BPP 12 Q1 W1 Mod1 BREAD AND PASTRY PRODUCTION

English (Titay National High School)

Republic of the Philippines
Department of Education
National Capital Region
DIVISION OF CITY SCHOOLS – MANILA
Manila Education Center Arroceros Forest Park
Antonio J. Villegas St. Ermita, Manila

Bread and Pastry Production Grade 12

PREPARE AND PRODUCE BAKERY PRODUCTS

Most Essential Learning Competency
Prepare and Produce Bakery Products
TLE_HEBP9-12PB-Ia-f-1
1st Quarter Week 1 Module 1

HOW DO YOU USE THIS MODULE?

Before starting the module, I want you to set aside other tasks that will disturb you while enjoying the lessons. Read the simple instructions below to successfully enjoy the objectives of this kit. *Have fun!*

1. Follow carefully all the contents and instructions indicated in every page of this module.

2. Write on your notebook the concepts about the lessons. Writing enhances learning, that is important to develop and keep in mind.

3. Perform all the provided activities in the module.

4. Let your facilitator/guardian assess your answers using the answer keycard. 5. Analyze conceptually the posttest and apply what you have learned.

6. Enjoy studying!

PARTS OF THE MODULE

- **Expectations** - These are what you will be able to know after completing the lessons in the module.
- **Pre-test** - This will measure your prior knowledge and the concepts to be mastered throughout the lesson.
- **Looking Back to your Lesson** - This section will measure what learnings and skills did you understand from the previous lesson.
- **Brief Introduction**- This section will give you an overview of the lesson.
- **Discussion** – This section provides a short discussion of the lesson. This aims to help discover and understand new concepts and skills.
- **Activities** - This is a set of activities you will perform with a partner.
- **Remember** - This section summarizes the concepts and applications of the lessons.
- **Check your Understanding**- It will verify how you learned from the lesson.
- **Post-test** - This will measure how much you have learned from the entire module.

LESSON 1 – BAKING INGREDIENTS AND ITS SUBSTITUTION

EXPECTATION:

- Identify ingredients used in baking.
- Proper storing and handling of baking ingredients.
- Familiarize oneself with the table of weights and measures.
- Apply basic mathematical operations in calculating weights and measures.

PRE – TEST

A. Directions: Read the questions carefully and write the letter of the best answer on the space provided.

1. What kind of sugar is primarily used in preparing icing?
   A. brown sugar
   B. confectioner sugar
   c. granulated sugar
   d. refined sugar

2. What is basic ingredient in baking that improves aroma, flavor, sweetness and nutrition in baked products?
   A. baking powder
   B. flour
   c. shortening
   d. sugar

3. Which of the ingredients is an example of a physical leavening agent?
   A. air
   B. baking powder
   c. baking soda
   d. yeast

4. Which kind of flour contains more gluten and less starch?
   A. All-purpose flour
   B. bread flour
   c. cake flour
   d. soft flour

5. What is the best substitute for one cup sifted CAKE flour?
   A. 1C minus 1T sifted APF plus 2T cornstarch
   B. 1C minus 2T APF plus 2T cornstarch then, sift 3-5 times
   C. 1C minus 2T sifted APF plus 2T cornstarch
   D. 1C sifted APF

6. Which of the following is the best substitute for sour milk?
   A. 1C sweet milk plus 1 tbsp. vinegar
   B. 1 ¾ C sweet milk plus 1 tbsp. vinegar
   C. 2 C sweet milk plus ½ tbsp. vinegar
   D. 2/3 C sweet milk plus 1 tbsp. vinegar

7. Which of the following ingredients functions as food for the yeast?
   A. Baking Powder
   B. Baking Soda
   C. Milk
   D. Sugar

8. Which of the ingredients is an example of a chemical leavening agent?
   A. Active Dry Yeast
   B. Air
   C. Baking Powder
   D. Steam

9. Which of the following ingredients that when added to flour mixtures, increases tenderness.?
   A. butter
   B. lard
   C. shortening
   D. vegetable oil

10. Which of the ingredients that serves as backbone of many baked goods and contribute to its structure?
   A. Eggs
   B. Flour
   C. Shortening
   D. Sugar

B. Directions: Give the substitute equivalent of the following ingredients. Choose the correct letter inside the box.

A. 62	B. 2	C. 7/8 and 3	D. 2 and 1

11. 2 T all purpose flour = _____ T. cornstarch

12. 1 cup cake flour sifted = _____ T. all purpose flour sifted

13. 1 square unsweetened chocolate = _____ T cocoa and ____ T fat

14. 1 whole egg = _____ egg yolks

15. 1 cup coffee cream (20 percent) = _____ cup milk and _____ T butter

LOOKING BACK TO YOUR LESSON

Direction: Read and understand the statement. Encircle the correct answer.

