



**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

**Level:
1st-3rd
Grades**



EAT WHAT YOU GROW

Overview: In this lesson, youth will learn the different parts of plants that we eat, and how to use drying and freezing techniques to preserve foods for later use.

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The Grow Getters Program originated as a Master Gardener project in 2020 and is now a multi-departmental effort among SDSU Extension staff and volunteers.

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Activities in this Lesson

- Science Activity: Comparing Fresh and Preserved Foods
- Nutrition Activity: Drying Herbs
- Nutrition Activity 2: Freezing Berries
- Physical Activity: Fruit and Vegetable Alphabet Freeze Tag

South Dakota Educational Standards

- **Health:**
 - 7.2.1 Demonstrate healthy practices and behaviors to maintain or improve personal health. (Pre-K- grade 2 standard)
 - 7.5.2 Demonstrate a variety of healthy practices and behaviors to maintain or improve personal health. (Grades 3-5 standard)
- **Physical Education:**
 - S4.E1.3 Exhibits personal responsibility in teacher-directed activities. (3rd grade standard)

Book

Books may be available at school or community libraries.

The Vegetables We Eat, by Gail Gibbons

- Learn how vegetables grow, how they are harvested, how they get to stores, and how many kinds there are.
- Purchase the book: [The Vegetables We Eat](#)
- Watch: "[The Vegetables We Eat](#)" read aloud link by Pop Into Pre-K
- Consider these follow-up questions:
 - What do plants need to grow?
 - » Soil, water, and sun
 - How are vegetables preserved?
 - » They can be dried, canned, or frozen
 - Why should we eat vegetables?
 - » They are tasty and help keep our bodies strong and healthy.
 - What are some of the different ways we eat vegetables?
 - Discuss which vegetables of each plant part students have already eaten. Which would students like to try?

The Fruits We Eat, by Gail Gibbons

- Learn the parts of fruits, where and how they grow, harvesting, processing, where to buy them, and how to enjoy them as part of a healthy diet.
- Purchase the book: [The Fruits we Eat](#)
- Watch: "[The Fruits We Eat](#)" read aloud by Class 1: Ms. Sandra
- Consider these follow-up questions:
 - Which fruits grow only during a short season?
 - » Strawberries, watermelons, etc.

- What are some different ways we eat fruits?
 - » Answers will vary - raw, on cereal, juice, cooked, etc.
- What is it called when fruits are picked to eat?
 - » Harvest

Vocabulary

- **Harvest:** to gather plants or plant parts when they are at the best stage for eating
- **Produce:** foods grown to be eaten or sold, especially fresh fruits and vegetables. Different parts of the plant are eaten, including
 - **Roots:** the part of the plant that is under the ground, including carrots, radishes, beets, turnips, sweet potatoes, potatoes, garlic, and beets
 - **Stems:** this plant part holds the plant upright and includes asparagus, celery, and rhubarb
 - **Leaves:** plant leaves eaten as a vegetable include lettuce, spinach, kale, some herbs, and cabbage
 - **Flowers:** the buds of flowers that are eaten include broccoli and cauliflower or the flower itself such as squash blossoms
 - **Fruits:** the part of a plant that contains the seeds, including apples, cherries, tomatoes, peppers, cucumbers, green beans, melons, berries, and pumpkins
 - **Seeds:** although often eaten before they are mature (ripe), seeds that we eat include corn, peas, sunflower seeds, and pumpkin seeds
- **Preserve:** to keep food safe to eat later
 - **Cold storage:** cold places, such as refrigerators, cellars or caves that keep food cold so it will last longer
 - **Drying:** removing water from a food by using a low-temperature oven, dehydrator or the sun
 - **Canning:** foods are sealed in glass jars or cans by heating them to a high temperature in water or steam
 - **Freezing:** foods are packaged in air-tight containers and stored in a freezer



COMPARING FRESH AND PRESERVED FOODS

Science Activity
1st-3rd Grades

In this activity, students will compare fresh and preserved foods.

