked beets counts as ½ cup in the MyPlate Vegetables group.	• Point to the MyPlate poster. • Show a ½-cup measuring cup.
Have any of you ever grown beets before? Beets can actually be planted in the garden 30 days before that first frost-free date for your area. Beet seedlings grow well in cool, moist conditions, while the more established plants grow well during warm weather.	• Allowing participant discussion time.

What You Say:	What You Do:
Several seedlings may grow from each beet seed. Seeds should be planted ½ inch deep and 1 inch apart with 12-18 inches between rows. Planting too deep results in a poor stand. Beets should be planted in fertile soil. They do not compete well with weeds, so they need to be weeded often. Beets also need to be thinned by hand to keep seedlings about one to three inches apart. Beets can be harvested whenever they grow to the desired size. Thinnings, which are beets that are pulled before they are fully mature, can be eaten raw (including the tops) in salads or they can be roasted, which brings out their natural sweetness.	
It takes about 60 days for beets to reach the mature stage where the beets have a diameter of 1 ½ to 2 inches. This is the size often used for cooking, canning or pickling; Beets that are larger than 3 inches in diameter are often tough and woody. Beets vary in color and shape depending on the variety. The most common beet is round in shape and has a deep maroon color. Beets can also be orange, white or pink.	• If possible, show a real beet of the common variety, making note of the diameter.
If purchasing fresh beets, select beets with firm skin. If the greens are still attached, select those with fresh looking leaves. Remember that smaller beets (1 ½ to 2 inches) are more tender. Beets store well in a plastic bag in the refrigerator. Use them while they are firm and fresh, usually within a week.	
Beet greens are edible and are packed with nutritional value, but they have to be prepared separately from the beet. If the greens are left on during storage, they will draw moisture from the beet causing them to shrivel and lose flavor. Cut the greens off, leaving a one-inch stem on the beet to retain moisture and nutrients.	• Demonstrate cutting the greens and leaving a 1-inch stem.

What You Say:	What You Do:
Why should we eat beets? Beets are rich in folate, which has been found to help prevent neural-tube birth defects and aids in the fight against heart disease. Beets also have both soluble and insoluble fiber. Insoluble fiber helps to keep our intestinal tract running smoothly. Soluble fiber helps to keep our blood sugar and blood cholesterol levels in check, the beet greens are a good source of vitamin A, which helps to keep our eyes and skin healthy.	• Call on participants that want to answer.
How do we eat beets? First, we need to wash the beets carefully under cool running water without breaking the skin. Breaks and tears allow color and nutrients to escape. Beets are known for their red pigment, which stains towels, cutting boards, sinks and skin. Salt easily removes the stains from hands or you may want to wear disposable gloves. After cooking and cooling, the beet skin can be rubbed off.	
Beets can be microwaved, steamed, boiled, pickled, roasted or eaten raw. Beets of different sizes cook at different rates. Select beets uniform in size to prevent overcooking. Beets are done when they are easily pricked with a fork. When eating raw, the beets only need to be scrubbed then grated or sliced to desired thickness.	

What You Say:	What You Do:
To bake: Pierce and wrap in foil. Bake at 350 degrees F for 45-90 minutes. To grill: Place ½-inch thick slices in a plastic baggie or container with lid and drizzled with olive oil and seasoning. Shake to coat. Put slices on skewers over a preheated grill. Cook 15-20 minutes. To microwave: place 2-3 small beets in a small amount of water. Microwave on high 8-15 minutes or until tender. To roast: Place ½-inch thick slices in a plastic bag. Drizzle with olive oil seasoning. Shake bag to coat beets. Place beets on a baking sheet and roast at 400 degrees F for 30-40 minutes. Salad greens: Beet greens can be used much like spinach. Rinse the leaves well before adding them to salad. Borscht is a popular soup made from beets that can be served cold in the summer or warm in the winter. In order to enhance their natural flavor, beets can be seasoned with allspice, basil, cinnamon, cloves, dill weed, ginger or nutmeg.	
Beets can also be frozen. To do so, first choose tender young beets. Wash them gently under cool running water. Trim the tops, leaving a 1-inch stem and the small root. Cook in boiling water until tender, about 25-45 minutes. Cool right away in cold water. Rub the peel away and trim the stem. Cut the cooled beets into cubes or slices. Place in freezer bags, seal and freeze.	
Beets are also available in the store in canned and pickled form.	• If possible, show a can of cooked beets and a container of pickled beets.

