

8

Lesson Exemplar for TLE

Quarter 2

Lesson

8

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Lesson Exemplar for TLE Grade 8
Quarter 2: Lesson 8 (Week 8)
SY 2025-2026

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TLE/QUARTER 2/ GRADE 8

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES

A. Content Standards	The learners demonstrate an understanding of the concepts and skills in fisheries.
B. Performance Standards	The learners perform recipe quantification in food processing and develop label design for processed products
C. Learning Competencies and Objectives	Learning Competency • Perform quantification procedures in processing food. • Discuss different packaging materials used in food processing. • Develop sample label design for processed food products.
• Content	• Recipe Quantification and Standard Weight • Packaging and Labelling of Food Products
• Integration	SDG 2: Zero Hunger

II. LEARNING RESOURCES

Elixir, (2021). *A Manufacturer's Guide to Food Labeling Requirements in the Philippines*. <https://www.elixirphil.com/manufacturers-guide-to-food-labeling-requirements-philippines/>

L. Lasagca (2024). *Recipe Quantification*. <https://www.scribd.com/presentation/534996853/Recipe-Quantification>

M. Forbes (2024). *Recipe Quantification*. <https://www.scribd.com/doc/112077435/Recipe-Quantification>

Papercon Philippines (2023)., *The importance of food packaging and labeling*. <https://papercon.com/food-packaging/food-packaging-and-labeling/>

Venturepack (2024)., *Why are food packaging labels important*. <https://www.venturepak.co.uk/why-are-food-packaging-labels-important/#:~:text=Food%20packaging%20labels%20help%20people,your%20food%20is%20labelled%20appropriately.>

III. TEACHING AND LEARNING PROCEDURE			NOTES TO TEACHERS
A. Activating Prior Knowledge	DAY 1 • Short Review Directions: Match Column A with the corresponding item in Column B. Write the letter of your answer for each number.		ANSWER KEY 1. B 2. C 3. D 4. E 5. A
	COLUMN A	COLUMN B	
	_____ 1. tongs	A.  Handmade Chef Knife from Wikimedia Commons .	
	_____ 2. measuring spoon	B.  Tongs for Serving Food from Wikimedia Commons .	
	_____ 3. weighing scale	C.  Kitchen Tools - Measuring Spoon by Joey Z, from Flickr .	
	_____ 4. Can sealer	D.  Weighing Scale by Tuxyso. from Wikimedia Commons .	

	_____5. knife E.  Glass Jar with Can Lid Closing Machine from Shutterstock.	
	• Feedback (Optional) The Teacher asks the learners randomly about the function and uses of every tool and material in the short review.	
B. Establishing Lesson Purpose	1. Lesson Purpose Ask the learners the following questions. Do you think that packaging and labelling of food products are important? Why? Explain your answer. 2. Unlocking Content Vocabulary • Factor method - This quantification method uses what is known as a "yield conversion factor". • Percentage Method - This method works with the recipe weights and measurements rather than using a conversion factor.	
C. Developing and Deepening Understanding	SUB-TOPIC 1: RECIPE QUANTIFICATION AND STANDARD WEIGHT PERCENTAGE 1. Explicitation There are two (2) ways to quantify a recipe. These are the Percentage Method and the Factor Method. Although, the factor method is the recommended method because it is direct and simple use, the percentage method can sometimes come in handy. Thus, it also deserves a closer look. The prerequisite to both, however, is that the recipe being used is a standardized one. 2. Worked Example Recipe Quantification	

- It is the process of enlarging recipes with lower yields to adjust to meet the production requirements of bigger functions.

Ways to Quantify Recipe

- Factor Method - This quantification method uses what is known as a "yield conversion factor". This factor is then used as a multiplier for the rest of the ingredients in the recipe. It's simpler than it sounds.

Formula:

$$\text{Conversion factor} = \frac{\text{Desired yield}}{\text{Recipe yield}}$$

Step 1 - Compute for the conversion factor. This is done by getting the quotient of the desired yield and the original recipe yield.

