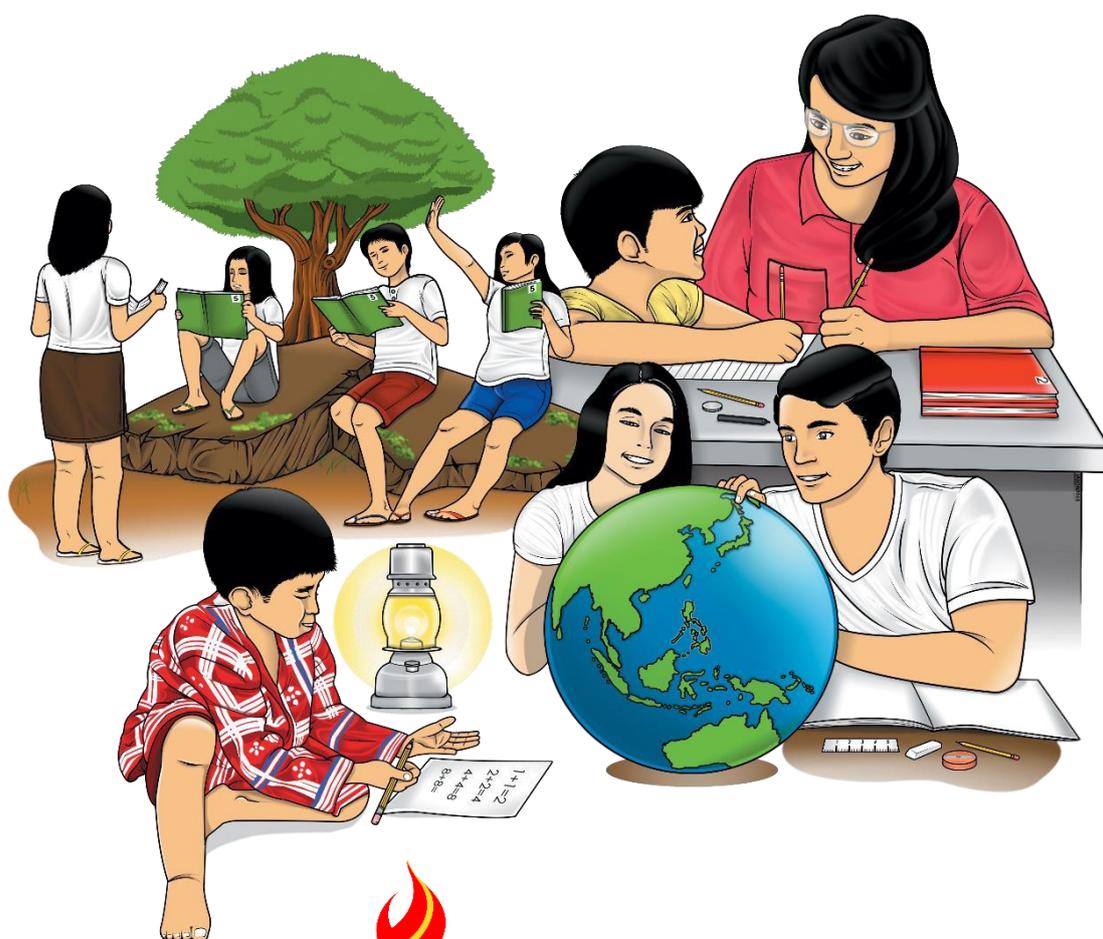


TLE - Bread and Pastry Production NC II

Quarter 2 – Module 2

Select, Measure, and Weigh Ingredients in Preparing Pastry Products



Technology and Livelihood Education – 10

Alternative Delivery Mode

Quarter 2 – Module 2: Select, Measure and Weigh Ingredients in Preparing Pastry Products **First Edition, 2020**

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Development Team of the Module

Writers: Merlie C. Mangannay
Editors:
Reviewers: Jonalyn C. Ambrona, Primo B. Aligo- EPS, EPP/TLE/TVL
Illustrator:
Layout Artist: Bernie Rojo Pamplona (Agusan del Norte, Caraga)
Management Team: Estela Leon-Cariño
Rosita C. Agnasi
Georgina C. Ducayso
Khad M. Layag
Jocelyn P. Samidan
Dolores M. Anecang
Atkinson F. Tudlong

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Department of Education – Cordillera Administrative Region

Office Address: Wangal, La Trinidad,
Benguet
Telefax: (074)-422-4074
E-mail Address: car@deped.gov.ph

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TLE - Bread and Pastry Production NC II

Quarter 2 – Module 2

**Select, Measure, and Weigh
Ingredients in Preparing Pastry
Products**

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.

