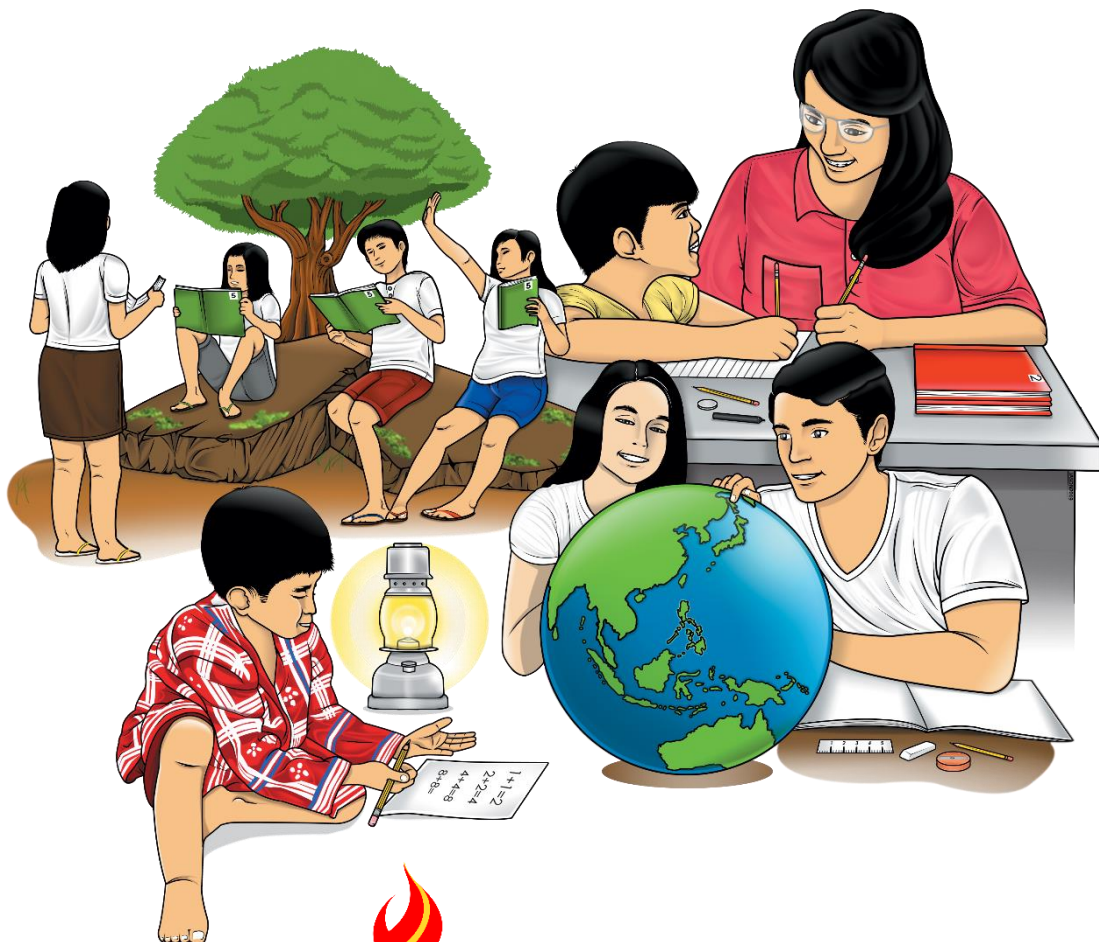


Technology and Livelihood Education

Home Economics

Module 9: Different Ways of Food Preservation



TLE (HE) – Grade 6
Alternative Delivery Mode
Module 9: Different Ways of Food Preservation
First Edition, 2020

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6

Technology and Livelihood Education

Home Economics

**Module 9: Different Ways of
Food Preservation**

Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task. If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



What I Need to Know

One of the effects of emergency situation is shortage of food supplies. This module was developed to help learners understand the methods of preserving food.



What I Know

Before you begin, try to answer first the following questions. This will help you find out what you already know about the topic discussed in this module.

Read each item carefully. Choose the letter of the correct answer. Write your answer on a separate sheet of paper.