1. It is a cooking method using dry heat.
   a. baking b. boiling c. frying d. steaming

2. Earliest biblical record of bread making is during the time of _____ more than 2,000 years ago.
   a. Abraham b. David c. Moises d. Solomon

3. Another term for professional baker.
   a. astillarium b. baker c. chief d. pastillarium

4. Production of large quantity of breads is said to have started in _____.
   a. America b. Brazil c. France d. Rome

5. What was apparently regarded as high official position in the household of the Pharaoh?
   a. baker b. chief baker c. chief d. cook

BRIEF INTRODUCTION

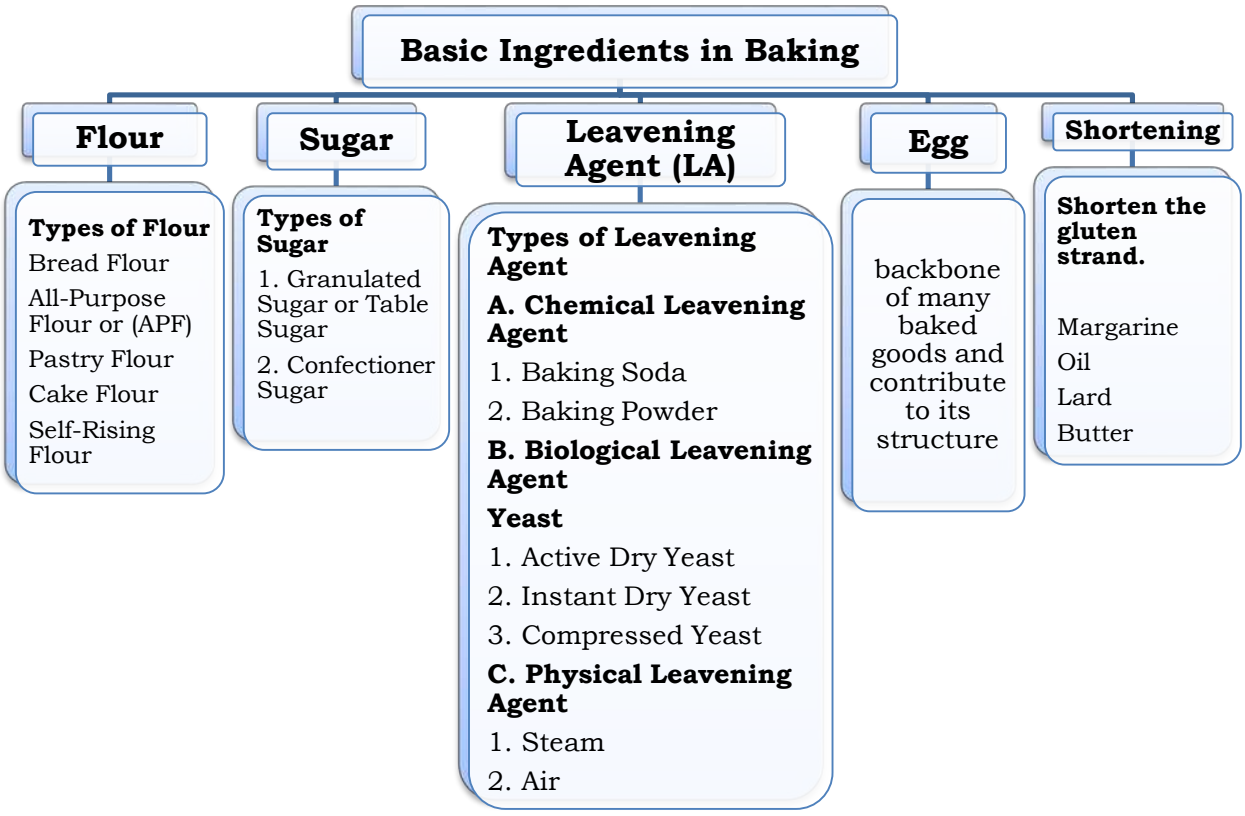
Before engaging oneself in the Bread and Pastry Production industry, One must know the different ingredients used in baking and its substitution. This will help in creating or finding options for baking different bakery products. This skill can be acquired by identifying ingredients used in baking, proper storing and handling of baking ingredients, familiarizing oneself with the table of weights and apply basic mathematical operations in calculating weights and measure.

TOPIC: BASIC INGREDIENTS IN BAKING

Objectives

1. Identify the ingredients used in baking
2. Proper storing and handling of baking ingredients

DISCUSSION



I. FLOUR

- Finely ground meal obtained by grinding and milling cereal grains or other root crops.
- When mixed with water, this proteins form as gluten.
- The more protein a flour has, the stronger the gluten strength.
- Functions as gluten development.

Types of Flour	Protein-Content	Gluten-Content	Milled from
Bread Flour or Hard Flour	12-14%	Strongest gluten strength	Hard Wheat Flour
• The high gluten content causes the bread to rise and gives its shapes and structure			
All-purpose or General Purpose Flour or Family Flour	10-11%		Blend from hard and soft wheat flour
Pastry Flour	Varies from 8-9%	Slightly more gluten than cake flour	Usually from soft wheat
Cake Flour	7-9%	Low in gluten	Soft wheat
It is good for making cakes and cookies where a tender and delicate texture is desired.			
Soft Flour		Lowest in gluten	

II. SUGAR

- Sweet, soluble organic compound that belongs to the carbohydrate group of food.
- They are the simplest to digest among all carbohydrates.
- Functions as food for the yeast.

