Technology and Livelihood Education
Home Economics - Cookery
Quarter 0 - Module 3.2
Abbreviations, Equivalents and Conversions
Republic Act 8293, section 176 states that: No copyright shall subsist in any work of the Government of the Philippines. However, prior approval of the government agency or office wherein the work is created shall be necessary for exploitation of such work for profit. Such agency or office may, among other things, impose as a condition the payment of royalties.

Borrowed materials (i.e., songs, stories, poems, pictures, photos, brand names, trademarks, etc.) included in this book are owned by their respective copyright holders. Every effort has been exerted to locate and seek permission to use these materials from their respective copyright owners. The publisher and authors do not represent nor claim ownership over them.

Published by the Department of Education
Secretary: Leonor Magtolis Briones
Undersecretary: Diosdado M. San Antonio

Development Team of the Module

Writers: Ryan A. Tanjay, Nerie D. Contreras
Editor: Geraldine F. Vergas
Layout Artist: Eljun A. Calimpusan
Management Team: Francis Cesar B. Bringas, Isidro M. Biol, Josephine Chonnie M.Obseñaries
Maripaz F. Magno, Minerva T. Albis, PhD, Imee R. Vicariato,
Genevieve S. Verceles, Corazon F. Adrales

Printed in the Philippines by ________________________

Department of Education – Caraga Region

Office Address: Teacher Development Center
J.P. Rosales Avenue, Butuan City, Philippines 8600
Tel. No./Telefax: (085) 342-8207/ (085) 342-5969
E-mail Address: caraga@deped.gov.ph
Technology and Livelihood Education
Economics - Cookery
Quarter 0 - Module 3.2
Abbreviations, Equivalents and Conversions
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

This module was designed and written to better perform mensuration and calculations. It will help the learner master the nature of mensuration and calculation. The scope of this module will be used in many different learning situations. The language used recognizes the diverse vocabulary level of learners. The lessons are arranged to follow the standard sequence of the module. But the order of teaching or using can be changed to correspond with the textbook and references you will be using.

The module has one lesson;

LO. 3.2 Abbreviations, Equivalents and Conversions

(TLE_HECK7/8PM-Od-4)

After going through this module, you are expected to:

3.2.1 Give abbreviations and equivalents of measurements
3.2.2 Convert system of measurements according to recipe requirements
What I Know

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

1. 1/2 oz. = _____ g?
   A. 15
   B. 16
   C. 10
   D. 8

2. 1 kg = _____ g?
   A. 500
   B. 1000
   C. 700
   D. 800

3. What is the Abbreviation for Tablespoon?
   A. Tbsp.
   B. Tsp.
   C. Tbps.
   D. Tpsb.

4. What is the Abbreviation for Teaspoon?
   A. Tbsp
   B. Tsp.
   C. Tbps.
   D. Tpsb.

5. What is the Abbreviation for Pounds?
   A. Kg.
   B. Oz.
   C. Lb.
   D. Cm.

6. A change in the units or form of number or expression.
   A. Metric system
   B. Conversion
   C. Quantity
   D. Symbol

7. How many tablespoons in 1 cup of dry ingredients?
   A. 19 tbsp.
   B. 18 tbsp.
   C. 17 tbsp.
   D. 16 tbsp.
8. How many cups is the 500 ml water?
   A. 2 cups  
   B. 3 cups  
   C. 4 cups  
   D. 5 cups

9. How ounces in 1 gram of nutmeg?
   A. 0.035 oz  
   B. 0.045 oz  
   C. 0.055 oz  
   D. 0.065 oz

10. One tablespoon of ingredients is equal to?
    A. two teaspoon  
    B. three teaspoon  
    C. four teaspoon  
    D. five teaspoon

11. One pint of flour is equal to many cups?
    A. 2 cups  
    B. 3 cups  
    C. 4 cups  
    D. 5 cups

12. One galloon of vinegar is equal to?
    A. 2 quarts  
    B. 4 quarts  
    C. 6 quarts  
    D. 8 quarts

13. 1 L = _____ ml?
    A. 500  
    B. 200  
    C. 300  
    D. 600

14. 250°F = _____ °C?
    A. 150  
    B. 160  
    C. 200  
    D. 120

15. 2 c = _____ T?
    A. 14  
    B. 15  
    C. 16  
    D. 17
Lesson 1

Abbreviations, Equivalents and Conversions

What’s In

The module 3.1 was designed and written to better perform measuring techniques of ingredients. Let us determine how much you already know about measuring techniques of ingredients. Take this pre-test.

