

Chapter 3

Activity Guide

ACTIVITY 3.1 | DEFINITIONS

Directions

Complete the following definitions for the key terms.

Key Term	Definition
Pasteurization	
Homogenization	
Lactose intolerance	
Casein	
Cream	
Fermentation	

ACTIVITY 3.1 | **DEFINITIONS** *(continued)*

Key Term	Definition
Probiotic	
Smoke point	
Butter substitute	
Whey	
Curdling	
Unripened	
Ripened	
Processed cheese	
Albumen	
Chalazae	
Coddled	

ACTIVITY 3.1 DEFINITIONS (*continued*)

Key Term	Definition
Ramekins	
Shirred eggs	
Poached eggs	
Sunny-side up	
Over easy	
Basted eggs	
Omelets	
Frittatas	
Quiche	
Soufflés	
Pooled eggs	

ACTIVITY 3.2 | TYPES OF MILK**Directions**

Complete the table by giving descriptions of the types of milk listed below.

TYPES OF DAIRY MILK		
Type of Milk	Fat Content	Description
Whole	At least 3.25%	
Low fat	Available in 1% and 2%	
Skim	Less than 0.5% (usually 0.1%)	
Buttermilk	Depends on the type of fresh milk used	
Evaporated	At least 6.5%	
Condensed	At least 8.5%	
UHT (ultra-high temperature)	Depends on the type of fresh milk used	

ACTIVITY 3.2 | **TYPES OF MILK** *(continued)*

TYPES OF DAIRY MILK <i>(continued)</i>		
Type of Milk	Fat Content	Description
Powdered	Depends on the type of fresh milk used	
Lactose-free milk	Depends on the type of fresh milk used	

TYPES OF PLANT-BASED MILK		
Type of Milk	Fat Content	Description
Soy milk (nondairy)	Four grams of fat per eight-ounce serving (fortified)	
Rice milk (nondairy)	Three grams or less per eight-ounce serving	
Almond milk (nondairy)	Two to three grams per eight-ounce serving	
Coconut milk (nondairy)	Thick: 20% to 22% Thin: 5% to 7%	

ACTIVITY 3.3 | WHIP IT!**Directions**

Whip various types of cream into whipped cream using the information below regarding fat in cream and how much sugar and vanilla extract to add. What are your findings? Is there a correlation between the amount of fat and the quality of whipped cream? Record your observations and provide a summary.

Note: For each quart of cream, add 1 cup of sugar and 1 teaspoon vanilla extract.

Type of Cream	Amount of Fat
Light whipping cream	At least 30% but less than 36%
Heavy whipping cream	36% to 38%
Very heavy whipping cream	40%
Light cream	18% to 30%
Half-and-half	10.5% to 18%

ACTIVITY 3.3 | WHIP IT! (continued)

Type of Cream	Amount of Fat (%)	Observations during Whipping Process	Time to Completion	Description of Resulting Product

Summary and Conclusions

ACTIVITY 3.4 | CULTURE SHOCK**Directions**

Complete the following table on cultured dairy items. Then, perform research on how to make buttermilk, yogurt, sour cream, and crème fraîche. Record your findings into a *mise en place* plan. Complete the activity with a summary response.

Type of Cultured Dairy Item	Amount of Fat	Description
Buttermilk		
Yogurt		
Sour cream		
Crème fraîche		

ACTIVITY 3.4 | **CULTURE SHOCK** *(continued)*

Summary Question

How does food safety conflict with some of the preparation steps for cultured dairy?

ACTIVITY 3.5 | SAY CHEESE**Directions**

Complete the following charts on the parts of cheese, how to make cheese, and the varieties of cheese.

