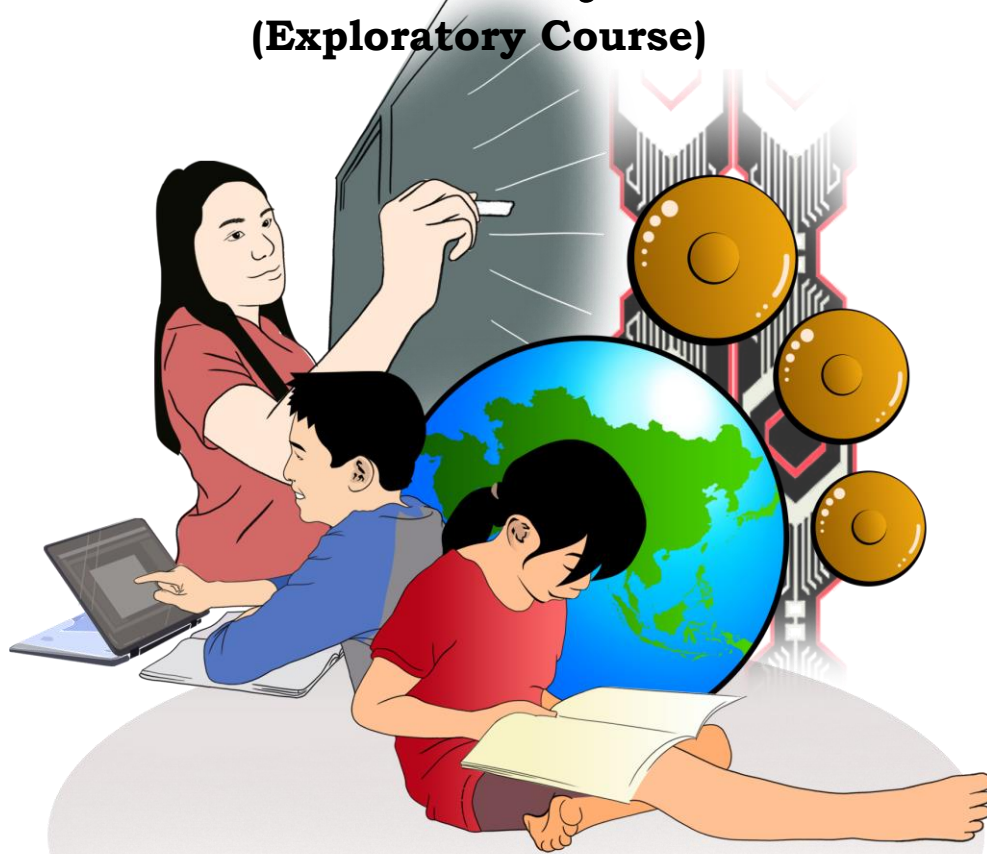
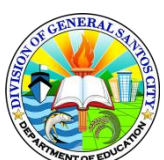


7/8

Technology and Livelihood Education

Quarter 1 – Module 4:

Cookery (Exploratory Course)



SELF-LEARNING MODULE



DEPARTMENT OF EDUCATION - SOCCSKSARGEN

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TLE Cookery – Grade 7 (Exploratory Course)
Self-Learning Module (SLM)
Quarter 1 – Module 4: Cookery
First Edition, 2020

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Development Team of the Module

Writer: Meryll Ann T. Dela Cruz, Floriza Y. Tominez

Editor: Josephine G. Arellano HTIII

Reviewer: Amalia C. Caballes

Illustrator: Jay M. Alora

Layout Artist: Rhoniel F. Medrano

Management Team: Allan G. Farnazo, CESO IV - Regional Director RXII

Gilbert Barrera, CLMD Chief

Arturo B. Tingson - Regional EPS in Charge of LRMS

Peter Van C. Ang-ug ADM Coordinator

Juliet F. Lastimososa, CID Chief

Sally A. Palomo, EPS in Charge of LRMS

Gregorio O. Ruales - Division ADM Coordinator

Amalia C. Caballes - Education Program Supervisor EPP/TLE/TVL

Printed in the Philippines by Department of Education – SOCCSKSARGEN Region

Office Address: Regional Center, Brgy. Carpenter Hill, City of Koronadal

Telefax: (083) 2288825/ (083) 2281893

E-mail Address: region12@deped.gov.ph

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Technology and Livelihood Education

Quarter 1 – Module 1: COOKERY

(Exploratory Course)



Introductory Message

For the facilitator:

Welcome to the TLE 7 Self-Learning Module (SLM) on Cookery!