1. Food preservation is the process of preserving food for long periods of time which can help _____.
 - a. less production
 - b. food shortage
 - c. preservation
 - d. availability of food

2. Which of the following methods of preservation is the best way in making *tapa*, *longganisa*, and ham?
 - a. salting
 - b. smoking
 - c. curing
 - d. pickling

3. Why drying method is an ideal way of preserving food?
 - a. easy to store, carry and requires no refrigeration
 - b. expensive and time consuming
 - c. easy to sell in the market
 - d. hard to make

4. Which of the following preserved foods are good source of quick energy and wholesome nutrition because it only lost its moisture?
 - a. pickled
 - b. sweetened
 - c. cellared
 - d. dried

5. How do *bagoong*, *burong manga*, mustard, salted egg and fish sauce were preserved?
 - a. refrigerating
 - b. salting
 - c. pickling
 - d. freezing

6. Freezing delays spoilage and keeps foods safe by preventing microorganisms from growing and by slowing down the enzyme activity that causes food to spoil. What is the exact freezing point of food preserved?
 - a. 0 °C
 - b. 10 °C
 - c. 1 °C
 - d. 100 °C

7. In preserving processed food like *longganisa* and *tocino*, what solution is used?
 - a. sugar, salt, vinegar and chili
 - b. sugar, salt, vinegar and salitre
 - c. sugar, salt, vinegar and tomato
 - d. sugar, salt, vinegar and soysauce

8. Freezing is one of the most effective methods of preserving food. Which of the following can be stored in the freezer for several months at a temperature of 0°C or below?
 - a. fruit
 - b. meat
 - c. vegetables
 - d. bread

9. Most fruits and vegetables are preserved through pickling. What do you call the solution which contains salt and acid (usually vinegar) used to make pickled products?
 - a. prine solution
 - b. twine solution
 - c. brine solution
 - d. wine solution

10. Tony's mother wants to cook *ube jam* and jelly for her friend, which of the following method is best suited in making it?
 - a. curing
 - b. sweetening
 - c. salting
 - d. freezing

Lesson 1

Food Preservation

Food preservation is the process of preparing food for future consumption by preventing its spoilage. Food preservation is the answer to the problem of inadequate food supply as well as the need for nutritious and palatable meals for the family.

The goal of food preservation is the prevention of spoilage. Delay in the use of fresh foods alters its freshness, taste, and nutritive value. Spoiled food becomes unfit for use. Correct food preservation techniques can prevent spoilage and retain the nutritive value, natural color, and texture of the food. It is also very important to maintain the sanitation of food.



What's In

What are the foods that can be preserved?

Do you have any idea how these foods are prepared?

What are the different ways of food preservation you know?

Notes to the Teacher

Begin by orienting learners with the relevance of the module in providing varied, relevant activities and opportunities in improving learner's skills. Remind the learner to answer *What I Know*, *What Can I Do* and *Assessment* to test their own progress. Let them answer on a separate sheet of paper.



What's New

Study the puzzle below. Encircle the words that are related to food preservation.

c	l	s	m	o	k	i	n	g	p	q	r	u	p	q	p	t	s
a	p	p	l	a	u	p	q	f	k	a	f	j	i	a	l	f	a
s	t	e	r	i	l	i	z	a	t	i	o	n	c	s	m	g	l
s	o	o	k	s	j	l	s	r	l	s	v	k	k	d	o	h	t
d	u	i	j	f	r	e	e	z	i	n	g	l	l	f	i	t	i
f	r	u	h	d	n	k	z	t	j	z	c	m	i	r	u	r	n
g	t	y	g	f	m	m	x	y	h	e	t	n	n	t	j	e	g
h	r	t	i	g	b	r	e	u	g	d	y	o	g	y	m	s	p
n	e	r	d	n	h	d	w	i	f	c	h	p	t	u	n	w	u
b	w	e	s	h	g	s	d	o	d	c	u	r	i	n	g	y	l
v	r	e	f	r	i	g	e	r	a	t	i	o	n	i	b	i	h

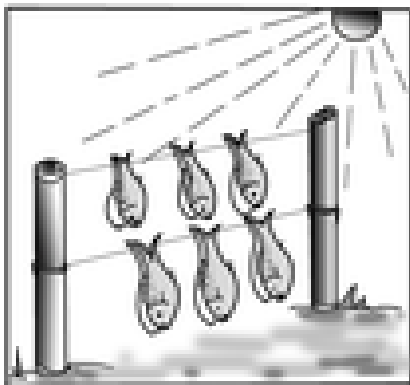


What is It

Food Preservation Methods

Food preservation is the process of changing raw ingredients into food by means of physical or chemical ways. Food preservation on the other hand is the process of treating and handling food to stop, slow down spoilage to prevent food borne illness and extend its shelf-life.

