Food Families

FOOD PRESERVATION

MODULE 8

This module was developed in collaboration with

COUPONS for HUNGER

Child & Youth Network

FOOD PRESERVATION

Module Component	Details
Topic:	Food Preservation
Time Required:	120 minutes
Objective:	The objective of this module is to introduce participants to the value of food preservation while providing a specific demonstration of the "Water Bath" and "Freezing" methods.
Learning Outcomes:	By the end of this session, participants will be able to: • Communicate the value and benefits of preserving food • Explain various methods of food preservation including freezing, canning, drying, and smoking • Explain how the "Water Bath" method of canning preserves food • Use the tools needed to effectively and safely can food using the "Water Bath" method • Safely perform the "Water Bath" method of food preservation with various local fruits and vegetables • Use the "Freezing" method to preserve fruit
Materials Required:	• Small squares of paper and pens/pencils • All canning and freezing equipment • Fruits and vegetables for canning and freezing
Preparation Required:	• Prepare materials for the Loaded Questions Ice Breaker • If the facilitator has not done canning before, it may be helpful to go through the "Water Bath" canning method at least once prior to facilitating the session
Budget Considerations:	• Jars – 12 cases of 250 ml jars x $11 (12 in a case) = $132.00 • Recipe ingredients – $200.00
Handouts:	• The Basics Of "Water Bath" Canning • Food Preservation Methods • The Basics Of The "Freezer" Method • Recipes For Canning And Freezing
Sources:	• Bernardin • Simply Canning • Healthy Canning

Module Component	Details
Summary Instructions: **A** = Activity **P** = Presentation **Q** = Question(s)	**P** Welcome (5 minutes) **A** Ice Breaker Activity – Loaded Questions (15 minutes) **P** Why Preserve Foods? (10 minutes) **P** Food Preservation Methods (15 minutes) **P** "Water Bath" Canning (10 minutes) **A** Food Preservation – Activity (45 minutes) **P** Food Preservation FAQs (10 minutes) **A** Evaluation And Wrap-Up (10 minutes)

MODULE CONTENT

Part 1 – Presentation: Welcome And Agenda (5 minutes)

Instruction: Welcome the group to the Food Preservation module.

- **PP Slide 3** – Ask the group questions about your most recent module and whether they have been able to implement what they learned. Let them share a few of their examples and stories of success.
    - Did you complete your budget?
    - What part of the Money Sense conversation was most helpful? Difficult?
- **PP Slide 4** – Share the agenda for today's session:
    - Ice Breaker
    - Why Preserve Foods
    - Food Canning Methods
    - What Is Water Bath Canning/Freezer Method
    - Try It Together

Part 2 – Activity – Ice-Breaker – Loaded Questions (15 minutes)

Instruction: PP Slide 5 – For this activity, depending on the size of the group, the facilitator may want to break the larger group into two smaller groups. This activity works best in groups of 5 or 6 people. Feel free to prepare other questions that fit your group and relate to the canning process in some way.

Here are the instructions for the game:

- Give everyone small squares of paper and a pencil or pen.
- Designate someone to be the first questioner.
- The questioner will ask a "crazy question" to the group (see questions below for examples). The question does have a correct answer.
- The questioner will have the right answer available to them on their question card and will write down the correct answer on a separate piece of paper.
- The other participants will make up a response to the question and write it down on a piece of paper. If they happen to know the answer, they can write that, or they can make something up.
- Each participant will hand their answers to the questioner to read out loud to the group. The answers may have to be read twice for everyone to remember what answers have been given.
- Go around the circle and ask each participant to say which answer they think is the correct one.
- Participants need to listen and keep track of how many other people choose the answer they have written.

- Participants get points for choosing the right answer and for having other people choose their answer as the correct one.
- Play three or four rounds depending on your time.
- The participant with the most points wins the game.

Potential questions to be used for the game:

Q. What is brine?
A. Brine is a solution of salt in water.

Q. What is sauerkraut made of?
A. It is made of finely cut cabbage that has been fermented.

Q. How do you blanche a vegetable?
A. Cook them in boiling water for a short time and then put them in ice water.

Q. Define the word "pathogen."
A. A bacteria, virus, or other small organism that can cause disease.

Part 3 – Presentation – Why Preserve Foods? (10 minutes)

Instruction: Winter is coming/is here (it always seems to be just around the corner) and participants should be prepared so they can enjoy fresh fruits and vegetables. This section of the food preservation module is meant to discuss and identify the benefits of food preservation.

PP Slide 6 – ASK the participants if any of them have preserved foods in some way.
- What have you preserved and how did you do it?
- When you were growing up, did a family member preserve food/can food?
- Is there anyone who has tried to preserve food and it didn't work properly? What happened? What do you think went wrong?

PP Slide 7 – ASK the participants what they think is the importance or value of food preservation.

Here are some of the benefits the group might suggest:

- Prevents food from being spoiled so it can last much longer.
- Increases the amount of time a food can safely be stored.
- Increases the availability of out-of-season fruits and vegetables.
- Can make up for deficiencies in the diet during certain times of the year.
- Can help save money.
- Provides healthier food options compared to processed food.
- Provides an easy way to share and be generous with family, neighbours, and friends.
- Provides a way to take advantage of local harvests.

