



# **6 TLE** **(Home Economics)** **Quarter 1**



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CLMD CALABARZON

# **TLE (HE)**

## **Grade 6**

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**EPP (Home Economics) Grade 6**  
**PIVOT IV-A Learner's Material**  
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# Different Ways of Food Preservation

## Lesson

### I

If you have a lot of fruit trees in your house and you cannot consume all the fruits immediately, what different things you can do? If you bought some fishes and meat in the market but wish to consume it some other time, how will you prevent them from spoiling?

In this lesson, you will learn about the different foods that can be preserved and what are the benefits of doing it.

Read the song and analyze each line for you to know its theme.

#### **Food Preservation Song**

(Tune: It's a Small World)

There's a lot of food we can find at home  
We can find outside, everywhere we go  
We can't cook what to do?  
Let us make something new  
Food preservation will do.

You can dry under the sun  
Oh it's raining, oven is fine.  
You can freeze them, do some salting  
Food preservation is fun!

### D

**Learning Task 1:** Choose the letter of the best answer. Write your answers in a separate sheet of paper.

1. What do you call the prevention of food spoilage caused by growth of microorganisms in food?  
A. Food Presentation  
B. Food Planning  
C. Food Preservation  
D. Food Preparation
2. What do you call the process of preserving food by soaking the raw ingredient in salt and water solution?  
A. natural drying  
B. artificial drying  
C. dry salting  
D. brine salting

3. It is a food preservation technique wherein the food is placed under very low temperature.  
 A. drying    B. salting    C. freezing    D. none of these
4. Which of the following is a benefit of food preservation?  
 A. It extends the shelf life of food.  
 B. It can be a source of income.  
 C. It keeps the nutrients and texture of food.  
 D. All of the above.
5. What is the difference between dry salting and brine salting?  
 A. Dry salting is soaking the raw ingredient in salt solution while brine salting is rubbing the salt directly in the food.  
 B. Dry salting is rubbing the salt directly in the food while brine salting is soaking the raw ingredient in salt solution.  
 C. Dry salting is for dry products while brine salting is for wet products.  
 D. Dry salting is for wet products while brine salting is for dry products.

**Learning Task 2:** Given the following raw main ingredients, choose the possible food preservation method to be used and the product that can be made. Write your answers on a separate sheet of paper.

Raw Ingredient	Way of Food Preservation (Drying, Salting, Freezing)	Product
Eggs		
Fish		
Mango		
Pork		
Strawberry		

**Learning Task 3:** Classify the following food as meat, seafood, or vegetables/ fruits by putting them in their proper column. Write your answers on a separate sheet of pad paper.

MEAT	SEAFOOD	VEGETABLES/ FRUITS

Pork	bangus	cabbage	mango	tilapia
Chicken	beef	ampalaya	caimito	hito

## Food Preservation

Food preservation is the prevention of food spoilage, which is caused by the growth of microorganism in foods. This is used to extend the shelf life of food products.

Some ways to preserve food are the following: drying, salting and freezing.

## Ways of Food Preservation

### Drying

Drying is a food preservation method wherein water is drawn out of the food either naturally (placing food under the sun) or artificially (using an oven and setting the drying temperature) under 50-60 °C. The moisture removal prevents the growth of microorganisms that causes decay, thus, prevents food spoilage. It can be traced on the idea of Egyptians and an ancient way of food preservation.

Fruits, vegetables, fish and meat can be dried. It is recommended to cut the food into small pieces in order to dry quickly. Depending on the type of food and size, the length of drying time may vary.

## **Drying Procedure**

### *For sun drying*

1. Prepare the foods to be dried. Wash them thoroughly.
2. Cut the food evenly to dry them in equally related rate.
3. For meat, you may treat them with salt.
4. Lay out the food properly in a tray. Make sure that the food pieces are not overlapping to avoid uneven drying.
5. Cover the food with mesh to prevent bugs coming in.
6. Place the tray on your backyard or any preferred place where it will be exposed to sun.
7. Turn the food occasionally (once a day) for equal drying.
8. Wait for at least two to four days until the food is completely dried.
9. Check the food. If there is still moisture, it needs more time under the sun.
10. When the food is already dried, store them in an airtight container or plastic bag to make sure no moisture gets in.