Step 2 - Multiply original quantity with conversion factor. The conversion factor obtained in step one would now be multiplied with each ingredient quantity in the original recipe. The new quantity obtained is the desired recipe quantity. Remember, if pounds are being used in the recipe, try converting everything to ounces to simplify the process. For the metric system, this is not necessary. This is why the metric system is recommended for standardized recipes

Example: If an actual recipe has a yield of 5 servings and a function requires 25 serving portions, in order to quantify the recipe, the conversion factor would be computed as:

$$\frac{25}{5} = \boxed{6.25}$$

Ingredients	Original Weight	Factor	Quantify to 25 portions
Ingredients 1	3lbs	6.25	18lbs. 12oz
Ingredients 2	200 g.	6.25	1.25kg (200x6.25)
Ingredients 3	50ml.	6.25	312.5 ml (60x6.250)
Ingredients 4	2pcs.	6.25	12.5 ounces (2x 6.25)

Note: The conversion of pounds in the original weight to the quantified amount was done in 2 steps.

1. Multiply amount with the factor
3 pounds x 6.25 = 18.75 pounds
2. Convert decimal to ounces

16 ounces per pound x 0.75 pound = 12 ounces

Result: 18 pounds and 12 ounces

- Percentage Method - This method works with the recipe weights and measurements rather than using a conversion factor. Here, the percentage of each ingredient relative to the combine total weight of all the ingredients is used as one of the bases for quantifying. The required weight of the quantified recipe is then simply multiplied by the individual ingredient percentages.

Step 1 - Convert all measurements to the required measurement of the desired yield.

Step 2 - Get the total combined weight of all the ingredients.

Step 3 - Compute the percentage of each ingredient in relation to the total weight.

Formula:

$$\% = \frac{\text{Ingredient weight} \times 100}{\text{Total combined weight}}$$

Step 4 - Multiply the required yield of the new recipe with the individual ingredient percentages. The resulting product is the new ingredient quantity of the quantified recipe.

Step 1 Convert all measurements to the required measurement of the desired yield

Note: required yield is kilo.

a.1.5 kg

b.300 g = .3kg (300g/1000g per kilo)

c.1 cup = .24 (240 g/1000g per kilo)

Ingredients	Original weight	Converted weight	% Of total	Total yield required	Quantified Amount
A	1.5 kg	1.5 kg	73.53%	17 kg	12.5 kg
B	300 g	0.3 kg	14.71%	17 kg	2.5 kg
C	1 cup	0.240 kg	11.76%	17 kg	2 kg

Step 2 Get the total combined weight of all the ingredients

a.1.5 kg

b.0.3 kg

c.0.24 kg Total = 2.04 kg

Ingredients	Original weight	Converted weight	% Of total	Total yield required	Quantified Amount
A	1.5 K	1.5 kg	73.53%	17 kg	12.5 kg
B	300 g	0.3 kg	14.71%	17 kg	2.5 kg
C	1 cup	0.240 kg	11.76%	17 kg	2 kg
TOTAL		2.04 kg	100 %		

Step 3 Compute for the percentage of each ingredient in relation to the total weight.

$$\% = \frac{\text{Ingredient weight} \times 100}{\text{Total combined weight}}$$

$$\%A = 1.5 \times 100 / 2.04 = 73.53\%$$

$$\%B = 0.3 \times 100 / 2.04 = 14.71 \%$$

$$\%C = 0.24 \times 100 / 2.04 = 11.76\%$$

Ingredients	Original weight	Converted weight	% Of total	Total yield required	Quantified Amount
A	1.5 K	1.5 kg	73.53%	17 kg	12.5 kg
B	300 g	0.3 kg	14.71%	17 kg	2.5 kg
C	1 cup	0.240 kg	11.76%	17 kg	2 kg
TOTAL		2.04 kg	100 %		

Step 4 Multiply the required yield of the new recipe with the individual ingredient percentages.

$$\text{Quantified amt} = \% \text{ of total wt.} \times \text{yield requirement}$$

$$A. 17\text{kg} \times 0.7353 = 12.5 \text{ kg}$$

$$B. 17\text{kg} \times 0.1471 = 2.5 \text{ kg}$$

$$C. 17\text{kg} \times 0.1176 = 2 \text{ kg}$$

Ingredients	Original weight	Converted weight	% Of total	Total yield required	Quantified Amount
A	1.5 K	1.5 kg	73.53%	17 kg	12.5 kg
B	300 g	0.3 kg	14.71%	17 kg	2.5 kg
C	1 cup	0.240 kg	11.76%	17 kg	2 kg

TOTAL		2.04 kg	100		
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DAY 2

3. Lesson Activity

CONVERT ME!