Use this page if you are going to prepare Beets with Dijon Dressing

Equipment List

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> • Knife • Bowls • Measuring spoons | <ul style="list-style-type: none"> • Roasting pan • Timer • Liquid measuring cup | <ul style="list-style-type: none"> • Whisk • Cutting board • Disposable gloves |
|--|---|---|

What You Say:	What You Do:
Today we are going to make Beets with Dijon Dressing. What is the first thing we need to do before we begin? (Answer: Wash hands.)	Go over Handwashing skill sheet.
Let's read through the recipe to see what steps we need to do. The oven will need to be preheated.	- Pass out the recipe and read through together for understanding. - Review Oven Safety skill sheet. Ask someone to turn the oven on.
First we will wash the beets. Remember we need to wash them gently to avoid breaks in the skin. Breaks and tears allow the color and nutrient to escape.	Allow participants to tell how to wash vegetables. Refer to Washing Fruits and Vegetables skill sheet.
The recipe tells us to toss the contents of the bowl. What does the cooking term "toss" mean? (Answer: To combine ingredients with a lifting motion.)	Call on someone who would like to answer.
We are going to roast the beets. Does anyone know the definition for the cooking term "roast"? (Answer: To cook by dry heat in an oven.)	Call on someone who would like to answer.

Use this page if you are going to prepare Red Beet and Apple Salad

Equipment List

- Knife
- Large bowl
- Grater
- Measuring spoons
- Small bowl
- Spoon

What You Say:	What You Do:
Today we are going to make Red Beet and Apple Salad. Before we begin food preparation, what do we need to do? (Answer: Wash our hands).	• Refer to the Handwashing skill sheet.
Let's read through the recipe so we know what steps we are going to do.	• Pass out the recipe and read it together.
How many food groups are represented in this recipe? (Answer: 2. Vegetable group - beets. Fruit group - apples.) According to MyPlate, we should be filling half of our plate with fruits and vegetables. Depending on our age and gender, 1-4 cups of vegetables and 1-2 cups of fruit are recommended daily.	• Allow participants to answer. • Show the MyPlate poster.
The first step in this recipe is to wash the beets. It also states that the beet can be peeled if desired. How will we wash the beet? (Answer: Gently under cool running water.) If we choose to peel the beet, how will we do that step? (Answer: Use a knife or vegetable peeler.)	• Allow participants to answer. • Review Washing Fruits and Vegetables skill sheet. • Review Knife Safety and Cutting Board safety and skill sheet.
What does the cooking term "grate" mean? (Answer: To rub on a grater that separates the food into various sizes of bits or shreds.) We will be doing this to both the beets and the apples.	• Call on someone who would like to answer.
For the dressing we will mix the honey and lemon juice together. The recipe says we can add salt to taste.	
Salt is one thing we need to watch in the foods we eat. Our bodies do need salt, but too much can lead to high blood pressure and possibly cardiovascular disease.	
Dietary guidelines recommend that people over the age of 14 limit sodium intake to 2,300 mg per day (about 1 teaspoon). Sodium is in many foods we eat and can be especially high in boxed meals, canned soups and vegetables. It is important to check the nutrition facts labels for sodium. If the daily value for sodium is higher than 20%, that means it is high in sodium. Look for foods that are 5% or lower in sodium. Use spices and herbs to season foods at home. You can get creative with cooking and find different flavor combinations you and your family like.	• If possible, show a few food labels to look at the sodium content.
If you recall from the lesson, allspice, basil, cinnamon, cloves, dill weed, ginger and nutmeg were suggested to enhance the natural flavor of beets.	• Prepare the recipe with participants.