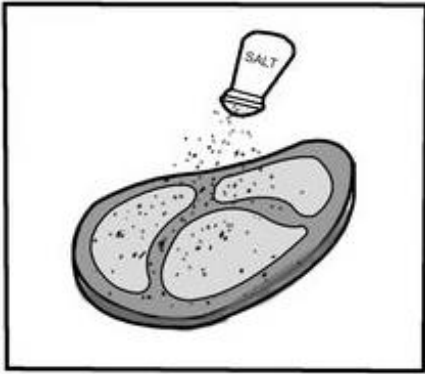
Methods of Food Preservation



1. Drying

Food drying is one of the oldest methods of preserving food. Drying food is simple, safe and easy to learn. It is the easiest and the most common method of food preservation. The moisture content of the food is removed. Being easy to store and carry and requiring no refrigeration makes dried foods ideal for domestic use as well as for use in the rough outdoors.

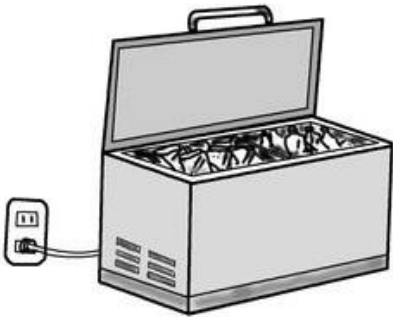
Moreover, dried foods are good sources of quick energy and wholesome nutrition, since the only thing lost during preservation is moisture.



2. Salting

Salting is a method of preserving food that was more common before modern refrigeration. Salting preserves food by drawing water out of the food, preventing bacteria growing and spoiling the food.

Salt is applied to the food to be preserved like meat, fishes, shrimps, fruits and eggs. Products made from salting are *bagoong*, *burong manga*, mustard, salted egg and fish sauce.



3. Freezing

Freezing delays spoilage and keeps foods safe by preventing microorganisms from growing and by slowing down the enzyme activity that causes food to spoil.

It is a quick and convenient way to preserve food such as meat, poultry, and fish, which are stored under 0°C or 32 °F until they are to be consumed.



4. Refrigeration

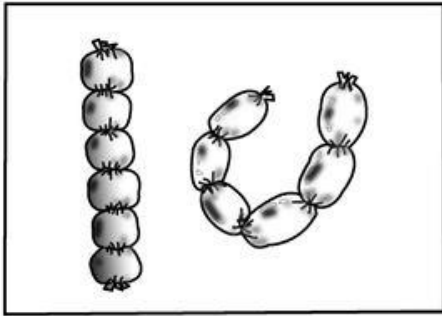
Refrigeration is one of the most popular forms of food preservation in use today. It keeps at low temperature to prolong their freshness like eggs, milk, fruits, vegetables, and dairy products.



5. Smoking

Smoking is the process of flavoring, browning, cooking or preserving food by exposing it to smoke from burning or smoldering material, most often wood.

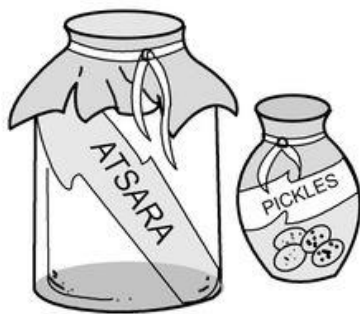
Foods such as cured meat and fish are exposed to smoke and preserved. Examples of which are *tinapa*, *tapa*, and *longganisa*.



6. Curing

Through the use of a combination of salt, sugar and either nitrate or nitrite, fish and meat can be successfully preserved and even add flavoring to them.

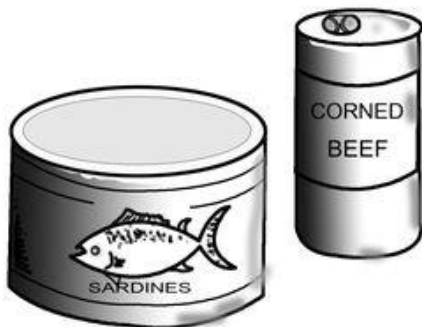
Curing is a method done by soaking or injecting meat with preservatives like sugar, salt, vinegar, and salitre solution. Examples are *longganisa* and *tocino*



7. Pickling

Pickling is the process of preparing a food by soaking and storing it in a a brine containing salt, acid (usually vinegar), or both, a process which can be preserve otherwise perishable foods for months.