### *For artificial drying*

1. Prepare the foods to be dried. Wash them thoroughly.
2. Cut the food evenly to dry them in equally related rate.
3. For meat, you may treat them with salt.
4. Lay out the food properly in a tray. Make sure that the food pieces are not overlapping to avoid uneven drying.
5. Set the oven to the lowest setting or 50-62 °C and put the food in the oven.
6. Close the oven door and allow the food to cook for 10-20 hours. Check them occasionally rotating them once in a while. You may adjust the temperature to 90 °C for faster drying.
7. When dried, check the texture of the food. If there is no more moisture left, you may store it inside an airtight container.

## **Freezing**

Freezing is placing the food under very low temperature to prevent the growth of microorganisms and maintaining the freshness and nutrients of food. Freezing can be used in meat, fish, fruits, and vegetables.

### **Freezing Procedure**

1. Select the foods to be frozen. Make sure that they are fresh and free from bruises.
2. Wash the foods thoroughly.
3. Peel and cut the food and place it in a container.

4. Place the container inside the freezer. Remove it from the freezer when the food is ready for consumption.

## **Salting**

It is a method of preserving food by using salt. It is commonly used in meat, poultry, fish, and seafood.

There are three common methods of salting: dry salting, brine salting and combination method. In the first method, dry salt is rubbed on fish/ meat directly while in brine salting, the fish/ meat is immersed in concentrated brine; this method can be used in producing salted eggs. In combination method dry salt is rubbed on fish/ meat followed by immerse in brine solution.

### **Salting Procedure**

#### *For dry salting*

1. Measure the amount of salt to be used. (For example, 10-kg fish must use 3-4 kg dry salt)
2. Wash the food to be salted.
3. Place the salt in a container and lay down the food to be salted. Rub the food with salt. Make sure to cover all the layers of meat/ fish with salt.
4. Secure the food inside the container.
5. Salting time varies from 3 days to a week, depending on the size and type of food to be salted.

#### *For brine salting*

1. Prepare the brine by mixing salt with water (Use 3 cups of water for every cup of salt.) It is better to use fine salt for it dissolves faster.
2. Prepare the food to be salted. Clean the food thoroughly.
3. Soak the food in brine solution.
4. Stir the brine mixture every 20-30 minutes. Brining will take as little time as 30 minutes for light salting or up to 24 hours for medium salting.
5. After drying, allow the food to cool for at least 6 hours.

## **Why Preserve Foods?**

1. It extends the shelf life of food by preventing spoilage.
2. It keeps the nutrients and texture of food.
3. Seasonal fruits are made available whole year round.
4. It can be a source of income.





**Learning Task 4:** Identify the food preservation technique that is used in the following products. Write your answers in your notebook.

1.



2.



3.



Source: biznet9onlinemarket.weebly.com

4.



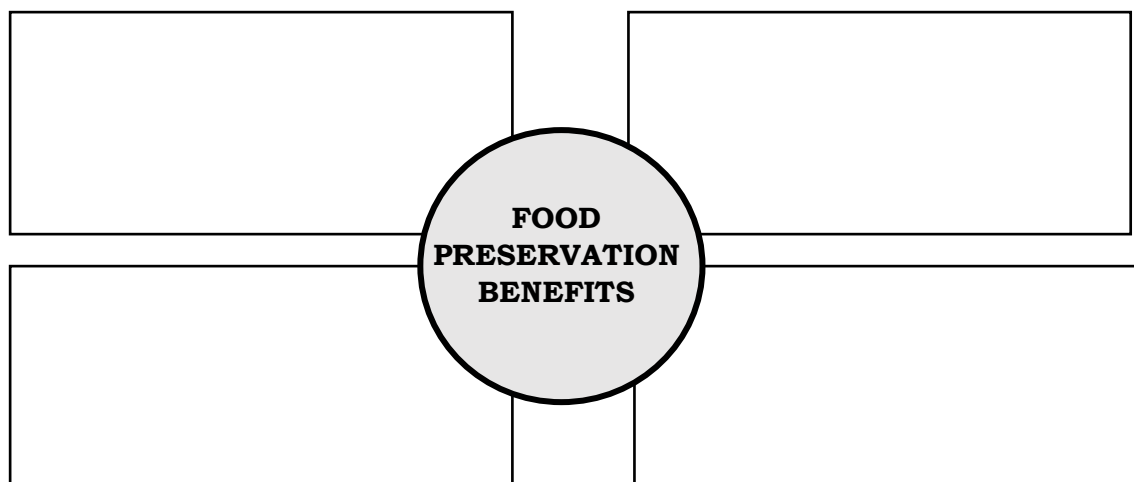
Source: welovecebu.com

5.