Visuals



Beet growing in the ground



Beetroot and greens



Yellow beets



A beet cut in half

Beets Nutrition Information

Type	Serving Size/Weight in grams	Calories	Fiber (g)	Vitamin A (International Units)	Vitamin C (mg)	Potassium (mg)	Folate (mcg)
Beets, cooked	½ cup 85 g	37	1.7	2%	3	259	68
Beet greens, cooked	½ cup 72 g	19	2.1	n/a	18	654	10
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)

Beet Sources

Information

- pickyourown.org
- extension.illinois.edu/veggies
- msuextension.org

Recipe

- eatfresh.org

Cooking terms

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

Lakota translation:

- Translated by Jeshua Estes

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Beet

In season:



Summer



Lakota: p̣haŋǵí šašá

Pick it!

Beets are usually round with a 1 to 2 ½ inch diameter and deep burgundy color with edible green to burgundy leaves.

Select beets that are smooth, hard, rounded and free of cuts and bruises. Discard overgrown or woody beets.

Trim the greens (leaves) to about 1 inch when storing the root; refrigerate for several weeks. Store the greens separately.

"Thinnings" are beets that are pulled before fully mature and can be eaten raw and whole in salads.



Try it!

Can be eaten raw, baked, steamed, roasted or pickled as a condiment.

Raw or steamed beets are good in salads; medium/large-sized beets are better cooked.

Choose beets similar in size for even cooking.

Peel beets after cooking while wearing disposable gloves to avoid staining your skin.

Beet greens can be used like spinach.



Types of Beets

Red table: Most common

Chioggia: Candy red outside with banded red/white inside and sweet, mellow flavor

Golden: Orange skin with golden yellow inside, sweet mild flavor



Did you know...

Folate and folic acid help protect against heart attack, stroke and the formation of neural tube defects. The nutrient can be found in beets and leafy green vegetables.

Like it!

Beets with Dijon Dressing

Ingredients

- 3 pounds beets
- 4 Tablespoons olive oil
- 1 teaspoon salt
- ½ teaspoon black pepper
- 1 Tablespoon Dijon mustard (or yellow prepared mustard)
- ¼ cup orange juice
- 1 teaspoon sugar
- 1 Tablespoon red wine vinegar
- 1 Tablespoon rosemary, chopped

Directions

1. Preheat oven to 400 degrees Fahrenheit.
2. Wash, trim and dry beets leaving ½ inch stem and root intact.
3. Put beets in a bowl and add 1 Tablespoon olive oil, the salt and pepper. Toss contents of bowl with clean hands.
4. Arrange beets in a single layer roasting pan. Roast in oven for 45 minutes or until tender.
5. Remove pan and allow to cool.
6. Make dressing while cooling. Whisk mustard, orange juice, sugar and vinegar together. Whisk in 3 Tablespoons of olive oil and the rosemary.
7. Rub skin off beets and cut into quarters.
8. Combine with dressing and let sit for 30 minutes.

Yields 6 servings

Nutrition Facts per Serving:
Calories 200, fat 10g, cholesterol 0mg, carbohydrates 25g Fiber 5, sugar 20g, Protein 4g

Red Beet and Apple Salad

Ingredients

- 1 large or 2 small red beet(s)
- 4 apples
- 1 Tablespoon lemon juice
- 1 Tablespoon honey

Directions

1. Wash the beet and peel if desired. (If peeled, the beet will taste less earthy.)
2. Grate the beet and apples into a large bowl.
3. For the dressing, mix the lemon juice, honey and salt.
4. Pour the dressing over the mixture of beet and apples. Mix well.
5. Serve chilled.

Yields 8 servings

Nutrition Facts per Serving:
Calories 55, fat 0g, Cholesterol 0mg, Carbohydrates 15g, Fiber 2.5, Sugar 12.5g includes added sugars 2g, Protein 0.5g

Lakota word translated by Jeshua Estes

**Find more recipes
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