This module was collaboratively designed, developed and reviewed by educators both from public and private institutions to assist you, the teacher or facilitator in helping the learners meet the standards set by the K to 12 Curriculum while overcoming their personal, social, and economic constraints in schooling.

This learning resource hopes to engage the learners into guided and independent learning activities at their own pace and time. Furthermore, this also aims to help learners acquire the needed 21st century skills while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:



Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

As a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Furthermore, you are expected to encourage and assist the learners as they do the tasks included in the module.

For the learner:

Welcome to the TLE-7 Self-Learning Module (SLM) on Cookery!

The hand is one of the most symbolized part of the human body. It is often used to depict skill, action and purpose. Through our hands we may learn, create and accomplish. Hence, the hand in this learning resource signifies that you as a learner is capable and empowered to successfully achieve the relevant competencies and skills at your own pace and time. Your academic success lies in your own hands!

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning resource while being an active learner.

This module has the following parts and corresponding icons:



What I Need to Know

This will give you an idea of the skills or competencies you are expected to learn in the module.



What I Know

This part includes an activity that aims to check what you already know about the lesson to take. If you get all the answers correct (100%), you may decide to skip this module.



What's In

This is a brief drill or review to help you link the current lesson with the previous one.



What's New

In this portion, the new lesson will be introduced to you in various ways such as a story, a song, a poem, a problem opener, an activity or a situation.



What is It

This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills.



What's More

This comprises activities for independent practice to solidify your understanding and skills of the topic. You may check the answers to the exercises using the Answer Key at the end of the module.



What I Have Learned

This includes questions or blank sentence/paragraph to be filled in to process what you learned from the lesson.



What I Can Do

This section provides an activity which will help you transfer your new knowledge or skill into real life situations or concerns.



Assessment

This is a task which aims to evaluate your level of mastery in achieving the learning competency.



Additional Activities

In this portion, another activity will be given to you to enrich your knowledge or skill of the lesson learned. This also tends retention of learned concepts.



Answer Key

This contains answers to all activities in the module.

At the end of this module you will also find:

References

This is a list of all sources used in developing this module.

The following are some reminders in using this module:

1. Use the module with care. Do not put unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Don't forget to answer *What I Know* before moving on to the other activities included in the module.
3. Read the instruction carefully before doing each task.
4. Observe honesty and integrity in doing the tasks and checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator. Always bear in mind that you are not alone.

We hope that through this material, you will experience meaningful learning and gain deep understanding of the relevant competencies. You can do it



What I Need to Know

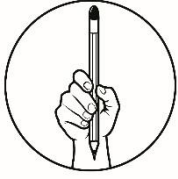
This module was designed and written with you in mind. It is here to help you master the Cookery. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

The module is divided into three lessons, namely:

- Lesson 1 – Use and Maintain Kitchen Tools and Equipment
- Lesson 2 – Perform Mensuration and Calculation
- Lesson 3 – Practice Occupational Safety and Health

After going through this module, you are expected to:

1. identify kitchen tools, equipment according to their use.
2. select various types of chemicals for cleaning and sanitizing kitchen tools, equipment, and paraphernalia;
3. clean and sanitize kitchen tools and equipment following manufacturer's instructions;
4. measure ingredients properly;
5. calculate the cost of production of a given recipe;
6. choose the type of hazards and risks that is common in workplace;
7. explain the importance of Occupational Health and Safety.



What I Know

Let's see first what you know about measurements and calculations.

Directions: Answer the following questions and encircle the letter of your answer.

1. What is the abbreviation for tablespoon?
 - a. kg
 - b. oz
 - c. tsp
 - d. tbsp
2. Which of the following is the abbreviation for teaspoon?
 - a. kg
 - b. oz
 - c. tsp
 - d. tbsp
3. What does the abbreviation "ml" stand for?
 - a. meter
 - b. mince
 - c. milliliter
 - d. millimeter
4. What is 212 degrees Fahrenheit in degrees Celsius?
 - a. 10 °F
 - b. 20 °F
 - c. 100 °F
 - d. 110 °F
5. Which of the following is equivalent to 50 °F?
 - a. 12 °C
 - b. 121°C
 - c. 112°C
 - d. 212°C
6. How many cups are there in 16 tablespoons?
 - a. 1
 - b. 2
 - c. 10
 - d. 11
7. Which of the following is equivalent to 1 pound?
 - a. 1 cup
 - b. 4 tsp
 - c. 2 cups
 - d. 16 tbsp

