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Introduction

Technology and Livelihood Education (TLE) is one nomenclature in the implementation of the K to 12 Basic Education Program (BEP). It is composed of four components, namely, Agri-Fishery Arts, Home Economics, Industrial Arts and Information and Communication Technology. In this learning material, the focus is on a course in Home Economics – Cookery.

The course provides varied and relevant activities and opportunities to determine your understanding of the key concepts and to demonstrate core competencies as prescribed in TESDA Training Regulation in Cookery. Thus, it aims to provide quality service to target clients alongside of assessing yourself as to the aspects of business that you may consider to strengthen and become part of the food provider sector.

The world of work today presents a picture of available jobs that are getting scarcer each year. To address this reality, the Department of Education is stretching its available resources, prioritizing needs, and developing sustainable programs to lead and to prepare the young minds as future skillful chef or any related job. The department further believes that it is in honing the skills that the learner can have an edge over other job seekers. DepEd endeavors to equip the learners with the appropriate knowledge, attitudes, values and skills necessary to become productive citizen of our society.

This learner’s material is specifically crafted to focus on the different activities that will assess your level in terms of skills and knowledge necessary to get a Certificate of Competency and/or National Certification. This learner's material will surely make you a certified food provider.
Content Standard

The learner demonstrates understanding of core concepts and theories in cookery lessons.

Performance Standard

The learner independently demonstrates core competencies in cookery as prescribed in the TESDA Training Regulation.

Objectives

Learners are expected to become proficient in performing skills on the following competencies:

1. develop personal entrepreneurial skills;
2. prepare egg dishes;
3. prepare cereals and starch dishes;
4. prepare vegetables dishes;
5. prepare and cook seafood dishes;
6. prepare stocks, sauces and soups;
7. prepare poultry and game dishes; and
8. prepare and cook meat.

Program Requirements

Grade 10 students who will take Cookery course as their specialization in Technology and Livelihood Education (TLE) – Home Economics should have successfully taken the exploratory course in Commercial Cooking in Grade 7/8 and have successfully completed the competencies indicated in Grade 9.

The student of this course must possess the following characteristic:

1. incline in cooking and other cooking-related activities;
2. can communicate both in oral and written;
3. physically and mentally fit;
4. with good moral character; and
5. can perform basic mathematical computation.

Learners are expected to develop their knowledge and skills in Cookery, demonstrate mise ’en place, cook, present and evaluate egg, starch and cereal, vegetable, stocks, sauces and soups, poultry and game, and meat dishes.
This learner's material should be taken for one school year for a total of 160 hours. Lessons should be taken one at a time, following the correct sequence being presented and should accomplish the assessment or enhancement activities before proceeding to the next lesson.

Along the learning process, learners of this course are required to complete the 25-hour industry involvement to different food services to experience the actual workplace.

**Learning Episodes**

This learner's material is subdivided into four (4) quarters which may serve as the recommended scope and limit for every academic grading period. In every quarter there are lessons that comprise the learning outcomes.

Before exploring the core competencies of Cookery, you will be guided on how to assess your own Personal Entrepreneurial Competencies and Skills (PECS) and demonstrate your understanding about the Environment and Market.

Quarter I is composed of two lessons. Lesson I is all about preparation, cooking and presenting different kinds of egg dishes while Lesson II is on cereals and starch dishes.

Quarter II has two lessons, the preparation of vegetable dishes and seafood dishes. Learn the different kinds and classifications of vegetables and seafood, cooking, plating dishes and storing food items.

Quarter III consists of lessons on preparing stocks, sauces and soups, and poultry and game dishes.

Quarter IV covers lessons on how to prepare and cook different kinds of meat like pork, beef, carabeef and others.

Enjoy using this learner's material as your guide to become a successful chef in the future.
HOW TO USE THIS LEARNER’S MATERIAL?

Here are some reminders on how to use this material.

1. Answer the diagnostic assessment before you proceed to the different activities. The diagnostic assessment determines how much you know about the lessons and identifies the areas you ought to learn more. Your teacher will check and analyze your score to determine your learning needs.

2. This learner’s material contains relevant information and activities. Go over each activity carefully. If you encounter difficulties, do not hesitate to consult your teacher for assistance. Do not skip any topic unless you are told to do so. REMEMBER that each activity is a preparation for the succeeding activities.

3. For every lesson/learning outcomes, perform the enhancement activities to enrich the knowledge and skills.

4. After successfully finished the tasks, answer the post-test to be given by your teacher. Your score will be analyzed and will be used by your teacher for the computation of your grades.

5. Lastly, DO NOT marks the learner’s material in any way.
A. Multiple Choice.

Directions: Read the following questions carefully and choose the letter that best describes the statement. Write your answer on your test notebook.

1. Which of the following is the right step by step procedures in manual dishwashing.
   A. Drain and air-dry, scrape and pre-rinse, rinse, sanitize, and wash dishes.
   B. Rinse, scrape and pre-rinse, wash, drain, air-dry and sanitize dishes
   C. Scrape and pre-rinse, rinse, wash, sanitize, drain and air-dry dishes
   D. Scrape and pre-rinse, wash, rinse, sanitize, drain and air-dry dishes

2. Which of the following parts of an egg is produced by the oviduct and consist of four alternating layers of thick and thin consistencies.
   A. Air cell
   B. Albumen
   C. Chalaza
   D. Yolk

3. Which of the following vitamins is found in eggs?
   A. B₁
   B. C
   C. D
   D. K

4. The appearance of egg is important for consumer appeal. On what basis are shells evaluated?
   A. cleanliness, shape, texture and soundness
   B. grade, texture, cleanliness, shape
   C. shape, texture, cleanliness and size
   D. texture, soundness, size and cleanliness

5. Which of the following market forms of eggs is seldom used in cooking.
   A. Dried egg
   B. Fresh egg
   C. Frozen egg
   D. Shelled egg

6. Which of the following raises coagulation temperature producing softer, weaker gel when added to egg used in culinary.
   A. Alkali
   B. Salt
   C. Sugar
   D. Vinegar

7. Which kind of egg dish is prepared by slipping shelled eggs into barely simmering water and gently cooking until the egg holds its shape?
   A. Fried egg
   B. Poached egg
   C. Scrambled egg
   D. Soft-boiled egg
8. Which of the following tools is not used in cooking omelet?
   A. Bowls  
   B. Fork  
   C. Sauté pan  
   D. Skimmer

9. Which of the following is true in plating egg dishes?
   A. Choose serving dish small enough to let each food item stand out
   B. Play with color and texture
   C. Protein dish should cover half of the plate
   D. Use even numbers in setting the dish.

10. Which of the following sources of starch is rarely used in manufacturing food starch?
   A. Cassava  
   B. Corn  
   C. Potato  
   D. Rice

11. Which of the following changes in starch during cooking is the resistance to flow; increase in thickness or consistency.
   A. Dextrinization  
   B. Gelatinization  
   C. Retrogradation  
   D. Viscosity

12. Which of the following is suggested if you will hold pasta for a short time for later service?
   A. Cook pasta ahead of time and chill
   B. Drain and add sauce
   C. Drain, toss with a small amount of oil, cover and hold in warmer
   D. Undercook slightly the pasta

13. Which is the process of making a new product to be sold to the customers?
   A. Product Analysis  
   B. Product Conceptualization  
   C. Product Development  
   D. Product Implementation

14. This is a meaningful and unforgettable statement that captures the essence of your brand.
   A. Branding  
   B. Product Naming  
   C. Tagline  
   D. Unique Selling Proposition

15. What managerial tool is used to assess the environment to gather important information for strategic planning?
   A. Environmental Scanning  
   B. SWOT Analysis  
   C. Survey Analysis  
   D. WOTS Analysis

16. What animal produces veal meat?
   A. Calf  
   B. Deer  
   C. Hog  
   D. Sheep

17. Which of the following market forms of meat does not undergo chilling?
   A. Cured meat  
   B. Fresh meat  
   C. Frozen meat  
   D. Processed meat
18. What part of the meat helps you identify the less tender cuts?
   A. Bone  C. Flesh
   B. Fat  D. Ligament

19. What part of the meat has the greatest amount of quality protein?
   A. Bone  C. Flesh
   B. Fat  D. Ligament

20. Which of the following meat cuts requires long and slow cooking temperature?
   A. Less tender  C. Tender
   B. Slightly tough  D. Tough

21. Which of the following is a long – bladed hatchet or a heavy knife used by a butcher?
   A. Butchers knife  C. Cleaver knife
   B. Chopper knife  D. Set of slicing knife

22. Which of the cooking methods does not belong to dry heat method?
   A. Baking  C. Roasting
   B. Broiling  D. Stewing

23. What do you call to the cooking method when meat is cooked in steaming liquid in which bubbles are breaking on the surface.
   A. Boiling  C. Roasting
   B. Broiling  D. Stewing

24. Which is an oil-acid mixture used to enhance the flavor of meat.
   A. Brine solution  C. Soy sauce and vinegar
   B. Marinade  D. Salt and calamansi

25. Which of the following tools is used for carving?
   A. Cleaver knife  C. Slicer
   B. Fork  D. Razor knife

26. To which meat cut do internal organs belong?
   A. Less tender cuts  C. Tough cuts
   B. Tender cuts  D. Variety cuts

27. Where should meat products be stored?
   A. Crisper  C. Dry shelf
   B. Cold shelf  D. Freezer

28. Which of the following is the tenderest cut of beef?
   A. Chunk  C. Sirloin
   B. Round cut  D. Tenderloin

29. Which will you consider first when buying meats?
   A. Brand  C. Quality
   B. Price  D. Round cut

30. What is your primary consideration when storing goods?
   A. Expiration date  C. Quantity
   B. Fragility  D. Size
31. What do you call to young immature pigeon of either sex with extra tender meat?
   A. Duck                C. Rooster
   B. Fryer               D. Squab

32. To what part of poultry does breast meat belong?
   A. Dark meat           C. Variety meat
   B. Tough meat          D. White meat

33. Which of the following characteristics is a good quality of a live poultry?
   A. Free from pin feathers and shows no cuts
   B. Eyes are clear
   C. Is heavy and the skin is watery
   D. Thighs are well-developed

34. What do you call to a young chicken that is usually 9 to 12 weeks of?
   A. Fryer               C. Roaster
   B. Hen                 D. Stag

35. How many days should a whole chicken be refrigerated?
   A. 1 day               C. 2 to 4 days
   B. 1 to 2 days         D. 3 to 4 days

36. How do you classify the fleshy part of chicken like breast?
   A. Entrails            C. Viscera
   B. Dark meat           D. White meat

37. What cookery method is used for a matured poultry?
   A. Boiling             C. Roasting
   B. Frying              D. Stewing

38. What cookery method is suitable for the less tender cuts?
   A. Boiling             C. Roasting
   B. Frying              D. Stewing

39. What is the best cooking temperature for poultry?
   A. High temperature    C. Low to moderate temperature
   B. Low temperature     D. Moderate temperature

40. What factor affects the poultry meat’s tenderness and juiciness?
   A. Age                 C. Cuts
   B. Cookery             D. Sex

41. What is the flavor component of vegetables which gives strong flavor and odor to some vegetables like onions, leeks, garlic, chives, cabbage, and broccoli?
   A. Flavonoids          C. Sugar
   C. Glutamic acid       D. Sulfur compounds

42. What is a way of cooking by placing blanched or raw vegetables in the pan, adding liquid (stock, water, wine) then covering and cooking it slowly.
   A. Boiling             C. Braising
   B. Baking              D. Sautéing
43. Which of the following plating styles is not a classic arrangement?
   A. Starch or vegetable item is heaped in the center while the main item is sliced and lean up against it.
   B. The main item is in the center, with vegetable distributed around it.
   C. The vegetable item is in the rear and main item, starch item and garnish at the front.
   D. The main item is in the center with neat piles of vegetables carefully arranged around.

44. Which of the following vegetables is cooked uncovered?
   A. Fruit vegetables
   B. Green vegetables
   C. Roots and tubers
   D. Yellow vegetables

45. Which of the following is a freshwater fish?
   A. Bluefish
   B. Cat fish
   C. Grouper
   D. Sole

46. Which is the market form of fish where both sides of a fish is still joined but bones are removed?
   A. Butterfly
   B. Drawn
   C. Fillet
   D. Steak

47. Which of the following is a characteristic of a fresh fish?
   A. With fresh and foul odor
   B. Eyes are dull, shiny and bulging
   C. Gills are red or pink
   D. Flesh shrink when pressed

48. Which of the following seafood is cooked just enough to heat to keep juicy and plump?
   A. Fat fish
   B. Lean fish
   C. Flat fish
   D. Shellfish

49. Which of the following is a cooking method suited to fat fish?
   A. Baking
   B. Boiling
   C. Deep-frying
   D. Sautéing

50. What is used to baste lean fish to help prevent them from drying up.
   A. Butter
   B. Cream
   C. Soy sauce
   D. Tomato sauce
Personal Entrepreneurial Competencies (PECs)

<table>
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<th>Performance Standards</th>
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<td>The learner demonstrates understanding of one's PECs in <strong>Cookery</strong>.</td>
<td>The learner independently creates a plan of action that strengthens and or further develops his/her PECs in <strong>Cookery</strong></td>
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Quarter I

**Time Allotment:** 4 hours

**Module 1**

**Personal Entrepreneurial Competencies**

**Introduction**

In this module, you will learn more about entrepreneurship and the entrepreneurial competencies related to **Cookery**. You will have a first-hand experience in educational activities leading to personal assessment of your entrepreneurial competencies and assessment of entrepreneurial competencies of a successful **chef** within your area. You will also have some activities that will align your competencies those of successful practitioners. Moreover, this module will stimulate your mind to think about entrepreneurship and its role in the business community, as well as in the economic and social development.

To start with this module, let us first understand entrepreneurs and entrepreneurship.

Entrepreneurs are people with skills and capabilities to see and evaluate business opportunities. They are individuals that can strategically identify products or services needed by the community and they have the capacity to deliver these at the right time and at the right place.

Entrepreneurs are agents of economic change; they organize, manage and assume risks of a business. Some of the good qualities of an entrepreneur are opportunity seeker, risk taker, goal setter, excellent planner, a confident problem solver, hardworking, persistent, and a committed worker.
Entrepreneurship, on the other hand, is not just a simple business activity. It is a strategic process of innovation and new venture creation. Basically, entrepreneurship is both an art and science of converting business ideas into marketable products or services to improve the quality of living.

Now that you have a little background knowledge about entrepreneurs and entrepreneurship, can you now walk through in assessing your PECs? Always remember that “Successful entrepreneurs continuously develop and improve their PECs.”

To begin with, let us first try to find out the competencies you will master as you finish this module.

OBJECTIVES

At the end of this module, you are expected to:

- identify areas for improvement, development and growth;
- align your PECs according to your business or career choice; and
- create a plan of action that ensures success in your business or career choice.

Now that you have an idea about the knowledge and skill that you will develop and master, take the first challenge in this module – the pre-assessment.
PRE-ASSESSMENT

As part of your initial activity, you will be challenged to dig deeper on your knowledge and previous experiences on the topic. Try to diagnose or assess what you already know about PECs by answering Task 1.

Task 1: Matching Type

Direction: Match the entrepreneurial competencies in column A with their meaning in column B. Write the letter of the correct answer on the space provided before each number.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
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<tr>
<td>1. Creative</td>
<td>A. make a wise decision towards the set objectives</td>
</tr>
<tr>
<td>2. Profit-oriented</td>
<td>B. strategic thinking and setting of goals</td>
</tr>
<tr>
<td>3. Discipline</td>
<td>C. trust in one’s ability</td>
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<tr>
<td>4. Decision Making</td>
<td>D. adoptable to change</td>
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<tr>
<td>5. People Skill</td>
<td>E. innovative to have edge over other competitors</td>
</tr>
<tr>
<td>6. Planner</td>
<td>F. solid dedication</td>
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<tr>
<td>7. Self-confidence</td>
<td>G. skillful in record keeping</td>
</tr>
<tr>
<td>8. Hardworking</td>
<td>H. always stick to the plan</td>
</tr>
<tr>
<td>9. Ability to accept change</td>
<td>I. working diligently</td>
</tr>
<tr>
<td>10. Committed</td>
<td>J. effective and efficient communication and relation to people</td>
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<td></td>
<td>K. always looking for income</td>
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Task 2: Guide Questions

Direction: The following are guide questions which encapsulate the entire module. Write your answers on your assignment notebook, and then share these to the class.

A. Explain why entrepreneurial activities are important to social development and progress of the economy.

B. What entrepreneurial activities do you know and capable of doing which are related to Cookery?

C. Given the opportunity to own a business that relates with Cookery are you confident to manage it? Explain your answer.

D. What do you think are the most important competencies you must possess in order to be successful in running your chosen business?
E. Name successful entrepreneurs from your area whose business is related to **Cookery**. Be able to share to the class their PECs that made them successful.

After answering all the guide questions to the best of your knowledge and skills, share those with your classmates. You too, may compare your insights, personal knowledge, and relevant experiences on the topic to make it more exciting and engaging.

**LEARNING GOALS AND TARGET**

After understanding the objectives of this module, having gone through pre-assessment, and answering the guide questions, you will be asked to set your own personal goals. These goals will trigger you to further achieve the ultimate objective of this module. In the end, these goals will motivate you to learn more about PECs.

