



**SOUTH DAKOTA STATE  
UNIVERSITY EXTENSION**

**In season:**



**Summer**

# Beans

**Dakota: Cehbe'ca**

**Lakota: omníčá**

## Preschool Lesson Plan

### Objectives

Participants will:

- identify beans as a vegetable from myplate.
- increase knowledge in selecting, storing and preparing green beans.
- demonstrate use of green beans in a recipe.

### Items Needed for the Lesson

- MyPlate poster
- Visuals of beans-varieties of colors, bean plants, overripe beans
- Measuring cups – 1 cup and ½ cup
- Packet of bean seeds
- Pencil
- Raw snap bean for sample
- Can of green beans

### Handouts or Take Home Items

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

### Recipe Choices

- Green Beans with Tomatoes

### Cooking and Food Safety Skill Sheets

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

### Supplies for Bean Lessons

- Green Beans with Tomatoes
  - » Knife
  - » Cutting board
  - » Non-stick pan
  - » Measuring spoons
  - » Spoon
  - » Liquid measuring cup

### Notes

- Dakota and Lakota translation of the name of the produce is available at the end of this document.

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"> <li>• These are grown in most gardens.</li> <li>• Most of them are green, but they can be purple or yellow.</li> <li>• They are 4 to 6 inches long and they are not very big around.</li> <li>• They might be called green, string or snap.</li> </ul> <p>(Answer: Beans.)</p>	<ul style="list-style-type: none"> <li>• Name off each clue, allow a few guesses before moving on to the next clue.</li> <li>• After someone guesses the answer, or you tell them, show them visuals of beans.</li> </ul>
<p>How many of you have seen this before? MyPlate shows us how to eat healthier by dividing a "plate" into parts and using different colors and sizes for each of the food groups. Orange is for grain foods, Purple is for protein foods, Green is for vegetables, Red is for fruits and the round Blue part by the plate is for dairy foods, like milk.</p> <p>Can you see that <math>\frac{1}{2}</math> of the plate is fruits and vegetables?</p> <p>That is what our plate should look like on most days - <math>\frac{1}{2}</math> full of fruits and vegetables.</p>	<ul style="list-style-type: none"> <li>• Point to the MyPlate poster.</li> <li>• Show the different parts and colors.</li> <li>• Point out that <math>\frac{1}{2}</math> of the MyPlate is fruits and vegetables.</li> </ul>
<p>What food group do beans come from? (Answer: Green beans come from the vegetable group on MyPlate.)</p> <p>Can anyone name some other vegetables?</p>	<ul style="list-style-type: none"> <li>• Call on someone who would like to answer.</li> <li>• Allow students time to share. Tell them that the vegetables they are naming come from the Green section on MyPlate.</li> </ul>
<p>Kids in preschool should be eating 1 cup of vegetables each day. Kids in kindergarten should be eating 1 <math>\frac{1}{2}</math> cups of vegetables a day.</p>	<ul style="list-style-type: none"> <li>• Show the preschool children a 1 cup measuring cup. Show kindergarteners a 1 cup measure and a <math>\frac{1}{2}</math> cup measuring cup. Explain that this is how much 1 cup and 1 <math>\frac{1}{2}</math> cups are.</li> </ul>
<p>How many of you have grown beans in your garden or have seen beans in a garden?</p> <p>They are planted from seeds. Some bean plants need poles to help hold them up. Other bean plants do not. Having the bean plant grow up the pole makes it easier to pick the beans from the plant when they are ready to be picked.</p>	<ul style="list-style-type: none"> <li>• Show a packet of bean seeds if possible.</li> <li>• Show visuals of the 2 types of beans growing.</li> </ul>

What You Say:	What You Do:
<p>Have you ever heard beans called “string beans?”</p> <p>Green beans used to be called string beans because of a “string” (fiber) that grew along the seam of the bean pod. Scientists have been able to make green beans that do not have the “string” anymore.</p> <p>Beans are now called “snap” beans because of the sound they make when they are broken into pieces to cook.</p> <p>And remember from our clues, that even though we call them green beans they can be yellow or purple also.</p>	<ul style="list-style-type: none"> <li>• If possible, show a snap bean, pointing out where the string was once located.</li> <li>• Demonstrate the “snap” sound the bean makes when broken.</li> </ul>
<p>Beans should be picked from the plant in the garden when they are straight and tender. If you see the seeds inside the bean getting really big and they bulge in the pod, they are overripe. They will not taste as good.</p> <p>When you buy green beans in the store, we want to pick the ones that are no thicker than a pencil and that are bright green and crisp.</p> <p>We should put green beans in the refrigerator to store them.</p> <p>When we are ready to use them, we should wash them in cold water and remove the stem.</p>	<ul style="list-style-type: none"> <li>• If possible, show a bean that is overmature.</li> <li>• Show a pencil to reference size.</li> </ul>
<p>Have you eaten green beans before? How did they taste?</p> <p>Fresh snap beans can be eaten raw as a snack or they might be put into a salad.</p> <p>They can be heated on the stove or in the microwave.</p> <p>They can be put into stir fry.</p> <p>We can also buy green beans in a can. They are ready to heat and eat.</p> <p>We can also find green beans frozen at the grocery store.</p>	<ul style="list-style-type: none"> <li>• Allow discussion.</li> <li>• If possible, have a small sample of snap beans that the children can try raw.</li> <li>• Show a can of green beans.</li> </ul>