8. What ingredient is pack into cup when measured?
 - a. flour
 - b. cornstarch
 - c. white sugar
 - d. brown sugar

9. What can be a substitute for butter?
 - a. oil
 - b. lard
 - c. cream
 - d. margarine

10. Which of the following is a substitute for dry bread crumbs?
 - a. flour
 - b. chips
 - c. cookie
 - d. slice bread

11. What can be the best substitute for beef broth?
 - a. bones
 - b. water
 - c. spices
 - d. bouillon cube

12. Which is equivalent to 1 cup?
 - a. 150 ml
 - b. 120 ml
 - c. 250 ml
 - d. 520 ml

13. How many millimeters are there in a teaspoon?
 - a. 5 ml
 - b. 10 ml
 - c. 15 ml
 - d. 50 ml

14. What is the abbreviation for pound?
 - a. p
 - b. pd
 - c. lb
 - d. lp

15. How many ounces are there in 60 grams?
 - a. 1 oz
 - b. 2 oz
 - c. 3 oz
 - d. 4 oz

Lesson**2****Perform Mensuration and Calculations****LO 1
(WEEK 4)****Carry Out Measurements and Calculations**

Good day! Today we will be learning more about cookery. Did you know that cookery is not just about cooking? I hope you are excited to learn how math is applied in cooking.

After going through this module, you are expected to:

- Give the abbreviations and equivalents of the given measurements
- Measure ingredients properly
- Convert systems of measurement according to recipe requirement
- Perform substitution of commonly used ingredients

***What's In***

Do you still remember our previous lesson? Try to enumerate 5 cleaning agents and 5 sanitizing agents we have discussed.

***Notes to the Teacher***

These questions will help you check your student's knowledge with kitchen tools and equipment. The student's prior knowledge would help them understand and finish this module.



What's New

How are you coping with our lesson? I hope you are looking forward to the activities that we will discuss in this module. Let's try to answer the following questions before we proceed to our lesson.

1. Do you know how to cook steamed rice?

2. What proportion of water to rice do you use?

(example: 1cup rice is to 2cups of water)

3. How do you measure the rice and water?



What is It

There are so many ways to measure ingredients in cooking steamed rice. You probably use the Filipinos' traditional way using hands to measure water.

Math in cooking can be applied in computing for cost of a dish, measuring ingredients and even in conversions. It starts with a recipe which includes ingredients and instructions on how to cook a certain dish

How are you coping with our lesson? I hope you are looking forward to the activities we will be discussing in this module.

Before we would be able to know how much is the cost of a certain dish, we have to learn abbreviations and conversion first hand.

tsp =teaspoon
tbsp = tablespoon
C=cup
ml = milliliter
L = liter

oz=ounce
°C = Celsius
°F = Fahrenheit
g = gram
kg = kilogram

WEIGHTS AND MEASURE

Measuring Volume

CUPS	ENGLISH	METRIC
2 tablespoons	1 fluid ounce	30 ml.
¼ cup	2 fluid ounces	60 ml.
	3 fluid ounces	90 ml.
½ cup	4 fluid ounces	125 ml.
	5 fluid ounces	150 ml.
	5 ½ fluid ounces	170 ml.
¾ cup	6 fluid ounces	185 ml.
	7 fluid ounces	220 ml.
1 cup	8 fluid ounces	250 ml.
2 cups	16 fluid ounces (1 pint)	500 ml.
2 ½ cups	20 fluid ounces	625 ml.
4 cups	16 fluid ounces (1 quart)	1 liter
16 cups	128 ounces	1 gallon

