# Local Food Preservation
## *Pickled, Frozen, Dried*

**GRADE K-1**

**Month: February**
**Time Required: 30 minutes**
**Tasting**: **Preserved fruit or veggie**

## Lesson Goals

- ❑ Students will increase their knowledge of fruits and vegetables.
- ❑ Students will learn to try new fruits and vegetables and increase their preference for them.
- ❑ Students will learn that their peers like to eat fruits and vegetables.
- ❑ Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

## Lesson Objectives

- ❑ Students will be able to define three tenses: past, present, future.
- ❑ Students will be able to describe three methods of food preservation.

## Materials

- ❑ Clear bowl
- ❑ Ice cubes
- ❑ Cooler (for ice cube experiment and transporting food tasting)
- ❑ Images or tangible examples of fresh and preserved foods
- ❑ Tasting options of your choosing. Some ideas offered here:
  - 2 types preserved foods (ex: dried apples and pickled cucumber).
  - 2 types of pickled foods (ex: cucumbers, sauerkraut, curtido).
  - One food in two forms (ex: fresh cucumber, pickled cucumber)
- ❑ Printed worksheets, “Past, Present & Future Foods!”

## Preparation

- ❑ Print “Past, Present & Future Foods!” half-sheets for students.
- ❑ Decide what tasting you would like to offer based on the lesson length.

## Recommended Books

- ❑ “Time To Learn About Past, Present & Future,” by Pam Scheunemann
  - YouTube video preview here

## Standards Connection

This lesson supports the following Iowa Core standards.

**Health Education**
Standards 1, 2, 3, 4, 5, 7, 8

**Science**
Kindergarten - K-LS1-1. Patterns

First grade - 1-LS1-2. Patterns

## Lesson Checklist

- ❑ Physical Activity
- ❑ Tasting
- ❑ Voting
- ❑ “Asking” Discussion
- ❑ Newsletters, Bingo cards, Stickers, Incentives
- ❑ Science Connection: Similarities, differences and patterns (K) & (1st)

# Engage

**1. Introduction:** *2 minutes*

*The "Introduction" section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.*

At the front of the classroom, place your cooler and lesson materials in a spot that will be visible to students. Gather students in a circle.

**2. Engage Activity:** *8 minutes*

*The "Engage Activity" section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.*

Have students sit in the circle. Put several ice cubes in a clear bowl. Share, *Today, we're going to learn about time. All things change over time. Let's think about how these ice cubes will change over time. Right now, these are ice cubes. If we leave them here, will they change by the end of our lesson?* Pick a stick or select a few students at random to share their ideas. Summarize response, *So we think they might change from ice cubes into water. We'll leave them here and check on them later.*

Have students stand up. *One way to think about time is in the past, present and future.*

- *Think in your head, what's something you did this morning before school? When I say our magic word, "pickle," silently act it out. For example* (share and act out something you did that morning). *Ready? Pickle!* Observe students. *Excellent, before school, we* (demonstrate some activities you observed: eating breakfast, brushing teeth, walking to school etc.).
- *Think in your head, what's something you will do tonight after school? When I say our magic word, silently act it out. Ready? Pickle! Great, after school we are going to* (demonstrate some activities you saw).

*What you did this morning is in the past. The past means all the time before right now.*
*What we're doing right now, our PABS lesson, is the present. The present is the moment that is right now.*
*What you will do tonight is in the future. The future is the time after right now.*

*Let's see if our ice cubes have changed since the past.* Allow students to see the ice cubes. *To **preserve** means to save something for the future. What does preserve mean?* Choral response - *"save something for the future."* Note new vocabulary word. Define, write out, and have the class repeat the word "preserve." *We'll keep some ice in the cooler to see if it is preserved in the future.*

## Explore

**3. Experiential Learning:** *5 minutes*
*This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.*

Have students return to their desks (opportunity for 3 deep breaths).

*Just like we can preserve the ice cubes by keeping them in the cooler, we can also preserve food.* Explain, *For as long as humans have been eating food, they've found ways to preserve it - to save it for the future. When we preserve food, we turn a fresh food into a food that is saved to eat later. Let's explore three ways to preserve food.*

Show images on doc-cam.
**Consider your classroom, and represent fresh and preserved foods across multiple cultures here!

1. *Dried foods are preserved by removing water.* Show images of fresh and dried foods (examples: apples, tomatoes, mushrooms, herbs).
2. *Frozen foods are preserved by making the food very cold.* Show images of fresh versus frozen foods (examples: peas, berries).
3. *Pickled foods are preserved by adding vinegar or salt.* Show images of fresh versus pickled foods (examples: fresh cucumbers and jars of pickles; fresh cabbage and jar of sauerkraut).

**If you have more than 30 minutes, check out this FoodCorps lesson, "Quick, Pickle That!" and consider making pickles as a classroom during the extended lesson.

**4. Tasting Activity:** *8 minutes*
*The "Tasting Activity" section is when students get to try the fruit or vegetable. Don't forget to review your food tasting norms (for example, "don't yuck my yum").*

Before you pass out any samples, be sure to share your brave tasting rules (for example, don't yuck my yum, we all try together, etc.). As students receive their samples, talk the class through using their senses to explore the tasting.