**READING RESOURCES AND INSTRUCTIONAL ACTIVITIES**

After setting your own personal goals and targets in achieving the objectives of this module, check your inherent knowledge of PECs. Answer the following guide questions with the help of your classmates.
Task 3: Group Activity

Direction: Answer the following guide questions on a separate sheet of paper. Share your answers to the class.

1. Explain the importance of assessing one’s PECs before engaging in a particular entrepreneurial activity.
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

2. Are there other strategies or approaches where you can assess your PECs? Explain how those strategies will become more useful in selecting a viable business venture.
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

3. What are the desirable personal characteristics, attributes, lifestyles, skills and traits of a prospective entrepreneur? Why are these important?
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

4. Why there is a need to assess one’s PECs in terms of characteristics, attributes, lifestyles, skills, and traits before starting a particular business?
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
5. What is the significance of evaluating PECs of a successful entrepreneur? What helpful insights can you draw from this activity?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

How was your experience in answering the guide questions with your classmates? Were you able to benefit from them? What were the insights you have realized?

This time you’re going to study the different topics that will enrich your knowledge of PECs. Read carefully all the important details about the succeeding topic.

Assessment of Personal Entrepreneurial Competencies (PECs) and Skills vis-à-vis a Practicing Entrepreneur or Employee in a Province

Entrepreneurial competencies refer to the important characteristics that should be possessed by an individual in order to perform entrepreneurial functions effectively. In this module, you will learn some of the most important characteristics, attributes, lifestyle, skills and traits of a successful entrepreneur in order to be successful in a chosen career.

Below are few important characteristics / traits / attributes of a good entrepreneur:

- Hardworking: One of the important characteristics of a good entrepreneur is hardworking. This means habitually working diligently for a long period of time. Hardworking people keep on improving their performance to produce good products and/or provide good services.
- **Self-confidence:** Entrepreneurs have confidence in one’s ability and own judgment. They exhibit self-confidence in order to cope with all the risks of operating their own business.

- **Discipline:** Successful entrepreneurs always stick on the plan and fight the temptation to do what is unimportant.

- **Committed:** A good entrepreneur accepts full responsibility of everything in his/her business. He/she gives full commitment and solid dedication to make the business successful.

- **Ability to accept change:** Nothing is permanent but change. Change occurs frequently. When you own a business, you should cope-up and thrive on changes. Capitalize on positive changes to make your business grow.

- **Creative:** An entrepreneur should be creative and innovative to stay in the business and in order to have an edge over the other competitors.

- **Has the Initiative:** An entrepreneur takes the initiative. You must put yourself in a position where you are responsible for the failure or success of your business.

- **Profit-Oriented:** An entrepreneur enters into the world of business to generate profit or additional income. This shall become the bread and butter for you and for your family as well. Therefore, you must see to it that the business can generate income.

Listed below are the important skills of a successful entrepreneur:

- **Planner:** Planning is strategic thinking and setting of goals to achieve objectives by carefully maximizing all the available resources. A good entrepreneur develops and applies step-by-step plans to realize goals. A good entrepreneur knows that planning is an effective skill only when combined with action.

- **People Skills:** It’s a very important skill in order to be successful in any kind of business. People skills refer to effective and efficient communication and relation to people working in and out of your
business. In day-to-day business transactions, you need to deal with people. A well-developed people skill can spell out the difference between success and failure of the business.

- Decision Making: Successful entrepreneurs have the ability to think quickly, and to make a wise decision towards pre-determined set objectives. No one can deny that the ability to make wise decisions is an important skill that an entrepreneur should possess. Sound decision should spring out from given facts and information and should be towards the pre-determined objectives.

In order to firm up what you have learned and to have a better appreciation of the different entrepreneurial competencies, read the PECs checklist presented below, then answer the same.

**Task 4: PECs Checklist**

**Directions:** Using the PECs checklist, assess yourself by indicating a check (/) mark in either strengths or development areas column. Interpret the results by counting the total number of check marks in each of the columns. After accomplishing the checklist, form a group and share your insights and experiences why you came up with that personal assessment.
Table 1: PECs Checklist

<table>
<thead>
<tr>
<th>Personal Entrepreneurial Competencies of an Entrepreneur</th>
<th>Personal Assessment in terms of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strengths</td>
</tr>
<tr>
<td>Hardworking</td>
<td></td>
</tr>
<tr>
<td>- Working diligently</td>
<td></td>
</tr>
<tr>
<td>Self-confidence</td>
<td></td>
</tr>
<tr>
<td>- Confidence in one’s ability</td>
<td></td>
</tr>
<tr>
<td>Discipline</td>
<td></td>
</tr>
<tr>
<td>- Always stick to the plan</td>
<td></td>
</tr>
<tr>
<td>Committed</td>
<td></td>
</tr>
<tr>
<td>- Solid dedication</td>
<td></td>
</tr>
<tr>
<td>Ability to accept changes</td>
<td></td>
</tr>
<tr>
<td>- Adoptable to change</td>
<td></td>
</tr>
<tr>
<td>Creative</td>
<td></td>
</tr>
<tr>
<td>- Innovative to have edge over other competitors</td>
<td></td>
</tr>
<tr>
<td>Profit-oriented</td>
<td></td>
</tr>
<tr>
<td>- Always looking for income</td>
<td></td>
</tr>
<tr>
<td>Planner</td>
<td></td>
</tr>
<tr>
<td>- Strategic thinking and setting of goals</td>
<td></td>
</tr>
<tr>
<td>People Skill</td>
<td></td>
</tr>
<tr>
<td>- effective and efficient communication and relation to people</td>
<td></td>
</tr>
<tr>
<td>Decision Making</td>
<td></td>
</tr>
<tr>
<td>- make a wise decision towards the set objectives</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
</tr>
</tbody>
</table>
How was your experience in discovering your strengths and the areas to be developed? Did you gain valuable experience in exchanging insights with your classmates? To learn more and deepen your understanding of PECs, do Task 5 below.

**Task 5: Interview**

Interview a successful chef or entrepreneur in your area whose type of business is related with Cookery. Focus your interview on PECs and other business-related attributes that helped them become successful. Analyze the result of the interview and reflect on the similarities and/or differences. Write your answer on a separate sheet of paper.

**Sample Interview Guide**

Name of Proprietor/Practitioner: __________________________________________
Age: _______________ Number of Years in Business: __________________
Business Name: _______________________________________________________
Business Address: _____________________________________________________

1. What are your preparations before you engaged in this type of business or job?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Reflect and Understand

How was your experience in discovering your strengths and the areas to be developed? Did you gain valuable experience in exchanging insights with your classmates? To learn more and deepen your understanding of PECs, do Task 5 below.
2. What are your special skills and characteristics that are related with your business or job?

________________________________________________________________________

________________________________________________________________________

3. How did you solve business-related problems during the early years of your business operation?

________________________________________________________________________

________________________________________________________________________

4. Did you follow the tips from a successful businessman or practitioner before you engage in your business?

________________________________________________________________________

________________________________________________________________________

5. What are your best business practices that you can share with aspiring students?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

6. What are the salient characteristics, attributes, lifestyle, skills and traits that made you successful in your business or job?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Note: Cull the needed information from the interview to supply answer/s to Row 1 in the table below. Meanwhile, fill out the second row with your PECs.
Using the information on the table above, analyze and reflect on the similarities and differences in your answers. Put your reflection on the table below. Write your conclusion on the space provided.

<table>
<thead>
<tr>
<th>Personal Entrepreneurial Competencies</th>
<th>Characteristics</th>
<th>Attributes</th>
<th>Lifestyles</th>
<th>Skills</th>
<th>Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful Entrepreneur in the place</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My PECs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusion:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________.
After performing the activities on the importance of PECs, let’s determine how much you have learned. Perform Task 6 to determine how well you have understood the lesson.

**Task 6: Preparation of a Plan of Action**

**Directions:** Using the table below and the information generated from Task 5 (Interview), prepare an action plan that indicates how you would align your PECs to the PECs of a successful entrepreneur in Cookery in your place.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Area</th>
<th>Activities</th>
<th>Strategies</th>
<th>Time Frame</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>To align my PECs with the PECs of a successful entrepreneur in Cookery.</td>
<td>Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attribute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Traits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Task 7: Essential Questions

**Directions:** Read and study the following questions below. You may use a separate sheet of paper or your notebook to write your answers.

1. Why is there a need to compare and align one’s PECs with the PECs of a successful entrepreneur?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. How does your action plan help sustain your strong PECs and/or address your development areas?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. What plan of action would you prepare to address your development areas?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
ENVIRONMENT AND MARKET(EM)

<table>
<thead>
<tr>
<th>Content Standards</th>
<th>Performance Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner demonstrates understanding of environment and market in <strong>Cookery</strong> in one’s area.</td>
<td>The learner independently creates a business vicinity map reflective of potential market in <strong>Cookery</strong> in a province.</td>
</tr>
</tbody>
</table>

Quarter I

Time Allotment: 4 hours

Module 2

Environment and Market

Introduction

People who aspire to start a business need to explore the economic, cultural and social conditions prevailing in an area. Needs and wants of the people in a certain area that are not met may be considered as business opportunities. Identifying the needs of the community, its resources, available raw materials, skills, and appropriate technology can help a new entrepreneur in seizing a business opportunity.

To be successful in any kind of business venture, potential entrepreneurs should always look closely at the environment and market. They should always be watchful on the existing opportunities and constraints. The opportunities in the business environment are those factors that provide possibilities for a business to expand and make more profits. Constraints, on the other hand, are that factor that limit the business to grow, hence reduces the chance of generating profit. One of the best ways to evaluate the opportunities and constraints is to conduct SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis.

SWOT Analysis is a managerial tool to assess the environment. This gathers important information which in turn is used in strategic planning. Strengths and weaknesses are internal in an organization. Basically, they relate to resources owned by the organization, by the things that you have control over, and as well as to the extent of its marketing.
Opportunities and threats exist in the external environment. Opportunities relate to the market, to the development of new technologies, and external factors such as government policies, climate, and trends. Threats relate to what the competition is doing, as well as legal and other constraints.

Now that you have read some important considerations to look into to be successful in any business, you are now ready to explore more about the environment and market.

To begin with, let’s find out the competencies that you will master as you finish this module.

OBJECTIVES

At the end of this module, you are expected to:

- identify what is of “value” to the customer;
- identify the customer to sell to;
- explain what makes a product unique and competitive;
- apply creativity and innovative techniques to develop marketable product; and
- employ a unique selling proposition (USP) to the product and/or service.

Now that you have an idea about the things you will learn, take the first challenge in this module – the pre-assessment.
PRE-ASSESSMENT

Task 1: Multiple-Choice

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

1. This is generated by examining the goods and services sold in the community.
   A. business creation  C. business concept
   B. business pricing  D. business idea

2. A process of making a new product to be sold to the customers.
   A. product analysis  C. product development
   B. product conceptualization  D. product implementation

3. These are luxuries, advantages and desires that every individual considers beyond necessity.
   A. wants  C. requirements
   B. desires  D. needs

4. This is the factor or consideration presented by a seller as the reason that one product or service is different from and better than that of the competition.
   A. unique selling plan  C. unique pricing policy
   B. unique selling proposition  D. finding value-added

5. In this stage, the needs of the target market are identified, reviewed and evaluated.
   A. concept development  C. project development
   B. economic analysis  D. refine specification

6. This is the introduction of new ideas to make the product and services more attractive and saleable to the target customers.
   A. new idea  C. product development
   B. creativity  D. innovation

7. A managerial tool used to assess the environment and to gather important information that can be used for strategic planning.
   A. environmental scanning  C. WOTS Analysis
   B. SWOT Analysis  D. survey analysis

8. A marketing practice of creating name, symbol or design that identifies and differentiate a product from the other products.
   A. product naming  C. branding
   B. unique selling proposition  D. tagline

9. This is a meaningful and unforgettable statement that captures the essence of the brand.
   A. product naming  C. branding
   B. unique selling proposition  D. tagline
10. These are the things that people cannot live without in a society.
   A. wants               C. requirements
   B. desires             D. needs

**Task 2: Guide Questions:**

**Directions:** Read and study the guide questions below. Use a separate sheet of paper to write your answer.

1. How does one determine the product or services to be produced and or to be offered or delivered to the target customers?

2. How does one select an entrepreneurial activity?

3. When can one say that a certain product has a “value”?

4. Are innovation and creativity to your product or services important? Why?

5. How can one effectively respond to the needs of the target customer?

6. Express from the viewpoint of business owner the importance of scanning the environment and market in generating business ideas.
7. Using self-assessment, explain your level of confidence in formulating a business idea.

________________________________________________________

________________________________________________________

_____________________________________________________

After all the guide questions have been answered and skills have been mastered, share those with your classmates. Discuss your insights, personal knowledge, and relevant experiences on the topic to make it more exciting and engaging.

LEARNING GOALS AND TARGET

After reading and understanding the objectives of this module and having gone through the pre-assessment and guide questions, you will be asked to set your own personal goals. These goals will trigger you to further achieve the ultimate objective of this module. In the end, these goals will motivate you to learn more about Environment and Market.

READING RESOURCES AND INSTRUCTIONAL ACTIVITIES

After setting your own personal goals and targets in achieving the objectives of this module, you will have the opportunity to read and learn more about environment and market. You will also be given a chance to do practical exercises and activities to deepen your understanding of the topic.
Product Development

When we talk of product development, we are referring to a process of making a new product to be sold by a business or enterprise to its customers. The product development may involve modification of an existing product or its presentation, or formulation of an entirely new product that satisfies a newly defined customer’s needs, wants and/or a market place.

The term development in this module refers collectively to the entire process of identifying a market opportunity, creating a product to appeal to the identified market, and finally, testing, modifying and refining the product until it becomes ready for production.

There are basic, yet vital questions that you can ask yourself about product development. When you find acceptable answers to these, you may now say that you are ready to develop a product and/or render services:

1. For whom are the product services aimed at?
2. What benefits will the customers expect from it?
3. How will the product differ from the existing brand? From its competitor?

Likewise, needs and wants of the people within an area should also be taken into big consideration. Everyone has his/her own needs and wants. However, everyone has different concepts of needs and wants. Needs in business are important things that every individual cannot live without in a society. These include:

1. basic commodities for consumption;
2. clothing and other personal belongings;
3. shelter, sanitation and health; and
4. education.

Basic needs are essential to an individual to live with dignity and pride in a community. These needs can obviously help you generate business ideas and subsequently to product development.
Wants are desires, luxury and extravagance that signify wealth and expensive way of living. Wants or desires are considered above all the basic necessities of life. Some examples of wants or desires: fashion accessories, expensive shoes and clothes, travelling around the world, eating in an expensive restaurant; watching movies, concerts, having luxurious cars, wearing expensive jewelries, perfume, living in impressive homes, among others.

Needs and wants of people are the basic indicators of the kind of business that you may engage into because it can serve as the measure of your success. Some other good points that might be considered in business undertakings are the kind of people, their needs, wants, lifestyle, culture and tradition, and social orientation that they belong to.

To summarize, product development entirely depends on the needs and wants of the customers. Another important issue to deal with is the key concepts of developing a product. The succeeding topic will enlighten you about the procedure in coming up with a product.

**Concepts of Developing a Product**

Concept development is a critical phase in the development of a product. In this stage, the needs of the target market are identified and competitive products are reviewed before the product specifications are defined. The product concept is selected along with an economic analysis to come up with an outline of how a product is being developed. Below is a figure that shows the stages of concept development of a product.
The process of product development follows the following steps:

**A. Identify Customer Needs:** Using survey forms, interviews, researches, focus group discussions, and observations, an entrepreneur can easily identify customers’ needs and wants. In this stage, the information that can be possibly gathered are product specifications (performance, taste, size, color, shape, life span of the product, etc.). This stage is very important because this would determine the product to be produced or provided.

**B. Establish Target Specifications:** Based on customers' needs and reviews of competitive products, you may now establish target specifications of the prospective new product and/or services. Target specifications are essentially a wish-list.
C. Analyze Competitive Products: It is imperative to analyze existing competitive products to provide important information in establishing product or services specifications. Other products may exhibit successful design attributes that should be emulated or improved upon in the new product or services.

D. Generate Product Concepts: After having gone through with the previous processes, you may now develop a number of product concepts to illustrate what types of product or services are both technically feasible and would best meet the requirements of the target specifications.

E. Select a Product Concept: Through the process of evaluation between attributes, a final concept is selected. After the final selection, additional market research can be applied to obtain feedback from certain key customers.

F. Refine Product Specifications: In this stage, product or services specifications are refined on the basis of input from the foregoing activities. Final specification as the results of extensive study, expected service life, projected selling price and among others are being considered in this stage.

G. Perform Economic Analysis: Throughout the process of product development, it is very important to always review and estimate the economic implications regarding development expenses, manufacturing costs, and selling price of the product or services to be offered or provided.

H. Plan the Remaining Development Project: In this final stage of concept development, you may prepare a detailed development plan which includes list of activities, the necessary resources and expenses, and development schedule with milestones for tracking progress.
Finding Value

People buy for a reason. There should be something in your product or service that would give consumers a good reason to go back and buy for more. There must be something that has to make you the best option for your target customers; otherwise they have no reason to buy what you’re selling. This implies further, that you offer something to your customers that they will make them value or treasure your product or service.

The value that you incorporate to your product is called value proposition. Value proposition is “a believable collection of the most persuasive reasons people should notice you and take the action you’re asking for.” Value is created by fulfilling deep desires and solving deep problems. This is what gets people moving, what people get spending for your product or service.