Directions: Explain briefly your answers to the following questions and write them on your TLE Activity notebook. How will you measure the following ingredients?

A. flour
B. white sugar
C. oatmeal
D. honey
E. margarine

Are miscellaneous measures important? Why?

What’s New

It’s useful to know which unit of measurement is being referred to in a recipe abbreviation, but it’s just as important to recognize which are measurements of weight and which refer to volume. Knowing the difference will help you choose the correct measuring tools and increase your chances of successfully executing your dish. Below are the different common measurements used in cooking, to know your stock knowledge on the topic, please answer the table below.
Directions: Give the abbreviation of the following: Write your answers on your TLE notebook.

Give the abbreviations of the following:

<table>
<thead>
<tr>
<th>Unit of Measure</th>
<th>Abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tablespoon</td>
<td></td>
</tr>
<tr>
<td>2. Grams</td>
<td></td>
</tr>
<tr>
<td>3. Pounds</td>
<td></td>
</tr>
<tr>
<td>4. Kilogram</td>
<td></td>
</tr>
<tr>
<td>5. Teaspoon</td>
<td></td>
</tr>
<tr>
<td>6. Cup</td>
<td></td>
</tr>
<tr>
<td>7. Liter</td>
<td></td>
</tr>
<tr>
<td>8. Ounce</td>
<td></td>
</tr>
<tr>
<td>9. Pint</td>
<td></td>
</tr>
<tr>
<td>10. Millilitre</td>
<td></td>
</tr>
</tbody>
</table>

**What is It**

How many times have you been ready to cook and found you were out of a certain ingredient? Experienced having trouble of reading the units because it is new to you?

Some of the ingredient are measured and labelled using only their units. In this part of the module, common measurements and their corresponding units, their equivalents to other system of measures and how to convert them to other units of equivalent. But first, let us define the following terms:

Abbreviation – a shortened form of a word or phrase

Equivalents – a thing that is equal to or corresponds with another in value, amount and function.

Conversion – a quantity expressed in one set of units into an equivalent expressed in another
Common Abbreviations for Measurements in cooking:

<table>
<thead>
<tr>
<th>Cooking Abbreviations</th>
<th>Unit of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. C, c</td>
<td>Cup</td>
</tr>
<tr>
<td>2. g</td>
<td>Grams</td>
</tr>
<tr>
<td>3. kg</td>
<td>Kilogram</td>
</tr>
<tr>
<td>4. L, l</td>
<td>Liter</td>
</tr>
<tr>
<td>5. lb</td>
<td>Pound</td>
</tr>
<tr>
<td>6. mL, ml</td>
<td>Millilitre</td>
</tr>
<tr>
<td>7. oz</td>
<td>Ounce</td>
</tr>
<tr>
<td>8. pt</td>
<td>Pint</td>
</tr>
<tr>
<td>9. t, tsp</td>
<td>Teaspoon</td>
</tr>
<tr>
<td>10. T, tbsp</td>
<td>Tablespoon</td>
</tr>
<tr>
<td>11. gal</td>
<td>Gallon</td>
</tr>
</tbody>
</table>