Source: www.moneysavingmom.com

**Learning Task 5:** Give the benefits of food preservation by completing the graphic organizer below. Do this in your notebook.



**Learning Task 6:** Given the following situations, can you identify how food preservation became useful? Write your answers on the table below.

<b>SITUATION</b>	<b>FOOD PRESERVATION BENEFITS</b>
1. Aling Gina lives near the sea-shore. She makes tuyo (dried fish) and sells it at the market as her source of living.	
2. Karen wanted to eat mangoes but she cannot buy any in the market because it is not yet fruit season. Fortunately, she found a store selling dried mangoes.	
3. It is a habit of Mang Luis to buy in bulk whenever he goes to market so he makes sure to place the fruits and vegetables in the refrigerator if they will not be consumed immediately.	
4. Liza noticed that their avocado tree bears lot of fruits this year. She decided to peel the fruits, put them in the container, and place them inside the freezer.	
5. Grace loves making banana chips which she brings to school and sells to her classmates.	



Food preservation is the prevention of food spoilage. There are different ways of food preservation such as drying, freezing, and salting. There are also lots of benefits of food preservation.

**Learning Task 7:** Identify the food preservation method employed in the following scenario. Write your answers in your notebook.

- \_\_\_\_\_ 1. Gwen got kamias from their backyard. She sliced the kamias and arranged them on a tray. She put the tray under the sun afterwards.
- \_\_\_\_\_ 2. Aling Joy bought four kilos of pork in the market. After cleaning them, she cut it into different sizes and put them in containers. Then, she put them in the freezer.
- \_\_\_\_\_ 3. Angela put the sliced mangoes inside the oven with a temperature of 50 degrees Celsius.
- \_\_\_\_\_ 4. After harvest, Mang Kanor made a brine solution that he poured on the jars with eggs. He secured the jars tightly and let the eggs soaked for three weeks.
- \_\_\_\_\_ 5. It is a food preservation technique used in daing na bangus.

**Learning Task 8:** Make an essay on how food preservation is beneficial for you. You may cite specific examples.

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# Tools and Equipment in Food Preservation

## Lesson

### I

Successful food preservation requires usage of the correct tools and equipment as well as a plan to guide you in the process. This lesson will help you identify those tools and let you create your own project plan.

Hello! In the previous lesson, you found out what the different food preservation procedures that you can use in order to preserve and process foods. Do you know the different tools and equipment that you need in food preservation?

Before doing the food preservation process, what do you need to do first and how are you going to do it?

In this lesson, you will find out the tools and equipment used in food preservation as well as how to make and prepare a project plan in food preservation.

**Learning Task 1:** Using your background knowledge in cooking, look for five different tools used in food preservation. Words can be found vertically, horizontally or diagonally.

T	O	N	G	S	A	G	C	T	S
Z	A	Q	W	F	T	G	O	L	T
X	C	B	T	R	S	L	N	C	R
V	Q	P	P	Z	A	P	T	S	A
B	A	K	E	V	Z	U	A	D	I
T	T	D	R	E	R	J	I	A	N
G	Y	X	S	H	L	L	N	M	E
K	F	I	Y	N	Y	E	E	L	R
L	B	O	I	K	U	I	R	P	X
P	O	T	S	Y	I	F	S	O	I

# D

**Learning Task 2:** Try classifying the following tools and equipment in food preservation as to their usage. Put them in their proper column.

<b>Peeler</b>	<b>ladle</b>	<b>measuring cups</b>	<b>kitchen</b>
<b>knivesturner</b>	<b>Pots</b>	<b>containers</b>	<b>weighing scale</b>
	<b>colander</b>	<b>tongs</b>	

<b>Mixing Tools</b>	<b>Cutting Tools</b>	<b>Measuring Tools</b>	<b>Other Tools and Equipment</b>

**Learning Task 3:** Identify the food preservation method described. Write your answer on a separate sheet of pad paper.

\_\_\_\_\_ 1. A technique of placing the food under low temperature to maintain its freshness.

\_\_\_\_\_ 2. A drying method wherein the food is placed directly under the sun.

\_\_\_\_\_ 3. A salting procedure that requires mixing an amount of salt in water where the food will be submerged.

\_\_\_\_\_ 4. A drying procedure that uses an electrical device such as an oven instead of drying under the sun.

\_\_\_\_\_ 5. A salting procedure wherein the salt is rubbed directly on the skin of the food.

Food preservation requires not only the food that you will preserve but you must also have the tools and equipment needed to carry out the process. Here are some of the tools that you need to prepare if you will start preserving food.