Lesson 2

Select, Measure, and Weigh Ingredients in Preparing Pastry Products



What I Need to Know

This module was designed and written with you in mind. It is here to help you master the concepts of bread and pastry production. The scope of this module permits it to be used in many different learning situations. The language used recognizes your vocabulary level. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using. This module provides you the necessary information and activities to enrich your knowledge and skills in preparing and presenting pastries.

Lesson 2 – Select, measure and weigh ingredients in preparing pastry products

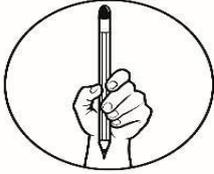
After going through this module, you are expected to:

1. identify required ingredients in pastry production
2. explain the importance of measuring and weighing ingredients
3. discuss ratio of ingredients in pastry making

Before going through this module, you must answer first the activity below.



Illustration by: CLPC



What I Know

Direction: Choose the letter of the best answer. Write the chosen letter of your answer on a separate sheet of paper.

1. The best flour for pastry production if pastry flour is not available is
 - a. all-purpose flour
 - b. bread flour
 - c. cake flour
 - d. wheat flour
2. Which of the following is the most popular fats for pie crust?
 - a. butter
 - b. margarine
 - c. oil
 - d. shortening
3. The liquid ingredient in pastry making that contributes tenderness and flakiness of the dough is
 - a. lemon Juice
 - b. milk
 - c. orange juice
 - d. water
4. The correct ratio of single crust pie is
 - a. 1: 1/3
 - b. 1:1/8
 - c.2: 1/8
 - d. 2: 2/3
5. Which of the following can be used as liquid ingredients that make a rich dough brown quickly?
 - a. lemon juice
 - b. milk
 - c. orange juice
 - d. water
6. What type of fats makes the pastry very tender and crumbly?
 - a. butter
 - b. margarine
 - c. oil
 - d. shortening
7. Which fat contributes excellent flavor in pastry making but expensive and melts easily?
 - a. butter
 - b. margarine
 - c. oil
 - d. shortening
8. Which of the following act as the raising agents in puff and flaky pastries.
 - a. baking powder
 - b. egg
 - c. steam
 - d. yeast
9. The ingredient that must be dissolved into the liquid before adding to even distribution of flavor is
 - a. corn syrup
 - b. honey
 - c. salt
 - d. sugar
10. The correct ratio of pie dough flour to fat to liquid is
 - a. 1-1-1/2
 - b. 3-3-1
 - c. 4-2-1
 - d. 4-2-2
11. The correct ratio of Pate a' choux flour to fat to liquid and to egg is
 - a. 1- 1/2- 1/2 - 1/2
 - b.1-1-1-1
 - c. 1-1-2-2
 - d. 2-1-1-1



What's New

In this lesson you should be able to select, measure and weigh required ingredients in pastry making. And explain the ratio of ingredients required in pastry making. An information regarding this topic will be given to you on the next pages. Before moving on, you should answer first the activity below.

Analogy Test

Directions: Select the lettered pair that expresses a relationship like that expressed in the original pair. Write your answer on a separate sheet of paper.

1. Bread: bread flour
a. all-purpose flour
b. cake flour
Pastry: _____
c. self-risen
d. self- risen wheat flour
2. Bread: dough
a. batter
b. cookies
Pastry: _____
c. crust
d. dough
3. Crust: _____
a. crumby
b. flaky
Dough: soft
c. thick
d. thin
4. Bread: biological leavening
a. baking powder
b. biological leavening
Pastries: _____
c. chemical leavening
d. yeast
5. Pasty: _____
a. high fat proportion
b. low fat proportion
Bread: low fat proportion
c. medium fat proportion
d. no-fat proportion
6. Shortening: fat
a. dry
b. dairy
Milk: _____
c. liquid
d. non-dairy
7. Sugar: sweetened
a. adds flavor
b. dry
Eggs: _____
c. emulsifies
d. liquid
8. Brown sugar: spoon and packed
a. dip and packed
b. dip and sweep
Shortening: _____
c. lightly spoon
d. spoon and packed
9. Measuring spoon: 1 tablespoon baking powder