What You Say:	What You Do:
<p>What is good about eating green beans?</p> <p>Beans have fiber that helps to keep our digestive system healthy.</p> <p>They also have some nutrients in them that help our nerves to function and our muscles to contract.</p>	
<p>Are you ready to try a recipe that uses green beans?</p> <p>What is the first thing we need to do before making or eating food? (Answer: Wash hands.)</p>	<ul style="list-style-type: none"> <li>• Refer to Handwashing skill sheet.</li> </ul>

**Beans** – *original to South Dakota prior to European settlement.*

Dakota name – Cehbe'ca      Lakota name – omníča

A favorite amongst many tribes, this plant produced two types of seeds, one below ground and one above ground. The one produced below ground was about the size and shape of a lima bean and contained everything needed to sustain life.

When some tribes planted, they put corn, beans and squash together so they could help each other. They planted the corn on top of a little mound, after the plant was high, enough they planted the beans at the base of the corn so the beans could use the corn plant as a trellis to climb and grow toward the sun. The squash was planted throughout the corn and beans, because of the size of the squash leaves, they helped the ground retain moisture and prevent weeds from growing.

Dakota word translated and perspective provided by a member of Hunkapti Dakota.

Lakota word translated by Jeshua Estes.



## Use this page if you are going to prepare Green Beans with Tomatoes

### Equipment List

- Knife
- Cutting board
- Non-stick pan
- Measuring spoons
- Spoon
- Liquid measuring cup

What You Say:	What You Do:
<p>Today we are going to be making Green Beans with Tomatoes.</p> <p>Let's read the recipe to make sure we know what the steps are and to make sure we have everything that we need.</p>	<ul style="list-style-type: none"> <li>Read the recipe to the students. Show each ingredient as it is read.</li> </ul>
<p>What food group do green beans, tomato, onion, garlic and potato come from? (Answer: All of them are from the vegetable group.)</p>	
<p>We will wash the vegetables first.</p> <p>How do we wash fresh vegetables? (Answer: Under cool running water.)</p>	<ul style="list-style-type: none"> <li>Review Washing Fruits and Vegetables skill sheet.</li> </ul>
<p>We will be using a sharp knife and cutting board to cut up the vegetables. What do we need to remember about using knives?</p>	<ul style="list-style-type: none"> <li>Allow discussion.</li> <li>Review Knife Safety and Cutting Boards skill sheet.</li> </ul>
<p>We are going to use the stove top to prepare this recipe.</p> <p>What do we need to remember about using the stove top?</p>	<ul style="list-style-type: none"> <li>Review Stove Top Safety skill sheet.</li> </ul>
<p>We have to measure some water for this recipe. How do we measure a liquid ingredient like water? (Answer: Use a liquid measuring cup, eye level.)</p>	<ul style="list-style-type: none"> <li>Review Measuring Liquid and Dry Ingredients skill sheet.</li> <li>Demonstrate measuring a liquid.</li> </ul>
<p>This recipe will be colorful with the green beans, red tomatoes and white potatoes.</p> <p>Eating this recipe helps us to make 1/2 of our plate fruits and vegetables.</p>	

## Visuals



**Bean and bean flower growing on the plant**



**Fresh green beans**



**Variety of dried beans**



**Variety of fresh beans**



## Beans Nutrition Information

Type	Serving Size/Weight in grams	Calories	Fiber (g)	Vitamin A (mcg)	Vitamin C (mg)	Potassium (mg)	Folate (mcg)
<b>Green Beans, raw</b>	1 cup, 100g	31	3	35	12	211	30
<b>Green Beans, cooked</b>	1 cup, 125g	44	4	40	12	182	41
<b>Daily Recommendations</b> <b>RDA=Recommended daily allowance</b> <b>AI=Adequate intake</b>	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)



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# BEANS



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# Bean Sources

## Clues

- Home Garden Green Beans, UGA Cooperative Extension: [extension.uga.edu/publications/detail.html?number=C1006](http://extension.uga.edu/publications/detail.html?number=C1006)