Directions: Convert all measurements to the required measurement of the desired yield. A total of 160 tablespoons of a recipe is required for this function. The following ingredients are listed on the original recipe card, Ingredients: ¼ cups, 1 pint, 3 teaspoon, and 1 fluid ounce.

Note: required yield is Tablespoon.

- A. ¼ cup
- B. 1 pint
- C. 3 teaspoons
- D. 1 fluid ounce

Ingredients	Original weight	Converted weight	% Of total	Total yield required	Quantified Amount
A	1/4 cups				
B	1 pint				
C	3 tsp.				
D	1 fluid ounce				

ANSWER KEY:

Ingredients	Original weight	Converted weight	% Of total	Total yield required	Quantified Amount
A	1/4 cups	4 tbsps.	10.26	160	16 tbsps.
B	1 pint	32 tbsps.	82.05	160	131 tbsps.
C	3 tsp.	1 tbsp.	2.56	160	41 tbsps.

D	1 fluid ounce	2 tbsps.	5.13	160	82 tbsps.
TOTAL		39 tbsps.	100%		

DAY 3

SUB-TOPIC 2: PACAKAGING AND LABELING OF FOOD PRODUCTS

1. **Explicitation**

The design of food packaging labels will be the first thing to catch the eye of a shopper and on that alone they can make up their mind to buy the product. A design can be shorthand for 'eco-friendly', 'low cost' or 'premium brand'. Primary colors and a quirky typeface can indicate that this is a range for children and a label may also include the image of the actual product on the packaging. The design is a signpost for savvy shoppers to investigate further. But the main reason is that food packaging labels are designed to inform customers about the ingredients and calories in food products and this is a legal requirement.

Food packaging labels help people make informed decisions about what they are buying, furnish them with knowledge of how to store the food safely and tell them how it should be cooked. If you are a supplier to restaurants or supermarkets, it is essential that your food is labelled appropriately. Failure to comply with this regulation can lead to severe consequences.

DAY 4

2. **Worked Example**

Food packaging and labeling are some of the essential elements of the food industry, which are mandatory for ensuring product security, delivering the necessary information and complying with law requirements. They go beyond mere aesthetics and influence product development, consumer attractiveness and ultimately commercial success. This means that in the selection of the packaging supplier, quality standards must be maintained, as well as the credibility of the brand.

It means the provision of adequate information and accurate identification of the pre-package foods on the package. Also, the product communicates with the consumers, traders and regulatory agencies. It must be correct, not misleading, accurate and legible.

The Importance of Food Packaging and Labeling

- *Protection and Preservation:*

Food packaging does much more than protect the food. It is a powerful barrier against contamination, harm and decay. Essentially, it forms a barrier that stops harmful agents like microorganisms, air, moisture, and light from entering the food and spoiling it during its shelf life.

- *Consumer Empowerment:*

Not only do food packaging labels shield the product, but they also equip consumers with vital information. From the comprehensive nutritional breakdown to the list of ingredients and allergen alerts, these labels empower individuals to make well-informed decisions that align with their dietary requirements, preferences, and limitations.

- *Building Trust and Brand Loyalty:*

Consumers' trust and loyalty increase with transparent food packaging. Credibility can be established through the provision of information about the product's origin, certifications, as well as quality adherence. This allows consumers to be very transparent with the brand, leading to a very close relationship that builds on goodwill between the consumers and the brand.

Food Labelling Requirements and Guidelines

2. Product Name

The name of the food should be visible on the product label. It should be specific, and a description may be added to clearly state the product's characteristics. Food packaging and labelling may also include the treatment used for a product such as UHT, Sterilized, Freeze-Dried, and others.

3. Brand Name

The registered trademark of a company's brand name must be printed on the label. This is a unique identifier that food label manufacturers should take note of. It is also registered with the FDA.

4. Ingredients

Food products should include labels that provide complete details of the ingredients used. Food label manufacturers should be able to present information in descending order or according to proportion.