The resulting food is called a pickle. It can be used with most foods, including fruits, vegetables, meats, seafood, and eggs.





8. Canning

Canning is an important, safe method for preserving food if practiced properly. It involves placing foods in jars or similar containers and heating them to a temperature that destroys micro-organisms that cause food to spoil.

During this heating process air is driven out of the jar and as it cools a vacuum seal is formed. This vacuum seal prevents air from getting back into the product bringing with it contaminating micro-organisms.

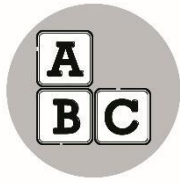
Sardines, tomato sauce, pineapple juice are examples of processed food sealed in airtight cans.

	<p>9. Sweetening/Sugar Preservation</p> <p>Sweetening or Sugar Preservation is a food preservation method similar to pickling. Sugaring is the process of desiccating a food by first dehydrating it, then packing it with pure sugar.</p> <p>This sugar can be crystalline in the form of table or raw sugar, or it can be a high sugar density liquid such as honey, syrup or molasses.</p> <ol style="list-style-type: none"> Jam the fruit is mashed and cooked with sugar as main ingredients. Jelly clear fruit juice cooked with sugar, which gelatinizes in cooking.
	<p>10. Sterilization</p> <p>Sterilization is the process that involves using heat to kill microorganisms and bacteria. The food item must be properly to have shelf life of up to several years.</p>

Guide Questions:

Read each question carefully. Write your answer on a separate sheet of paper.

1. What is food preservation?
2. What are the different ways of preserving food?
3. Why do we need to preserved food?



What's More

Activity 1

Match the meaning in Column A with its corresponding food preservation processes/methods in Column B. Write your answer on a separate sheet of paper.

A	B
1. It is a method in which processed food is put and closed in an airtight cans.	A. drying
2. It is a method done by drenching or injecting meat with preservatives like vinegar, sugar, salt solutions.	B. canning
3. It is a method in which food items such as fish or cured meat is exposed to smoke not only to preserve them but also to add color and flavor.	C. salting
4. This process of food preservation is done by applying salt in the food.	D. freezing
5. This is a fast and easiest way to preserve food such as meat, poultry, and fish, which are kept in the freezer until they are consumed.	E. refrigeration
6. The food preservation method where food is stored at low temperature to extend their freshness.	F. curing
7. This method is use by adding solution of vinegar, salt, and sugar to vegetables.	G. smoking
8. This method of food preservation is use to preserve fruits like jelly and jam.	H. sterilizing
9. It is a process that involves using heat to kill microorganisms and bacteria. After sterilization, the food item must be stored properly to have shelf life of up to several years.	I. sweetening
10. The easiest and the most common method. The moisture content of the food is removed.	J. pickling

Activity 2

Read each sentence Column A. In column B write the correct food preservation method being describe. Use the configuration box as clue.

Column A

1. It is the method of food preservation which similar to pickling. Examples are jam and jelly.

2. It is the process of preparing food by soaking and storing in brine solution.

3. It is a method done by soaking or injecting meat with preservatives like sugar, salt, vinegar, and salitre solution. Examples are *longganisa* and *tocino*.

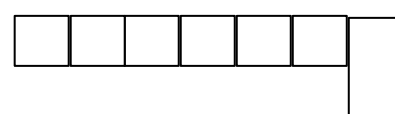
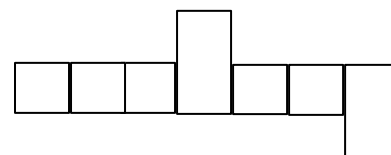
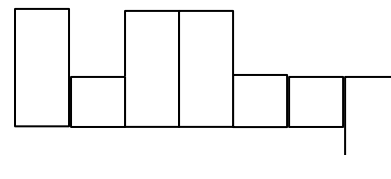
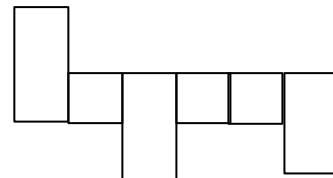
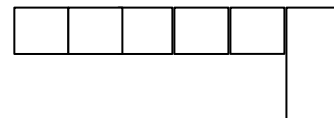
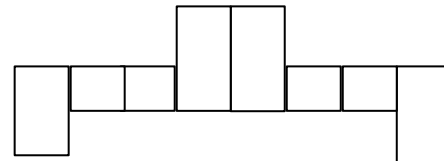
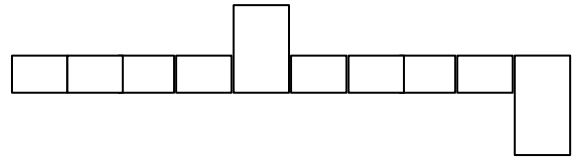
4. It is the oldest method of preserving food which the moisture content of the food is removed.