TYPES OF SUGAR

- **Regular granulated sugar** or **white sugar** – also known as "table sugar"
- **Confectioner's sugar** or **powdered sugar** – granulated sugar that has been pulverized. To prevent lumping and caking, about 3% cornstarch is added.
- **Brown Sugar** – contains caramel, mineral matter and moisture. It also contains a small amount of molasses.

III. EGG

- the**backbone of many baked goods** and contribute to its structure.
- Eggs also **provide steam for leavening or moisture for starch**.
- Represent almost 50% of the total cost of any baked product, thus considered the baking ingredient with the highest cost or expense.
- Egg yolks **add moisturizing fat** and *helps emulsify the batter*, giving the baked good a **smooth and creamy texture**.
- The**egg whites act as strengtheners.** There are substitutes for fresh eggs, but they do alter the recipe.

IV. SHORTENING

- **Shortening** is any fat, which when added to flour mixtures increases tenderness.

- This is done by preventing the sticking of gluten strands while mixing so that gluten is shortened and makes the product tender.

- Function to shorten the gluten strand.

Types of Shortening

1. **Oil** - Made from plant products such as corn, cottonseeds, soybeans, peanuts and other sources.
2. **Butter** - Animal-based and made of fatty milk proteins
3. **Margarine** - Plant-based and made from hydrogenated vegetable oil.
- **Lard** - Animal-based and made from fats of pork

V. LEAVENING AGENT

Leavening Agent are gases that cause the dough to "rise".

They do this by providing air, steam, or gas.

1. Yeast
2. Baking soda is a quick-acting leavening agent. It is only used when acids are present…the most common of which is “cream of tartar”
3. Baking powder is the most common of the quick-acting leavening agents. It is a combination of soda and acid.

Note: Quick-acting leavening agents are used in cakes and cookies.

Classification of Leavening Agent

1. Chemical Leaveners
2. Biological Leaveners
3. Physical Leaveners

Topic#1 Baking Ingredients and Substitutions\Major-Ingredients-in-Baking101.ppt

VI. LIQUID

- Mix with flour to develop gluten.
- Gluten helps form structure of a baked good
- Milk and water are the most common.
- Water is the liquid used in baking
- Milk adds flavor, nutrients and promotes browning
- Buttermilk: tangy flavor, makes the mixture more acidic, determines the kind of leavening agent needed.

Minor Ingredients in Baking

- Essential in attaining the **sensory qualities** of baked products.
- They are used in small quantity, but contribute to the **enhancement of flavor** and **texture** of the baked products.

Flavorings

- Fruits and nuts add flavor and texture to baked products.
- Herbs, spices, extracts used in small amounts add flavor
- Examples of extracts (liquid) lemon, vanilla, almond

Difference between Extract and Flavor Emulsion

- Flavor Extract is alcohol-based
- Flavor Emulsion is oil-based or fat-based

SALT

- Salt adds flavor
- Strengthens gluten
- Salt enhances the sweetness of other ingredients in a baked product.

Types of Chocolate

- Unsweetened Chocolate
- Bittersweet and semisweet Chocolate
- Milk Chocolate

Proper Storing and Handling of Baking Ingredients

1. Store in a clean and dry area.
2. Store away from odorous materials and areas prone to infestation.
3. Store in a well-ventilated area free from roof leaks and/or condensates.
4. Palletize properly to prevent caking.
5. Prioritize proper stock rotation such as First In, First Out (FIFO).

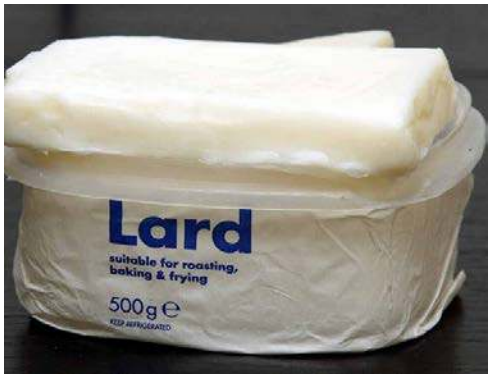
ACTIVITY 1

Direction: Based on the picture, read and answer the given questions. Write your answer on your notebook**.**

1. What are the basic ingredients shown?
2. What are the functions of ingredients shown in baking?

1. 

2. 

3. 

4. 

5. 

ACTIVITY 2

Direction: Make a research about the recipe of Dinner Roll and identify the ingredients used in it and state the functions of each ingredients. Do it together with your parent/guardian.

CHECK YOUR UNDERSTANDING

Direction: Categorize the following ingredients accordingly. Write F if it is Flour, FT if it is Fat, S if it is Sugar and LA if it is Leavening Agent. Write your answer in your quiz notebook.

1. Cake
2. Margarine
3. Baking Powder
4. Granulated
5. Butter
6. Oil
7. Confectioner
8. Bread
9. Baking Soda
10. Yeast

Direction: Enumerate the following:
1-3) Types of Yeast
4-5) Types of Physical Leaveners

TOPIC: SUBSTITUTION

Objectives:

1.Familiarize oneself with the table of weights and measures
2.Apply basic mathematical operations in calculating weights and measures.