Time

Prep: 30 minutes

Activity: 20-30 minutes

Materials

- Different forms (fresh, frozen, canned, or dried) of a fruit or vegetable
- Plates and utensils for tasting
- Worksheet “Comparing Fresh and Preserved Food”, one per student



Steps

Ahead of time:

- Gather foods to be used in comparison. Some ideas of foods that are easily accessed in multiple forms (fresh, frozen, dried, canned) include peas, peaches, berries, herbs, pumpkin, and carrots.
- Collect small plates on which to place samples, as well as toothpicks or forks with which to taste.
- Prepare the food for sampling. This includes cutting fresh fruit, thawing frozen food, etc.

Instructions:

- Encourage each student to try each form of the produce. Consider giving each student a plate with each form of the food OR make centers around the room where each center has a different form of the food. Then, have students rotate around the room, giving them time to make observations on their worksheet at each center.

Guiding Questions:

Immediately after the setup:

- Ask: Can you tell the differences in the way the foods look that have been preserved in different ways? Write those observations down on your worksheet.
 - **Answer:** Differences should be apparent. They would include color, texture, etc.

During the experiment:

- Ask...Which preserved food tastes most like fresh? Which taste the most different?
 - **Answer:** will vary, but probability is that frozen will taste the freshest; depending on the food used, canned or dried will taste the most different

After the experiment

- Ask...Do you think there is a difference in how long a food will keep for different ways of preserving? Why do you think that is?

- **Answer:** Dried would keep the longest, followed by canned (as long as it is sealed), frozen and fresh. Bacteria needs moisture and oxygen to grow; preserving prevents bacteria from having the right conditions in which to grow.
- Encourage students that it is good to eat fruits and vegetables in any of the forms – fresh, frozen, dried, or canned.

Modification notes:

- **If a garden is available:** Learn about harvest by doing hands-on harvesting. Students, ask an adult when the fruits or vegetables are ready to pick. If you do not have a garden of your own, you might be able to help a neighbor or friend or visit a community garden when the gardeners are working in their gardens. Other places to help pick produce is a U-pick it strawberry patch or apple orchard. Often pumpkin growers allow you to visit the patch in the fall to pick your own pumpkins. Fruits could be frozen. Pumpkin seeds could be dried.

Tip: practice drawing each of the faces with the students before starting the activity. Point out the difference between each. Optionally, use colors instead of faces.

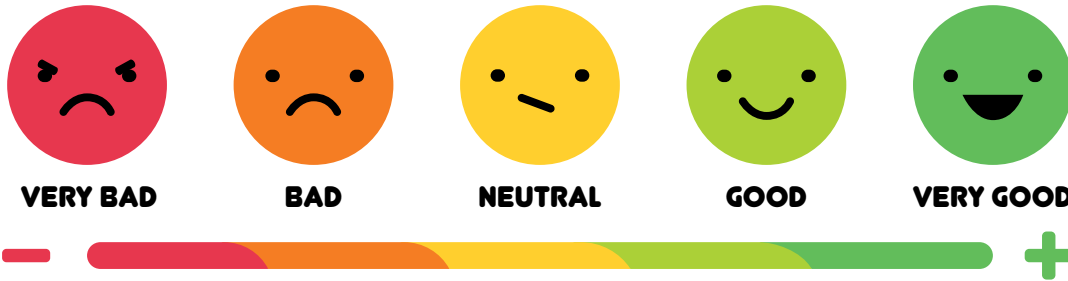


GROW GETTERS

Name(s): _____ Date: _____

COMPARING FRESH & PRESERVED FOOD

Compare different forms of the same fruits or vegetables. Use your senses to describe the appearance, smell, flavor, and texture of each by drawing your reaction in the table below.



Type of Fruit or Vegetable _____

Type	Appearance	Smell	Taste	Texture
Fresh				
Canned				
Frozen				
Dried				

DRYING HERBS

Nutrition Activity
PreK-3rd Grades

In this activity, students will preserve fresh herbs by drying. Drying is one of the oldest methods of preserving food. Optionally, make a vegetable dip with the dried herbs.

Time

Prep: 5 minutes

Activity: 20 minutes

Drying time: 2 weeks

Materials

- Variety of herbs (dill, basil, parsley, and mint work well)
- Scissors
- Rubber bands and/or coffee filters



Steps:

Ahead of time:

- Collect scissors and rubber bands or coffee filters, depending on drying method.
- Purchase or harvest available fresh herbs.