Important Note for Food Label Manufacturers

- Food allergen information must be visible below the list of ingredients.
- This should disclose the components used in a product.
- The required information based on food packaging and labelling standards is essential as they warn consumers of possible allergic reactions they may cause.

- *Net Content*

To be clear, net weight and gross weight are two different things. Net weight is required on product labels to represent food volume minus the actual packaging. It must also be declared in units using the metric system.

NOTE: Drained weight is also required to be declared for food products packed in a liquid medium. It represents the actual weight of the food product once the aqueous solution is discarded.

- *Manufacturer Details*

The name and the address of the manufacturer are vital for all locally manufactured items. Food packaging and labelling require the manufacturer's contact details. This is to provide consumers with a reference in case they have inquiries about the food product they purchase.

NOTE: For manufacturing companies with plants in different locations, the head address would be enough if a traceability code is added.

- *Lot Identification*

This refers to the code that uses a mix of numbers and letters about the batch of products. This is crucial for product identification and tracking and must not be missed out by food label manufacturers.

- *Storage*

	To provide consumers with essential information, storage conditions must also be found on product labels. This type of food packaging and labelling information will guide them in properly stocking food products after opening. ● <i>Best Before Date</i> Expiration and use by dates are some of the most common information that consumers usually search for. It is an important marking that reassures product quality. ● <i>Instructions</i> The direction of use should be visible on the label. This food packaging and labelling information are especially important for products that require certain instructions to be properly consumed. ● <i>Nutritional Information</i> Nutrients that are claimed to be in the product must be declared. It should include the number of nutrients and other vitamins and minerals that a product has.									
D. Making Generalizations	5. Learners’ Takeaways Directions: The learners will complete the phrase. <table><tr><th>Teacher’s Activity</th><th>Student’s Activity</th></tr><tr><td>I know</td><td></td></tr><tr><td>I will apply</td><td></td></tr><tr><td>I will share</td><td></td></tr></table>	Teacher’s Activity	Student’s Activity	I know		I will apply		I will share		
Teacher’s Activity	Student’s Activity									
I know										
I will apply										
I will share										

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION		NOTES TO TEACHERS
A. Evaluating Learning	1. Formative Assessment Directions: Study the scrambled letters and rearrange the letters to form a word. In the following rows words are jumbled up on the left-hand side and a clue is given to help you re-arrange it into a proper word.	ANSWER KEY 1. STORAGE 2. BRAND NAME 3. PRODUCT NAME

	1. SOERAGT To provide consumers with essential information, storage conditions must also be found on product labels. This type of food packaging and labelling information will guide them in properly stocking food products after opening. Answer: _____ 2. RBNDA AMEN The registered trademark of a company's brand name must be printed on the label. This is a unique identifier that food label manufacturers should take note of. It is also registered with the FDA. Answer: _____ 3. PURTDON MEAN The name of the food should be visible on the product label. It should be specific, and a description may be added to clearly state the product's characteristics. Answer: _____ 4. NEGRIDTENS The name of the food should be visible on the product label. It should be specific, and a description may be added to clearly state the product's characteristics. Answer: _____ 5. NSTIRSCTUON It is used should be visible on the label. This food packaging and labelling information are especially important for products that require certain instructions to be properly consumed. Answer: _____	4. INGREDIENTS 5. INSTRUCTIONS
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B. Teacher's Remarks	<i>Note observations on any of the following areas:</i>	Effective Practices	Problems Encountered	The teacher may take note of some observations related to the effective practices and problems encountered after utilizing the different strategies, materials used, the learner engagement and other related stuff. Teachers may also suggest ways to improve the different activities explored.
	<i>strategies explored</i>			
	<i>materials used</i>			
	<i>learner engagement/ interaction</i>			
	<i>others</i>			
C. Teacher's Reflection	<i>Reflection guide or prompt can be on:</i> ▪ <u><i>principles behind the teaching</i></u> <i>What principles and beliefs informed my lesson?</i> <i>Why did I teach the lesson the way I did?</i> ▪ <u><i>students</i></u> <i>What roles did my students play in my lesson?</i> <i>What did my students learn? How did they learn?</i> ▪ <u><i>ways forward</i></u> <i>What could I have done differently?</i> <i>What can I explore in the next lesson?</i>			Teacher's reflection in every lesson conducted/facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.