DISCUSSION

STANDARD TABLE OF WEIGHT AND MEASURE

1 tablespoon (T or tbsp)	= 3 teaspoon (t or tsp.)
2 tablespoon	= 1/8 cup
4 tablespoon	= ¼ cup
5 1/3 tablespoon	= 1/3 cup
¾ cup plus2 tablespoons	= 7/8 cup
16 tablespoon	= 1 cup(c.)
2 cups	= 1 pint
4 cups	= 1 quart
16 ounces	= 1 pound

COMMON UNITSOF WEIGHT

1 pound (lb.)	= 463.59 grams
1 ounce	= 28.35 grams
1 kilogram (kg.)	= 2.21 pounds
1 gram	= .035 ounces
1 medium orange	= ¼ to ½ cup (slice)
1 medium apple	= 1 cup slice
14 oz. can condensed milk	= 1 ¼ cups
14 oz, can evaporated milk	= 1 2/3 cups
1 lb. brown sugar	= 2 ¼ cups (packed)
1 lb. confectioner sugar	= 3 ½ cups
1 lb. confectioner sugar	= 2 ½ cups
1 lb. nuts	= 4 ½ cups
1 lb. dried nuts	= 2 cups
5 whole eggs	= 1 cup
12 egg yolks	= 1 cup
8 egg whites	= 1 cup

COMMON UNITS OF VOLUME

1 bushel (bu)	= 4 pecks
1 peck (pk)	= 8 quarts
1 gallon (gal.)	= 4 quart
1 quart	= 2 pints
	= 964.4 milliliters
1 teaspoon (tsp. or t.)	= 4.9 milliliters
1 tablespoon (T. or tbsp.)	= ½ fluid ounce
	= 14.8 milliliters
15 ounces raisins	= 3 cups
1 pound dates	= 2 ½ - 3 cups
½ pint whipping cream	= 2 cups whipped creams

BAKING INGREDIENTS SUBSTITUTIONS

Ingredients	**Substitute**
1 Cup Brown Sugar	¼ Cup Molasses + 1 Cup Sugar
1 Bar Butter	½ tsp. Salt + 7/8 C vegetable oil
1 Cup Buttermilk	1 Cup Yogurt
1 Cup Self-Rising Flour	½ tsp. salt + 1 ½ tsp. baking powder + 7/8 Cup APF (All-Purpose Flour)
1 tsp. Cream of Tartar	2 tsp. Lemon Juice
1 Cup Evaporated Milk	1 Cup Cream
1 Cup Corn Syrup	1/3 C. Water + 1 ¼ C. Sugar
1 tsp. Lime Juice	1 tsp. Vinegar
1 Cup Molasses	¾ C. Brown Sugar + 1 tsp. Cream of Tartar (COT)
1 Cup Yogurt	1 C. Sour Cream
1 Cup Heavy Cream	1/3 C. Butter + 1/3 C. Milk
1 tbsp. all purpose flour	½ tbsp. cornstarch/ potato starch / rice starch
1 Cup Sour Milk	1 Cup Evaporated Milk + 1 T. vinegar or lemon juice
1 Cup cake flour	1 C. All-Purpose Flour Minus 2Tbsp + 2Tbsp. Cornstarch/Wheatstarch (Sift three to five times)
1 Cup granulated sugar	1 1/3 cup brown sugar
1 Cup honey	1 ¼ cup sugar plus ½ cup liquid
1 ounce chocolate	3 tbsp. cocoa plus 1 tbsp. fat
1 tbsp. baking powder	1/4 tsp. baking soda plus ½ cup soured milk
1 tsp. active dry yeast	7 g instant dry yeast
1 square unsweetened chocolate	3 tbsp. cocoa plus 1 tbsp. fat
1 Cup butter	1 Cup margarine; 7/8 cup of lard plus ½ tsp. salt
1 Cup heavy cream	¼ Cup butter plus ¾ cup of milk
1 Cup coffee cream	3 tbsp. butter plus 7/8 cup milk
1 Cup whole milk	1 Cup non-fat dry milk plus 2 ½ tsp. of butter or margarine
1 Cup milk	3 tbsp. of sifted non-fat dry milk plus 1 cup water

Oven Temperatures

°C = °F – 32 X 5/9	°F = °C X 9/5 + 32

TEMPERATURE CONVERSION TABLE			
°CENTIGRADE (°C) TO °FARENHEIT (°F)			
50 – 122	110 – 230	170 – 338	230 – 446
60 – 140	120 - 248	180 – 356	240 – 464
70 – 158	130 – 266	190 – 374	250 – 482
80 – 176	140 – 284	200 – 392	260 – 500
90 – 194	150 – 302	210 – 410	270 – 518
100 - 212	160 – 320	220 – 428	280 - 536

ACTIVITY I

Direction: Give the equivalent of the following measurement. Write your answer in your notebook.

1. 1cup = _____ T
2. 6tbsp= _____cup
3. 1tbsp.=_____ teaspoon
4. 2 cups=_____ pint
5. 4 cups= _____ quart
6. ½ cup = _____ T
7. 1 kilo = _____ lbs.
8. 1 pound= _____ ounces
9. 8 cups= _____ quarts
10. ¼ cup= _____ T

Direction: Use the formula below in converting degrees Fahrenheit to degrees Centigrade and degrees centigrade to degrees Fahrenheit. Show your computation. Write your answer in your notebook.