DRY INGREDIENTS

QUICK CONVERSIONS

1/2 oz	15 g	¼ inch	5 mm
1 oz	30 g	½ inch	1 cm
2 oz	60 g	¾ inch	2 cm
3 oz	90 g	1 inch	2.5 cm
4 oz (1/4 lb)	125 g	2 inches	5 cm
5 oz	155 g	2 ½ inches	6 cm
6 oz	185 g	3 ¼ inches	8 cm
7 oz	220 g	4 inches	10 cm
8 oz (1/2 lb)	250 g	5 inches	12 cm
9 oz	280 g	6 inches	15 cm
10 oz	315 g	7 inches	18 cm
11 oz	345 g	8 inches	20 cm
12 oz (3/4 lb)	375g	9 inches	22 cm
13 oz	410 g	10 inches	25 cm
14 oz	440 g	11 inches	28 cm
15 oz	470 g	12 inches (1 foot)	30 cm
16oz (1 lb)	500 g	18 inches	46 cm
24 oz (1 ½ lbs)	750 g	20 inches	50 cm
32 oz (2 lbs)	1 kg	24 inches (2 feet)	61 cm
		30 inches	77 cm

CUPS AND SPOONS

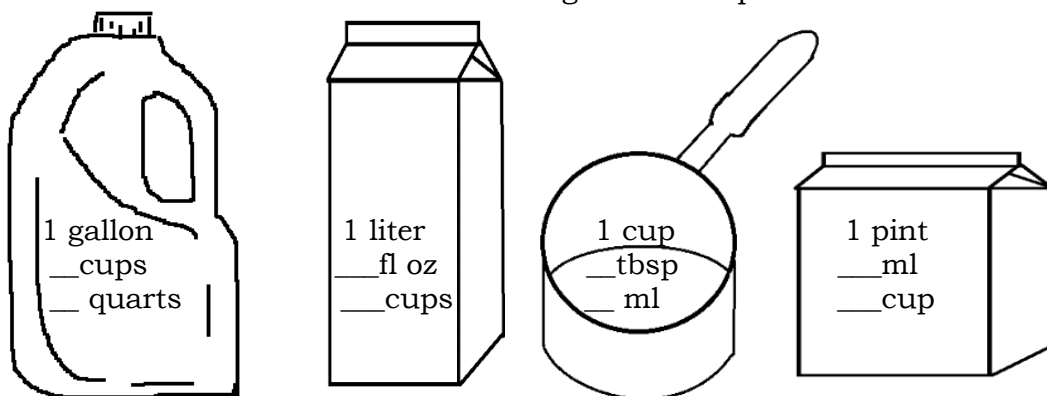
All cup and spoon measurement are level

¼ cup	2 fluid ounces	60 ml	¼ teaspoon	1 ml
1/3 cup	2 ½ fluid ounces	85 ml	1/2 teaspoon	2.5 ml
½ cup	4 fluid ounces	125 ml	1 teaspoon	5 ml
1 cup	8 fluid ounces	250ml	1 tablespoon	15 ml

OVEN TEMPERATURES

FAHRENHEIT (°F)	CELCIUS (°C)	TEMPERATURES
250	120	Very slow
300	150	Slow
325-350	160-180	Moderately Slow
375-400	190-200	Moderate
425-450	220-230	Moderately Hot
475-500	250-260	Hot

Directions: Fill in the blanks in each drawing with the equivalent conversion.



Well done, let us continue learning on how to measure ingredients.

PROPER MEASURING OF INGREDIENTS

Just like cooking rice, it is very important to apply accurate techniques in measuring. The following are the techniques that should always be observed:



Sifted flour. Take note and follow what is on the recipe if it is sifted or not. In this case, sift flour 2 or 3 times. Spoon into the cup overflowing, level off with a spatula.



Rice and flour. Scoop flour till it is overflowing, level-off with a spatula or with a straight-edged knife

Refined sugar. If sugar has lumps, sift it before measuring. Spoon into cup and level off with a spatula. Do not pack or tap the sugar down.



Brown sugar. Pack into cup just enough to hold its shape when turned out off cup. Level off with a spatula before emptying.

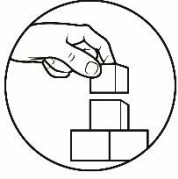


- Level a measuring spoon with straight edge of a knife to measure **small amounts** of salt, pepper, leavening agents or solid fats.

Liquid ingredients. liquid measuring cup -- a glass or plastic cup with graduated markings on the side. Place the cup on a flat, level surface. Hold the cup firmly and pour the desired amount or liquid into the cup. Lean over and view the liquid at eye level to make sure it is the proper amount.

- Do not shake the dry measuring cup to level off dry ingredients.

- Ranges, sometimes called stoves, provide heat for cooking on top and in the oven.
- The controls for range heat must be accurate and easy to operate. Tools and utensils needed for cooking on the range and work space should be within easy reach.
- Learn to match the size of pan to the size of the unit and to select the right amount of heat for the cooking job to be done.
- In microwave cooking, time schedules must be followed exactly because every second is important. The microwaves shut off automatically when the door is opened.
- Refrigerators are operated by electricity. The unit that does the cooling is underneath the box behind the grill.