1. Mixing tools are tools used to mix the ingredients in food preservation.



ladle



tongs



turner

2. Cutting tools are tools used to cut, chop, and peel the food.

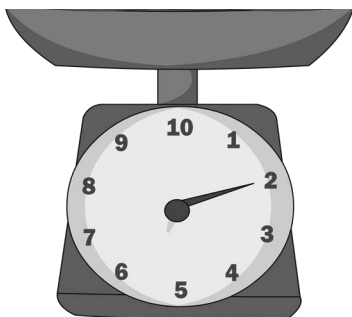


Kitchen knives



peeler

3. Measuring tools are tools used to measure the ingredients needed in preserving food.



Weighing scale



Measuring cups



Measuring spoons

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#### 4. Other tools and Equipment

##### A. Colander and strainer—used for draining ingredients



Colander



Strainer

##### B. Pots and pans



Pots



Pans

C. Pressure Caner is used for processing and preserving low acid food.

D. Salinometer is used to determine brine concentration.

E. Food Processor is used to crush or chop hard food like nuts and seeds.

## HOW TO MAKE A PROJECT PLAN

A project plan is a guide in accomplishing a certain task that you need to achieve. Here, you are going to write your objectives in making a task, the things needed, the procedures, a sketch of your product as well as the evaluation that you are going to use. See the sample below.

I. **PROJECT NAME:** Dried Fish (Daing na Isda)

II. **OBJECTIVES:**

1. Use appropriate ingredients and cooking tools
2. Demonstrate the correct procedure/ steps in making dried fish
3. Produce a preserved food.

III. **INGREDIENTS:**

1 cup of salt          3 cups of water      1 kilo fresh hasa-hasa

IV. **TOOLS:**

Net	Strainer
Wooden spoon	Bowl

V. **PROCEDURES:**

1. Split the fish. Remove the gills and internal organs of the fish. Wash them thoroughly.
2. Place the fish in the strainer to remove excess water.
3. Prepare the brine solution. For a kilo of fish, use one cup of salt mixed in three cups of water. Using a piece of cloth, strain the brine solution to remove any dirt.
4. Place the fish in a large container and pour the brine solution.
5. Cover the container. Let it stand for 6 hours.
6. Drain the salted fish.
7. Arrange the fish in a wire screen mesh. Cover it with net to avoid contamination. Dry under the sun for two to three days.





**Learning Task 4:** Choose the best tool to be used in the following scenarios by encircling your answer below.

1. Maria needs to remove the water from the vegetables after washing them.

A. Colander

B. container

C. turner

2. Jose wants to remove the skin of the mangoes that he will dry.

A. Kitchen scissors

B. strainer

C. peeler

3. Ana will measure the amount of salt to be put in the brine solution for her salted eggs.

A. Measuring cups

B. measuring spoons

C. weighing scale

4. Jose wants to determine the brine concentration of his solution.

A. Pressure canner

B. salinometer

C. Food Processor

5. Gloria needs storage for food preservation.

A. Pots

B. containers

C. pan

**Learning Task 5:** Make an inventory of available tools and equipment in food preservation at your home. List it down and write how it is used. You may add rows if necessary.

FOOD PRESERVATION TOOLS/ EQUIPMENT	USAGE/ FUNCTION

**Learning Task 6:** Find a partner. Put all the food preservation tools available in your house inside a box. Prepare flashcards with the name of tools written in it. When your partner shows the flashcard, you need to get the tool written in it inside the box. You may change your roles afterwards.

**Learning Task 7:** Make an album of the different tools and equipment used in food preservation. You can take a picture or you can draw. Also, write the function of each tool and equipment. You can add designs to make your album more beautiful.



There are different tools and equipment needed in food preservation. You need to make sure that everything is prepared before doing food preservation. Making a project plan will help you in the process of doing it.

**Learning Task 8:** Decide a food preservation recipe and make your own project plan. Follow the guide on the succeeding below.

### **PROJECT PLAN**

I. Project Title:

II. Objectives:

- 1.
- 2.
- 3.

III. Ingredients/ Tools

IV. Procedures:

- 1.
- 2.
- 3.
- 4.
- 5.