Innovation

Innovation is the introduction of something new in your product or service. This may be a new idea, a new method or a device. If you want to increase your sales and profit, you must innovate. Some of the possible innovations in your products are change of packaging, improve taste, color, size, shape and perhaps price. Some of the possible innovations in providing services are application of new improved methods, additional featured services and possibly freebees.

Unique Selling Proposition (USP)

Unique Selling Proposition is the factor or consideration presented by a seller as the reason that one product or service is different from and better than that of the competitions. Before you can begin to sell your product or service to your target customers, you have to sell yourself on it. This is especially important when your product or service is similar to those around you.

USP would require careful analysis of other businesses’ ads and marketing messages. If you analyze what they say or what they sell, not just their product or service characteristics, you can learn a great deal about how companies distinguish themselves from competitors.
Here’s how to discover your USP and use it to increase your sales and profit:

- **Use empathy:** Put yourself in the shoes of your customers. Always focus on the needs of the target customers and forget falling in love with your own product or service. Always remember, you are making this product or providing for the target customers to eventually increase sales and earn profit and not making this product or service for you. Essential question such as what could make them come back again and ignore competition should be asked to oneself. Most possible answers may be focused on quality, availability, convenience, cleanliness, and reliability of the product or service.

- **Identify what motivates your customers.** It is very important for you to understand and find out what drives and motivates your customers to buy your product or service. Make some efforts to find out, analyze and utilize the information that motivates the customers in their decisions to purchase the product or service.

- **Discover the actual and genuine reasons why customers buy your product instead of a competitor's.** Information is very important in decision making. A competitive entrepreneur always improve this products or services to provide satisfaction and of course retention of customers. As your business grows, you should always consider the process of asking your customers important information and questions that you can use to improve your product or service.
In order to firm up your understanding of the topic previously presented, you will be tasked to form a group and conduct an interview with a successful entrepreneur or practitioner. You have to document this interview and present this to the whole class for reflection and appreciation.

Task 3: Interview

Directions: Select a successful entrepreneur or practitioner. Conduct an interview using the set of questions below. Document the interview and present this to the class.

1. How did you identify your customers?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. What were your considerations in selecting your customers?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Explain how your product or service becomes unique compared to other products.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Did you consult somebody before you engage in this business? Cite sample insights that you gained from the consultation.
   __________________________________________________________
   __________________________________________________________
5. What were your preparations before you started the actual business?
____________________________________________________
______________________________________________________

6. What creative and innovative techniques did you adopt to your product or service? What was the effect of the innovative techniques to the sales and profits of your business?
____________________________________________________
______________________________________________________

7. What strategy did you consider to have a unique selling proposition to your product or service?
____________________________________________________
______________________________________________________

Reflect and Understand

Task 4: Video Viewing

In order to deepen your understanding of the lesson, perform the following tasks:

1. Browse the internet and view the topics related to:
   a. customers' needs and wants
   b. techniques in identifying customers’ needs and wants
   c. creativity or innovations in products and services
   d. unique selling proposition
   e. product development

2. Prepare a short narrative report about the aforementioned topics. You may highlight the “aspect” that increases your knowledge of product development.
Task 5: Product Conceptualization

Direction: Using the space and figures below, develop your own concept for your product or service. Utilize bullets in every stage of product conceptualization in listing important key ideas.
Generating Ideas for Business

The process of developing and generating business idea is not a simple process. Some people just come with a bunch of business ideas but are not really feasible. There are two problems that arise; first is the excessive generation of ideas that can forever remain in the dreaming stage and the second is when they don't have ideas and don't want to become entrepreneurs.

The most optimal way is to have a systematic approach in generating and selecting business idea that will be transferred in real business. Here are some basic yet very important considerations that may be used to generate possible ideas for business:

1. Examine existing goods and services. Are you satisfied with the product? What do other people who use the product say about it? How can it be improved? There are many ways of improving a product from the way it is made to the way it is packed and sold. You can also improve the materials used in crafting the product. In addition, you can introduce new ways of using the product, making it more useful and adaptable to the customers’ many needs. When you are improving the product or enhancing it, you are doing an innovation. You can also do an invention by introducing an entirely new product to replace the old one.

Business ideas may also be generated by examining what goods and services are sold outside of the community. Very often, these products are sold in a form that can still be enhanced or improved.

2. Examine the present and future needs. Look and listen to what the customers, institutions, and communities are missing in terms of goods and services. Sometimes, these needs are already obvious and felt at the moment. Other needs are not that obvious because they can only be felt in the future, in the event of certain developments in the community. For example, an area will have its electrification facility in the next six months. Only by that time will the entrepreneur could think of electrically-powered
or generated business such as photo copier, computer service, digital printing, etc.

3. Examine how the needs are being satisfied. Needs for the products and services are referred to as market demand. To satisfy these needs is to supply the products and services that meet the demands of the market. The term market refers to whoever will use or buy the products or services, and these may be people or institutions such as other businesses, establishments, organizations, or government agencies.

There is a very good business opportunity when there is absolutely no supply to a pressing market demand.

Businesses or industries in the locality also have needs for goods and services. Their needs for raw materials, maintenance, and other services such as selling and distribution are good sources of ideas for business.

4. Examine the available resources around you. Observe what materials or skills are available in abundance in your area. A business can be started out of available raw materials by selling them in raw form and by processing and manufacturing them into finished products. For example, in a copra-producing town, there will be many coconut husks and shells available as “waste” products. These can be collected and made into coco rags or doormat and charcoal bricks and sold profitably outside the community.

A group of people in your neighborhood may have some special skills that can be harnessed for business. For example, women in the Mountain Province possess loom weaving skills that have been passed on from one generation to another. Some communities there set up weaving businesses to produce blankets, decorative and various souvenir items for sale to tourists and lowland communities.

Business ideas can come from your own skills. The work and experience you may have in agricultural arts, industrial arts, home economics, and ICT classes will provide you with business opportunities to acquire the needed skills which will give you extra income, should you decide to engage in income-generating activities. With your skills, you may also tinker around with various things in your spare time. Many products were invented this way.
5. Read magazines, news articles, and other publications on new products and techniques or advances in technology. You can pick up new business ideas from Newsweek, Reader’s Digest, Business Magazines, “Go Negosyo”, KAB materials, and Small-Industry Journal. The Internet also serves as a library where you may browse and surf on possible businesses. It will also guide you on how to put the right product in the right place, at the right price, at the right time.

**Key Concepts of Selecting a Business Idea**

Once you have embarked on identifying business opportunities, you will eventually see that there are many possibilities that are available for you. It is very unlikely that you will have enough resources to pursue all of them at once.

You have to select the most promising one among hundreds of ideas. It will be good to do this in stages. In the first stage, you screen your ideas to narrow them down to about few choices. In the next stage, trim down the choices to two options. In the final stage, choose between the two and decide which business idea is worth pursuing.

In screening your ideas, examine each one in terms of the following factors:

1. How much capital is needed to put up the business?
2. How big is the demand for the product? Do many people need this product and will continue to need it for a long time?
3. How is the demand met? Who are processing the products to meet the needs (competition or demand)? How much of the need is now being met (supply)?
4. Do you have the background and experiences needed to run this particular business?
5. Will the business be legal, not going against any existing or foreseeable government regulation?
6. Is the business in line with your interest and expertise?

Your answers to these questions will be helpful in screening which ones among your many ideas are worth examining further and worth pursuing.
Branding

Branding is a marketing practice of creating name, symbol or designs that identifies and differentiates product or services from the rest. It is also a promise to your customers. It tells them what they can expect from your product or service and it differentiates your offerings from other competitors. Your brand is derived from who you are, who you want to be and what people perceive you to be.

Branding is one of the most important aspects of any business. An effective brand strategy gives you a major edge in increasingly competitive markets.

The features of a good product brand are as follows:
- Delivers the message clearly
- Confirms your credibility
- Connects your target prospects emotionally
- Motivates the buyer
- Concretizes user loyalty

Here are some simple tips to publicize your brand:

- Develop a tagline. Write a meaningful, unforgettable, and easy to remember statement that captures the essence of your brand.
- Get a great logo. Create a logo suitable to your business and consistent with your tagline and place it everywhere.
- Write down your brand messaging. Select key messages you want to communicate about your brand.
- Be true to your brand. Deliver your brand promise.
- Be consistent. Be reliable and consistent every time.
In generating business idea, you should first identify what type of business is suited to your business idea. You should analyze and scan the potential environment, study the marketing practices and strategies of your competitors, analyze the strengths, weaknesses, opportunities, and the threats in your environment to ensure that the products or services you are planning to offer will be patronized within the easy reach by your target consumers.

Bear in mind these simple rules for successful SWOT Analysis:

- Be realistic about the strengths and weaknesses of your business when conducting SWOT Analysis.
- SWOT Analysis should distinguish between where your business is today, and where it could be in the future.
- SWOT Analysis should always be specific. Avoid any grey area.
- Always apply SWOT Analysis in relation to your competition’ i.e. better than or worse than your competitions.
- Keep your SWOT Analysis short and simple. Avoid complexity and over analysis.
- SWOT Analysis is subjective.
Task 6: SWOT Analysis

**Directions:** Utilize the SWOT Analysis table below to list up all your observations. Be guided by the strategies in analyzing and formulating realistic and attainable activities. Write down the activities on the available spaces provided to create the best business idea.

<table>
<thead>
<tr>
<th>Strength (S)</th>
<th>Weaknesses (W)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (O)</th>
<th>Threats (T)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Strategies:**

- **SW** - Maximize on the strengths to overcome the internal weakness.
- **OW** - Capitalize on the opportunities to eliminate the internal weakness.
- **ST** - Maximize on your strengths to eliminate the external threats.
- **OT** - Take advantage of the available opportunities to eliminate the external threats.
Analysis:

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Activities:

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

My Best Business Idea:

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Reflect and Understand

In order to deepen your understanding of the topics previously discussed, you will be asked to perform the following activities:
Task 7: Extra Readings and Video Viewing

Reading books and watching videos have been considered as one of the most effective educational activities that can help learners deepen their understanding on a certain topic. In this particular task, you will be asked to conduct extra readings and video viewings in the Internet on the following topics:

A. Steps in Selecting Business Idea
B. Criteria of a Viable Business Idea
C. Benefits of a Good Brand
D. Ways on Developing a Brand

After successfully performing the assigned task, make a narrative report about it and share it to the class.

Task 9: Making My Own Logo

Direction: Generate a clear and appealing product brand with a logo and a tagline.

Logo
QUARTER I
Prepare Egg, Cereal, and Starch Dishes

Overview

This quarter will provide you learners the essential knowledge and opportunities to develop your skills and gained understanding in the preparation, cooking, presentation, and storing egg, cereal, and starch dishes. You will be able to know the needed tools and equipment and learn how to clean and sanitize them after each use. Differentiated activities and hands-on activities were given to give you opportunities to transfer what you have learned.

Objectives

At the end of the lesson, you are expected to:
1. perform Mise’en place;
2. prepare and cook egg, cereal and starch dishes;
3. present egg, cereal and starch dishes; and
4. store egg, cereal and starch dishes.

Let’s See What You Know

Pretest 1

A. Multiple Choice.

Directions: Read each question carefully. Choose the letter which corresponds to the correct answer and write it in your test notebook.

1. It is a small hand tool used generally in decorative works such as making garnishes.
   A. bread knife  
   B. butcher knife  
   C. channel knife  
   D. paring knife
2. It is a perforated bowl of varying sizes made of stainless steel, aluminum or plastic used to drain, wash or cook ingredients from liquid.
   A. Canister  C. Mixing bowl
   B. Colander   D. Soup bowl

3. It is used for turning and lifting eggs, pan cakes and meats on griddles, grills, sheet pans, and the likes and also used to scrape and clean griddles.
   A. Measuring spoon  C. Rubber scraper
   B. Offset spatula    D. Wooden spoon

4. It is used to scrape off all the contents of bowls and pans from the sides and fold in beaten eggs in batter or whipped cream.
   A. Paring knife     C. Wire whisk
   B. Rubber spatula   D. Wooden spoon

5. It is a screen – type mesh supported by a round metal frame used for sifting dry ingredients like starch and flour.
   A. Colander        C. Sieve
   B. Funnel          D. Skimmer

6. It is a device with loops of stainless steel wire fastened to a handle. It is used for blending, mixing, whipping eggs or batter, and for blending gravies, sauces, and soups.
   A. Fork            C. Spoon
   B. Knife           D. Whisk

7. It is a miniature Bain Marie with an upper dish containing indentations each sized to hold an egg or contains separate device for poaching.
   A. Egg Poacher    C. Frying pan
   B. Double boiler  D. Omelet pan

8. It is a chamber or compartment used for cooking, baking, heating, or drying.
   A. Blender        C. Mixer
   B. Burner         D. Oven

9. It is the process of washing and sanitizing dishes, glassware, flatware, and pots and pans either manually or mechanically.
   A. Bleaching      C. Ware washing
   B. Hand washing   D. Washing machine

10. It requires a dishwashing machine capable of washing, rinsing, and drying dishes, flatware, and glassware.
    A. Hand washing   C. Mechanical ware washing
    B. Manual ware washing D. Washing machine

11. It is the egg’s outer covering which accounts for about 9 to 12 % of its total weight depending on egg size.
    A. Chalaza        C. Shell
    B. Germinal disc  D. Yolk
12. This is the entrance of the latebra, the channel leading to the center of the yolk.
   A. Chalaza  
   B. Germinal disc  
   C. Shell  
   D. Yolk
13. It is the yellow to yellow-orange portion which makes up to about 33% of the liquid weight of the egg.
   A. Chalaza  
   B. Germinal disc  
   C. Shell  
   D. Yolk
14. A disease that is carried and transmitted to people by food is referred to as food borne ____________.
   A. Bacteria  
   B. Illness  
   C. Infection  
   D. Intoxication
15. It is a disease that results from eating food containing harmful microorganism.
   A. Food borne bacteria  
   B. Food borne illness  
   C. Food borne infection  
   D. Food borne intoxication
16. It is a disease that results from eating food containing toxins from bacteria, molds or certain plants or animals.
   A. Food borne bacteria  
   B. Food borne illness  
   C. Food borne infection  
   D. Food borne intoxication
17. It is used for mixing creams, butter and for tossing salads.
   A. Electric mixer  
   B. Serving spoon  
   C. Wire whisk  
   D. Wooden spoon
18. It is used for preparing meat, chicken, and other grains or legumes, such as mongo and white beans in lesser time.
   A. Double boiler  
   B. Frying pan  
   C. pressure cooker  
   D. rice cooker
19. It is a long chainlike molecule, sometimes called the linear fraction, and is produced by linking together 500 to 2,000 glucose molecules which contributes to the gelling characteristics to cooked and cooled starch mixtures.
   A. Amylopectin  
   B. Amylose  
   C. Dextrin  
   D. Mucin
20. This problem is usually encountered when using acid or acid ingredients such as lemon or vinegar.
   A. Scorching  
   B. Skin formation  
   C. Thinning of gel.  
   D. Weak gelling
21. This results when there is too much liquid in relation to the starch.
   A. Scorching  
   B. Skin formation  
   C. Thinning of gel.  
   D. Weak gelling
22. This problem can be reduced by covering the container of the starch gel with a waterproof cover.
   A. Scorching
   B. Skin formation
   C. Thinning of gel.
   D. Weak gelling

23. This can be avoided by temperature control and constant stirring so the starch granules do not settle at the bottom of the cooking pan.
   A. Scorching
   B. Skin formation
   C. Thinning of Gel.
   D. Weak gelling

24. It can be stored in the refrigerator for 2 or 3 days.
   A. Cooked pasta
   B. Dried pasta
   C. Fresh pasta
   D. Frozen pasta

25. FIFO stands for ___________
   A. Fan In Fan On
   B. First In Fight Out
   C. First In First Out
   D. Fit In Fit Out

B. Give one risk in the preparation and cooking of starch, cereal dishes and other foods, and give some guidelines pertaining to food safety.

Your answer will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Explains very clearly the complete guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
<tr>
<td>3</td>
<td>Explains clearly the complete guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
<tr>
<td>2</td>
<td>Explains partially the guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to explain any guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
</tbody>
</table>
Overview

In cookery, egg refers to poultry or fowl products. The versatility of eggs is evident in its presence in numerous food items. Eggs may be eaten cooked in its shell, fried or poached or may be combined with other ingredients to produce another dish. In baking, egg acts both as an emulsifier and leavener.

The egg’s protective coating or mucin layer which aids in the maintenance of its freshness by covering the small holes in the shell is called bloom. Bloom is removed during washing so it is not advisable to wash eggs prior to storage unless it is very dirty. Removal of the mucin layer will expose the holes making the egg susceptible to bacterial penetration and dehydration, thus hastening deterioration of its quality.

Eggs are produced commercially in farms with a few hundred laying chickens, or in large laying complexes with thousands of layers. Small and micro-sized backyard poultry either in small poultry cages or as free range chicken are also producing eggs. Egg is indeed a convenient food for any meal in and out of the house.

Learning Outcome 1 Perform Mise’en Place

At the end of the lesson, you are expected to:

1. identify tools, utensils and equipment needed in egg preparation;
2. clean, sanitize and prepare tools, utensils and equipment needed in preparing egg dishes;
3. identify egg components and its nutritive value; and
4. identify and prepare ingredients according to standard recipe.