## Information

- [web.extension.illinois.edu/vegguide/grow\\_bean.cfm](http://web.extension.illinois.edu/vegguide/grow_bean.cfm)
- [fruitsandveggies.org/fruits-and-veggies/green-beans/](http://fruitsandveggies.org/fruits-and-veggies/green-beans/)
- [michigannutritionnetwork.org/wp-content/uploads/2016/05/green-beans-family-newsletter-2016.pdf](http://michigannutritionnetwork.org/wp-content/uploads/2016/05/green-beans-family-newsletter-2016.pdf)
- [extension.umaine.edu/publications/4255e/](http://extension.umaine.edu/publications/4255e/)
- [extension.illinois.edu/](http://extension.illinois.edu/)
- [bedford.tennessee.edu/snap-beans/](http://bedford.tennessee.edu/snap-beans/)
- [ag.umass.edu/nutrition/publications-resources/produce-spotlight/green-beans-0](http://ag.umass.edu/nutrition/publications-resources/produce-spotlight/green-beans-0)
- [medlineplus.gov/potassium.html](http://medlineplus.gov/potassium.html)
- [medlineplus.gov/folicacid.html](http://medlineplus.gov/folicacid.html)
- FoodData Central (usda.gov): [fdc.nal.usda.gov/index.html](http://fdc.nal.usda.gov/index.html)

## Recipe

- [eatfresh.org/recipe/side-dish/bean-dumplings](http://eatfresh.org/recipe/side-dish/bean-dumplings)

## Dakota word translate and perspective

- Provided by a member of Hunkapti Dakota.

## Lakota translation

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## Pick it!

When buying fresh, select slender beans, no thicker than a pencil; if too mature, the seeds will be visible through the pod.

Store unwashed beans in a plastic bag, for up to a week, in the refrigerator.

Shelled/dried beans have been allowed to mature and then harvested. Dried beans come in many colors, shapes, sizes and can be stored for months.

Wash just before preparation, drain well. Trim off ends using a knife.

Fresh beans may be eaten raw in salads, cooked as a side dish or as part of a main dish.

## Try it!

Stir-frying preserves nutrients; boiling and microwaving are also common.

When boiling, cook, covered about 4 minutes, cooking 1 pound or less at a time.

Dried beans are soaked to absorb water and will become double to triple their size; cook to make them edible and digestible.



## Types of Beans

**Edible Pod Beans:** Called string beans or snap beans, include yellow, purple and green

**Shell beans:** Dried and shelled, includes lima, kidney, pinto or canned beans

**Edamame:** Fresh or frozen shell bean, eaten as whole pods or shelled fresh beans



## Did you know...

Beans and legumes are good sources of manganese. Manganese is important to break down carbohydrates and helps grow cartilage.



**Like it!**

## Green Beans with Tomatoes

### Ingredients

- 1 ½ pounds fresh green beans
- 1 large ripe tomato, cored and chopped
- ½ cup onion, chopped
- 1 clove garlic, minced
- 2 Tablespoons olive oil
- 1 potato, cubed
- Salt and pepper to taste
- 1 cup water

### Directions

1. Wash the green beans and trim the stem ends. Wash the tomato; core and chop it. Leave skin on. Set both aside.
2. Heat the olive oil in a non-stick pan.
3. Add onions and saute for 1 minute.
4. Add garlic and tomatoes and cook for 1 minute.
5. Add the green beans and potatoes and toss into the mixture.
6. Season with salt and pepper.
7. Pour in water, cover and let simmer for 10 minutes or until potato is tender.
8. Serve hot.

Frozen green beans can be substituted for fresh. Fresh tomato can be replaced with 1 can of diced tomatoes. Frozen onions can be used in place of fresh onion.

Yield 6 servings

Nutrition Facts per Serving:

Calories 100; Fat 5g; Cholesterol 0mg; Sodium 20mg; Carbohydrates 13g; Fiber 4g; Sugar 4g; Protein 3g

## Bean Dumplings

### Ingredients

- 2 ½ cups whole grain blue or yellow cornmeal/masa/hominy/grits
- 2 cups boiling water
- 1 (15.25 ounces) can cooked brown or red beans
- ½ teaspoon salt

### Directions

1. In a large pot, stir together cornmeal and boiling water until there are no lumps. Cook for 3 minutes over low heat, stirring constantly.
2. Rinse and drain beans. Add beans and salt to moistened cornmeal. Stir well.
3. Shape corn dough into small balls.
4. Drop the corn balls gently into a large pot of boiling water. Reduce heat to low and simmer the dumplings gently until cooked to the center, about 30 minutes.

\*To keep the dough from sticking to your palms, wet your hands with cold water before rolling each ball. While cooking the dumplings, do not let the water come to a fast boil, as they may fall apart.

\*Variations: Stir in sliced scallions, whole corn kernels, roast red peppers, minced jalapeños, ground cumin or garlic powder for extra flavor.

Yield 8 servings (3 pieces each)

Nutrition Facts per Serving:

Calories 136; Fat 1.3g; Cholesterol 0mg; Sodium 244mg; Carbohydrates 28g; Fiber 3.6g; Sugar 4g; Protein 3.9g

Sources: [eatfresh.org/recipe/side-dish/bean-dumplings/](https://eatfresh.org/recipe/side-dish/bean-dumplings/)

## Dakota Perspective (Beans)

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*Lakota: omníča*

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