_____ : 2 cups flour

- a. dry measuring cup
- b. graduated measuring cup
- c. measuring tool
- d. weighing scale

10. Single crust pie

Flour: 1 cup

- a. $\frac{1}{2}$ cup
- b. $\frac{1}{4}$ cup

Fats: _____

- c. $\frac{1}{3}$ cup
- d. 1 cup



What Is It

Baking Ingredients in Pastry Making

Like bakery products, pastry products have also their required ingredients. The required ingredients for pastry are the same with those required in bakery products except for some ingredients that are specific for pastry production.

Pastry as a finished product is characterized as having light, airy, fly, and buttertaste. All pastry is made up of a combination of different ingredients such as flour, water, salt, butter, or other fats. Pastry products with the desired characteristics can be produced by observing correct mixing procedures and baking techniques.

I. Selecting Required Ingredients for Pastry Production

1. Flour = makes up the bulk of the ingredients in pastry
 - a. All-purpose Flour = contains 10-12% protein and can be used in bread, cake and pastry making. If pastry flour is not available, all-purpose flour can be used instead. Most pastry dough does not need highly developed gluten.
 - b. Pastry Flour = has enough gluten to produce the desired structure and flakiness. It is good for making cookies, pie dough, biscuits, and muffins.
Note: If stronger flour is used, the percentage of shortening be increased to produce more tenderness. The use of too much flour results in a tough, dry, and flavorless recipe. On the other hand, too little flour results in a flat, tough, and flavorless baked product. The ratio of flour to shortening ranges from 1:1/3 to 1:2/3.
2. Fat = this contributes to the tenderness and flakiness of pastry.
 - a. Shortening = the most popular fat for pie crust because it has the right plastic consistency to produce a flaky crust. It is firm and moldable enough to make an easily worked dough.

- b. Butter = contributes excellent flavor to pie pastry, but it is not frequently used in volume production for two reasons: it is expensive, and it melts very easily, making the dough difficult to work.
- c. Margarine = this should not be used because it blends too quickly with the flour, making a flaky pastry difficult to achieve.
- d. Oil = makes the pastry very tender, but crumbly rather than flaky.
- e. Lard = rendered fat of hogs and mainly used in cooking.

Note: If butter is used in place of shortening, the percentage of fat in the formula should be increased by about one-fourth. (If 1 pound shortening is called for, use 1 pound 4 ounces butter, if 500grams shortening are called for, use 65 grams butter). The differences in texture of many pastries have to do with the type of fats and how fats are introduced during the process. The liquid should be reduced slightly, as butter contains moisture.

3. Leavening Agents

- a. Steam = act as the raising agents in puff and flaky pastries.
- b. Egg and steam = act as raising agents for choux pastry
- c. Yeast = use in making Croissants and Danish pastry

4. Liquid = use to bind and hold together the blended flour-shortening mixture.

- a. Water = is used to bind and hold together the blended flour-shortening mixture. It should be ice-cold to get the best result.
- b. Milk = sometimes used instead of water; it produces pastry that browns beautifully but tends to be less tender than made with water.
- c. Chilled orange or lemon juice = can be used instead of water to add flavor to the crust.

Note: Add cold liquid ingredients on a gradual basis. Since different types of flour have different absorbing properties. The addition of liquid contributes to flakiness as the temperature of liquids allows fat particles to become well-formed and preserved. Likewise, the flour particles become less saturated with the additional water, thus minimizing swelling.

- 5. Salt = it has a tenderizing and conditioning effect on the gluten.
= its main contribution is to add flavor and it must be dissolved into the liquid before adding to even distribution.

Note: Skip using salt if margarine is used.

- 6. Sugar = it is added to sweeten the pastry dough
- 7. Egg = the yolk emulsifies the dough giving the crust characteristics of tenderness, richness, and brown color.
- 8. Flavorings such as herbs, spices, essences, and cheeses may be used and be added to the basic pastry dough.