Instructions:

1. If you have herbs in your garden, invite youth to help cut several stems. Herbs are best harvested just before they bloom and in the morning after the dew dries.
2. Invite youth to wash the stems and shake them dry.
3. Dry herbs by your method of choice.

Hang dry method

1. Wrap the bottom of the stems tightly with a rubber band. Hang them up-side down in a warm, dry place out of the light. An unused cupboard or closet is a good choice. It will take about a week to dry completely.
2. When dry, strip the leaves from the stems and store in a glass jar for use in any dried herb recipe.

Coffee Filter Method:

- If you prefer to dry only the leaves, strip them from the stems and spread to dry on coffee filters in a warm, dry place.

Guiding Questions:

Before the Activity:

- When are herbs ready to dry?
 - When they have flower buds, but the buds haven't opened into flowers
 - Early in the morning when they have the most flavor.

During the Activity:

- What is a good way to dry herbs?

- Either leave the leaves on the stems and hang the stems to dry or take the leaves off the stems and place them on coffee filters to dry

After the Activity:

- When are the herbs ready to use?
 - As soon as they are completely dry and crispy
- How to you keep herbs to use later?
 - The best way is to store them is in a glass jar in the cupboard
- Which herb do you think will dry the fastest or slowest? Why?
 - Get students to recognize differences among sizes and thickness of the plant leaves

Modification Notes

Extension: Grow herbs in a garden, in a pot along a window sill, or under a grow light with your students to use in this activity.

Extension: Dried herbs can be used to flavor foods, such as dips, soups, or pizza. Consider the following recipe with your dried herbs. This dip recipe can easily be substituted for different herbs.

DILL DIP

Combine:

- 1/3 C. plain, non-fat Greek yogurt OR 1/3 C. sour cream
- 1/3 C. mayonnaise
- 1 1/2 tsp. dried parsley, rubbed between hands
- 1 1/2 tsp. dill weed, rubbed between hands
- 1 1/2 tsp. instant minced onion
- 1/4 tsp. onion salt
- 1/4 tsp. celery salt

Mix together thoroughly. Chill for several hours. Use as a dip for fresh vegetables.



FREEZING BERRIES

Nutrition Activity
PreK-3rd Grades

In this activity, students will preserve berries by freezing. Optionally, make a berry and yogurt parfait with the frozen berries.

Time

Prep: 10 minutes

Activity: 30 minutes

Drying time: Overnight

Materials

- Variety of berries (red grapes, strawberries, blueberries, and/or raspberries work well)
- Colander
- Paper towels
- Baking pans
- Parchment paper or plastic wrap
- Zip lock bags



Steps:

Ahead of time:

- Purchase fresh berries or pick from a garden. To find a fresh, local berry grower near you, visit the South Dakota Specialty Producers [website](#) or Dakota Rural Action [directory](#).
- Gather all the materials for freezing the berries.

Instructions:

1. Select good quality fresh berries and rinse in a colander. If able, invite youth to help you pick fresh berries. Reference the SDSU Extension "[Pick it! Try it! Like it!](#)" materials to know how to pick fresh fruit from the store.
2. Invite youth to dry the berries thoroughly on paper towels.
3. Ask 1-2 students to line a rimmed baking sheet with parchment paper or plastic wrap.
4. Spread the berries on the baking sheet in a single layer. Put them in the freezer until frozen solid (overnight or longer).
5. Store in the freezer in a zipper freezer bag.

Guiding Questions:

Immediately after setup:

- Identify the berries we are going to freeze. Which are your favorites?

During the Activity:

- How do you think the berries will taste after they are frozen? Will they still look the same and feel the same in your mouth?
 - Berries should look the same but the texture will be different. The berries will be softer and have more water after freezing and thawing.

After the experiment

- Did you like the taste of the frozen berries?
- Can you think of some ways to use frozen berries?
 - They can be eaten partially frozen, put on top of cereal, or used in a parfait or fruit smoothie

Modification notes:

Extension: Frozen berries can be used to prepare a fruit parfait by layering frozen berries with any flavored or unflavored yogurt.