What's More

Are you able to up cope with our lesson? Let's apply by practicing what we have learned.

Ask the help of a family member and let him/her rate you using the evaluation form below.

Materials needed:

- measuring cups
- measuring spoons
- offset spatula or knife
- water
- brown sugar
- flour
- baking powder

Directions: Show to a family member the proper measuring of the following ingredients.

1. Water
2. Brown sugar
3. Baking powder and baking soda
4. Evaporated milk
5. Flour

How many times have you been ready to cook and found out that you lack a certain ingredient? Sometimes it is inconvenient to run out and purchase the necessary ingredient --it's easier to use a similar product as a replacement. There are, however, several factors to consider when substituting ingredients. Take into account the differences in flavor, moisture, texture and weight.

Substitutions with an acid factor, such as molasses, need to be neutralized to avoid changes in the flavor and texture of the product. Differences in sweetening and thickening powder need consideration in sugar and flour substitutions. To help avoid disappointments when substituting ingredients, understand the physical and chemical properties of all ingredients. Measure accurately.

INGREDIENT EQUIVALENTS

Ingredient	Amount	Substitutions
Baking powder double acting	1 tsp	<ul style="list-style-type: none"> • 1/4 tsp baking soda, 1/2 tsp cream of tartar and 1/4 tsp cornstarch; • 1/4 tsp baking soda plus 5/8 tsp cream of tartar; • 1/4 tsp baking soda plus 1/2 cup buttermilk, sour milk or yogurt (decrease liquid in recipe by 1/2 cup); • 1/4 tsp baking soda, 1/2 Tbsp vinegar or lemon juice plus sweet milk to make 1/2 cup (decrease liquid in recipe by 1/2 cup);

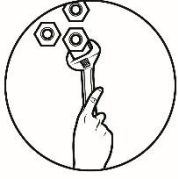
		<ul style="list-style-type: none"> • 1/4 tsp baking soda plus 1/4 cup molasses • (decrease liquid in recipe by 1-2 tbsp); • 1 1/2 tsp phosphate or tartrate baking powder.
Bread crumbs dry	1/4-1/3 cup	<ul style="list-style-type: none"> • 1 slice bread; 1/4 cup cracker crumbs; • 2/3 cup rolled oats;
Broth, beef	Or 1 cup chicken	1 bouillon cube, 1 tsp (1 envelope) powdered broth base or 1 tsp instant granules dissolved in 1 cup water.
Butter	1 cup	1 cup margarine; – 7/8 to 1 cup hydrogenated shortening plus 1/2 tsp salt; – 7/8 cup lard plus 1/2 tsp salt; – 7/8 cup oil plus 1/2 tsp salt.
Catsup	1 cup	1 cup tomato sauce plus 1/2 cup sugar and 2 Tbsp vinegar (for use in cooking).
Chili Sauce	1 cup	1 cup tomato sauce, 1/4 cup brown sugar, 2 Tbsp vinegar, 1/4 tsp cinnamon, and dash of ground cloves and allspice.
Chocolate, Unsweetened	1 oz	3 Tbsp cocoa plus 1 Tbsp butter or fat; 3 Tbsp carob powder plus 2 Tbsp water.
Semisweet	1-2/3 oz	1 oz unsweetened chocolate plus 4 tsp sugar.



What I Have Learned

Let's see if you still remember what you have learned from this module by filling in the blanks.

1. Ingredients which measure by volume and by weight demand _____ measuring tools or equipment.
2. Refrigerators are operated by electricity. The unit that does the _____ is underneath the box behind the grill.
3. In preparing foods on the range or in the fryer, heat is transferred by _____.
4. Brown sugar is _____ into the measuring cup before leveling off.
5. Spring scales should be adjusted so that pointer is at _____.



What I Can Do

Learning is better when applied. The next activity will help you put into practice what you just learned.

Your mother asked you to make chocolate pancakes for merienda with the following ingredients. You realized you don't have any of the ingredients. What would be your substitute ingredients for the following?

1. 1 tsp baking powder = _____
2. 1 cup butter = _____
3. 1 oz chocolate = _____
4. 2 cups whipped cream = _____
5. 1 oz semisweet chocolate = _____



Assessment

Good Job! Let's test what you have learned from the very start of our lesson.