I. Measuring and Weighing Required Ingredients for Pastry Production

Measuring and weighing accurately the required ingredients in pastry making is of great importance for it may affect the desired characteristics of the baked goods.

The succeeding tables show the basic pastry ingredients weights and of measures by Rose Levy Beranbaum.

Ingredients	Method of Measure	Ounces per Cup	Grams per Cup
Fats			
Butter	Scoop and packed	8	227
Clarified butter	Scoop and packed	6.8	195
Vegetable shortening	Scoop and packed	6.7	191
Commercial lard	Scoop and packed	7.5	216
Cream cheese		9	256
Sugars			
Granulated, superfine sugar, and coarse crystal	Dip and sweep	7	200
Powdered sugar	Lightly spooned	4	115
Light brown sugar	packed	7.6	217
Dark brown sugar	packed	8.4	239
Flour and other dry ingredients			
Pastry Flour	Dip and sweep	4.5	130
All-purpose Flour Bleached	Sifted	4	114
	Lightly spooned,	4.2	121
	Dip and sweep	5.2	142
All-purpose Flour Unbleached	Lightly spooned	4.5	130
	Dip and sweep	5.2	148
corn starch	Lightly spooned or sifted	2.6	120
	Dip and sweep	4.8	138
Dutch-processed cocoa	Sifted	2.6	75
	Lightly spooned	3.2	92
	Dip and sweep	3.3	95
Baking powder	1teaspoon		4.9
Baking Soda	1teaspoon		5

Ingredients	Method of Measure	Ounces per Cup	Grams per Cup
--------------------	--------------------------	-----------------------	----------------------

Salt	1 teaspoon		6.7
Cinnamon powder	1 teaspoon		6.5
Nuts			
Almonds	Whole	6.7	191
	Silvered	4.2	120
	Sliced or coarsely chopped	3	85
	Finely ground	3.7	107
	Powder fine	3	89
Walnuts, pecans	Halves	3.5	100
	Coarsely chopped	4	114
Hazelnuts	Whole	5	142
	Coarsely chopped	4	114
	Finely ground	3.7	107
Smooth peanut butter	scooped	16.6	266
Desiccated coconut	packed	3	85
Grate coconut	grated	2.7	79
Dairy and water			
Sweetened condense milk	Liquid measure	11	316
Heavy cream	Liquid measure	8.12	232
Milk, buttermilk, sour cream	Liquid measure	8.5	242
Syrups			
Molasses	Greased liquid measure	11.2	322
Corn syrup	Greased liquid measure	11.5	328
Honey	Greased liquid measure	12	345
Other Ingredients			
Lemon juice	Liquid measure	8.7	250
Orange juice	Liquid measure	8.5	242
Vanilla extract	1 teaspoon		4
Citrus zest	1 teaspoon		2

Ingredients	Method of Measure	Ounces per Cup	Grams per Cup
Eggs	Ounces	Grams per unit	Grams per cup
1 large, in shell	2	56.7	
1 large, without shell (3T+1/2 t)	1.7	50	253
1 large egg white(2T)	1	30	240
1 large egg yolk (3 ½ t)	0.6	18.6	255

II. Ratio of Ingredients

Following a recipe is a great way to get started in the kitchen. However, once you have gotten the hang of it, you can learn the few choice ratios that govern dozens of different baked products and free yourself from the restriction of recipes. Baking can be daunting, but what you may not know is that a lot of foods are governed by some very basic math. Once you understand it, you'll always be able to make a batch of freshly baked products.

Part = is a designated amount of one ingredient relative to an amount of another ingredient, unit of measure being the same.

Example: four parts flour and one-part chocolate chips, it means you need 4 tablespoons of flour and 1tablespoon of chocolate chips or 4 cups flour and 1 cup chocolate chips. The Basic Ratios: Bread, Pie Dough and Pancakes (by: A Tuscan Foodie in America)

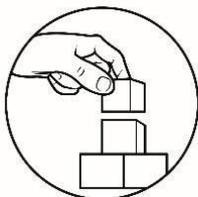
	Flour	Fat	Liquid	Egg	Sugar	Notes
Bread	5 parts		3 parts			Rule of thumb: salt- 2% of flour's weight, yeast- 1tsp. for 1 pound of flour
Pie dough	3 parts	2 parts	1 part			Fat and liquid must be as cold as possible
Single crust pie	1part	1/3 part				Fat must be cold as possible
Biscuit	3 parts	1 part	2 parts			1tsp. baking powder per 225g. of flour, use butter as your fat
Cookie	3 parts	2 parts			1 part	Flavor will vary depending on additions. Use butter as your fat.
Pate a'	1	1	2	2		Savory and sweet (creampuff dough) preparations (depends on