ASK – Are there any downfalls to food preservation?

- The taste and texture of the food may change.
- The food may lose some vitamins, which may decrease the nutritional value.

Part 4 – Presentation – Food Preservation Methods (15 minutes)

Instruction: There are a number of ways to preserve food. This section of the module will highlight some of the typical methods used to preserve foods.

PP Slide 8 – **ASK participants**, what are some of the ways someone can preserve foods?

Provide "Food Preservation Methods" handout.

PP Slide 9 – The following are highlighted on the handout:

- **Root Cellaring –** Root cellars are typically in the basement of homes or buildings and are used for keeping foods at steady temperatures and humidity. In the winter, food is kept from freezing and in the summer, food is kept from spoiling in the heat.
- **Freezing –** For centuries, people depended on snow and ice if they wanted to freeze food to keep it from spoiling. In 1870, the first freezer was invented, although it never became incredibly popular until after WWII (1945). Most homes in developed countries have access to a small freezer as part of their refrigeration.
- **Canning –** The canning process involves sealing food in airtight containers. Canning became a proven method to preserve food in the early 1800s with the understanding that canning prevented microorganisms from contaminating the food once canned. The process changes the moisture, pH, or salinity levels to protect against microbes, bacteria, mold, and yeast. Canned foods can often stay on shelves for 1 to 2 years.
- **Pickling –** This may be one of the most ancient methods for preserving food and is the process of expanding the lifespan of food by either fermentation in brine (solution of salt in water) or immersion in vinegar. The resulting food is called a pickle, or to avoid confusion, is referred to as being "pickled."

- **Drying –** Removing water from food to inhibit bacterial growth in foods is the process of food preservation known as drying. This method has been used throughout history, but in more recent years, solar or electric food dehydrators are used to speed the drying process and dry food in even the most humid conditions. Dried foods, if stored properly, can be kept indefinitely.
- **Smoking –** The process of burning or smoldering plants in order to flavor, cook, or preserve food is known as smoking. A variety of woods such as mesquite, hickory, oak, maple, and some fruit trees are used for smoking. The smoking method kills certain bacteria and slows down the growth of others. It prevents fats from becoming rancid and prevents mold from forming. It extends the shelf life of the product. Smoking is most known for its smell and the way it flavours meats.

There are many different ways to preserve foods. It is important to understand the advantages and disadvantages of each and which methods are best used for different foods.

Part 5 – Presentation: Water Bath Canning (10 minutes)

Instruction: PP Slide 10 – The purpose of this section of the module is to provide the participants with some of the basic information needed for successfully using the "Water Bath" canning method. In the next part of the module, the group will be doing some hands-on work with this particular canning method.

Provide participants with the "Water Bath" Canning handout and walk through some of the main points that each individual will need to understand to ensure their canning is successful.

Here are the main elements of the handout that should be highlighted for participants:

1. **What is "Water Bath" canning?**
    a. It is a shorter, lower-temperature canning process that is ideal for high-acid foods.
    b. The process involves completely submersing sealed containers (usually jars) in a large pot of boiling water for a specified period of time determined by the type of food inside the jar and the size of the jar.
    c. "Water Bath" canning is only suitable for highly acidic foods (they have a low pH level). Low acid foods (i.e. foods with a high pH level) should be canned in a pressure canner.
    d. The temperature will never exceed 100°C (212°F) because it can't. That's the maximum temperature the boiling water around the jars can reach.
    e. The process kills off many yeasts, molds, and bacteria to ensure the food is preserved for a longer period of time.

f. The process also drives out the air in the food and in the jar that could cause spoilage.
g. A by-product of the method is that it drives out air and leaves behind a vacuum, which seals the jar.

2. **What fruits and vegetables are best preserved using a "Water Bath" approach?**
    a. Beans
    b. Carrots
    c. Peas
    d. Asparagus
    e. Peppers
    f. Corn
    g. Winter squash
    h. Beets
    i. Pickled onions
    j. Cabbage
    k. Apples
    l. Apricots
    m. Berries
    n. Cherries
    o. Peaches
    p. Pears

3. **What equipment is needed for "Water Bath" canning?** (Show the group the equipment when going through the list)
    a. Canning jars and lids
    b. Canning funnel
    c. Steel ladle
    d. Jar lifter with rubber grips
    e. Kitchen tongs
    f. Magnetic lid lifter and bubble remover
    g. Large pot
    h. Canning rack
    i. Clean kitchen towels
    j. Food Strainer

Instruction: Included in the handout will be **step-by-step instructions** for how to properly implement the "Water Bath" canning method. It may be best to go through the demonstration visually with the group and let them know the handout is available for them to follow the directions when they can at home.

Part 6 – Activity: Canning/Freezing Demonstration (45 minutes)

Instruction: **"Water Bath" canning** – **PP Slides 11-12 –** Gather everyone in the kitchen and walk through the individual steps for "Water Bath" canning with the group. Be sure to rotate participants through the various roles in the process so they begin to gain some confidence and the skills to implement canning within their own home.