V. Output

# Principles of Food Preservation

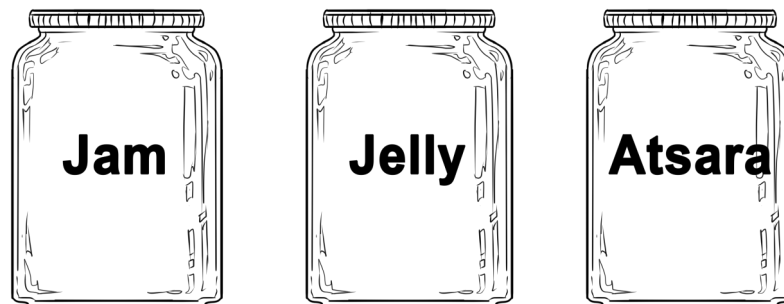
## Lesson

### I

Food preservation is a way to prevent food spoilage. To ensure foods are preserved properly, we must be careful in checking the ingredients and carrying out the food preservation procedures. This lesson will inform you on the different principles on food preservation.

Do you know the qualities of food products that are best to be preserved? What are the different things that we need to consider when doing food preservation? Why do we need to follow the principles in food preservation?

In this lesson, you will be able to preserve food by applying the principles and skills in food preservation processing.



**Learning Task 1:** Get a timer and set it in two minutes. Within that period of time you need to write the different things which do you think need to consider in preserving food. Write your answers on a separate sheet of paper.

# D

**Learning Task 2:** Write **TRUE** if the statement is correct and **FALSE** if not correct. Write your answers on a separate sheet of paper.

- \_\_\_\_\_ 1. You need to wash and rinse the food thoroughly using clean water.
- \_\_\_\_\_ 2. Use bare hands in handling hot food.
- \_\_\_\_\_ 3. You need to remove the blood and slime of the fish before you preserve it.
- \_\_\_\_\_ 4. Only ripe fruits can be preserved.
- \_\_\_\_\_ 5. A poultry with foul smell means it is in a good condition.
- \_\_\_\_\_ 6. It is important to wash all the tools to be used in food preservation.
- \_\_\_\_\_ 7. Let the food in the containers uncovered.
- \_\_\_\_\_ 8. Use different chopping boards for raw and cooked food.

## **Factors in Selecting Food for Preservation**

*For fruits and vegetables:*

1. Sort the fruits or vegetables and determine whether it is unripe, ripe, or overripe.
2. Wash the fruits/ vegetables thoroughly.
3. Peel the fruits/ vegetables and cut it to your preferred size.

*For meat, poultry, and seafood:*

1. Check freshness of meat.

### **Signs that Meat is Bad**

- **Red Meat**- has distinct, pungent smell, sticky/ slimy to touch, presence of greenish-brown or grey color in skin.
  - **Poultry**-has grey coloring of skin, have foul smell, has slimy texture and sticky film.
  - **Seafood**—has foul odor, has squishy or mushy texture when poked, has slimy, slippery film on the surface, has bluish or greyish color.
2. Use the preservatives (salt, sugar, vinegar, etc.) needed to prevent immediate spoilage. Some examples of meat preserved with salt or sugar are bacon, sugar-cured ham, bacon, and corned beef.

3. Fish is preserved as a whole but can be split into two. It must be washed thoroughly and make sure that the blood and slime is removed.

### **Safety Rules in Food Preservation**

To avoid contamination, safety handling of food for preservation must be observed. Here are some rules that you must follow:

1. Wash and rinse food thoroughly using clean water.
2. Wash all the tools and utensils to be used. You may also sterilize them if needed.
3. Use different chopping boards and knives for raw and cooked food.
4. Secure the cooking equipment. Make sure it is dry before using.
5. Use kitchen towel or pot holder in handling hot food.
6. Secure the cover of all the food containers.



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**Learning Task No. 3:** Observing the principles in selecting food and safety in food preservation, let us try doing this food preservation method.

### **HOW TO MAKE SALTED EGGS**

#### **Ingredients:**

8 pieces duck or chicken eggs  
½ cups of salt  
4 cups of water

#### **Procedure:**

1. Wash the eggs with water and place them in a jar or glass container with a lid.
2. Fill in the saucepan with water and let the water boil. Dissolve the salt in water to make a brine solution. Let the brine solution cool.
3. Pour the solution over the eggs. Make sure the eggs are completely soak in water.
4. Cover the jar and store it in a dark place for at least three weeks.
5. After three weeks, take out the eggs from the container and boil them. Let them cool and store in the refrigerator afterwards.

**Learning Task 4:** Now that you know how to preserve food, make a tour in your community. Look for available resources in your place that can be preserved which you think will meet community demands. Using the food that is available, select the food preservation technique which you think is most applicable. Apply the principles and skills in food processing and observe safety rules as well.