	Flour	Fat	Liquid	Egg	Sugar	Notes
choux	part	part	parts	parts		salt and sugar)
Muffin	2 parts	1 part	2 parts	1 part		Straight mixing method, use baking powder
Fritters	2 parts		2 parts	1 part		Straight mixing method, use baking powder
Pancake	2 parts	½ part	2 parts	1 part		Straight mixing method, use baking powder
Crepe	½ part		1 part	1 part		One bowl method
Popover	1 part		2 parts	1 part		Straight mixing method, no baking powder



Wow! Thank you for reading and understanding it. I hope you learned from the reading you did a while ago. I supposed you are now excited to explore on another activity. Are you ready?

Illustration by: CLPC



What's More

Matching Type

Directions: Match column A with the correct answer on column B. Write only the letter of your answer in your answer sheet.

- | A | B |
|---|--------------|
| 1. The bests flour for pastry making | a. flaky |
| 2. acts as raising agent of puff and flaky pastries | b. 130 grams |
| 3. A good crust is tender and | c. 8 ounces |

4. 1 cup of Pastry flour is the same with _____grams
 5. 2 part of flour means
 6. makes a flaky pastry difficult to achieve
 7. 1 cup butter is the same with _____ounces
 8. 1 cup shortening the same with _____ ounces
 9. 1 cup sifted flour is equal to _____ grams
 10. tenderized and condition gluten
 11. sweeten the pastry dough
 12. 1 part of salt means
 13. ideal proportion of flour to shortening
 14. makes up the bulk of the ingredients
 15. bind and hold together blended flour and shortening
- d. steam
 - e. 6.7 ounces
 - f. 1: 1/3
 - g. 2 cups
 - h. flour
 - i. Margarine
 - j. Pastry flour
 - k. 114 grams
 - l. Salt
 - m. Liquid ingredients
 - n. 1 tsp. salt
 - o. Sugar

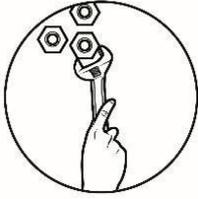


What I Have Learned

Fill in the blanks

Directions: Supply the needed term to complete the idea of the sentence. Write your answer on a separate sheet of paper.

1. If stronger flour is used in pastry making, percentage of shortening should be _____.
2. Pastry is made of high proportion of fat to flour with a small amount of _____.
3. An ideal pastry crust is _____ and _____.
4. _____ is the key in the preparation of the dough for pastry.
5. Shortening has the best consistency when _____.
6. _____ liquid ingredient is best to use in making pastry dough.
7. _____ produces pastry that browns beautifully but tends to be less tender than that with water.
8. The use of _____ flour results into tough, dry and flavorless recipe.
9. _____ should be dissolved in liquid before adding to the mixture.
10. Too little _____ in pastry causes the pastry to be crumbly.



What I Can Do

Essay

Direction: Read, analyze, and answer the following questions. (5 points each)
Rubrics will be used to assess your answers.

1. What is the best kind of fats to be used in making pastry dough? Why?

_ 2. How do you achieve a tender and flaky pastry dough/crust?

Rubrics

Criteria	4	3	2	1
Clarity	Exceptionally clear and easy to understand	Generally clear and quite easy to understand	Lacks clarity and difficult to understand	Unclear cannot understand
Comprehensiveness	Thorough and comprehensive explanation	Substantial explanation	Partial or not comprehensive explanation	Misunderstanding or serious misconception on the explanation
Relevance	Highly relevant	Generally relevant	Somewhat relevant	Irrelevant