Measuring equivalents for teaspoons, tablespoons, cups, pints, fluid ounces,

<table>
<thead>
<tr>
<th>Unit</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Tbsp</td>
<td>= 3 tsp</td>
</tr>
<tr>
<td>1 c</td>
<td>= 48 t</td>
</tr>
<tr>
<td>1/16 c</td>
<td>= 1 T</td>
</tr>
<tr>
<td>1 c</td>
<td>= 16 T</td>
</tr>
<tr>
<td>1/8 c</td>
<td>= 2 T</td>
</tr>
<tr>
<td>8 fluid ounces (floz)</td>
<td>= 1 c</td>
</tr>
<tr>
<td>1/6 c</td>
<td>= 2 T plus 1 t</td>
</tr>
<tr>
<td>1 pt</td>
<td>= 2 c</td>
</tr>
<tr>
<td>1/4 c</td>
<td>= 4 T</td>
</tr>
<tr>
<td>1 qt</td>
<td>= 2 pt</td>
</tr>
<tr>
<td>1/3 c</td>
<td>= 5 T plus 1 t</td>
</tr>
<tr>
<td>4 c</td>
<td>= 1 qt</td>
</tr>
<tr>
<td>3/8 c</td>
<td>= 6 T</td>
</tr>
<tr>
<td>1 gal</td>
<td>= 4 qt</td>
</tr>
<tr>
<td>1/2 c</td>
<td>= 8 T</td>
</tr>
<tr>
<td>16 oz</td>
<td>= 1 lb</td>
</tr>
<tr>
<td>2/3 c</td>
<td>= 10 T plus 2 t</td>
</tr>
<tr>
<td>1 ml</td>
<td>= 1 cc</td>
</tr>
<tr>
<td>3/4 c</td>
<td>= 12 T</td>
</tr>
<tr>
<td>1 inch</td>
<td>= 2.54 cm</td>
</tr>
</tbody>
</table>

Conversions for metric and U.S. systems of measurement.
source: United States Dept. of Agriculture (USDA)

U.S. system of measurement of Metric

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/5 tsp</td>
<td>1 ml</td>
</tr>
<tr>
<td>1 tsp</td>
<td>5 ml</td>
</tr>
<tr>
<td>1 Tbsp</td>
<td>15 ml</td>
</tr>
<tr>
<td>1 fluid oz</td>
<td>30 ml</td>
</tr>
<tr>
<td>1/5 c</td>
<td>47 ml</td>
</tr>
<tr>
<td>1 oz</td>
<td>28 grams</td>
</tr>
<tr>
<td>1 pound</td>
<td>454 grams</td>
</tr>
</tbody>
</table>
1 c 237 ml
2 c 473 ml
4 c .95 liters
4 q 3.8 liters

Metric to U.S. system of measurement.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ml</td>
<td>1/5 tsp</td>
</tr>
<tr>
<td>5 ml</td>
<td>1 tsp</td>
</tr>
<tr>
<td>15 ml</td>
<td>1 T</td>
</tr>
<tr>
<td>100 ml</td>
<td>3.4 floz</td>
</tr>
<tr>
<td>240 ml</td>
<td>1 c</td>
</tr>
<tr>
<td>1 L</td>
<td>34 floz</td>
</tr>
<tr>
<td></td>
<td>4.2 c</td>
</tr>
<tr>
<td></td>
<td>2.1 pt</td>
</tr>
<tr>
<td></td>
<td>1.06 qt</td>
</tr>
<tr>
<td></td>
<td>0.26 gal</td>
</tr>
</tbody>
</table>

Temperature Conversion:

To convert Celsius to Fahrenheit, multiply the given temperature by 1.8 then add 32.
For Fahrenheit to Celsius, deduct 32, then divide the result by 1.8.

Example:

125 °Celsius = ? °Fahrenheit

= (125 x 1.8) + 32
= 225 + 32
= 257°F.

100°Fahrenheit = ? °C

= (300 – 32) / 1.8
= 268 / 1.8
= 149°C

<table>
<thead>
<tr>
<th>°F</th>
<th>°C</th>
<th>Gas Mark</th>
<th>Cooking Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>225</td>
<td>110</td>
<td>¼</td>
<td>Very low</td>
</tr>
<tr>
<td>250</td>
<td>120-130</td>
<td>½</td>
<td>Very low</td>
</tr>
<tr>
<td>275</td>
<td>140</td>
<td>1</td>
<td>Slow</td>
</tr>
<tr>
<td>300</td>
<td>150</td>
<td>2</td>
<td>Slow</td>
</tr>
<tr>
<td>325</td>
<td>160-170</td>
<td>3</td>
<td>Moderate</td>
</tr>
<tr>
<td>350</td>
<td>180</td>
<td>4</td>
<td>Moderate</td>
</tr>
<tr>
<td>375</td>
<td>190</td>
<td>5</td>
<td>Moderately hot</td>
</tr>
<tr>
<td>400</td>
<td>200</td>
<td>6</td>
<td>Moderately hot</td>
</tr>
<tr>
<td>425</td>
<td>220</td>
<td>7</td>
<td>Hot</td>
</tr>
<tr>
<td>450</td>
<td>230</td>
<td>8</td>
<td>Hot</td>
</tr>
<tr>
<td>475</td>
<td>240</td>
<td>9</td>
<td>Very hot</td>
</tr>
</tbody>
</table>
Useful Temperature Facts:

- Celsius and Fahrenheit are the same at -40°.
- Water boils at 100°C or 212°F.
- Water freezes at 0°C and 32°F.
- Absolute zero is 0 K.
- Celsius and Fahrenheit are degree scales. The degree symbol is not used to report temperature using the Kelvin scale.