1. 100 °C to °F
2. 180 °C to °F
3. 270 °C to °F
4. 90 °C to °F
5. 220 °C to °F
6. 428 °F to°C
7. 212 °F to°C
8. 158 °F to°C
9. 338 °F to°C
10. 266 °F to°C

ACTIVITY 2

Direction: Using the available ingredients inside your house, Create atleast 3 substitution ingredients we used in baking. Please refer to the above information about substitution. Ask for assistance with your parent/guardian.Take a picture, label it and paste it on your notebook.

Example:

You have available Sugar and Water at home,
1/3 C. Water + 1 ¼ C. Sugar = 1 Cup Corn Syrup

+

CHECK YOUR UNDERSTANDING

Direction: Analogy: Fill in the blanks with the correct answer. Write your answer in your notebook.

1. 1C butter : 1C margarine
1 ¼ butter : _____ margarine

2. 1C milk : 6T sifted crystals + 1C water
½ C milk : _____sifted crystal + _____water

3. 1T cornstarch : 2T all purpose flour
¼T cornstarch : _____ all purpose flour

4. 1oz chocolate : 3T cocoa + 1T fat
¼ ozchocolate : _____ cocoa + _____ fat

5. 1T all purposeflour : ½ T rice starch
3T all purpose flour _____ rice starch

REMEMBER

To achieve desired result in baking, It is important to learn the different baking ingredients and its functions. Flour develops gluten strand. It has different types such as Bread Flour, All-Purpose Flour, Cake Flour, Pastry Flour and Self-Rising Flour. Sugar functions as food for the yeast. Types of sugar are Table sugar or granulated sugar, Confectioner's sugar and Brown sugar, Leavening Agent causes the dough to rise. It is classify into Chemical, Biological and Physical Leavening Agent. Shortening helps shortens the gluten strands. Egg serves as a backbone of many baked goods and contribute to its structure.

Baking ingredients can be substitute if needed arise but it is not highly recommended since it will also affects the result in baking.

Post - Test

A. Directions: Read the questions carefully and write the letter of the best answer on the space provided.

1. Which kind of flour contains more gluten and less starch?
   A. All-purpose flour c. cake flour
   b. bread flour d. soft flour

2. Which of the following ingredients that when added to flour mixtures, increases tenderness.?
   A. butter C. shortening
   B. lard D. vegetable oil

3. Which of the following is the best substitute for sour milk?
   A. 1C sweet milk plus 1 tbsp. vinegar
   B. 1 ¾ C sweet milk plus 1 tbsp. vinegar
   C. 2 C sweet milk plus ½ tbsp. vinegar
   D. 2/3 C sweet milk plus 1 tbsp. vinegar

4. Which of the ingredients is an example of a chemical leavening agent?
   A. Active Dry Yeast C. Baking Powder
   B. Air D. Steam

5. Which of the following ingredients functions as food for the yeast?
   A. Baking Powder C. Milk
   B. Baking Soda D. Sugar

6. What is basic ingredient in baking that improves aroma, flavor, sweetness and nutrition in baked products?
   A. baking powder c. shortening
   B. flour d. sugar

7. Which of the ingredients that serves as backbone of many baked goods and contribute to its structure?
   A. Eggs C. Shortening
   B. Flour D. Sugar

8. What kind of sugar is primarily used in preparing icing?
   A. brown sugar c. granulated sugar
   B. confectioner sugar d. refined sugar

9. What is the best substitute for one cup sifted CAKE flour?
   A. 1C minus 1T sifted APF plus 2T cornstarch
   B. 1C minus 2T APF plus 2T cornstarch then, sift 3-5 times
   C. 1C minus 2T sifted APF plus 2T cornstarch
   D. 1C sifted APF

10. Which of the ingredients is an example of a physical leavening agent?
   A. air c. baking soda
   B. baking powder d. yeast

B. Directions: Give the substitute equivalent of the following ingredients. Choose the correct letter inside the box.

A. 62	B. 2	C. 7/8 and 3	D. 2 and 1

11. 1 cup coffee cream (20 percent) = _____ cup milk and _____ T butter
12. 1 cup cake flour sifted = _____ T. all purpose flour sifted
13. 1 whole egg = _____ egg yolks
14. 2 T all purpose flour = _____ T. cornstarch
15. 1 square unsweetened chocolate = _____ T cocoa and ____ T fat

REFLECTIVE LEARNING SHEET

I learned that...

_____

_____

_____

_____

_____

_____

_____

_____

Let's do the checking

Pre – Test

1. B
2. D
3. A
4. B
5. B
6. A
7. D
8. C
9. C
10. A
11. B
12. A
13. D
14. B
15. C

Post - Test

1. B
2. C
3. A
4. C
5. D
6. D
7. A
8. B
9. B
10. A
11. C
12. A
13. B
14. B
15. D

LESSON 2 – ACCURATE MEASUREMENT OF INGREDIENTS

TOPIC: ACCURATE MEASUREMENT OF INGREDIENTS

EXPECTATION:

- Measure and weigh baking ingredients accurately.