In the preparation of egg dishes, the first consideration is to identify the needed tools and equipment and how to clean and sanitize them after each use.
Tools, Utensils and Equipment Needed In Egg Preparation

Kitchen Tools

1. Channel Knife – a small hand tool used generally in decorative works such as making garnishes.
2. Colander – a perforated bowl of varying sizes made of stainless steel, aluminum or plastic, used to drain, wash or cook ingredients from liquid.
3. Offset spatula – a broad – bladed implement bent to keep the hand off hot surfaces. It is used for turning and lifting eggs, pan cakes, and meats on griddles, grills, sheet pans, and the likes and also used to scrape and clean griddles.
4. Pastry Brush – a small implement used to brush the surface of unbaked pastries or cookies with egg white, egg yolk or glaze.
5. Rubber spatula or scraper – a broad flexible plastic or rubber scraper, that is rectangular in shape with a curve on one side. It is used to scrape off all the contents of bowls and pans from the sides and fold in beaten eggs in batter or whipped cream.
6. Sieve – a screen – type mesh supported by a round metal frame used for sifting dry ingredients like starch and flour.
7. Spoons: solid, slotted and perforated – large stainless spoons holding about 3 ounces used for mixing, stirring, and serving. Slotted and perforated spoons are large, long-handled spoons with holes in the bowl used to remove larger solid particles from liquids.
8. Wire whip or Whisk – a device with loops of stainless steel wire fastened to a handle. It is used for blending, mixing, whipping eggs or batter, and for blending gravies, sauces, and soups.

Kitchen Utensils

1. Egg Poacher – A miniature Bain Marie with an upper dish containing indentations each sized to hold an egg or contains separate device for poaching.
2. Omelet Pan – a heavy-based frying usually of cast iron or copper, with rounded sloping sides used exclusively for omelets and never washed after used but cleaned with absorbent paper.
3. Measuring cup- a kitchen utensil used for measuring liquid or bulk solid cooking ingredients such as flour and sugar
4. Measuring spoon- used to measure an amount of an ingredient, either liquid or dry, when cooking. Measuring spoons may be made of plastic, metal, and other materials.
5. Sauce pan- deep cooking pan with a handle used primarily for cooking sauce.
6. Mixing bowl - these containers have smooth, rounded interior surfaces with no creases to retain some mixture and is used for mixing ingredients.

**Kitchen Equipment**

1. Oven - a chamber or compartment used for cooking, baking, heating, or drying.
2. Electric mixer - A hand-held mixer which usually comes with various attachments including a whisk attachment for whisking cream, batters and egg whites, and sugar.
3. Refrigerator - a kitchen appliance where you store food at a cool temperature.

**Cleaning and Sanitizing Tools and Equipment**

A cleaning program that is an overall system should be prepared to organize all your cleaning and sanitizing tasks. The program should also help identify your cleaning needs, set up a master cleaning schedule, select the supplies and tools to use, and train yourselves to make the best of your skills.

Cleaning is the removal of visible soil while sanitizing means reducing the number of harmful microorganisms by using very hot water or a chemical sanitizing solution. To be effective, cleaning and sanitizing must be two-step process. Surfaces must first be cleaned and rinsed before being sanitized.

There are many cleaning products or agents and a variety of equipment in the market. Choose the best for your workplace and follow instructions in the label.

Here are some points to support your workplace training:

1. Clean in a logical order.
2. Different cleaning tasks require different methods. Getting things wrong can cause damage to surface, harm to yourself, and spread bacteria and dirt.
3. Many cleaning agents are harmful. Their contact with your skin or eyes or breathing in the fumes can cause a serious illness.
4. Mixing one agent with another can be very dangerous. A chemical reaction can be set up, or in some cases, produce poisonous fumes.
Ware washing

Ware washing is the process of washing and sanitizing dishes, glassware, flatware, and pots and pans either manually or mechanically. Manual ware washing uses a three-compartment sink and is used primarily for pots and pans. It may be used for dishes and flatware in small operations. Mechanical ware washing requires a dishwashing machine capable of washing, rinsing, and drying dishes, flatware, and glassware. In large operations, heavy-duty pot and pan washing machines have been designed to remove cooked-on food.

Manual Dishwashing
Procedure
1. Scrape and pre-rinse.
   The purpose of this step is to keep the wash water cleaner longer.
2. Wash.
   Use warm water at 110°F to 120°F and a good detergent. Scrub well with a brush to remove all traces of leftover and grease.
3. Rinse.
   Use clean warm water to rinse off detergent. Change the water frequently, or use running water with an overflow.
4. Sanitize.
   Place utensils in rack and immerse in hot water at 170°F for thirty seconds. (A gas or electric heating element is needed to hold water at this temperature.)
5. Drain and air-dry.
   Do not towel-dry. This may contaminate utensils.

Mechanical Dishwashing
The steps in washing dishes by machine are the same as in the manual methods. Except that the machine does the washing, rinsing, and sanitizing.

Procedure
1. Scrape and pre-rinse.
2. Rack dishes so that the dishwasher spray will strike all surfaces.
3. Run machine for a full cycle.
4. Set the sanitizing temperatures at 180°F for machine that sanitizes by heat and at 140°F for machine that sanitizes by chemical disinfectant.
5. Air-dry and inspect dishes. Do not touch food – contact surfaces.
Review of Learning Outcome 1

A. YES/NO Cards. Directions: Using a 4 x 6 inches Index Card, do the activity below:
   a. Write YES on one side and NO on the other side
   b. When the teacher shows you a kitchen tool, a kitchen utensil or equipment with label, raise the index card showing YES if the label is correct and NO if it is wrong.
   c. Do the same in the succeeding questions.

Performance Activity 1

B. Clean and sanitize tools and equipment by performing the given activity.
   You will be asked to clean and sanitize the tools and equipment in the food laboratory. Follow the procedures properly in performing the task.

Your performance will be rated using the scoring rubric below:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Follows correctly the procedures in cleaning and sanitizing tools and equipment and performs the skill without supervision and with initiative and adaptability to problem situations.</td>
</tr>
<tr>
<td>3</td>
<td>Follows correctly the procedures in cleaning and sanitizing tools and equipment and performs the skill satisfactorily without assistance or supervision.</td>
</tr>
<tr>
<td>2</td>
<td>Follows the procedures in cleaning and sanitizing tools and equipment with minor errors and performs the skill satisfactorily with some assistance and/or supervision.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to follow the procedures in cleaning and sanitizing tools and equipment and performs the skill unsatisfactorily.</td>
</tr>
</tbody>
</table>

After knowing the needed tools and equipment needed in the preparation of egg dishes and on how to clean and sanitize them after each use, the next consideration is to know what makes up an egg and appreciate other things about egg.
Physical Structure and Composition of Eggs

We normally distinguish 3 parts of an egg, the shell, the egg white, and the egg yolk, but a closer scrutiny reveals a much more detailed structure of an egg.

Structure

1. **Shell.** The egg’s outer covering, the shell, accounts for about 9 to 12% of its total weight depending on egg size. The shell is the egg's first line of defense against bacterial contamination.

2. **Air cell.** This is the empty space between the white and shell at the large end of the egg which is barely existent in newly laid egg. When an egg is first laid, it is warm. As it cools, the contents contract and the inner shell membrane separate from the outer shell membrane to form the air cell.

3. **Albumen/Egg white.** Albumen, also called egg white, accounts for most of an egg’s liquid weight, about 67%. This is produced by the oviduct and consists of four alternating layers of thick and thin consistencies. From the yolk outward, they are designated as the inner thick or *chalaziferous* white, the inner thin white, the outer thick white and the outer thin white. The outer thin white is a narrow fluid layer next to the shell membrane. The outer thick white is a gel that forms the center of the albumen. The inner thin white is a fluid layer located next to the yolk. The inner thick white (*chalasiferous* layer) is a dense, matted, fibrous capsule terminates on each end in the chalazae, which are twisted in opposite directions and serve to keep the yolk centered.
4. **Chalaza.** This is the ropey strands of egg white at both sides of the egg, which anchor the yolk in place in the center of the thick white. They are sometimes mistaken for egg imperfections or beginning embryos, which of course they are not. The twist in the chalaza is meant to keep the germinal disc always on top whichever way the egg may turn. The more prominent the chalazae the fresher is the egg.

5. **Germinal Disc.** This is the entrance of the *latebra*, the channel leading to the center of the yolk. The germinal disc is barely noticeable as a slight depression on the surface of the yolk. When the egg is fertilized, sperm enter by way of the germinal disc, travel to the center and a chick embryo starts to form. Since table eggs are not fertilized, this is not as easy to recognize as when the egg is fertilized.

6. **Membranes.** There are two kinds of membranes, one just under the shell and the other covering the yolk. These are the shell membrane and the *vitelline* membrane. Just inside the shell are two shell membranes, inner and outer. The air cell formed due to the contraction of egg as it cools, is found between the two layers of this shell membrane. The outer membrane sticks to the shell while the inner membrane sticks to the albumen. During storage, the egg losses water by evaporation, causing the air cell to enlarge. The *vitelline* membrane is the covering that protects the yolk from breaking. The *vitelline* membrane is weakest at the germinal disc and tends to become more fragile as the egg ages. Every cook has experienced that the yolk of eggs that are no longer fresh easily break.

7. **Yolk.** The yolk or the yellow to yellow-orange portion makes up about 33% of the liquid weight of the egg. The egg yolk is formed in the ovary. On the surface of the yolk, there is a small white spot about 2 mm in diameter. This is the germinal disc and it is present even if the egg is infertile. In infertile eggs, the germinal disc contains the genetic material from the hen only but when fertilized, it contains the zygote that will eventually develop into a chick. The yolk material serves as a food source for embryonic development. It contains all the fat in the egg and a little less than half of the protein. The main protein in the egg yolk is *vitelline*, a lipoprotein. It also contains *phosvitin* which is high in phosphorus and has antioxidant properties, and *livetin* which is high in sulfur.
Composition of an Egg

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>% Water</th>
<th>% Protein</th>
<th>% Fat</th>
<th>% Ash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Egg</td>
<td>100</td>
<td>65.5</td>
<td>11.8</td>
<td>11.0</td>
<td>11.7</td>
</tr>
<tr>
<td>Albumen</td>
<td>58</td>
<td>88</td>
<td>11.0</td>
<td>0.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Yolk</td>
<td>31</td>
<td>48</td>
<td>17.5</td>
<td>32.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Nutritive Value of Egg

Egg is indeed one of nature’s complete food. It contains high quality protein with all the essential amino acids, all of the vitamins except vitamin C, and many minerals. Egg products are particularly good for fortifying food low in protein quality. Except for mother’s milk, eggs provide the best protein naturally available. Egg protein is often used as a reference standard for biological values of their proteins.

Egg Nutrient Chart

Nutrient Content of a Large Egg

<table>
<thead>
<tr>
<th>Nutrient (unit)</th>
<th>Whole Egg</th>
<th>Egg White</th>
<th>Egg Yolk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories (kcal)</td>
<td>72</td>
<td>17</td>
<td>55</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>6.3</td>
<td>3.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Carbohydrate (g)</td>
<td>0.36</td>
<td>0.24</td>
<td>0.61</td>
</tr>
<tr>
<td>Carbohydrate (g)</td>
<td>0.36</td>
<td>0.24</td>
<td>0.61</td>
</tr>
<tr>
<td>Total fat (g)</td>
<td>4.8</td>
<td>0.06</td>
<td>4.5</td>
</tr>
<tr>
<td>Monounsaturated fat (g)</td>
<td>1.8</td>
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<td>2</td>
</tr>
<tr>
<td>Polyunsaturated fat (g)</td>
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<td>0</td>
<td>0.72</td>
</tr>
<tr>
<td>Saturated fat (g)</td>
<td>1.6</td>
<td>0</td>
<td>1.6</td>
</tr>
<tr>
<td>Trans fat (g)</td>
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<td>0</td>
<td>0.02</td>
</tr>
<tr>
<td>Cholesterol (mg)</td>
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<td>184</td>
</tr>
<tr>
<td>Choline (mg)</td>
<td>126</td>
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<td>116</td>
</tr>
<tr>
<td>Riboflavin (mg)</td>
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<td>0.15</td>
<td>0.09</td>
</tr>
<tr>
<td>Vitamin B12 (mcg)</td>
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<td>0.03</td>
<td>0.33</td>
</tr>
<tr>
<td>Folate (mcg)</td>
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<td>25</td>
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<tr>
<td>Vitamin D (IU)</td>
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<td>37</td>
</tr>
<tr>
<td>Vitamin A (IU)</td>
<td>270</td>
<td>0</td>
<td>245</td>
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<tr>
<td>Vitamin B 6 (mg)</td>
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<td>0.06</td>
</tr>
<tr>
<td>Thiamin (mg)</td>
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<td>0</td>
<td>0.03</td>
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<tr>
<td>Vitamin E (mg)</td>
<td>0.5</td>
<td>0</td>
<td>0.44</td>
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<tr>
<td>Selenium (mcg)</td>
<td>15.4</td>
<td>6.6</td>
<td>9.5</td>
</tr>
<tr>
<td>Phosphorous (mg)</td>
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<td>5</td>
<td>66</td>
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<tr>
<td>Nutrient</td>
<td>Value A</td>
<td>Value B</td>
<td>Value C</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>0.88</td>
<td>0.03</td>
<td>0.46</td>
</tr>
<tr>
<td>Zinc (mg)</td>
<td>0.65</td>
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</tr>
<tr>
<td>Calcium (mg)</td>
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<td>22</td>
</tr>
<tr>
<td>Sodium (mg)</td>
<td>71</td>
<td>55</td>
<td>22</td>
</tr>
<tr>
<td>Potassium (mg)</td>
<td>69</td>
<td>54</td>
<td>19</td>
</tr>
<tr>
<td>Magnesium (mg)</td>
<td>6</td>
<td>4</td>
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</tr>
</tbody>
</table>


**Egg quality**

Egg quality has two general components: shell quality (exterior quality) and interior egg quality. Interior egg quality has direct bearing on the functional properties of eggs while shell quality has direct influence on microbiological quality.

**Egg Grading.** Grading is a form of quality control used to classify eggs for exterior and interior quality. In the Philippines, the grade designations are A, B, C, and D.

**Egg Size.** Several factors influence the size of the egg: breed, age of hen, weight, feed and environmental factors. Native chickens have much smaller eggs than commercial breeds. Some commercial breeds have bigger eggs than others. Of the same breed, new layers tend to have smaller eggs compared to older hens. Pullets that are significantly underweight at sexual maturity will also produce small eggs. Better fed hens lay larger eggs than underfed ones. The environmental factors that lead to smaller eggs are heat, stress and overcrowding.

The egg sizes are Jumbo, Extra Large, Large, Medium, Small and Peewee. Medium, Large, and Extra Large are the sizes commonly available.

### Egg Size Classification

<table>
<thead>
<tr>
<th>Size</th>
<th>Jumbo</th>
<th>Extra Large</th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
<th>Peewee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight of 12 eggs in grams</td>
<td>840</td>
<td>756</td>
<td>672</td>
<td>588</td>
<td>504</td>
<td>420</td>
</tr>
<tr>
<td>Average weight per egg in grams</td>
<td>70</td>
<td>63</td>
<td>56</td>
<td>49</td>
<td>42</td>
<td>35</td>
</tr>
</tbody>
</table>
The appearance of the egg, as influenced by severity of defects, is important for consumer appeal. Egg shells are evaluated on the basis of cleanliness, shape, texture, and soundness.

The unit for describing egg freshness, based on the thickness of the albumen is called Haugh unit with a symbol of HU named before Raymond Haugh in 1937.

<table>
<thead>
<tr>
<th>Quality Factor</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell</td>
<td>Clean Unbroken Normal shape</td>
<td>Clean Unbroken Normal shape</td>
<td>Moderately stained Unbroken Slightly abnormal shape</td>
<td>Moderately stained Unbroken May be abnormal shape</td>
</tr>
<tr>
<td>Air Cell</td>
<td>Depth of 0.3cm or less Practically regular</td>
<td>Depth of 0.5cm or less Practically regular</td>
<td>Depth of 1.0 cm or less May be loose or bubbly</td>
<td>Depth of 1cm May be loose or bubbly</td>
</tr>
<tr>
<td>Egg White</td>
<td>Clear Firm 72 Haigh units or higher</td>
<td>Clear Reasonably Firm 60 - 71 Haugh units</td>
<td>Clear May be slightly weak 31-59 haugh units</td>
<td>May be weak and watery Small clots or spots may be present Less than 31 Haugh units</td>
</tr>
<tr>
<td>Egg Yolk</td>
<td>Outlined defined Round and firm Free from defects</td>
<td>Outline fairly well defined Round and firm Free from defects</td>
<td>Outline may be well defined. May be slightly enlarged and flattened. Practically free from defects. May have embryonic development</td>
<td>Outline may be well defined. May be enlarged and flattened. May have embryonic development</td>
</tr>
</tbody>
</table>
A. **Minute to Write It**  
**Directions:** In your test notebook write whether you agree or disagree to the following statements and justify your answer.

1. Egg is a complete food.  
2. Egg is composed of the shell, egg white and egg yolk.

B. **Pictorial Report**  
**Directions:** Make a pictorial report with illustration showing the qualities of a fresh egg in terms of egg size and grading.