Explanation:

There are two main temperature scales:

- °F, the Fahrenheit Scale (used in the US), and
- °C, the Celsius Scale (part of the Metric System, used in most other countries)

They both measure the same thing (temperature!), but use different numbers:

- Boiling water (at normal pressure) measures 100° in Celsius, but 212° in Fahrenheit
- And as water freezes it measures 0° in Celsius, but 32° in Fahrenheit

What’s More

To strengthen your understanding and skills of the topic, please copy and answer Activities 3-8 below in your TLE notebook.

**Activity 1**

Directions: Convert the following measures into teaspoons.

2 Tablespoon = __________
1 cup = _________
1/4 c = _________
1/4 c = _________
1 Tablespoon = _________

**Activity 2**

Directions: Convert the following metric system of measurements to US.

1. 5 ml = ___________ teaspoon
2. 1 L = ___________ cups
3. 15 ml = ___________ Tablespoon
4. 100 grams = ___________ ounce
5. 1 kg = ___________ pound
Activity 3

Directions: Convert the following temperatures from degree Celsius to degree Fahrenheit.

<table>
<thead>
<tr>
<th>Degree Celsius</th>
<th>Degree Fahrenheit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 240</td>
<td></td>
</tr>
<tr>
<td>2. 200</td>
<td></td>
</tr>
<tr>
<td>3. 190</td>
<td></td>
</tr>
<tr>
<td>4. 150</td>
<td></td>
</tr>
<tr>
<td>5. 140</td>
<td></td>
</tr>
</tbody>
</table>

Activity 4

Directions: Give the abbreviation of the following.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tablespoon</td>
<td></td>
</tr>
<tr>
<td>2. Pound</td>
<td></td>
</tr>
<tr>
<td>3. Kilogram</td>
<td></td>
</tr>
<tr>
<td>4. Ounce</td>
<td></td>
</tr>
<tr>
<td>5. teaspoon</td>
<td></td>
</tr>
</tbody>
</table>

What I Have Learned

Activity 1

Directions: Fill in the blanks with the correct answers.

1. __________ is a shortened form of a word or phrase. Equivalents is a thing that is equal to or corresponds with another in value, amount and function.
   Conversion - a quantity expressed in one set of units into an equivalent expressed in another.

2. To convert Celsius to Fahrenheit, __________ the given temperature by 1.8 then add 32. For Fahrenheit to Celsius, deduct 32, then divide the result by 1.8.

3. °F, the Fahrenheit Scale is used in the __________.

4. Boiling water measures __________ Celsius, but 212° in Fahrenheit.

5. __________ is a thing that is equal to or corresponds with another in value, amount and function.
What I Can Do

Activity 1

A. Give the equivalent measure of the following.

250 grams of starch = _______ ounce
6 cups coconut milk = _______ quart
1 teaspoon vanilla = _______ ml
1/2 c grated cheese = _______ Tablespoon
1 cup milk = _______ ml

B. Give the substitution of the following ingredients:

1. 1 tsp. all spice
2. 1 c sour cream
3. 1/2 t cream of tartar
4. 1/4 c oil
5. 1/4 c fresh chopped onions
Assessment

Direction: Choose the letter of the best answer. Write the letter of the correct answer on your TLE notebook.