PRE – TEST

I. TRUE OR FALSE

Direction: Write true if the statement is correct and write false if the statement is incorrect.

_____ 1. To ensure consistency of quality and quantity, ingredients and portion sizes must be measured correctly each time a recipe is made.

_____ 2. During measuring, flour can be scooped directly from its container.

_____ 3. Flour should always be sifted before measuring.

_____ 4. Brown sugar when measured properly, should retain the shape of the cup when inverted.

_____ 5. Shortenings and other solid fats should be packed tightly firmly during measuring to remove air holes.

_____ 6. 1 cup of butter is equivalent to 1 bar of butter.

_____ 7. Never measure over the bowl of ingredients you are using for the recipe due to the danger of spillage into the bowl.

_____ 8. A tablespoon is also equivalent to 3 teaspoon.

_____ 9. 1 cup is equivalent to 16 teaspoon

_____10. Liquid or glass measuring cup can also be used to measure dry ingredients.

II. MATCHING TYPE

Direction: Match the word on the left with its abbreviation on the right side. Write the letter of your choice.

_____ 11. Cup	a. C
_____ 12. Degrees Celsius	b. oz
_____ 13. Degrees Fahrenheit	c. lb
_____ 14. Gallon	d. TBSP
_____ 15. Grams	e. tsp
_____ 16. Kilograms	f. °F
_____ 17. Ounce	g.°C
_____ 18. Pound	h.kg
_____ 19. Tablespoon	i.gms
_____ 20. Teaspoon	j. gal

LOOKING BACK TO YOUR LESSON

Identification

Direction: Identify the classification of baking ingredients. Write **DI** if it is a dry ingredients, **LI** for liquid ingredients, **FS** for fats and shortenings, **LA** for leavening agents and **F** for flavoring.

____1.Cinnamon powder	____6.Cream of tartar
____2.Instant yeast	____7.Shortening
____3.Butter	____8.Vanilla Extract
____4.Bread Flour	____9. Confectionary sugar
____5.Milk	____10.Baking Powder

BRIEF INTRODUCTION

Before engaging oneself in the Bread and Pastry Production industry, Baking is an exact science. The different measuring and weighing techniques is one of the important skills a learner in bread & pastry production subject must learn. It is important to measure the ingredients accurately in order to come out with a standard product and efficiently use of the raw materials. Different types of flour sold in different localities need varying amounts of liquid and this should be taken into consideration during baking. Keep a record of the quantity of flour used each time you bake to find out which measurement procedure will give the best result from the different flour available in your area. You will soon learn to judge the correct amount of liquid to be added through the consistency or texture of the dough and the way it feels in your hands.

Objectives

1. Identify the different methods of measuring ingredients
2. Discuss the importance of accurate measurements.
3. Demonstrate the skills required in accurately measuring ingredients.

DISCUSSION

A. PROPER WAY OF MEASURING INGREDIENTS

- To ensure consistency of quality and quantity, ingredients and portion sizes must be measured correctly each time a recipe is made.

B. THE CORRECT TOOLS OF MEASUREMENT

1. Measuring cups

- Measuring cups comes in two basic types:
  - Liquid measuring cup
  - Dry measuring cup

DRY MEASURING CUP

- Dry measuring cups range in sizes from ¼ cup, 1/3 cup, and 1 cup
- Solid or dry measuring cups can be used to measure solid ingredients such as shortening, flour, sugar, cornstarch, raisins, and chocolate chips.
- Overfill the measuring cup and then scrape away the excess as you level off the measure.

LIQUID MEASURING CUP

- Liquid measuring cup with pouring spout at one end for easy pouring are used to measure liquid ingredients.
- Liquid measuring cups ranges in sizes from 1 cup, 2 cups and 4 cups.
- Ingredients that can be measured in a liquid measuring cup includes thin liquid like water, juices, milk, and oil.

2. MEASURING SPOON

- These measuring spoons can be used for measuring small quantities of ingredients for both liquid and dry ingredients.
- Be sure to use the graded teaspoons and tablespoons and not the spoons you use to eat with.
- Measuring spoons usually comes in sets containing: 1/8 teaspoon, ¼ teaspoon, ½ teaspoon, 1 teaspoon, and 1 tablespoon.
- In order to measure ingredients that do not fall into one of these measures, it is necessary to combine two measuring spoons, Example, a recipe calling for a ¾ teaspoon of baking soda would mean combining ½ teaspoon baking soda with ¼ teaspoon baking soda in order to achieve the proper amount.

C. PROPER WAY OF MEASURING INREDIENTS

1. PROPER WAY OF MEASURING LIQUID INGREDIENTS

- Liquid ingredients are measured in a glass measuring cup.
- Liquid ingredients need to be measured at eye level.
- To properly measure a liquid ingredient, place the liquid measuring cup on a flat surface and pour the liquid into the cup until it reaches the desired line of measurement.
- Bend down so your eye are on the same level with the measuring marks.

- Make sure the liquid comes to the top of the desired line measure. This line is known as the meniscus.
- Avoid holding the cup to eye level to check the measurement.