Your output will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Compiled pictures properly and illustrate the qualities of a fresh egg in terms of egg size and grading in a very attractive manner.</td>
</tr>
<tr>
<td>4</td>
<td>Compiled pictures properly and illustrate the qualities of a fresh egg in terms of egg size and grading in an attractive manner.</td>
</tr>
<tr>
<td>3</td>
<td>Compiled pictures properly and illustrate the qualities of a fresh egg in terms of egg size and grading in a less attractive manner.</td>
</tr>
<tr>
<td>2</td>
<td>Compiled pictures properly and illustrate the qualities of a fresh egg in terms of egg size and grading in a less attractive manner.</td>
</tr>
<tr>
<td>1</td>
<td>Improperly compiled pictures but were not able to illustrate the qualities of a fresh egg in terms of egg size and grading in disorderly manner.</td>
</tr>
</tbody>
</table>
Learning Outcome 2 Prepare and Cook Egg Dishes

At the end of the lesson, you are expected to:
1. identify and prepare ingredients according to standard recipes;
2. identify the market forms of eggs;
3. explain the uses of eggs in culinary; and
4. cook egg dishes with appropriate taste and seasoned in accordance with the prescribed standard.

Market Forms of Egg
There are three market forms of eggs namely: fresh, dried (whole, egg whites/egg yolks), and frozen (whole, egg whites/egg yolks).

1. Fresh Eggs or shell eggs may be purchased individually, by dozen or in trays of 36 pieces.
2. Frozen Eggs – are made of high quality fresh eggs. They come in the form of whole eggs with extra yolks and whites. Frozen eggs are pasteurized and must be thawed before use.
3. Dried Eggs – are seldom used. Their whites are used for preparing meringue. Dried eggs are used primarily as ingredients in food industry. They are not commonly sold directly to consumers.

Eggs are also sold in several processed forms: bulk or fluid whole eggs (which sometimes includes a percentage of extra yolks to obtain a specific blend), egg whites, and egg yolks. Pasteurized eggs are used in preparations such as salad dressings, eggnog, or desserts, where the traditional recipe may have indicated that the eggs should be raw. These products generally are available in liquid or frozen form. Frozen egg products on the other hand are used as ingredients by food processors. Products containing egg yolk usually have salt, sugar or corn syrup added to prevent gelation or increased viscosity during freezing. They are packed in 30-lb.containers and in 4-, 5-, 8-, and 10-lb.pouches or waxed or plastic cartons.

Dried powdered eggs are also sold and may be useful for some baked goods or in certain circumstances. For food service use, they are generally sold in 6-oz. pouches, and 3-lb. and 25-lb.poly packs.

Egg substitutes may be entirely egg-free or may be produced from egg whites, with dairy or vegetable products substituted by yolks. These substitutes are important for people with reduced-cholesterol diet requirement.
Uses of Eggs in culinary
Egg is cooked in many ways. It can be the main protein dish; it can be a main or accessory ingredient in dishes from appetizers to desserts. It can be cooked by dry heat, moist heat, with or without oil, as simply or as elaborately as one’s inclination for the moment. Indeed it can be eaten anywhere.

Effect of Heat on Eggs
1. Coagulation of proteins: white at 60-65 °C, yolk at 65-70 °C.
   - Beyond this temperature, over coagulation occurs and water is squeezed out causing shrinkage resulting in a tough product.
2. Formation of greenish discoloration at the interface of the yolk and white when egg is overcooked
   - Due to the reaction between the iron in the yolk and the hydrogen sulfide liberated from the sulfur containing ferrous sulfide.
   - Reaction is favored by
     - High cooking temperature
     - Prolonged cooking
   - Reaction is prevented by immediate cooling of the egg (e.g. immersing in cold water) after cooking

Uses of Egg
1. Cooked and served “as is”, e.g.
   - in the shell – soft cooked (5 minutes simmering) or hard cooked (15 minutes simmering)
   - poached – cooked in simmering water; addition of salt and vinegar hastens coagulation
   - fried – keep low to moderate temperature
   - scrambled – addition of sugar delays coagulation; addition of liquids and acids decreases coagulation point
   - omelet
2. Eggs as emulsifier
   - Lecithin and lysolecithin are responsible for the remarkable ability of egg yolk to act as an emulsifying agent; both are phosphoproteins containing polar and non-polar ends such that the polar end holds water while the non-polar end holds the fat, thus, prevent oil droplets in suspension from coalescing.
3. As binding, thickening agent, and gelling agents
   - Eggs are useful as binding, thickening and gelling agents because they contain proteins that are easily denatured by heat
   - Using whole egg requires lower coagulation temperatures resulting in a stiffer gel
   - Addition of sugar, raises coagulation temperature producing softer, weaker gel
   - Softer gel is produced with the addition of scalded milk and acid
   - In cooking custards, Bain Marie, double boiler or steamer is used to avoid boiling which can produce a porous custard
   - Soft custards are produced by constant stirring.

4. As foam
   - When egg is beaten albumen is denatured, air is incorporated as white is stretched into thin films
   - With continued beating, the air cells are subdivided and volume is increased
   - Protein network dries up and stabilizes the gas or air foams
     - If only egg whites are used, the color turns white and soft peaks are formed. The egg proteins collect at the air/liquid interface of the air bubble and undergo surface denaturation.
     - If whole eggs or only egg yolks are used, the color becomes pale yellow with continued beating; volume is increased (but not as much as when only whites are used); no surface denaturation occurs.
     - With further beating of egg whites, liquid drains out, air bubbles coalesce and foam breaks.
     - The same changes occur when the foam is allowed to stand too long.
     - Maximum stability is reached at soft stage while maximum volume attained is at stiff stage
   - Stages in foam formation
     A. frothy – large air bubbles that flow easily
     B. soft foam – air cells are smaller and more numerous; foam becomes whiter; soft peaks are formed when beater is lifted
     C. stiff foam – peaks hold their shape; when bowl is tipped, it holds, moist and glossy
     D. dry – moistness and glossiness disappear; specks of egg white are seen
• Factors to be considered in foam formation (leavening agent)
  a. Beating time and temperature: as the time of beating increases, both volume and stability of the foam increases initially, then, decreases; white can be beaten/whipped more readily at room temperature than at refrigerator temperature – refrigerated eggs are more viscous, thus, hard to beat/whip.
  b. Eggs beaten at room temperature whip better resulting in bigger volume and finer texture.
  c. Whole eggs or egg yolk require more beating to produce a good foam.
  d. Stored eggs foam faster but produce smaller volume than fresh eggs.
  e. Acids (e.g. cream of tartar, 1 t per cup) increase the stability of foams, but when added too early, delay foam formation (reduced volume) thus, increases the time necessary for beating.
  f. Sugar also increases the stability of foams but delays foams formation (reduced volume), thus, it should be added after foaming has started and soft peaks are formed; sugar retards the denaturation of egg white.
  g. Addition of soda increases stability and volume.
  h. Addition of salt lowers quality of the foam.
  i. Type of egg: duck eggs do not foam well because they lack ovumucin.
  j. Dilution of egg white by water produces bigger volume but lesser foam; this produces more tender cakes, but in meringues, syneresis occurs.
  k. Applications of foam in cookery
     • as leavening e.g. in angel cake, sponge cake, chiffon cakes
     • as meringue, e.g.
       (a) soft meringue for topping of cream, chocolate, or lemon pie, requires a proportion of two tablespoons sugar per egg white.
       (b) hard meringue for confections, base of fruit pies or Sans Rival Cake, requires a proportion of ¼ cup sugar per egg white.
     • structural and textural agent – tenderness and fluffiness to products, e.g. fluffy or foamy, soufflé, divinity, foam cakes, popovers.
5. As coloring and flavoring agent

Egg Products
- Balut from duck eggs
- Pidan eggs
- Century eggs
- Pickled eggs

Eggs may be cooked in a lot of ways:

Egg Dishes
- Eggs cooked in a shell
  Hard and soft-cooked eggs are cooked this way. Eggs should only be simmered and not boiled to prevent overcoagulation which would cause the eggs to be tough. The optimum cooking time for eggs in shells is 20 to 25 minutes. To avoid cracking of the eggs during cooking, refrigerated eggs should be warmed at ambient temperature before cooking. Before boiling, water at room temperature should be used.
  Sometimes yolks of eggs may become greenish during cooking. This color is due to the formation of iron sulfide. Darkening often occurs in eggs wherein the pH of the albumen is high. It may also be a result of cooking too long at very high temperature.
  To avoid this, fresh eggs should always be used. Eggs should be cooked within a minimum period and cooled immediately in running water after cooking.
- Eggs prepared out of the shell
  This method involves breaking the egg and using both the yolk and white during cooking. Poaching, frying, and the process of making scrambled eggs or omelet are some of the common methods done.

Culinary Uses:
- Eggs as a thickening agent and binder
  When used as a binder or thickener, the hydrophilic colloids of yolks and whites, due to the presence of proteins are converted into a hydrophobic colloid thus turning it into a gel.
  At high temperature, the gel toughens. This explains why the white becomes an opaque mass when cooked at a temperature of 62°C. For egg yolk, coagulation starts at 65°C.
- Eggs as leavening agent
  
  Baked products such as sponge cakes, chiffon cakes, meringues, and soufflés make use of eggs as leavened resulting in a light, airy texture. This is explained by the incorporation of air during the beating of eggs. Foam is formed when the albumen surrounds a colloidal system of air bubbles. When beating eggwhites, overbeating must be avoided as this tends to stretch the albumen and would result in a dry, watery appearance.

Why do you need to eat eggs?

Eggs may be considered as "functional foods". Functional foods are foods that may have health benefits beyond their traditional nutritional value. Eggs as functional foods contain lutein and zeaxanthin that reduce the risk of cataracts and macular degeneration. Eggs may also belong to "designer foods". Designer foods are foods that have been modified through biotechnology to enhance their quality or nutritional value. Eggs as designer foods contain omega-3-polyunsaturated fatty acids and vitamin E. So learn now and explore the various egg dishes below.

Variety of Egg Dishes

Cooking Eggs in the Shell

Although the term boiled may appear in the name, eggs prepared in the shell should actually be cooked at a bare simmer for best results. Eggs are cooked in the shell to make hard- and soft-cooked and coddled eggs. They may be served directly in the shell or they may be shelled and used to make another preparation, such as deviled eggs, or as a garnish for salads or vegetable dishes.

Select a pot deep enough for the eggs to be submerged in water. Have on hand a slotted spoon, skimmer, or spider to remove eggs from the water once they are cooked.
Directions: Given the different recipes in preparing and cooking egg dishes, perform the suggested activities below. Your product and performance will be evaluated using the given rubric after each activity.

**Hard – Cooked Eggs**
Makes 10 servings

**Tools/Equipment Needed:**
- Gas range
- Saucepan
- Ladle

**Ingredients Needed:**
- 20 Eggs
- Cold water

**Procedure:**
1. Prepare tools, equipment and food items.
2. Place the eggs in a pot. Fill the pot with enough cold water to cover the eggs by 2in/5in.
3. Bring the water to a boil and immediately lower the temperature to a simmer. Begin timing the cooking at this point.
4. Cook small eggs for 12 minutes, medium eggs for 13 minutes, large eggs for 14 to 15 minutes, and extra-large eggs for 15 minutes.
5. Drain immediately and cool under cold running water to stop cooking.
6. Peel as soon as possible by cracking the shell starting from the large end. For easier peeling, peel while still warm, and hold under running water to help loosen the shell.
7. Serve the eggs or refrigerate until needed.

**Coddled Eggs.** Put cold eggs into already simmering water and simmer for 30 seconds.

**Soft-Cooked Eggs.** Put cold eggs into already simmering water and simmer for 3 to 4 minutes.

**Medium-Cooked Eggs.** Put cold eggs into already simmering water and simmer for 5 to 7 minutes.

**Poached Eggs**
Poached eggs are prepared by slipping shelled eggs into barely simmering water and gently cooking until the egg holds its shape. The fresher the egg, the more centered the yolk, the less likely the white is spread and become ragged. Poached eggs can be prepared in advance and held safely throughout a typical service period to make the workload easier during service. Slightly under poach the eggs, shock them in ice water to arrest the cooking process, trim them, and hold them in cold water. At the time of service, reheat the eggs in simmering water.

Eggs are most often poached in water, though other liquids, such as red wine, stock, or cream, can also be used. Add vinegar and salt to the water to encourage the egg protein to set faster. Otherwise, the egg whites can spread too much before they coagulate.

Standard Qualities of Poached Eggs and Cooked Eggs in the Shell
1. Bright, shiny appearance
2. Compact, round shore, not spread or flattened
3. Firm but tender whites
4. Warm, liquid yolks

Poached Eggs
Makes 10 servings
Tools/Equipment Needed:
- Saucepan
- Skimmer

Ingredients Needed:
- 1 gal/3.84L water
- 1 tbsp/15g salt
- 1 fl oz./30ml distilled white vinegar
- 20 eggs

Procedure:
1. Prepare tools, equipment and food items. Be sure that eggs are chilled until ready to poach.
2. Combine the water, salt and vinegar, in a deep pan and bring it to a bare simmer.
3. Break each egg into a clean cup, and then slide the egg carefully into the poaching water.
4. Cook for 3 to 5 minutes, or until the whites are set and opaque.
5. Remove the eggs from the water with a slotted spoon, blot them on absorbent toweling, and trim the edges if desired.
6. Serve or chill and refrigerate for later use.

A good-cooked poached egg has a compact, glossy, tender white, and unbroken, thickened yolk

Critical factors:
- quality of the egg
- temperature
- amount of liquid
- the way the egg is put in the pan

**Fried Eggs**

Fried eggs call for perfectly fresh eggs, the correct heat level, an appropriate amount of cooking fat, and a deft hand. Fried eggs may be served sunny side up (not turned) or over (turned once). Fried eggs may be basted with fat as they fry. Using very fresh eggs is the only way to ensure a rich flavor and good appearance of the finished dish.

**Standard Qualities of Fried Eggs**

1. White should be shiny, uniformly set, and tender, not browned, blistered or crisp at edges.

2. Yolk should be set properly according to desired doneness. Sunny side-up yolks should be yellow and well rounded. In other styles, the yolk is covered with a thin layer of coagulated white.


4. A fried egg should have a yolk covered with a thin film of coagulated egg white and still remain slightly fluid.

5. The egg white should be opaque, firm and tender, not chewy, crisp or brown.

6. A perfectly fried egg is a glory to behold – crispy edges and a wobbly, pinkish yolk.

7. It will provide a fried egg with a slightly crispy, frilly edge; the white will be set and the yolk soft and runny.
Types of Fried Eggs

1. Sunny side up
Cook slowly without flipping until white is completely set but yolk is still soft and yellow. Heat must be low or bottom will toughen or burn before top is completely set.

2. Basted
Do not flip. Add a few drops of water to pan and cover to steam cook the top. A thin film of coagulated white will cover the yolk which should remain liquid.

3. Over easy
Fry and flip over. Cook just until the white is just set but the yolk is still liquid.

4. Over medium
Fry and flip over. Cook until the yolk is partially set.
5. Over hard fry and flip over. Cook until the yolk is completely set.

Fried Eggs

Tools/Equipment Needed:
- Sauté pan (preferably non-stick)
- Dish, turner

Ingredients Needed:
- Fresh egg
- Oil or clarified or whole butter, as needed for frying
- Salt, as needed
- Ground black pepper, as needed

Procedure:
1. Select very fresh grade AA eggs for best results.
2. Break the eggs into a dish.
3. Add about 1/8 inch fat to the sauté pan and set it to a moderate heat. Too much fat will make the eggs greasy. Less fat will cause them to stick, unless a pan with the nonstick coating is used.
4. When the fat is hot enough, slide the egg into the pan.
5. Tilt the pan, allowing the fat to collect at the side of the pan, and baste the eggs with the fat as they cook.
6. Season the eggs with salt and pepper and serve at once.

   Eggs over Easy, Medium or Hard: turn the eggs over near the end of their cooking time with a spatula and cook them on the other side until done as desired, 20 to 30 seconds for over easy, 1 minute for over medium, 2 minutes for over hard.

Desirable Qualities of Fried Eggs
- glossy
- moist
- tender

Common pitfalls:
- eggs brown and crisp
- eggs white blistered
- eggs odd-shaped
- eggs sticking

Scrambled Eggs

   Scrambled eggs can be made in two ways: the eggs can be stirred constantly over low heat for a soft delicate curd and a creamy texture, or stirred less frequently as they cook for a larger curd and a firm texture. Whether prepared to order or to serve on a buffet line, scrambled eggs must be served hot, fresh and moist.

   Choose eggs that are fresh, with intact shells. Adding a small amount of water or stock (about 2tsp/10ml per egg) to the beaten eggs will make them puffier as the water turns to steam. Milk or cream may be used to enrich the eggs. Scrambled eggs can be seasoned with salt and pepper, and/or flavored or garnished with fresh herbs, cheese, sautéed vegetables, smoked fish, or truffles.

   Eggs can be scrambled in a sauté pan or on a griddle. Nonstick surfaces make it easy to prepare scrambled eggs with a minimum amount of added fat. Pans used for eggs should be reserved for that use only, if possible. A table fork, wooden spoon, or spatula is needed for stirring the eggs in cooking.

   Do not overcook scrambled eggs or hold them too long. Overcooked eggs are tough and watery and will turn green in steam table. Scrambled eggs should be soft and moist.
For flavor variations, the following ingredients may be added to scrambled eggs before serving.

- Chopped parsley or other herbs
- Grated cheese
- Diced ham
- Crumbled bacon
- Sautéed diced onions and green bell pepper
- Diced smoked salmon
- Sliced cooked breakfast sausage

A good scrambled egg must not be tough nor burned but completely coagulated.

Preparation and Cooking Egg Dishes

Directions: Given the different recipes in preparing and cooking egg dishes, perform each of the activity and you will be evaluated using a rubric.