1. 1/2 oz. ____ g?
   A. 15
   B. 16
   C. 10
   D. 8

2. 1 kg = ____ g?
   A. 500
   B. 1000
   C. 700
   D. 800

3. What is the abbreviation for tablespoon?
   A. tbsp.
   B. tsp.
   C. tbps.
   D. tpsb.

4. What is the abbreviation for teaspoon?
   A. tbsp.
   B. tsp.
   C. tbps.
   D. tpsb.

5. What is the abbreviation for pounds?
   A. kg.
   B. oz.
   C. lb.
   D. cm.

6. A change in the units or form of number or expression.
   A. symbol
   B. quantity
   C. conversion
   D. metric system

7. How many tablespoons in 1 cup of flour?
   A. 16 tbsp.
   B. 17 tbsp.
   C. 18 tbsp.
   D. 19 tbsp.
8. How many cups is the 500 ml water?
   A. 2 cups
   B. 3 cups
   C. 4 cups
   D. 5 cups

9. How ounces in 1 gram of nutmeg?
   A. 0.035 oz
   B. 0.045 oz
   C. 0.055 oz
   D. 0.065 oz

10. One tablespoon of ingredients is equal to?
    A. 2 teaspoons
    B. 3 teaspoons
    C. 4 teaspoons
    D. 5 teaspoons

11. One pint of flour is equal to many cups?
    A. 2 cups
    B. 3 cups
    C. 4 cups
    D. 5 cups

12. One gallon of vinegar is equal to?
    A. 2 quarts
    B. 4 quarts
    C. 6 quarts
    D. 8 quarts

13. 1 L = ____ ml?
    A. 200
    B. 300
    C. 500
    D. 600

14. 250°F = ______ °C?
    A. 120
    B. 150
    C. 160
    D. 200

15. 2 c = ______ T?
    A. 14
    B. 15
    C. 16
    D. 17
Additional Activities

Activity 1

Directions: Convert the given ingredients into ML. Write your answers on your TLE notebook.

A. Suppose you're going to cook Maja Blanca and have the following ingredients, how will you calculate each measurement?

250 grams starch: _____ ml
6 cups coconut milk: _____ ml
2 ½ cups white sugar: _____ ml
1 teaspoon vanilla: _____ ml
1 cup evaporated milk: _____ ml
1/2 c grated cheese: _____ ml
Answer Key

What I Know

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

Activity 3

1. 6
2. 48
3. 12
4. 24
5. 3

Activity 4

1. 1 tsp.
2. 4 c
3. 1 T
4. 22 lb
5. 2.2 lb

Activity 5

1. 475
2. 400
3. 375
4. 300
5. 275

Activity 6

1. 9 oz
2. 1/2 qt
3. 5 ml
4. 4 T
5. 250 ml

Activity 7

1. Metric system
2. USA
3. Multiply
4. Use measuring cup and wrap and measure into a piece of plastic
5. The wrapping is usually marked in tablespoon

What's More

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

What's New

1. T or tbsp.
2. g
3. lb
4. kg
5. t or tsp
6. L
7. C, c
8. Oz
9. Pt
10. Ml

Assessment

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

Activity 8

1. 1 oz.
2. 24 q
3. 5 ml
4. 8 tbsp.
5. 237 ml
6. 454 grams
7. 56 g
8. 50 ml
9. 2 cups
10. 2 qt.

Additional Activities

1. 3.5 lbs.
2. 105 oz.
3. 1 T
4. 4.2 cups
5. 0.95 L
References

BOOKS


INTERNET

“Measurement Abbreviations and Conversions” 2020
Retrieved from https://www.dummies.com/food-drink/recipes/measurement-abbreviations-and-conversions/ on December 17, 2019

“Metric Cooking Conversions”
Retrieved from https://www.infoplease.com/math-science/weights-measures/us-metric-cooking-conversions on December 17, 2019

Pierce, Rod. "Conversion of Temperature - Celsius to Fahrenheit" 2020
Retrieved from http://www.mathsisfun.com/temperature-conversion.html on December 17, 2019

“Common Ingredient Substitutions” 2020
Retrieved from https://www.allrecipes.com/article/common-ingredient-substitutions/ on December 18, 2020

Helmenstine, Anne Marie. “Temperature Conversion Formulas” 2019
Retrieved from https://www.thoughtco.com/temperature-conversion-formulas-609324 on December 19, 2019

“Conversion of Temperature” 2017
Retrieved from https://www.mathsisfun.com/temperature-conversion.html on December, 19, 2019

Alice Henneman, Alice “Basic Ingredient Substitution” 2020
Retrieved from https://food.unl.edu/article/ingredient-substitutions on December 20, 202