2. MEASURING STICKY LIQUIDS

- When measuring sticky liquids such as honey and molasses, grease the measuring cup or spray with a non-stick cooking spray to make removal easier.
- Fill the dry measuring cup with the sticky liquid.

- Level the cup using a spatula

3. MEASURING SEMI-LIQUID INGREDIENTS

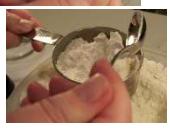
- Ingredients like sour cream, peanut butter, and yogurt are measured using dry measuring cups because they are too thick to be accurately measured in the liquid cups.
- Level off sour cream and peanut butter with the back of a knife.

4. PROPER WAY OF MEASURING DRY INGREDIENTS

A. FLOUR

- Always sift the flour onto a plate or wax paper before measuring to remove lumps and other foreign materials.

- To measure 1 cup of flour, lightly scoop the flour into the measuring cup until over flowing.Do not shake or bang the cup. Use the back of a knife or spatula to level off the excess flour.



- Keep spooning the flour into the cup until it mounds well above the top of the measuring cup.

- Using a dinner knife, turn it so the flat side is down.
- Hold the cup with the flour in your left hand, and start sweeping the knife over the top of the cup to remove the excess flour.
- Pass the knife over the measuring cup a few times to get a

level surface.

- Do not shake the cup or pack the flour down.
- WEIGHT OF A PROPERLY MEASURED FLOUR: 1 Cup of correctly measured flour should weight:
    - Cake flour – 112 grams
    - All purpose flour – 120 grams

WRONG WAY OF MEASURING FLOUR

- Scooping flour from the container or bag directly with the measuring cup will pack the flour and you will end up with too much flour.

B. WHITE OR REFINED SUGAR

- Sugar is measured by scooping the cup or measuring spoon into the container until it is over flowing.
- Then level off with the spatula.

C. BROWN SUGAR

- Spoon brown sugar into a dry measuring cup.
- Press sugar to the bottom of the cup using the back of a spoon.
- Press each time you add sugar.
- Fill cup heaping full.
- Level with a spatula.
- When inverted, the sugar should retain the shape of the measuring cup.

D. POWDERED SUGAR

- Powdered sugar needs to be sifted first prior to measuring to remove small lumps.
- It is measured by spooning the sugar into the measuring cup from the container, then leveling off with the spatula.

E. SHORTENING AND SOLID FATS

- To measure shortening, spoon the ingredients into a cup and pack down firmly with a spoon to eliminate any air holes, then leveling off the excess with a spatula.
- To easily remove fats from baking cups, spray them with a non- stick cooking spray before measuring.
- Oil is measured as liquid.
- 1 bar of butter is equivalent to 1 cup so there is no need to measure.

F. OTHER DRY, BULKY INGREDIENTS

- Bulky dry ingredients, such as shredded cheese, chopped nuts, and coconut, should be spooned into the measuring cup.

- When the cup is full enough, pat the ingredients lightly and use your fingers to level the contents.
- Do not pack the ingredients down.

5. MEASURING SPOONS

- When using measuring spoons, hold the spoon flat and pour the ingredient into the spoon until it reaches the top rim of the spoon.
- Never measure over the bowl of ingredients you are using for the recipe. If you over pour into the bowl, your measurements will not be accurate.

A. BAKING POWDER AND BAKING SODA

- Using the measuring spoon, lightly scoop out of the container.
- Use the back of a knife or a spatula to level off the top edge of the measuring spoon.

B. SHORTENINGS AND SOLID FATS

- To measure shortening, spoon the ingredients and pack down firmly to eliminate any air holes, then leveling off the excess with a spatula.

C. OTHER DRY INGREDIENTS

- Overfill the measuring spoons and level off using the spatula.
- When measuring spices, the measuring spoon often doesn't fit into the mouth of the spice jar. Pour some spice in a small bowl and then measure.

- To get the spice back into the jar, make a funnel out of paper and just pour the unused spice back into the jar

MEASURING TIPS:

- When measuring ingredients, never measure over the mixing bowl containing the other ingredients.
- You may accidentally tip the measuring device or over pour the ingredients and excess ingredients would fall into the mixture.
- This could ruin the whole batch, depending on the ingredient and how much was spilled.

- Measure over the sink, another bowl, or a sheet of wax paper to catch any excess spillage.
- Spillage caught on wax paper can be returned to that ingredient's container.
- If you do not have two sets of measuring cups or spoons that can be used separately for the dry and liquid ingredients, measure the dry ingredients first and then use the measuring cups and spoons for the liquid ingredients.
- Store loose dry ingredients, such as salt, in a lidded container.
- The ingredient can then be spooned out and leveled, rather than trying to pour it into a measuring spoon and having it spill over the edges.
- To help you keep track of which ingredients you have measured and added in the mixing bowl, place all the ingredients on one side of the mixing bowl and once you have measure and add an ingredient, move its container to the opposite side of the bowl.