Parts of cheese
1
2
3

How to Make Cheese
Step 1:
Step 2:
Step 3:

ACTIVITY 3.5 | SAY CHEESE (continued)

Variety of Cheese	Characteristics	Examples
Unripened, fresh		
Soft-ripened		
Semisoft, ripened		
Blue-veined, mold-ripened		
Firm, ripened		
Very hard, ripened		
Pasta filata		

ACTIVITY 3.6 | CHEESEMONGER LAB**Directions**

Research the techniques for making ricotta cheese and a basic rennet cheese. Design an experiment to make the two cheeses. Begin by creating a *mise en place* plan (some items may need to be specially ordered to perform this lab), with step-by-step instructions, ingredients, and equipment/tools. Then execute the two procedures. Keep notes the the process, and complete the lab with a summary of the processes and results.

Standardized Recipe

Name:
Yield:
Ingredients:
Portion size:
Temperature, time, and equipment:
Step-by-step directions:
Nutrition information:

ACTIVITY 3.6 | CHEESEMONGER LAB (continued)**Standardized Recipe**

Name:
Yield:
Ingredients:
Portion size:
Temperature, time, and equipment:
Step-by-step directions:
Nutrition information:

ACTIVITY 3.6 | CHEESEMONGER LAB *(continued)*

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.6 | CHEESEMONGER LAB (continued)

Ingredient	Unit Cost and Size	Amount in Recipe	Calculate the Percent of Unit Cost	Total Ingredient Cost	Total Ingredient Cost

Lab Report

Summary Response

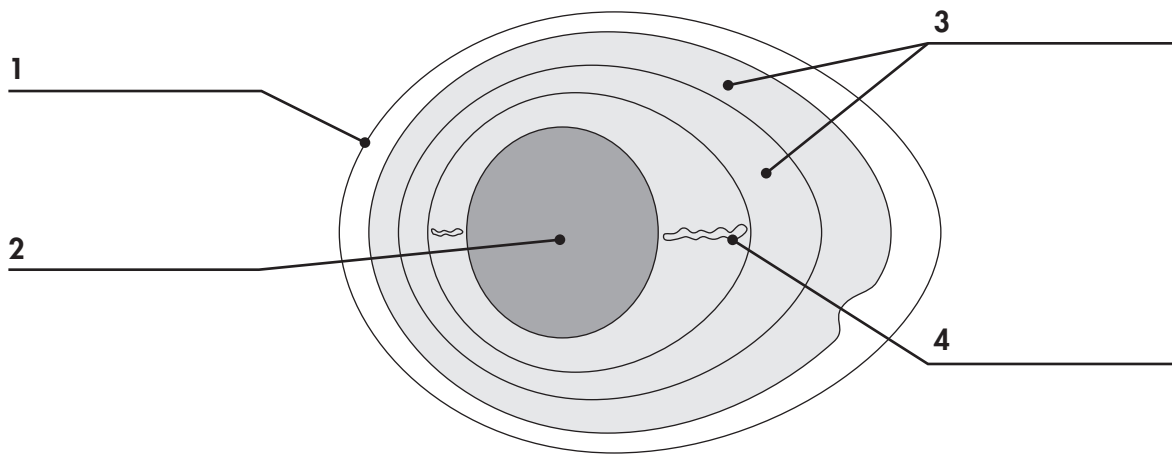
ACTIVITY 3.7 | LOUIS PASTEUR**Directions**

Research Louis Pasteur's contributions to science in regard to the restaurant and foodservice industry. Write an essay on your findings.

ACTIVITY 3.8 | THE INCREDIBLE EGG

Directions

Label the parts of the egg below, then define each in the chart provided.