5. Salt is applied to the food to be preserved. Examples are *bagoong*, *burong mangga*, mustard, salted egg and fish sauce.

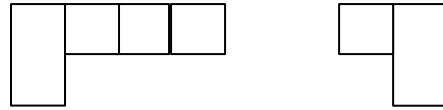
6. It is the process of flavoring, browning, cooking or preserving food by exposing it to smoke.

7. It is a method of food preservation that involves placing foods in jars or similar containers and heating them to a temperature that destroys micro-organisms that cause food to spoil

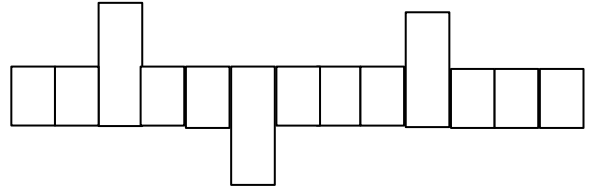
Column B



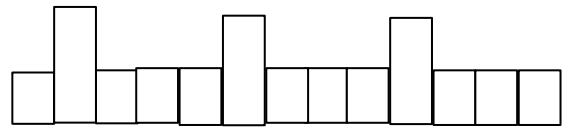
8. It is a quick and convenient way to preserve food such as meat, poultry, and fish, which are stored under 1 °C or 32 °F.



9. It is the method of food preservation which keeps the food at low temperature to prolong their freshness. Examples are eggs, milk, fruits, vegetables, and dairy products.



10. The process that involves using heat to kill microorganisms and bacteria.



Activity 3

Read each sentence carefully. Fill in the blank with the correct the answer. Select your answer inside the box. Use a separate sheet of paper to answer.

drying	salting	canning	
pickling	smoking	sweetening	sterilization
curing	freezing	refrigeration	

1. It is the process that involves using heat to kill microorganisms and bacteria. Is called _____.
2. It is one of the most popular forms of food preservation in use today. It keeps at low temperature to prolong their freshness like eggs, milk, fruits, vegetables, and dairy products is called _____.
3. It is a quick and convenient way to preserve food such as meat, poultry, and fish which are stored under 0 °C or 3 °F until they are to be consumed is _____.
4. An important, safe method for preserving food if practiced properly. It involves placing foods in jars or similar containers and heating them to a temperature that destroys micro-organisms that cause food to spoil.
5. It is the process of flavoring, browning, cooking or preserving food by exposing it to smoke from burning or smoldering material, most often wood

6. It preserves food by drawing water out of the food, preventing bacteria growing and spoiling the food. Salt is applied to the food to be preserved like meat, fishes, shrimps, fruits and eggs.
7. The process of food preservation which removed the moisture content of the food.
8. It is a method done through the use of a combination of salt, sugar and either nitrate or nitrite, fish and meat can be successfully preserved and even add flavoring to them.
9. The process of preparing food by soaking and storing it in a brine containing salt, acid (usually vinegar).
10. It is the method of food preservation which similar to pickling. Examples are jam and jelly.



What I Have Learned

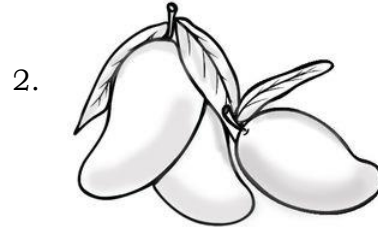
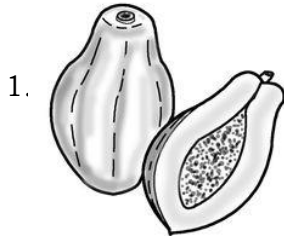
Complete the sentence below.