Scrambled Eggs

**Tools/Equipment Needed:**
- Stainless bowl
- Fork or egg beater
- Sauté pan, steam kettle or tilting skillets

**Ingredients Needed:**
- 30 Eggs
- 1 tbsp. /15g salt
- 1 tsp/2g ground pepper
- 5 fl oz. /50ml water or milk (optional)
- 2 ½ fl oz. /75 ml clarified butter or oil
Procedure:

1. Collect equipment and food items.
2. Break eggs into a stainless steel bowl and beat until well blended. Season with salt and pepper.
3. Add small amount of milk or cream about 1 to 1 ½ t, if desired.
4. Heat butter in a small sauté pan or heat nonstick pan over medium heat and add butter or oil, tilting the pan to coat the entire surface. The pan should be hot but not smoking.
5. Pour the egg mixture into the pan.
6. Cook over low heat, stirring frequently with the back of the fork or wooden spoon until the eggs are soft and creamy.
7. Remove the eggs from the heat when fully cooked, but still moist.
8. Serve at once.

Omelets

The rolled, or French-style, omelets start out like scrambled eggs, but when the eggs start to set, they are rolled over. A folded or American style, omelet is prepared in much the same manner, though it is often cooked on a griddle rather than in a pan, and instead of being rolled, the American omelet is folded in half. There are two other styles of omelets, both based upon a beaten mixture of eggs, cooked either over direct heat or in an oven.

Choose eggs that are fresh, with intact shells. As with scrambled eggs, the ability of the egg to hold its shape is irrelevant, but fresh eggs are preferable. Omelets can be seasoned with salt, pepper, and herbs. Clarified butter or oil is the most common cooking fat.

Omelets may be filled or garnished with cheese, sautéed vegetables or potatoes, meats, and smoked fish, among other things. These fillings and garnishes are incorporated at the appropriate point to be certain they are fully cooked and hot when the eggs have been cooked. Grated or crumbled cheeses will melt sufficiently from the heat of the eggs, and are often added just before an omelet is rolled or folded.

Two Factors for Making Quality Omelets

1. High Heat.
   This is an opposite to the basic principle of low temperature egg cookery. The omelet cooks so fast that its internal temperature never has time to get too high.
2. A conditioned omelet pan. The pan must have sloping sides and be of the right size so the omelet can be shaped properly. It must be well seasoned or conditioned to avoid sticking.

**Suggested Omelet Fillings**

- Cheese
- Sautéed or creamed mushrooms
- Creamed or curried chicken
- Creamed or buttered spinach
- Sautéed onions with or without bacon
- Sautéed onions and diced potatoes
Plain Rolled Omelet

Tools/Equipment Needed:
- Small bowls
- Sauté pan
- Fork

Ingredients Needed:
- 30 eggs
- 1 tbsp/15g salt
- 1 tsp/2g ground pepper
- 5 fl oz. /150 ml water, stock, milk, or cream (optional)
- 2 ½ fl. oz. /175 ml, as needed clarified butter or oil

Procedure
1. Prepare equipment and food items.
2. For each portion, beat 3 eggs well and season with salt and pepper. Add the liquid, if using.
3. Heat a nonstick omelet pan over high heat and add the butter or oil, tilting the pan to coat the entire surface.
4. Pour the entire egg mixture into the pan and scramble it with the back of the fork or wooden spoon.
5. Move the pan and the utensil at the same time until the egg mixture has coagulated slightly. Smooth the eggs into an even layer.
6. Let the egg mixture finish cooking without stirring.
7. Tilt the pan and slide a fork or a spoon around the lip of the pan, under the omelet, to be sure it is not sticking. Slide the omelet to the front of the pan and use a fork or a wooden spoon to fold it inside to the center.
8. Turn the pan upside down, rolling the omelet onto the plate. The finished omelet should be oval shaped.
Notes:
Options for filling an omelet: A pre-cooked filling may be added to the eggs after they have been smoothed into an even layer and before the omelet is rolled. Alternatively, the rolled omelet can be slit open at the top, and a pre-cooked filling can be spooned into the pocket.
To give the omelet, additional sheen, rub the surface lightly with butter.
A perfect omelet is fluffy, moist and tender, soft in the center, yellow in color with no brown at all or just a hint of it, oval in shape, and all in one continuous piece

Ham and Cheese Frittata

Tools/Equipment Needed:
- Skillet/Non-stick pan
- Knife
- Non-stick turner
- Fork or wire whisk
- Small bowl
- Chopping board

Ingredients:
- 1 cup diced cooked ham
- ½ cup sliced tomato
- 1pc white onion (cut into ring)
- ½ cup stripped sweet bell pepper
- 10pcs lightly beaten egg
- ¼ tsp ground black pepper
- ¼ cup shredded cheddar cheese
- ¼ cup evaporated milk
- ¼ tsp iodized salt

Procedure
1. In a skillet coated non-stick turner, put little oil, sauté the ham, onion, tomato, red bell pepper and season to taste.
2. In a bowl, combine the egg and milk, salt, black pepper and pour over ham mixture. Let eggs set on the bottom, then lift the edges to allow any uncooked egg to flow underneath. Cover and cook until the eggs
are set for about 3 minutes. Sprinkle with cheese and cut into wedges to serve.
Read more: http://www.tasteofhome.com/recipes/ham-and-cheese-frittata#ixzz36CpQloa7
Standard Recipe CMDC

Baked Eggs
Baked eggs are also quick and easy to prepare.
1. Place a little butter in a custard cup. Put the cup in 175°C (350°F) oven until the butter melts.
2. Break an egg into the cup, and sprinkle with salt and pepper, then top the egg with a little milk.
3. Bake 15 to 20 minutes or until the egg white is set.

---

Review of Learning Outcome 2

Formative Assessment:
Direction: Label the types of fried eggs.

1. ______________

2. ______________
A. Direction: Prepare poached egg individually following the procedures below.

**Tools/Equipment Needed:**
- Saucepan
- Skimmer

**Ingredients Needed:**
- Eggs
- Distilled vinegar
Water

**Procedure:**

|   | 1. Prepare mise’en place  
|   | 2. Add 1 teaspoon salt and 2 teaspoons distilled vinegar per quart of water if eggs are not very fresh. This will help to coagulate the egg white faster and keeps a better shape.  
|   | 3. Bring water to a simmer.  
|   | 4. Break eggs one at a time, into a dish or a small plate and slide into the simmering water.  
|   | 5. Simmer 3 to 5 minutes, until whites are coagulated but yolks are still soft.  
|   | 6. Remove eggs from pan with slotted spoon or skimmer.  
|   | 7. Drain well and trim off ragged edges.  
|   | 8. Serve immediately.  
|   | (To hold for later service, plunge immediately into cold water to stop cooking. Reheat briefly in hot water at service time). |
Your performance will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Follows correctly the procedures in preparing and cooking poached egg and performs the skill very satisfactorily without supervision and with initiative and adaptability to problem situations.</td>
</tr>
<tr>
<td>3</td>
<td>Follows correctly the procedures in preparing and cooking poached egg and performs the skill satisfactorily without assistance or supervision.</td>
</tr>
<tr>
<td>2</td>
<td>Follows correctly the procedures in preparing and cooking poached egg with minor errors and performs the skill less satisfactorily with some assistance and/or supervision.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to follow the procedures in preparing and cooking poached egg and performs the skill unsatisfactorily.</td>
</tr>
</tbody>
</table>

**Learning Outcome 3 Present Egg Dishes**

Part of serving food is presentation. It should appeal to your mouth, nose, and eyes. You don’t have to be a trained chef to learn the basics of *plating*, which is the art of presenting food in an attractive way.

**Seven Simple Ways to Present Food like a Chef**

1. Set the table properly. Your day-to-day meals might be free-for-all, but if you’ve got guests coming over, it’s nice to have the knives and forks in the right places.

2. Choose your plates wisely. Make sure your serving plates are big enough to let each food item stand out, but small enough that the portions don’t look tiny.

3. Read the clock! A fool proof way to arrange food on a plate is to place the carbohydrate (rice, pasta, bread, etc.) at “11 o’clock,” the vegetables at “2 o’clock,” and the protein at “6 o’clock” from the diner’s point of view. This will also help you portion correctly, if you remember that vegetables should cover about half of the plate, starch one fourth, and protein one fourth.
4. Just like with centerpieces, it’s good to have a little bit of height, but don’t overdo it or your guests won’t know how to proceed! If you have a mound of mashed potatoes (mid-height), you may want to lean your pork chop against it so that it is standing up (high), with a row of snow peas (low) in front. Or, top some rice (low) with sliced grilled chicken (cut into a few diagonal slices, and fan them out) (mid-height) and cross asparagus over top of it (high).

5. Be odd. Don’t be strange, but things generally look more interesting when they’re in sets of odd numbers, rather than even numbers.

6. Play with color and texture. Even if you’re just serving Tomato Soup and Grilled Cheese Sandwiches, a green paper napkin can make this simple meal look really special! http://startcooking.com/public/IMG_4809.jpg
7. Play with Height. This Chicken Stir-fry with Broccoli looks more interesting because of the high mound of rice sitting next to it.

8. Garnish appropriately. Don’t lose sight of the recipe you made in the first place! Any garnish on the plate should be edible and should enhance the flavor of the main dishes. Grilled salmon might be served with a lemon wedge, for example. Garnishes, like the cut-up fruit with the fried egg below, are also a great way to add color or texture.

http://startcooking.com/public/IMG_7835-1.JPG
Different Techniques in Presenting Egg Dishes Attractively.

Scrambled egg and bun on a plate with cereal bread

Boiled eggs on white plate with garnish

Scrambled egg with herbs

Fried egg with bacon and toasted bread

Egg in a sandwich

Hard-boiled eggs in different sizes and shape
Scrambled egg in Manhattan plate

Deviled eggs

Stuffed egg

Salad egg

Poached egg

Stir-fried eggs
Baked eggs

Fried egg toppings

Shaped poached egg

Hard boiled Easter eggs

Soft boiled egg

Baked eggs in potato bowls
Occupational Health and Safety (OHS)

Occupational Health and Safety (OHS) is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. Knowing OHS is essential to minimize the hazards and risks not only to students, trainers and other people within the training institution but also to others who will be affected.

Good OHS Practice

1. Disaster Plan - there should be plan in place to deal with any emergency.
2. Training and Providing Relevant Information
3. Work and storage areas should be designed, constructed, and equipped to ensure that there is minimum risk to archive material or staff. It should be kept free of food and drinks, harmful contaminants, pollutants or vermin radiation.
4. Near Miss and Hazardous Incidents and Accident Investigation
5. Report of Notifiable Accidents, Incidents and Dangerous Occurrences
6. First Aid
7. Personal Protective Equipment (PPE)

Basic Food Microbiology

Certain microscopic organisms, such as bacteria, are able to invade the human body and cause illness and sometimes death. Because contaminated foods are the major sources of organisms transmitted to people, it is essential that food production must have a clear understanding of food microbiology and the conditions involve in it.

What is food borne illness? Food borne infection? Food borne intoxication?

**Food-borne illness** is a disease that is carried and transmitted to people by food.

**Food-borne infection** is a disease that results from eating food containing harmful micro-organism.

**Food-borne intoxication** is a disease that results from eating food containing toxins from bacteria, molds or certain plants or animals.

The common causes of outbreaks of food borne illness are:

1. Failure to properly refrigerate food
2. Failure to thoroughly heat or cook food
3. Infected employees/workers because of poor personal hygiene practices
4. Foods prepared a day or more before they are served
5. Raw, contaminated ingredients incorporated into foods that receive no further cooking
6. Cross-contamination of cooked food through improperly cleaned equipment
7. Failure to reheat food to temperature that kills bacteria
8. Prolonged exposure to temperatures favorable to bacterial growth.

Aside from food safety we should also be aware of the different hazards in our workplace such as kitchen hazards, electrical hazards and others. To avoid or control these kind of hazards the following should be observed:

1. Use caution when working around hot oil.
2. Get trained in the proper use and maintenance of your deep fryer.
3. Observe all safety procedures and wear all protective equipment provided for your use while preparing hot items.
4. Use gloves, scrapers, and other cleaning tools with handles.
5. Use the correct grease level and cooking temperatures for your deep fryer.
6. Keep stove surfaces clean to prevent grease flare-ups.
7. Avoid reaching over or climbing on top of fryers and other hot surfaces. Clean vents when oil is cool.
8. Keep floor surfaces clean and dry to prevent slipping or falling onto hot surfaces.
9. Wear slip-resistant shoes. Floors should be cleaned often with grease-cutting solutions.
10. Do not work closely to hot fryers when the floor is wet.
11. Do not spill water or ice into hot oil as this may cause a flare-up.
12. Do not overfill or pour excessive amount of frozen fries into deep fryer at one time.
13. Overfilling causes excessive splashing and bubbling over of hot oil.
14. Do not pour excess ice from fry packages into the fryer.
15. Do not overheat the oil; use only manufacturers recommended cooking temperatures.
16. Do not move or strain hot oil containers; wait until the oil is cool!
17. Extinguish hot oil/grease fires by using a class K fire extinguisher.
Here are some tips on how to handle eggs:

Purchasing: Do not buy dirty, cracked, or outdated eggs.

Storage:
1. Store at 45 o F or below.
2. Store in closed container.
3. Store away from strong odors.
4. Refrigerate leftover egg dishes in shallow containers.
5. Do not allow drippings to contaminate eggs.

Preparation/Cooking:
1. Keep refrigerated before and after cooking.
2. Keep everything clean.
3. Use only clean, not cracked eggs.
4. Cook thoroughly.
5. Wash container used for egg thoroughly.
6. Use egg separator

Service/Transport:
1. Serve promptly after cooking.
2. Keep cold food cold, hot food hot.
3. Use ice or cold packs when transporting.
4. Avoid eating raw eggs or food that contain raw eggs.
Review of Learning Outcome 3

Formative Assessment (Learning Outcome 3)
A. Directions: Identify the different ways in presenting cooked eggs. Write your answer in your test notebook.

1. ___________________
2. ___________________
3. ___________________
4. ___________________
5. ___________________
6. ___________________
B. Directions: Prepare and cook French omelet individually using the given recipe. Present your product in an artistic way. Your product and performance will be evaluated using the given rubric.

**Tools/Equipment Needed:**
- Small bowls
- Sauté pan
- Fork
**Ingredients Needed:**
- Three eggs
- Salt and pepper
- Clarified butter
- Fillings

**Procedure:**

<table>
<thead>
<tr>
<th>Step</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Prepare the necessary equipment.</td>
</tr>
<tr>
<td>2.</td>
<td>Beat two or three eggs on a small bowl first until well-mixed. Do not whip until frothy. Season with salt and pepper. A tablespoon water may be added to make the omelet lighter.</td>
</tr>
<tr>
<td>3.</td>
<td>Place an omelet pan over high heat.</td>
</tr>
<tr>
<td>4.</td>
<td>When the pan is hot, add one tablespoon clarified butter to coat the inside of the pan. Give it a second to get hot.</td>
</tr>
<tr>
<td>5.</td>
<td>Add eggs to the pan.</td>
</tr>
<tr>
<td>6.</td>
<td>With one hand, vigorously shake the pan back and forth. At the same time, stir the eggs with a circular motion with the bottom side of the fork, but do not let the fork scrape the pan.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>8.</strong> Tilt the handle up and shake the pan so the omelet slides to the opposite side.</td>
<td><img src="https://example.com/image1.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>9.</strong> For filled omelet, spoon the filling across the center of the egg.</td>
<td><img src="https://example.com/image2.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>10.</strong> With the fork, fold the sides of the omelet over the center.</td>
<td><img src="https://example.com/image3.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>11.</strong> Grasp the handle of the pan, and tilt the omelet into the plate so it inverts and keeps an oval shape.</td>
<td><img src="https://example.com/image4.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>
Your output will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Excellent (4 pts.)</th>
<th>Very Satisfactory (3 pts.)</th>
<th>Satisfactory (2 pts.)</th>
<th>Needs Improvement (1 pt.)</th>
<th>No Attempt (0 pt.)</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of tools and equipment</td>
<td>Uses tools and equipment correctly and confidently at all times</td>
<td>Uses tools and equipment correctly and confidently most of the time</td>
<td>Uses tools and equipment correctly but less confidently sometimes</td>
<td>Uses tools and equipment incorrectly and less confidently most of the time</td>
<td>No attempt</td>
<td></td>
</tr>
<tr>
<td>2. Application of procedures</td>
<td>Manifests very clear understanding of the step-by-step procedure</td>
<td>Manifests clear understanding of the step-by-step procedure but sometimes seeks clarification</td>
<td>Manifests less understanding of the step-by-step procedure seeking clarification most of the time</td>
<td>No attempt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Safety work habits</td>
<td>Observes safety precautions at all times</td>
<td>Observes safety precautions most of the time</td>
<td>Observes safety precautions sometimes</td>
<td>Not observing safety precautions most of the time</td>
<td>No attempt</td>
<td></td>
</tr>
<tr>
<td>4. Final Output</td>
<td>Output is very presentable and taste exceeds the standard.</td>
<td>Output is very presentable and taste meets the standard.</td>
<td>Output is presentable and taste is little below the standard.</td>
<td>Output is not so presentable and taste is not within the standard.</td>
<td>No attempt</td>
<td></td>
</tr>
<tr>
<td>5. Time management</td>
<td>Work completed ahead of time</td>
<td>Work completed within allotted time</td>
<td>Work completed ___(mins./hours/day) beyond</td>
<td>Work completed ___(mins./hours/day) beyond</td>
<td>No attempt</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL POINTS
Learning Outcome 4 Store Egg Dishes

Storage is done to maintain the quality of food, prolong the shelf-life, maintain an adequate supply of food and ensure its safety for consumption.