FROZEN BERRY PARFAIT

Ingredients:

- 1/2 cup frozen berries of choice
- 1 cup yogurt of choice
- Optional: granola or honey

In a 12 oz or larger cup, layer 1/3 cup yogurt, followed by 1/4 cup frozen berries. Repeat until all ingredients have been used (yogurt should be on the top). Optionally, top with honey and/or granola. Place in the fridge to allow the berries to soften and mix with the yogurt.



Note: Yogurt can be high in added sugars. Look at the back of the label to choose an option with little or no added sugars. Greek yogurt is a good option for higher protein.

FRUIT & VEGETABLE ALPHABET FREEZE TAG

Physical Activity
1st-3rd Grades

In this activity, students will reinforce their knowledge of “freezing” by playing freeze tag with a fruits and vegetables of the alphabet twist.

Time

Activity: 15 minutes

Materials

- No materials needed

Steps

1. Choose a leader or tagger among the group of students.
2. The leader (tagger) calls out a letter of the alphabet and then starts playing tag with the rest of the group.
3. Students who get tagged by the leader must “freeze”. To get “un-frozen” the child must get tagged by another child and name a fruit or vegetable that starts with the letter called out. Optional: add a time limit for answering.
4. If the child that is tagged provides an appropriate answer (i.e. avocado for A), they are “un-frozen” and can continue running. If they provide an incorrect answer, they remain frozen until they get tagged again by another student and say the right fruit or vegetable to match the letter or a set time for the game has been reached. A new leader/tagger can be chosen, and a new letter called to continue the game.
5. The game ends when everyone is frozen, time limit reached or when all letters have been completed.



Guiding Questions

Immediately after setup:

- Ask... How many letters are in the alphabet?
 - Answer: 26
- Do you know how many minutes of activity you should engage in each day?
 - Answer: 60 minutes each day.

During the experiment:

- Ask... Can eating fruits and vegetables help us play games and be faster?
 - Answer: Yes, they provide us with lots of energy.

After the experiment

- Ask... Is it good to consume fruits and vegetables of different colors?
 - Answer: Yes! Consuming a rainbow of fruits and vegetables helps us get all the good nutrients to stay healthy.

Modifications

- **Simplified:** Rather than letters of the alphabet, have the students call out fruits and vegetables based on color groups.
- **Advanced:** Ask the students to call out fruits and vegetables based on plant part categories.
- **Tip:** Encourage students to name different fruits and vegetables each time and not repeat what they hear other students saying.
- **Tip:** If you have a large group of students, two+ leaders or taggers can be chosen.

Additional Resources

If you liked this lesson, you may also like these other educational materials from SDSU Extension.

Nutrition and Physical Activity

- [Pick it! Try it! Like it! Preserve it!](#) materials are filled with tips for selecting, preparing, and preserving a wide variety of fruits and vegetables. Colorful fact sheets, recipe cards, and educational videos provide educators and families with fun, engaging tools to enhance any dietary curriculum!
- [iGrow Readers](#) is a series of book-based lessons to help young children understand the benefits of making healthy decisions involving nutrition and physical activity.
- [South Dakota Farm to School Resource Guide](#) walks through the basics of starting farm to school programs in South Dakota, including local food selling/purchasing, school gardens, and in-class education.
- [Preservation](#) this page provides a suite of educational materials and programs offered by SDSU Extension related to food preservation.

Horticulture

- [Garden and Yard](#) this page provides easy access to all the educational materials and programs related to garden and yard by SDSU Extension. This frequently updated landing page includes sections for fruits, vegetables, problems and solutions, master gardener volunteer program, garden hour, and more.
- [Vegetable Gardening in South Dakota](#) this booklet will help you with basic vegetable gardening information and tips to get started.
- [Fertilizing Gardens in South Dakota](#) this booklet by SDSU Extension provides information on soil testing, types of fertilizers, and methods of application.
- [An Identification Guide to Native Pollinator Plants of South Dakota for Managed Landscapes](#) In this guide, learn about the perennial plants native to South Dakota that attract pollinators and can be incorporated in to gardens.
- [Tree Pest Alert](#) stay updated and informed with this weekly resource for selecting, planting, and caring for trees and shrubs all year round.