1. The process of transformation of raw ingredients into food by means of physical or chemical ways is called _____.
2. The process of treating and handling food in such a way as to stop or greatly slow down spoilage to prevent food borne illness and extend its shelf-life is called _____.
3. The different ways of food preservation are _____.

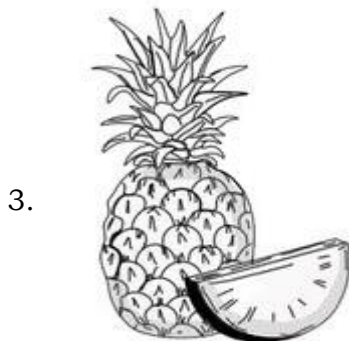


What I Can Do

Study each picture below. Write the processes/ methods used to preserve it. Write your answer on a separate sheet of paper.



mango



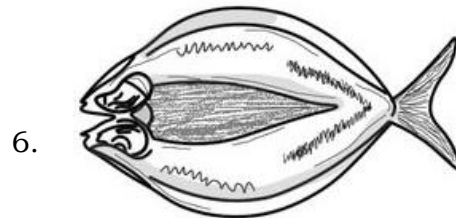
pineapple



eggs



shrimp



milkfish



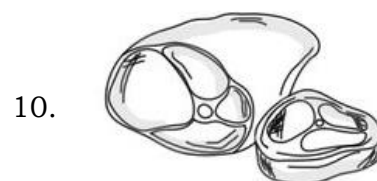
okra



santol



cucumber



meat



Assessment

Read each item carefully. Choose the letter of the correct answer. Write your answer on a separate sheet of paper.

1. Which product are example of salting?
 - a. *bagoong*, salted eggs and *tinapa*
 - b. burong manga, fish sauce, and ham
 - c. bagoong, salted eggs and *longganisa*
 - d. *bagoong*, *burong manga*, and salted egg
2. What method of preservation can be used for kamias?
 - a. pickling
 - b. salting
 - c. sweetening
 - d. curing
3. How can we prolong the shelf-life of food ?
 - a. by preserving
 - b. by washing
 - c. by storing
 - d. by soaking
4. What are the ingredients to make a brine solution ?
 - a. salt and pepper
 - b. vinegar and salt
 - c. vinegar and soy sauce
 - d. soy sauce and pepper
5. Food preservation is the process of preserving food for long periods of time which can help avoid_____.
 - a. preservation
 - b. availability of food
 - c. food shortage
 - d. less production
6. Aling Kesing and Jan went to the market to buy fish, beef, chicken and pork. What is the best method they should do to preserve the food they bought?
 - a. sweetening
 - b. freezing
 - c. sterilizing
 - d. pickling

7. Which preservation method is use to make tapa, tinapa and longganisa?
 - a. drying
 - b. smoking
 - c. canning
 - d. salting

8. What is the importance of vacuum sealing in preserving food?
 - a. prevents air from getting back into the product bringing with it contaminating micro-organisms
 - b. it help prolong the freshness of the product
 - c. it contaminates the container or the jar
 - d. prevents food from getting spoil

9. In drying method, what element in food is removed?
 - a. the nutrients of the food
 - b. the color and odor of the food
 - c. the moisture content of the food
 - d. the taste and juiciness of the food

10. What do you call the method of preservation which you set the temperature to 0 °C or 32 °F?
 - a. drying
 - b. salting
 - c. freezing
 - d. smoking



Additional Activities

Study the chart below. Put a check on the column that corresponds with the given processes.

<i>Food</i>	<i>Canning</i>	<i>Pickling</i>	<i>Salting</i>	<i>Drying</i>	<i>Sweetening</i>	<i>Smoking</i>	<i>Freezing</i>
1. guava jelly							
2. dried dilis							
3. salted egg							
4. tinapa							
5. pork							



Answer Key

Assessment

D
C
C
C
B
B
B
A
C
C

What's More

Activity 1.1
1. J
2. A
3. D
4. E
5. F
6. B
7. C
8. I
9. H
10. G

Sweetening
Pickling
Curing
Drying
Salting
Smoking
Canning
Freezing
Retrification
Sterilization

Activity 2.1
Sweetening
Pickling
Curing
Drying
Salting
Smoking
Canning
Freezing
Retrification
Sterilization

Activity 3.1
Sterilization
Retrification
Freezing
Canning
Smoking
Salting
Drying
Pickling

What I Know

B
C
A
D
B
A
B
B
B
A
B
B
A
B

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