Proper storage of food is very crucial in keeping food safe because the manner and temperature of storage will affect the food’s susceptibility to bacterial growth, other contaminants and infestation. Storing food will not improve its quality, it will only delay the rate of deterioration, and thus the proper period of storage should also be observed.

Eggs should be stored properly to prevent increase in alkalinity and bacterial growth. They should be stored in an oval, dry place to retard deterioration, as enzymatic activity is greater at room temperature.

Keeping eggs as fresh as possible depends on the care taken by the farmer, wholesaler, and grocer to refrigerate them at all times. After you have chosen your eggs by size, grade, freshness, and type, proper storage will help maintain their quality.

Kind of Storage

- **Cold Storage** (refrigerated storage, deep chilling, freezer storage) keeping potentially hazardous foods cold enough to prevent bacteria from growing.

  The temperature of the freezer compartment must be at 0°F or less, and the eggs should be stored in an area of the freezer where there is the least amount of temperature fluctuation.

- **Dry Storage** should be dry, cool, well-ventilated, free from insects and rodents, clean and orderly.

  In the absence of refrigerators, eggs may be stored at room temperature for about seven days. Left-over egg yolks and egg whites should be kept in containers that will prevent drying.

Tips for Storing Raw and Cooked Eggs:

- Put eggs in the refrigerator as soon as possible after purchase.
- Keep them in their covered carton (large end up) to preserve moisture and assure darkness. Do not put them in the egg box at the door of the refrigerator.
- Keep eggs away from strong odors. These can be absorbed through the shells, which are porous.
• Whole eggs can be beaten slightly and placed in a container with a tight seal and stored in the freezer for up to one year.
• Egg whites also can be stored for up to a year in a tightly sealed container in the freezer.
• When storing egg yolks in the freezer, a small amount of sugar or salt should be added to prevent the yolks from becoming too thick and gelatinous over time.
• Add a pinch of salt per yolk if the yolks will be used for savory dishes, or add about a ¼ teaspoon of sugar per yolk if the yolks will be used for sweet dishes.
• Do not wash eggs before storing them. This destroys the mineral-oil film that coats the shells and helps keep them fresh.
• Dip the eggs in oil to cover the pores and to delay its deteriorative changes, reduce mold penetration and retard spoilage.
• Do not keep eggs longer than 2 weeks in the refrigerator.
• Left-over raw yolks can be refrigerated for several days when covered with water, milk, or oil. Two yolks can be used in place of 1 whole egg in a recipe.
• Left-over raw whites can be stored in a tightly covered plastic or glass container in the refrigerator for several days or as long as they do not have any odor. They can also be frozen, although when thawed the white is thinner. However, you can use them successfully in recipes calling for egg whites.

Recommended Storage Time for Eggs

<table>
<thead>
<tr>
<th>Fresh Shell Eggs</th>
<th>Buys Best Before Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left-over yolks or whites</td>
<td>Within 2 to 4 days</td>
</tr>
<tr>
<td>Hard-Cooked eggs</td>
<td>Within 1 week</td>
</tr>
<tr>
<td>Prepared egg dishes</td>
<td>Within 3 to 4 days</td>
</tr>
<tr>
<td>Pickled eggs</td>
<td>Within 1 month</td>
</tr>
<tr>
<td>Frozen whole eggs (blended)</td>
<td>Within 4 months</td>
</tr>
</tbody>
</table>

A. Directions: Write **true** if the statement is correct and **false** if it is incorrect. Write your answer on your test notebook.

1. Eggs should be stored properly to prevent increase in alkalinity and bacterial growth.
2. Fresh eggs can be kept more than two weeks.
3. When storing egg yolks in the freezer, a small amount of sugar or salt should be added to prevent the yolks from becoming too thick and thin over time.
4. To delay the deteriorative changes, reduce the penetration of mold and retard spoilage of eggs, cover the pores by dipping the eggs in oil.
5. In the absence of refrigerator, eggs may be stored at room temperature for about two weeks.
Cereals are usually starchy pods or grains. Cereal grains are the most important group of food crops in the world named after the Roman goddess of harvest, Ceres. Rice, wheat and corn are the three most cultivated cereals in the world. Starch on the other hand, exists in nature as the main component of cereals and tubers. In manufactured and processed foods, it plays an obvious role in achieving the desired viscosity in such products as cornstarch pudding, sauces, pie fillings, and gravies.

Starch is the second most abundant organic substance on earth. It is found in all forms of leafy green plants, located in the roots, fruits or grains. Many of the food staples of man throughout the world are basically starchy foods, such as rice, corn, cassava, wheat, potato and others. Starch is the source of up to 80% of calories worldwide. Besides this significant role, starches have been used in food manufacture, cosmetics, pharmaceuticals, textiles, paper, construction materials, and other industries.

**Objectives**

At the end of the module the learners are expected to:

1. perform mise’en place;
2. prepare starch and cereal dishes;
3. present starch and cereal dishes; and
4. store starch and cereal dishes.

**Learning Outcome 1 Perform Mise’en Place**

**Tools and Equipment Needed**

The success of cooking starch and cereal dishes depends on the proper tools and equipment used in the preparation of food. The preparation of starch and cereal dishes requires the various tools and equipment below. Each tool must be used according to its function.

1. Mixing bowl – used when preparing cake mixture, salads, creams, and sauces.
2. Sifter – used for separating coarse particles of flour, sugar, baking powder, and powdered ingredients to retain finer textures.
3. Wire whip – used for beating egg whites, egg yolk, creams and mayonnaise.
4. Wooden spoon – used for mixing creams, butter, and for tossing salads.
5. Slotted spoon – used to separate solid particles from soup; also for stirring purposes, such as making egg white fine in texture for bird’s nest soup and mock nido soup.
6. Blending fork – used for testing the tenderness of meat, combining big cuts and particles of meat and vegetables, and for blending other ingredients with flour.
7. Rubber scraper – used for scraping off mixtures of butter, sugar, and egg from the sides of the mixing bowl.
8. Strainer – used for separating liquids from fine or solid food particles, such as coco cream from coconut and tamarind extract.
9. Tongs – used for handling hot foods.
10. Measuring Cups – used for measuring dry and liquid ingredients
11. Measuring spoon – used for measuring dry and liquid ingredients which require a little amount
12. Sauce pan and pots – used for cooking meat and fish dishes with gravy and sauce.
13. Kettle and rice cooker – used for cooking rice and other foods.
14. Pressure cooker – used for tenderizing or cooking meat, chicken, and other grains or legumes, such as mongo and white beans in lesser time.
15. Double boiler – used for preparing sauces which easily get scorched when cooked directly on the stove.
16. Steamer – used for cooking food by steaming.
17. Colander - a perforated bowl of varying sizes made of stainless steel, aluminum or plastic, used to drain, wash, or cook ingredients from liquid
18. Canister - a plastic or metal container with a lid that is used for keeping dry products
19. Butcher knife – used for cutting, sectioning, and trimming raw meats
20. Channel knife – a small hand tool used generally in decorative works such as making garnishes.
Sources of Starch

The parts of plants that store most starch are seeds, roots, and tubers. Thus, the most common sources of food starch are:

- cereal grains, including corn, wheat, rice, grain, sorghum, and oats;
- legumes; and
- roots or tubers, including potato, sweet potato, arrowroot, and the tropical cassava plant (marketed as tapioca)

Common Source of Manufactured Food Starch

1. corn
2. potato
3. Tapioca (cassava)

Starches are named after its plant sources

- corn starch from corn
- rice starch from rice
- tapioca from cassava

Classification of Starch

1. Native or Natural Starch refers to the starches as originally derived from its plant source.
2. Modified Starches are starches that have been altered physically or chemically, to modify one or more of its key chemicals and/or physical property.
3. Purified starch may be separated from grains and tubers by a process called wet milling. This procedure employs various techniques of grinding, screening, and centrifuging to separate the starch from fiber, oil, and protein.
Starch Composition and Structure

The Starch Molecule

Starch is polysaccharide made up of hundreds or even thousands of glucose molecules joined together. The molecules of starch are two general types, called fractions: amylase and amylopectin.

Amylose is a long chain-like molecule, sometimes called the linear fraction, and is produced by linking together 500 to 2,000 glucose molecules. The amylose fraction of starch contributes gelling characteristics to cooked and cooled starch mixtures. A gel is rigid to a certain degree and holds a shape when molded.

Amylopectin has a highly branched, bushy type of structure, very different from the long, string-like molecules of amylose. In both, amylose and amylopectin, however, the basic building unit is glucose. Cohesion or thickening properties are contributed by amylopectin when a starch mixture is cooked in the presence of water, but this fraction does not produce a gel.

Most natural starches are mixtures of the two fractions. Corn, wheat, rice, potato, and tapioca starches contain 24 to 16 percent amylose, with the remainder being amylopectin. The root starches of tapioca and potato are lower in amylose content than the cereal starches of corn, wheat, and rice.

The Starch Granule

In the storage areas of plants, notably the seeds and roots, molecules of starch are deposited in tiny, organized units called granules. Amylose and amylopectin molecules are placed together in tightly packed stratified layers formed around a central spot in the granule called the hilum. The starch molecules are systematically structured in the granule to form crystalline-like patterns. If the starch granules, in a water suspension, are observed microscopically under polarized light, the highly oriented structure causes the light to be rotated so that a Maltese cross pattern on each granule is observed. This phenomenon is called birefringence. The pattern disappears when the starch mixture is heated and the structure disrupted. The sizes and shapes of granules differ among starches from various sources, but all starch granules are microscopic in size.
### Composition of Starch

<table>
<thead>
<tr>
<th></th>
<th>Potato</th>
<th>Cassava</th>
<th>Wheat</th>
<th>Cornstarch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture,%</td>
<td>19</td>
<td>13</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Ash,%</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Protein, %</td>
<td>0.06</td>
<td>0.1</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Lipid,%</td>
<td>0.05</td>
<td>0.1</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Phosphorus%</td>
<td>0.08</td>
<td>0.01</td>
<td>0.06</td>
<td>0.4</td>
</tr>
<tr>
<td>Amylose,%</td>
<td>21</td>
<td>17</td>
<td>28</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Micrograph


### Starch Properties and Reactions

1. **Gelatinization.** The sum of changes that occur in the first stages of heating starch granules in a moist environment which includes swelling of granules as water is absorbed and disruption of the organized granule structure.

2. **Viscosity.** The resistance to flow; increase in thickness or consistency. When the newly gelatinized starch is stirred, more swollen granules break and more starch molecules spill causing increase in viscosity or thickness.

### Changes in Gelatinization of Starch

- hydration and swelling to several times original size
- loss of birefringence
- increase in clarity
- marked, rapid increase in consistency and attainment of peak
- "dissolution" of linear molecules and diffusion from ruptured granules.
- with heat removal, retro gradation of mixture to a paste-like mass of gel.
The type of sugar influences the temperature and rate of gelatinization. The effect of sugar is attributed to competition for water. It was observed that sugar actually interacts with the amorphous areas of the starch granules.

**Different Sweeteners Added to Starch Gel Preparation.**

- honey
- molasses
- panutsa or granulated sugar

3. **Retrogradation** is the process in which starch molecules, particularly the amyllose fraction, re-associate or bond together in an ordered structure after disruption by gelatinization; ultimately a crystalline order appears.

4. **Syneresis.** Oozing of liquid from gel when cut and allowed to stand (e.g. jelly or baked custard). The oozing of liquid from a rigid gel; sometimes called weeping.

   This reaction occurs in all kinds of gels:
   - puddings
   - jellies
   - custards
   - gelatin
   - agar

5. **Dextrinization.** It is the process of forming dextrin. Dextrins – are partially hydrolyzed starches that are prepared by dry roasting. In home kitchens, dextrinization is achieved by toasting flour for polvoron, rice flour for kare-kare sauce, and bread slices for breakfast.

6. **Hydrolysis** Starches undergo hydrolysis during cooking or processing and during storage of food where a chemical reaction in which a molecular linkage is broken and a molecule of water is utilized.

   a. Prolonged heating of starches with acid will promote hydrolysis. This can happen when cooking an acidic food, such as: Pineapple pie resulting in reduced viscosity or firmness of the pie filling.
Functional Properties of Starches

Starch plays various roles in food, a typical multi-tasker

1. Thickeners in gravies, sauces and pudding. It absorbs water and become a gel when cooked.
2. Colloidal stabilizers
3. Moisture retainer
4. Gel forming agents
5. Binders
6. Package
7. Flavor carriers— its ability to trap oils and fats, which absorb flavoring substances more efficiently.

Starches – are added to processed meats (luncheon meats, hot dogs, sausages, etc.) as a filler, binder, moisture, retainer, and fat substitute. The quality characteristics of the starch itself depends upon which role or function it was used.

Cereal. Cereal is any grain that is used for food. Grains especially whole grain are not just empty calories. These are very valuable and can contribute a great deal to our health. You should include at least four servings from this food group each day.

Cereal-processed food:
- A whole grain cereal is a grain product that has retained the specific nutrients of the whole, unprocessed grain and contains natural proportions of bran, germ and endosperm.
- Enriched cereals are excellent sources of thiamine, niacin, riboflavin, and iron.
- A restored cereal is one made from either the entire grain or portions of one or more grains to which there have been added sufficient amounts of thiamine, niacin, and iron to attain the accepted whole grain levels of these three nutrients found in the original grain from which the cereal is prepared.

Cereals provide the body with:
- Carbohydrates
- Protein
- Fat
- Vitamins
- Minerals
- Water
- Cellulose or roughage
Nutritional Significance of Noodles and Pasta or Alimentary Paste

The physiological function of noodles and pasta will depend on its starch and other constituents. Since it is basically a starchy food, the nutritional significance discussed for starches also applies. In addition to starches, including resistant starches I (RS), noodles and pasta may contain other fibers and some proteins and fat as well.

Nutritive value:

- Water
- Protein
- Fat
- Carbon
- Calcium
- Phosphorous
- Iron
- Thiamin
- Riboflavin
- Niacin

Dried Noodles and Pasta

- Macaroni
- Spaghetti
- Pancit Canton
- Bihon
- Sotanghon
- Miswa
- Miki
- Chicken Mami
- Linguini
- Lasagna
### Review of Learning Outcome 1

A. Directions: Complete the table by writing the appropriate tool and equipment in column B to perform the task given in column A. Write your answer in your test notebook.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>1. Used for separating coarse particles of flour, sugar, baking powder, and powdered ingredients to retain finer textures.</td>
<td></td>
</tr>
<tr>
<td>2. Used for cooking meat and fish dishes with gravy and sauce.</td>
<td></td>
</tr>
<tr>
<td>3. Used for cooking food by steaming</td>
<td></td>
</tr>
<tr>
<td>4. Used for tenderizing meat, chicken, and other grains or legumes, such as mongo and white beans in lesser time.</td>
<td></td>
</tr>
<tr>
<td>5. Used for separating liquids from fine or solid food particles, such as coco cream from coconut and tamarind extract.</td>
<td></td>
</tr>
</tbody>
</table>
B. Directions: Enumerate the different kinds of starch and give its nutritional value

1. 

________________________________________________________

2. 

________________________________________________________

3. 

________________________________________________________

4. 

________________________________________________________

C. Give at least three starch properties and reactions and describe it in one sentence.

1. 

________________________________________________________

2. 

________________________________________________________

3. 

________________________________________________________

4. 

________________________________________________________

5. 

________________________________________________________
Learning Outcome 2 Prepare and Cook Starch and Cereal Dishes

One of the properties of starch is viscosity which is the resistance to flow of starch and modified starch paste. In the preparation and cooking of starch and cereal dishes, factors affecting starch paste viscosity and starch gel strength should be considered.

Factors Affecting Starch Paste Viscosity and Starch Gel Strength

- **Stress or other factor.** Stirring Amount and Type. This is a gelatinized cornstarch dispersion that is likely to break; the granules broke apart due to stirring.
- **Kind and Amount of Starch.** Certain type of starch will influence the characteristics of the starch paste viscosity and gel strength. Generally speaking, with "native starches" the greater the amount of amylopectin the more viscous the starch paste, whereas, the greater the amount of amylase, the firmer the gel is (greater the gel strength).
- **Heating rate.** The faster starch-water dispersion is heated; the thicker it will be at the identical endpoint temperature.
- **Endpoint Temperature**
  - Each type of starch has a specific endpoint temperature at which it will undergo optimum gelatinization.
  - Incompletely gelatinized starch will not attain optimum starch paste viscosity or gel strength.
  - Over gelatinization results in decreased starch paste viscosity and gel strength because the swollen granules fragmented with stirring and/or imploded due to the extensive loss of amylase from the granule.
- **Cooling and storage conditions**
  - If cooled too fast, the amylase will not have time to form the vital micelles necessary for the three dimensional structure.
  - If cooled too slowly, the amylase fractions will have a chance to align too much and become too close together and the liquid portion will not be trapped in the micelles. In both instances there will be weeping and *syneresis* (the contraction of a gel accompanied by the separating out of liquid.).
• **Ingredients added** (acid, enzyme, sugar, fat and emulsifiers
  a. Addition of acid or enzyme can also cause **dextrinization** (the process of forming dextrins).
    - Dextrin – a pale powder obtained from starch, used mainly as an adhesive.
    - In making *kalamansi* pudding or pie, if the juice is added early in the gelatinization process, dextrinization of the starch will occur resulting in decreased viscosity and gel strength.
    - Sugar will delay or inhibit gelatinization of starch.
    - Starch pudding with excess sugar will be less viscous or form less firm gel.
    - A cake may collapse as the structural contribution of starch is delayed or inhibited.
    - Decreased starch paste viscosity and gel strength because the sugar added to water won’t be available for gelatinization. The kind of sugar used also affect viscosity.
    - Fat and surfactants, will serve to “waterproof” the starch granules so that water will not penetrate as readily during the gelatinization process.