Direction: Give the equivalent of the following measurement. Encircle the letter of your answer.

I. Weights & Measurement (Dry and Liquid Ingredient Measurement)

1. If 1 cup has 16 tablespoons, how many tablespoons are there in $2\frac{1}{2}$ cups?
 - a. 4 tsp
 - b. 14 tsp
 - c. 40 tsp
 - d. 44 tsp
2. If 1 tablespoon has 3 teaspoons, how many teaspoons are there in 3 tablespoons?
 - a. 1 tsp
 - b. 6 tsp
 - c. 9 tsp
 - d. 19 tsp
3. If 1 gallon is equal to 4 quarts, how many gallons are there in 10 quarts?
 - a. 1 gallon
 - b. 25 gallons
 - c. 2.5 gallons
 - d. 3.5 gallons
4. If a tablespoon has 15 milliliters, how many milliliters are there in 5 tablespoons?
 - a. 7 ml
 - b. 17 ml
 - c. 75 ml
 - d. 85 ml
5. If a pound is equal to 2 cups, what is the equivalent of 7 cups in pounds?
 - a. 3 lb
 - b. 3.5 lb
 - c. 5.30 lb
 - d. 13.50 lb
6. What is 212°F in $^{\circ}\text{C}$?
 - a. 1°C
 - b. 10°C
 - c. 100°C
 - d. 110°C
7. What is 122°F in $^{\circ}\text{C}$?
 - a. 5°C

- b. 15 °C
- c. 25 °C
- d. 50 °C

8. What is the abbreviation for tablespoon?

- a. kg
- b. oz
- c. tsp
- d. tbsp

9. Which of the following is the abbreviation for teaspoon?

- a. kg
- b. oz
- c. tsp
- d. tbsp

10. What does the abbreviation “ml” stand for?

- a. meter
- b. mince
- c. milliliter
- d. millimeter

11. What ingredient is pack into cup when measured?

- a. flour
- b. cornstarch
- c. white sugar
- d. brown sugar

12. What can be a substitute for butter?

- a. oil
- b. lard
- c. cream
- d. margarine

13. Which of the following is a substitute for dry bread crumbs?

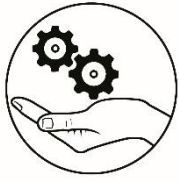
- a. flour
- b. chips
- c. cookie
- d. slice bread

14. What can be the best substitute for beef broth?

- a. bones
- b. water
- c. spices
- d. bouillon cube

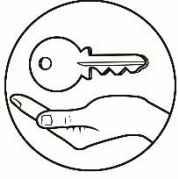
15. Which is equivalent to 1 cup?

- a. 150 ml
- b. 120 ml
- c. 250 ml
- d. 520 ml



Additional Activities

Find a simple recipe with not more than 5 ingredients. Find out how much is the price of each ingredient and the total cost of the recipe.



Answer Key

Assessment		
1.c	6.c	11.d
2.c	7.d	12.d
3.c	8.d	13.d
4.c	9.c	14.d
5.b	10.c	15.c

What I Have Learned		
1.	Standardized	
2.	Cooling	
3.	Conduction	
4.	Pack	
5.	Zero	

What's More		
1.	85 ml	
2.	45 g	
3.	15 mm	
4.	1.25ml	
5.	60 OC	

What I Know		
1.	d	6. a
2.	c	7. c
3.	c	8. d
4.	c	9. d
5.	d	10. d
		15. b

References

K – 12 Curriculum Guide Department of Education
Kto12 Cookery Module (Exploratory Course) Grade 7, pages 34-4

DISCLAIMER

This Self-learning Module (SLM) was developed by DepEd SOCCSKSARGEN with the primary objective of preparing for and addressing the new normal. Contents of this module were based on DepEd's Most Essential Learning Competencies (MELC). This is a supplementary material to be used by all learners of Region XII in all public schools beginning SY 2020-2021. The process of LR development was observed in the production of this module. This is version 1.0. We highly encourage feedback, comments, and recommendations.

For inquiries or feedback, please write or call:

Department of Education – SOCCSKSARGEN
Learning Resource Management System (LRMS)

Regional Center, Brgy. Carpenter Hill, City of Koronadal

Telefax No.: (083) 2288825/ (083) 2281893

Email Address: region12@deped.gov.ph