Instruction: "Freezing" method – Plan to have at least one recipe prepared to demonstrate freezing as a method of preserving food. This could include both fruits and/or vegetables. The facilitator may want to rotate two groups of people through the freezing and canning processes if you have a second facilitator or volunteer that can lead one of the stations.

Equipment Needed For The "Freezing" Method:

- Freezer containers or packaging such as freezer-safe glass or plastic jars, plastic freezer bags, or vacuum packages
- Fresh produce and any other quality ingredients based on your chosen recipes
- Freezing recipe

Instructions For Implementing The "Freezing" Method:

Step 1 – Read through the recipe and instructions and be sure to gather any equipment and ingredients needed to complete the recipe.

Step 2 – Select the appropriate freezer containers or packaging for the type of food you are looking to freeze. Experts encourage the use of rigid containers for foods that are liquid or semi-liquid at room temperature and flexible wrap for foods that are solid at room temperature. Be sure to wash your containers in hot soapy water, rinse, and dry them well.

Step 3 – Prepare fresh produce and other ingredients according to the recipe. Vegetables require blanching, an important step to cleanse off surface dirt, and to help retain vitamins and reduce the loss of flavor. See the FAQ section for more information on blanching procedures.

Step 4 – Pack the prepared food into the appropriate freezer containers. For rigid containers, leave a ½ inch headspace to allow for expansion of liquid during the freezing process.

Step 5 – Label all containers or packaging with the date and the name of the food being preserved.

Step 6 – Place the containers in a single layer near the coldest spot in the freezer. After the food is frozen solid, the containers can be stacked.

Step 7 – Store containers at -18°C (0°F) for the recommended length of time.

Here are some typical questions related to the "Freezing" method:

- **Q –** What is blanching?
- **A –** Blanching is a basic cooking process where a food substance, most often a vegetable, is boiled in water, removed after a brief timed interval, and put into iced water to stop the cooking process. Salt is typically added to the boiling water to help maintain the colour of the food and to improve flavour.
- **Q –** How can one avoid freezer burn?
- **A –** Drying occurs on the surface of a frozen product that wasn't wrapped properly. The food is safe to eat, but the quality is poor. To prevent it, be sure to remove all air and seal airtight.
- **Q –** Will food spoil if it stays frozen longer than the recommended storage time?
- **A –** No. This is a quality versus a food safety issue. Recommended storage times ensure maximum quality. Food stored longer will be safe to eat, but you may notice changes in flavour, colour, and texture. For best quality, use frozen fruits and vegetables within 8 to 12 months.

Instruction: Plan to send each participant home with some of the preserved food they would have worked on together.

Part 7 – Presentation: Food Preservation FAQs (10 minutes)

Instruction: PP Slide 13 – This section of the module will wrap up the time and give one more opportunity to answer questions from participants about the food preservation process.

ASK if the participants have any specific questions.

Provide the Food Preservation FAQ Sheet to the participants and plan to walk through the most pertinent questions, providing answers.

Questions include:

Q. When packing jars, is the headspace really important?
A. Absolutely. It is important to leave the specified amount of headspace available in a jar as it allows for the proper vacuum seal to occur. If not enough space is left at the top of the jar, the food may expand to the point of being forced out from under the lid during processing. When this happens, the jar may not seal properly. If too much space is left at the top of the jar, the food may discolour and the jar may not seal properly.

Q. How long will canned food keep?
A. If the food has been canned and preserved properly, and stored in a cool, dry place, it should keep its flavour and freshness for at least one year. If products are stored in a damp or warm place (e.g. by the furnace or near the stove), they may lose their quality within a few weeks or months.

Q. Do jars need to be sterilized before processing?
A. It's always best practice to go the safe route and sterilize everything, but, if jars are filled with food and placed in a water bath for more than 10 minutes, they will become sterilized through that process. If the jars were going to be processed in a boiling water bath for less than 10 minutes, they would need to be sterilized for at least 10 minutes prior to being filled.

Q. Should liquid lost during processing be replaced?
A. The loss of liquid will not cause the food to spoil, so don't worry about replacing any water. The food above the liquid may darken slightly, but it will still be edible.

Q. Is it okay to reuse jar lids and bands?
A. Lids should never be used more than once because the sealing compound becomes indented through the initial use, which will prevent a future airtight seal. Screw bands may be reused unless they are badly rusted or the top edge is misshaped in such a way that it may not seal properly.

Q. Why do jars break during processing?
A. Canning jars will break for a number of reasons, including:

- Using commercial jars rather than jars designed specifically for canning.
- Using jars that have chips or hairline cracks.
- Putting jars directly on the bottom of a canner instead of on a rack.
- Putting hot food in cold jars.
- Allowing jars to bump against each other during processing.

Part 8 – Activity: Evaluation & Wrap-Up (10 minutes)

Instruction: PP Slide 14 – Ask the participants a few questions:

- Do participants feel they will preserve food at home in the near future? If no, why not? What challenges might they face?
- Would they consider canning and freezing food with a group of people? Is anyone interested?

Hand out the evaluation and have the participants complete the form and hand it in to a facilitator.