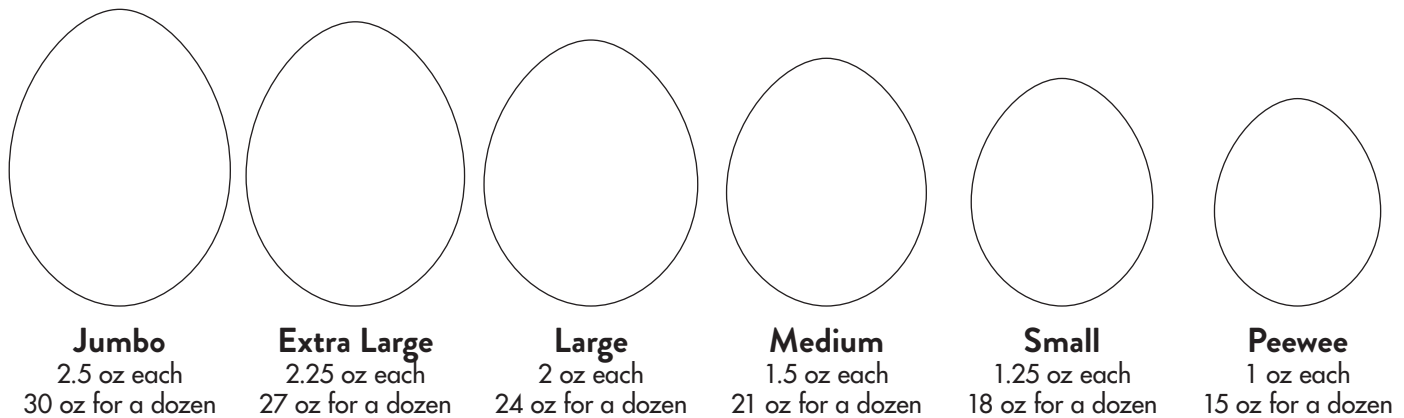
1	
2	
3	
4	

ACTIVITY 3.9 | EGG IT ON

Directions

Recipes often call for a particular size of egg. However, the egg size in a recipe can be converted to equivalent ounces and to other egg sizes. For example, a recipe may call for large eggs, but you may only have jumbo eggs available.

Solve the problems below by using the chart.



- 1 A quiche calls for 12 jumbo eggs. Find the number of ounces the recipe requires, then convert for each egg size to determine the number of eggs needed.

Egg Size	Number of Eggs	Total Ounces Recipe Requires	Number of Dozen Required
Extra large			
Large			
Medium			
Small			
Peeweee			

ACTIVITY 3.9 | EGG IT ON (continued)

- 2 A cookie recipe calls for 20 jumbo eggs. Find the number of ounces the recipe requires, then convert for each egg size to determine the number of eggs needed.

Egg Size	Number of Eggs	Total Ounces Recipe Requires	Number of Dozen Required
Extra large			
Large			
Medium			
Small			
Peeweee			

- 3 A cake calls for a total of 32 jumbo eggs for a large batch. Find the number of ounces the recipe requires, then convert for each egg size to determine the number of eggs needed.

Egg Size	Number of Eggs	Total Ounces Recipe Requires	Number of Dozen Required
Extra large			
Large			
Medium			
Small			
Peeweee			

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB**Directions**

Eggs can be prepared in many ways. Provide the steps and *mise en place* for the following preparations. Record notes during the process, and finish with a summary of the processes. For the fried egg, try cooking to over easy, over medium, over hard, and sunny-side up. Pay special attention to the timing for each.

Egg Preparation
Simmering or Hard Cooking Eggs in Shell
Baking Eggs
Cooking Shirred Eggs
Poaching Eggs
Scrambling Eggs
Making a Fried Egg
Making a Rolled Omelet
Making a Flat Omelet (Frittata)
Making Soufflés

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

ESSENTIAL SKILLS: SIMMERING OR HARD COOKING EGGS IN SHELL

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

ESSENTIAL SKILLS: BAKING EGGS

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

ESSENTIAL SKILLS: COOKING SHIRRED EGGS

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

ESSENTIAL SKILLS: POACHING EGGS

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)



ESSENTIAL SKILLS: SCRAMBLING EGGS

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

ESSENTIAL SKILLS: MAKING A FRIED EGG

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

ESSENTIAL SKILLS: MAKING A ROLLED OMELET

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

ESSENTIAL SKILLS: MAKING A FLAT OMELET (FRITTATA)

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB (continued)

 **ESSENTIAL SKILLS: MAKING SOUFFLÉS**

1
2
3
4
5
6

Ingredients	Tools	Equipment	Notes

Steps	Timing and Notes

ACTIVITY 3.10 | THE INCREDIBLE EGG LAB *(continued)*

Lab Report Summary Response

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