MEASUREMENT ABBREVIATION

Tablespoon	TBSP
Teaspoon	Tsp
Cup	C
Pound	lb
Ounce	oz
Quart	qt
Pint	pt

Gallon	gal
Fluid Ounce	Floz
Degrees Fahrenheit	°F
Degrees Celsius	°C
Grams	gms
Kilograms	Kg
Liter	L

MEASUREMENT EQUIVALENTS

A. DRY INGREDIENTS

1 Tablespoon	3 teaspoon	15 ml
1/8 cup	2 tablespoon	30 ml
¼ cup	4 tablespoon	50 ml
1/3 cup	5 tablespoon + 1 teaspoon	75 ml
½ cup	8 tablespoon	125 ml
2/3 cup	10 2/3 tablespoon	150 ml
¾ cup	12 tablespoon	175 ml
1 cup	16 tablespoon	250 ml

B. WET INGREDIENTS

1 Cup	8 fluid ounces
2 cups	16 fluid ounces
4 cups	32 fluid ounces
8 cups	64 fluid ounces
Dash	2 or 3 drops liquid or Less than 1/8 tsp (dry)
2 tablespoon	1 ounce
1 pint	2 cups or 1 pound
1 gallon	4 quartz
1 pound	16 ounces

ACTIVITY 1

Direction: Prepare a video presentation and show the proper measuring of the following ingredients. Ask the assistance of parent/guardian.

1. Oil
2. White sugar
3. Baking powder and baking soda
4. Evaporated milk
5. Flour

CHECK YOUR UNDERSTANDING

Direction: Write the word or group of word being defined or described in each statement. Choose your answer from the pool of words.

Measuring glass	Brown sugar	Spatula	Lumps
Overflowing	Lift	Straight edge	Stirring
Tap or shake	Sifting		

1. This is packed when measuring; it follows the shape of the cup when inverted.
2. This is used to measure liquid ingredients.
3. Use to level ingredients when measuring.
4. This is to removed in brown sugar and to be rolled with rolling pin.
5. What not to do in a cup full of flour to avoid excess measurement.
6. This is how to fill the cup when measuring.
7. This is not to be done with the cup when measuring liquid ingredients.
8. This is used to level dry ingredients in the absence of the spatula.
9. This is the way of removing lumps in the baking powder or baking soda.
10. This step is not necessary in sugar unless it is lumpy.

REMEMBER

ACCURACY – The correct ratio of dry to wet ingredients is crucial in order to achieve the right consistency and quality of the finished product.
CONSISTENCY – If each portion carries precisely the same amount of ingredients, every time a product is made.
ADJUST PORTION SIZES WITH EASE – If you take the weight of each ingredient and proportionately apply it, you can increase the portion size without affecting the consistency and quality of the finished product.

Post - Test

I. TRUE OR FALSE
Direction: Write true if the statement is correct and write false if the statement is incorrect.

_____ 1. 1 cup is equivalent to 16 teaspoon
_____ 2. During measuring, flour can be scooped directly from its ` container.
_____ 3. Liquid or glass measuring cup can also be used to measure dry ingredients.
_____ 4. Shortenings and other solid fats should be packed tightly firmly during measuring to remove air holes.
_____ 5. 1 cup of butter is equivalent to 1 bar of butter.
_____ 6. Brown sugar when measured properly, should retain the shape of the cup when inverted.
_____ 7. Flour should always be sifted before measuring.
_____ 8. A tablespoon is also equivalent to 3 teaspoon.
_____ 9. To ensure consistency of quality and quantity, ingredients and portion sizes must be measured correctly each time a recipe is made.
_____10. Never measure over the bowl of ingredients you are using for the recipe due to the danger of spillage into the bowl.

II. MATCHING TYPE

Direction: Match the word on the left with its abbreviation on the right side. Write the letter of your choice.

_____ 11. Cup	a. C
_____ 12. Degrees Celsius	b. oz
_____ 13. Degrees Fahrenheit	c. lb
_____ 14. Gallon	d. TBSP
_____ 15. Grams	e. tsp
_____ 16. Kilograms	f. °F
_____ 17. Ounce	g.°C
_____ 18. Pound	h.kg
_____ 19. Tablespoon	i.gms
_____ 20. Teaspoon	j. gal

REFLECTIVE LEARNING SHEET

I learned that...

_____

_____

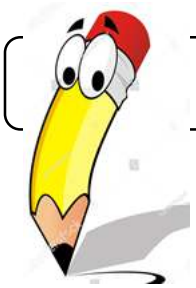
_____

_____

_____

_____

_____



Let's do the checking

Pre – Test

1. True	11. A
2. False	12. G
3. True	13.F
4. True	14. J
5. True	15.I
6. True	16. H
7. True	17. B
8. True	18. C
9. True	19. D
10. False	20. E

Post - Test

1. True	11. A
2. False	12. G
3. False	13. F
4. True	14. J
5. True	15. I
6. True	16. H
7. True	17.B
8. True	18. C
9. True	19. D
10. True	20. E

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Editor: Dr. Ariel Tosio, PSDS

Reviewers: Shiela Jean G. Zubiri, MT1 and Gina Bal, MT1

Management Team: Maria Magdalena M. Lim, CESO V, Schools Division Superintendent.
Aida H. Rondilla, CID Chief
Lucky S. Carpio, Division EPS and Lady Hannah C Gillo, Librarian II-LRMS