Assessment

Multiple Choice

Directions: Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

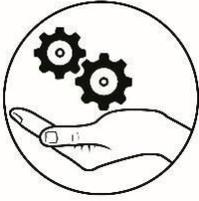
- Shortening has the best consistency when it is
 - cold
 - frozen
 - melt
 - warm
- Which of the following can be used as liquid ingredients that makes a rich dough brown quickly?
 - lemon juice
 - milk
 - orange juice
 - water
- The best flour for pastry production if pastry flour is not available is
 - all-purpose flour
 - bread flour
 - cake flour
 - wheat flour
- The correct ratio of Pate a' choux flour to fat to liquid and to egg is
 - 1-1/2-1/2-1/2
 - 1-1-1-1
 - 1-1-2-2
 - 2-1-1-1
- 1 cup of shortening is the same with _____ ounces
 - 6.7 ounces
 - 6 ounces
 - 8 ounces
 - 10 ounces
- The liquid ingredient in pastry making that contributes tenderness and flakiness of the dough is
 - lemon juice
 - milk
 - orange juice
 - water
- Which of the following act as the raising agents in puff and flaky pastries.
 - baking powder
 - egg
 - steam
 - yeast
- Which of the following is the most popular fats for pie crust?
 - butter
 - margarine
 - oil
 - shortening
- The correct ratio of single crust pie is
 - 1: 1/3
 - 1: 1/8
 - 2: 1/8
 - 2: 2/3
- What type of fats makes the pastry very tender and crumbly?
 - Butter
 - Margarine
 - Oil
 - Shortening

11. The ingredient that must be dissolved into the liquid before adding to even distribution of flavour is
- a. Corn syrup
 - b. Honey
 - c. Salt
 - d. Sugar
12. Which fat contributes excellent flavor in pastry making but expensive and melts easily?
- a. Butter
 - b. Margarine
 - c. Oil
 - d. Shortening
13. The amount of one ingredient relative to an amount of another ingredient is
- a. equivalent
 - b. part
 - c. portion
 - d. ratio
14. What is the equivalent of 1 cup sifted All-purpose flour to grams?
- a. 114 grams
 - b. 150 grams
 - c. 165 grams
 - d. 200grams
15. The correct ratio of pie dough flour to fat to liquid is
- a. 1-1-1/2
 - b. 3-2-1
 - c. 4-2-2
 - d. 4-2-1



How did it go? Were you able to get them correctly?

Illustrationby CLPC



Additional Activity

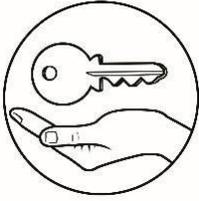
True or False

Directions: Write TRUE if the statement is correct and FALSE if it is incorrect. Write your answer on a separate sheet of paper.

1. If wheat flour is used in pastry making, percentage of shortening should be increased.
2. Shortening blends too quickly into the flour if it is cold.
3. Ideal pie dough consists of 3 parts flour, 3 parts fats and 1-part water.
4. Liquid ingredients in pastry making should be warm to maintain proper dough temperature.
5. Additional measurement of salt should be added if margarine is used in pastry making.
6. The differences in texture of many pastries have to do with the type of fats and how fats are introduced during the process.
7. The yolk of the egg emulsifies the dough and gives the crust characteristics of dryness.
8. To measure fat is to spoon and pack the fat into the measuring cup.
9. In measuring flour spoon full into the measuring cup and level it off with spatula.
10. To attain a tender and flaky dough proportion of flour and fat is very important.



Congratulations, you can move now to the next module!



Answer Key

What's New	1. A 2. C 3. B 4. C 5. A 6. C 7. C 8. D 9. A 10. C
What I Know	1. A 2. D 3. D 4. A 5. B 6. C 7. A 8. C 9. C 10. B 11. C 12. A 13. A 14. D 15. A

What I have learned	1. increased 2. liquid 3. tender, flaky 4. flour mixture 5. cold 6. Cold 7. Milk 8. too much 9. Salt 10. Water
What's More	1. J 2. D 3. A 4. B 5. G 6. I 7. C 8. E 9. K 10. L 11. O 12. N 13. F 14. H 15. M

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

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Department of Education - Bureau of Learning Resources (DepEd-BLR)
Ground Floor, Bonifacio Bldg., DepEd Complex
Meralco Avenue, Pasig City, Philippines 1600
Telefax: (632) 8634-1072; 8634-1054; 8631-4985
Email Address: blr.lrqad@deped.gov.ph * blr.lrpd@deped.gov.ph
Telefax: (632) 8634-1072; 8634-1054; 8631-4985