### **PROJECT PLAN**

Project Title:

Objectives:

- 1.
- 2.
- 3.

Ingredients/ Tools

Procedures:

- 1.
- 2.
- 3.
- 4.
- 5.

Output

**Learning Task 5:** Compose a jingle to remind us on the different principles and safety rules in food preservation. You can also make some steps that will match in your created jingle.

**Learning Task 6:** Make a slogan about the safety rules in food preservation.

**Learning Task 7:** Conduct an interview to your household members or other people that is knowledgeable in food preservation to give tips and points to ponder while doing food preservation.

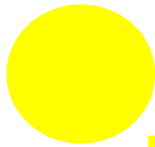


Food preservation helps us extend the shelf life of our food. To avoid contamination, we must remember the principles in selecting the food to be preserved. Keep in mind the availability of materials in our community during food selection. Also, proper handling of food and usage of tools are important to preserve the food successfully.

**Learning Task 8:** Ask your parents or any of your family members on how to make a dried mangoes. Write down the procedures that they told you. After that, ask their assistance and help for you to make your own dried mangoes. The output will be graded based on the rubrics below.

#### RUBRICS

CRITERIA	EXCELLENT 10-8	FAIR 7-5	POOR 4-2	SCORE
Cooking Procedures	All the procedures are followed correctly	The procedures are followed with some minor errors	Majority of the procedures are not followed.	
Food Appearance	The preserved food is cooked just right and with appeal.	The preserved food is over-cooked/ undercooked and lacking in appeal.	The preserved food is burnt and has no appeal.	
Palatability	The food prepared is well-blended and flavorful.	The food prepared is somewhat under seasoned and lacking in flavour.	The food prepared is bland and not well-blended.	
Safety	All the safety rules in food preservation is observed.	Some of the safety rules for food preservation are not followed.	Most of the safety rules for food preservation are not followed.	
TOTAL				



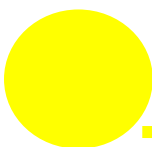
# Answer Key

## Different Ways of Food Preservation

<b>Learning Task 1</b> 1. C 2. D 3. C 4. D 5. B	<b>Learning Task 2</b> 1. Freezing 2. Drying 3. Salting 4. Drying 5. Freezing	<b>Learning Task 3</b> Meat (pork, chicken, beef) Seafood (bangus, tilapia, hito) Vegetables/ fruits (cabbage, mango, ampalaya, calamito)
<b>Learning Task 4</b> 1. Freezing 2. Drying 3. Salting 4. Drying 5. Freezing	<b>Learning Task 5</b> 1. It is a source of income. 2. Seasonal fruits are made available whole year round. 3. It extends the shelf life of food by preventing spoilage. 4. It keeps the nutrients and texture of food 5. It is a source of income.	<b>Learning Task 7</b> 1. Drying 2. Freezing 3. Drying 4. Salting 5. Drying

## Tools and Equipment in Food Preservation

<b>Learning Task 1</b> Tongs, peeler, containers, strainer, pots	<b>Learning Task 2</b> Mixing Tools ( <i>ladle, Turner, tongs</i> ) Cutting Tools ( <i>peeler, kitchen knives</i> ) Measuring Tools ( <i>measuring cups, weighing scale</i> ) Other Tools and Equipment ( <i>pots, containers</i> )	<b>Learning Task 3</b> 1. Freezing 2. Natural/ Sun Drying 3. Brine Salting 4. Artificial Drying 5. Dry Salting
<b>Learning Task 4</b> 1. Colander 2. Peeler 3. Measuring cups 4. Salinometer 5. Containers	<b>Principles of Food Preservation</b> <b>Learning Task 2</b> 1. True 2. False 3. True 4. False 5. False 6. True 7. False 8. True 9. True 10. True	



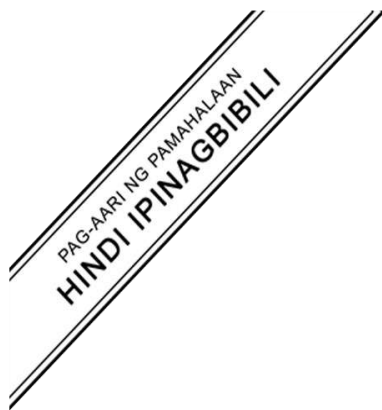
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MISOSA-V Iba't-ibang Pamamaraan ng Pag-iimbak.

MISOSA-VI Pag-iimbak at Preserbatiba.





**Para sa mga katanungan o puna, sumulat o tumawag sa:**

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