**Preserved Foods Taste Test Ideas:**
1. Offer classrooms 2 types preserved foods to sample (ex: dried apples and pickled cucumber).
2. Offer classrooms 2 types of pickled foods to sample (ex: pickled cucumber, sauerkraut, curtido).
3. Offer classrooms one food in two forms, fresh and preserved (ex: fresh cucumber, pickled cucumber)
4. Use all 5 senses to compare and contrast the preserved foods. *How do these foods look / feel / smell / sound / taste the same? How are they different?*
5. Discuss flavors, textures, colors, seed shapes, etc., as a class.

See the "Health Connection" section at the end of this lesson for tips on choosing lower-sodium canned and pickled vegetables.

***Local Food Facts!*** *If you're tasting local food, be sure to share information about where it came from: Iowa farm/farmer, location, distance from the school (a map is a great visual here!), when it was harvested, how did you get it, etc.*

## Reflect

**5. Voting Activity:** *3 minutes*
*This is a time for students to give their opinion on what they tried!*

As students taste the preserved foods, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

**6. Reflection:** *4 minutes*
*Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the "Asking Discussion."*

Pass out "Past, Present, Future Foods!" sheets. Ask students to draw some pictures of their favorite foods they ate in the past, eat now in the present, and would like to eat in the future.

Asking Discussion:
*Raise your hand if you're excited to go home and tell your family about tasting pickles.*

- Ask a student with a raised hand: *if you wanted to try this at home, how might you ask your grown-ups?*
- You might also ask additional questions like, *where could you buy pickles or other types of preserved foods? What else do you know about preserved foods?*

*Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.

# Past, Present & Future Foods!

| | | |
|---|---|---|
| In the past, I ate<br><br>_____. | In the present, I eat<br><br>_____. | In the future, I will eat<br><br>_____. |

This institution is an equal opportunity provider.
This material was funded by USDA's Supplemental Nutrition Assistance Program – SNAP. It was developed by the Iowa Department of Public Health in partnership with the Iowa Department of Human Services. August 2021

Pick a **better** snack™ Lesson

# Past, Present & Future Foods!

| | | |
|---|---|---|
| In the past, I ate<br><br>_____. | In the present, I eat<br><br>_____. | In the future, I will eat<br><br>_____. |

This institution is an equal opportunity provider.
This material was funded by USDA's Supplemental Nutrition Assistance Program – SNAP. It was developed by the Iowa Department of Public Health in partnership with the Iowa Department of Human Services. August 2021

# Additional Materials

## Physical Activity

Choose a physical activity to incorporate into the lesson. Ideas for physical activities are available at https://idph.iowa.gov/inn/play-your-way/brain-breaks.

## What You Need to Know About Preserved Fruits and Veggies

- Preserved fruits and veggies include those that are dried, canned, frozen or fermented. They're a healthy option when fresh fruit and vegetables are hard to find or too expensive.
- Some advantages of preserved fruits and veggies include greater convenience, more variety of foods available, and great taste. Canned fruits and veggies are usually ready to eat, so they do not require as much preparation as fresh ones.
- Some frozen fruits and vegetables contain added preservatives or sauces, so always check the ingredient list on the back of the package.
- Look for canned and frozen fruits and vegetables that say "reduced/low sodium" or "no added salt" with no added sugar. Look for fruits canned in water or 100% fruit juice instead of syrup.
- Look for cans that are clean with no dents, cracks, bulges, or leaking.
- Dried fruits and veggies have a crunchy or chewy texture and are a convenient way to eat healthy on the go. Look for dried fruits and veggies with no added sugar and low salt, if possible.

## Facts About Preserved Fruits and Veggies

- Pickled vegetables are preserved with a brine (salt and water) and an added acid, like vinegar.
- Fermented vegetables are preserved with a brine and a good bacteria or yeast (which creates its own acid). Different types of fermented foods include kimchi (cabbage and other vegetables), miso (soybeans), and sauerkraut (cabbage). Fermentation has been used to preserve food for centuries.
- Freezing food greatly slows down the growth of bacteria, allowing food to stay fresh for weeks to months.
- Canned foods are heated before canning, killing harmful bacteria and helping with preservation. Canned foods can generally be stored for 1-5 years!
- Store frozen foods at 0ºF or below in an airtight container. Keep the freezer temperature consistent for the best quality.

## Health Connection

- Look at the Daily Value percentage next to sodium on the nutrition label to determine if a food is low or high in sodium (salt). If it is ≤5%, that food is low in sodium. If it is ≥20%, that food is high in sodium. Make sure you check the serving size to see how much of the food contains that amount of sodium. Try to choose preserved fruits and veggies that are low in sodium.
- The same Daily Value recommendation applies to added sugars. Look for preserved fruits and veggies that have ≤5% of the Daily Value for added sugars for the healthiest options.

## References and Resources

https://store.extension.iastate.edu/product/4369
https://frozenadvantage.org/advantage/?slide=0
https://kidsgardening.org/digging-deeper-fermentation/?mc_cid=e0802d633a&mc_eid=22ee43239e
https://www.eatright.org/food/vitamins-and-supplements/nutrient-rich-foods/are-canned-foods-nutritious-for-my-family
https://medlineplus.gov/foodlabeling.html
ISU's Spend Smart Eat Smart educational videos on reading food labels: sodium and sugar

This institution is an equal opportunity provider.
This material was funded by USDA's Supplemental Nutrition Assistance Program – SNAP. It was developed by the Iowa Department of Public Health in partnership with the Iowa Department of Human Services. August 2021

Pick a better snack™

IDPH Iowa Department of Public Health