**Functions of Starch and Application in Filipino Dishes**

<table>
<thead>
<tr>
<th>Functions of Starch</th>
<th>Type of Food Preparation</th>
<th>Recipes</th>
</tr>
</thead>
</table>
| Thickening          | Sauces, Gravies, Pie fillings and soups | Sauces: Sweet sour, lechon, lumpia, kare-kare, palabok  
                      |                           | Pie filling: mango, buko, apple, pineapple  
                      |                           | Soups: Arrozcaldo, cream soups. |
| Gelling             | Puddings, kakanin         | Bread pudding, majaBlanca, sapin-sapin, kutchinta, cassava bibingka |
| Binding and filling | Meat loaves and meat emulsions | Luncheon meat, hot dogs, Vienna sausage, chicken nuggets, chicken balls, Ukoy, tempura |
### Common Problems in Starch Cookery

1. **Thinning of Gel.** This problem is usually encountered when using acid or acid ingredients such as lemon or vinegar.
2. **Weak Gel.** Weak gel results if there is too much liquid in relation to the starch.
3. **Skin Formation.** Skin formation is due to loss of water from the starch and protein molecules near the surface of the mixture. To reduce this problem, cover container of the starch gel with a waterproof cover.
4. **Scorching.** This can be avoided by temperature control and constant stirring so the starch granules do not settle at the bottom of the cooking pan.
5. **Raw Starch Flavor.** This is due to ungelatinized starch.

### Principles in Cooking Cereals

In cooking all cereal products, the following points should be observed:

1. Use a double boiler.
2. Observe carefully the correct proportions of cereal, water and salt.
3. Cook at boiling temperature (212° F.).
4. Watch the time by the clock, and always cook the full time prescribed, preferably longer.
5. Serve attractively.
6. Improper cooking and poor serving are largely responsible for unpopularity of cereal foods.
Cooking Pasta

Pasta should be cooked al dente, or “to the tooth”. This means the cooking should be stopped when the pasta still feels firm to the bite, not soft and mushy. The pleasure of cooking pasta is its texture, and this is lost if it is overcooked. To test for doneness, break pasta into small piece and taste it. As soon as pasta is al dente, cooking must be stopped at once. Half a minute extra is enough to overcook it.

Cooking times differ for every shape and size of pasta. Timing also depends on the kind of flour used, and the moisture content.

Fresh egg pasta, if it has not been allowed to dry, takes only 1 to 1 ½ minutes to cook after the water has returned to a boil.

Italian practice is to toss the pasta with the sauce the minute it is drained, the sauce immediately coats all surfaces of the pasta, and the cheese, melts in the heat of the boiling hot noodles.

This picture is to be replaced.
Basic Principles in Preparing Pasta

Pasta Shapes

There are hundreds of shapes and sizes of pasta with each shape used for different preparations based on how the sauce will cling, the texture desired, or how the product will be used. For example:

- Pasta shapes with holes or ridges, such as wagon wheels or rotini, are perfect for chunkier sauces.
- Thin, delicate pastas, such as angel hair or vermicelli, are better served with light, thin sauces.
- Thicker pasta shapes, such as fettuccine, work well with heavier sauces.
- Very small pasta shapes, like alphabet shapes and acini di pepe, are good for soups.

Flavored pasta is available in a variety of shapes in both the dried and fresh forms. Vegetable ingredients are added to pasta to provide both color and flavor. An example of flavored pasta is spinach noodles that are green. Follow the package directions for cooking flavored pastas.

Cooking Time Depends on the Shape

It is important to be familiar with different shapes of pasta so cooking times can be adjusted. The larger and fuller the pasta shape, the longer the cooking time. Most pasta recipes specify cooking times for pasta cooked al dente, tender but firm. Al dente is an Italian phrase that means “to the tooth.” Some of the pasta shapes and cooking times are shown in the “Cooking Chart for Various Pasta Shapes.” Just seeing this chart helps to emphasize how important it is to follow the recipe and cook pasta the right way.
Pasta Gets Bigger and Heavier when Cooked

Generally, pasta doubles or triples in weight when it is cooked. Likewise, the volume increases 2 to 2 ½ times during cooking.

Follow the Recipe

The general rule for cooking pasta in boiling water is for 1 pound of pasta, use 1 gallon of water, 1 teaspoon of salt, and 1 teaspoon of oil. For 100 servings of spaghetti, 6 gallons of water, 2 tablespoons of salt, and 2 tablespoons of oil are needed to cook 6 pounds of dried spaghetti.

When pasta is to be used as an ingredient in a recipe that will be cooked more, like macaroni and cheese, it should be slightly undercooked. This means reducing the cooking time by about 2 minutes. Pasta that is not cooked enough is tough and chewy. Pasta that is overcooked is soft and pasty. When overcooked pasta is combined with a sauce, it often breaks apart. Handle pasta the right way after it is cooked. Like most foods, pasta is best when it is cooked and served right away. However, it is sometimes necessary to cook it ahead and hold it until time for service.

Suggestions for Holding Pasta

<table>
<thead>
<tr>
<th>To serve immediately</th>
<th>Drain, add sauce, and serve.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To hold for a short time for service later</td>
<td>Drain, toss with a small amount of oil to prevent sticking, cover, and hold in warmer.</td>
</tr>
<tr>
<td>To serve as part of a salad</td>
<td>Cook pasta a day ahead so it will be chilled when combined with the other salad ingredients. Do not combine hot pasta with cold ingredients. Drain and cover with cold water just long enough to cool. The pasta does not need refrigeration for a short time, it is cooled in the water. When pasta is cool, drain and toss lightly with oil to prevent sticking or drying out. Cover and refrigerate.</td>
</tr>
<tr>
<td>To cook a day ahead for service in a heated dish</td>
<td>Drain and cover with cold water just long enough to cool. When pasta is cool, drain and toss lightly with oil to prevent sticking or drying out. Cover and refrigerate. When it is time to use the pasta, immerse it in boiling water until just heated through. Drain immediately and use according to</td>
</tr>
</tbody>
</table>
the recipe. The pasta should not be cooked more, just heated to serving temperature.

| To use in a cooked dish | Slightly undercook the pasta. |

Cooking Chart for Various Pasta Shapes

<table>
<thead>
<tr>
<th>Pasta Name</th>
<th>Cooking Time for al dente</th>
<th>Pasta Name</th>
<th>Cooking Time for al dente</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lasagna</td>
<td>15 minutes</td>
<td>Ziti</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Bow Ties</td>
<td>11 minutes</td>
<td>Fettuccine</td>
<td>8 minutes</td>
</tr>
<tr>
<td>Wagon Wheels</td>
<td>11 minutes</td>
<td>Rotini</td>
<td>8 minutes</td>
</tr>
<tr>
<td>Linguine</td>
<td>10 minutes</td>
<td>Elbow Macaroni</td>
<td>6 minutes</td>
</tr>
<tr>
<td>Rigatoni</td>
<td>10 minutes</td>
<td>Noodles</td>
<td>6 minutes</td>
</tr>
<tr>
<td>Spaghetti</td>
<td>10 minutes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Directions: Given the recipe, by pair or by group cook pasta following the procedures. Your product and performance will be evaluated using the given rubric.

How to Cook Pasta?

Materials needed:

- 500g pasta
- Salt
- Water
Tools/equipment needed

- Burner
- Kettle
- Ladle
- Colander

Procedure for Cooking Pasta

1. Put 4 quarter water per 500 g of pasta in a kettle. Add 1 ½ teaspoon salt.
2. Boil the water rapidly and drop in the pasta. As it softens, stir gently to keep it from sticking together and to the bottom. Continue to boil, stirring a few times.
3. Drain immediately in a colander as soon as it is al dente, and rinse with cold running water until the pasta is completely cooled. If serve immediately, just drain well from hot water.

Your performance will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Follows correctly the procedures in preparing and cooking pasta and performs the skill without supervision.</td>
</tr>
<tr>
<td>3</td>
<td>Follows correctly the procedures in preparing and cooking pasta and performs the skill with some assistance or supervision.</td>
</tr>
<tr>
<td>2</td>
<td>Follows correctly the procedures in preparing and cooking pasta with minor errors and performs the skill with some assistance and/or supervision.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to follow the procedures in preparing and cooking pasta and was not able to perform the skill.</td>
</tr>
</tbody>
</table>

Risk in the preparation and cooking of starch and cereal dishes and other food

- Food handlers;
- Kitchen facilities;
- Food selection and preparation; and
- Safe temperatures.
Guidelines on proper and safe handling of food

1. Food handlers
   - Undergo training on food safety and obtain medical certificates from the local/provincial/city/municipal health office.
   - Observe proper hand washing technique
   - Wear complete cooking outfit and use disposable gloves for direct food contact.
   - Observe personal hygiene at all times.
   - Avoid handling food if you are sick.

2. Kitchen facilities
   - Use separate equipment and utensils for handling raw foods
   - Sanitize all surfaces and equipment used for food preparation
   - Clean thoroughly the cutting-boards and work areas after each use
   - Protect the kitchen areas and food from insects, pests and other animals
   - Maintain the highest standards of sanitation in the kitchen at all times
   - Repair immediately broken but still serviceable kitchen tools, utensils and equipment to be ready for next use
   - Sanitize completely all kitchen utensils especially cups, saucers, flatware after each use
   - Provide for adequate space, proper ventilation and window screens in the area
   - Provide garbage receptacle for proper waste disposal

3. Food Preparation and Cooking
   - Check expiry dates of food commodities bought and those in stock
   - Use iodized salt as a must in salt-seasoned preparations
   - Cover the food properly.
   - Practice segregation of materials
   - Store food properly

4. Safe temperature
   - Do not leave cooked food at room temperature for more than two hours
   - Refrigerate promptly all cooked and perishable food preferably below 5°C within four hours
- Do not store food too long even in the refrigerator.
- Thaw food inside the refrigerator, not at room temperature.
- Check internal temperature during cooking to assure proper end-point time and temperature has been met to at least 70°C/165°F
- Reheat cooked food thoroughly to 70°C/165°F within two hours

**B. Directions: Collect at least 20 different recipes of starch and cereal dishes and compile it using any kind of paper, any decorating materials, glue, and coloring materials.**

Your output will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Compiled properly (20) recipes of starch and cereal dishes in a very attractive manner</td>
</tr>
<tr>
<td>4</td>
<td>Compiled properly (16-19) recipes of starch and cereal dishes in an attractive manner</td>
</tr>
<tr>
<td>3</td>
<td>Compiled properly (10-15) recipes of starch and cereal dishes in simple manner</td>
</tr>
<tr>
<td>2</td>
<td>Compiled properly (6-9) recipes of starch and cereal dishes in simple manner</td>
</tr>
<tr>
<td>1</td>
<td>Compiled less than 6 recipes of starch and cereal dishes in disorganized manner</td>
</tr>
</tbody>
</table>
C. Directions: Given the recipe, prepare and present Fettuccine Alfredo following the procedures.

**Ingredients:**

- 1 cup heavy cream
- 2 tbsp butter
- 1 ½ lb. fresh fettuccine
- 1 cup heavy cream
- 6 tbsp. freshly grated parmesan cheese

**Procedure:**

1. Combine the cream and butter in a sauté pan. Bring to simmer, reduce by ¼ and remove from heat.
2. Drop the noodles into boiling salted water, return to a full boil and drain. Undercook slightly the noodles because they will cook further in the cream.
3. Put the noodles in the pan with hot cream and butter. Toss the noodles with two forks until they are well coated with the cream, over low heat.
4. Add the remainder of the cream and cheese and toss to mix well.
5. Add salt and pepper to taste.
6. Plate and serve immediately.
Your performance will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Follows correctly the procedures in preparing and cooking starch dish and performs the skill without supervision and with initiative and adaptability to problem situations.</td>
</tr>
<tr>
<td>3</td>
<td>Follows correctly the procedures in preparing and cooking starch dish and performs the skill satisfactorily without assistance or supervision.</td>
</tr>
<tr>
<td>2</td>
<td>Follows correctly the procedures in preparing and cooking starch dish with minor errors and performs the skill satisfactorily with some assistance and/or supervision.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to follow the procedures in preparing and cooking starch dish and performs the skill unsatisfactorily.</td>
</tr>
</tbody>
</table>

Learning Outcome 3 Present Starch and Cereal Dishes

Techniques in Preparing Pasta before Plating

1. Pasta is best if cooked and served immediately. Try to cook pasta upon order.
2. If pasta is to be served immediately, just drain and do not rinse in cold water.
3. If pasta is to be used cold in salad, it is ready to be incorporated in the recipe as soon as it has cooled.
4. If pasta is to be held, toss gently with a small amount of oil to keep it from sticking.
5. Measure portions into mounds on trays. Cover with plastic film and refrigerate until service time.
6. To serve, place the desired number of portions in a china cap and immerse in simmering water to reheat. Drain, plate, and add sauce.
PLATING AND PRESENTING PASTA DISHES
D. Make an album of twenty different kinds of starch and cereal dish presentations with recipes.

Your output will be rated using the rubric below:

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Compiled properly (20) recipes of starch and cereal dishes in a very attractive manner</td>
</tr>
<tr>
<td>4</td>
<td>Compiled properly (16-19) recipes of starch and cereal dishes in an attractive manner</td>
</tr>
<tr>
<td>3</td>
<td>Compiled properly (10-15) recipes of starch and cereal dishes in simple manner</td>
</tr>
<tr>
<td>2</td>
<td>Compiled properly (6-9) recipes of starch and cereal dishes in simple manner</td>
</tr>
<tr>
<td>1</td>
<td>Compiled less than 6 recipes of starch and cereal dishes in disorganized manner</td>
</tr>
</tbody>
</table>
B. Directions: Given the needed tools and equipment, prepare and present Baked Lasagna following the recipe below:

Baked Lasagna

Ingredients:

- ¾ lb. ricotta cheese
- 2 tbsp. parmesan cheese, grated
- 1 pc egg
- salt to taste
- pepper to taste
- 1 lb. lasagna
- 6 cups meat sauce
- ¾ lb. mozzarella cheese, shredded
- 4 tbsp. parmesan cheese, grated
Procedure:

1. Mix together the ricotta, parmesan and eggs then season to taste with salt and pepper.
2. Cook lasagna noodles. Lay them out in a single layer on oiled sheet pans.
3. Ladle a little meat sauce into the pan. Spread it across the bottom.
4. Arrange a layer of noodles in the pan. Add a layer of ricotta mixture, a layer of noodles, a layer of sauce and a layer mozzarella.
5. Continue making layers of noodles, ricotta, sauce and mozzarella until all ingredients are used. Top with parmesan cheese.
6. Bake at 375°F (190°C) for about 30-45 minutes. Cover lightly with foil, then remove after 15 minutes of baking time.

Your performance will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>I. Products:</th>
<th>Very Good (4)</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Appearance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. attractive and appealing to appetite</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. pleasing and good color combination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. ingredients cooked just right</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Palatability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. delicious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. taste just right</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Nutritive value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. highly nutritious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Procedures:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Use of Resources:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. keep working table orderly while preparing the ingredients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. use only the proper and needed utensils and dishes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. use time-saving techniques and devices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cleanliness and sanitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. is well-groomed and properly dressed for cooking, use clean apron, hair nets, hand towel and pot holder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. observe sanitary handling of food</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Conservation of nutrients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. follow proper preparation and cooking procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A. Directions: Watch a video in the YouTube showing how to make a homemade pasta. Note down the procedures in your notebook and make a narrative observation on a short bond paper for submission next meeting. Review procedures and prepare for actual preparation.

B. Directions: Make your homemade pasta using your bare hands. You may include other ingredients. Your products, performance and presentation will be rated using the given rubric.

How to Make Homemade Pasta by Hand

Tools & Utensils:
- Rolling pin
- Mixing bowl
- Measuring cup/spoon
- Sharp cutter/knife

Ingredients:
- 2 cups all-purpose flour
- ¼ tsp salt
- 3 pcs egg
- 1 tbsp milk
- 1 tsp olive oil

Procedure:
1. Combine 2 cups all-purpose flour and 1/4 teaspoon salt on pastry board, culling board, or countertop; make well in center. Whisk 3 eggs, 1 tablespoon milk, and 1 teaspoon olive oil in small bowl until well blended; gradually pour into the flour mixture while mixing with fork or fingertips to form ball of dough.
2. Gradually add the mixture to the flour to make a ball of dough.
3. Place dough on lightly floured surface; flatten slightly. To knead dough, fold dough in half toward you and press dough away from you with heels of hands. Give dough a quarter turn and continue folding, pushing, and turning. Continue kneading for 5 minutes until smooth and elastic, adding more flour to prevent sticking if necessary. Wrap dough in plastic and let it stand for 15 minutes.
4. Knead the dough until it becomes smooth and elastic.
5. Unwrap dough and knead briefly (as described in step 2) on lightly floured surface. Using lightly floured rolling pin, roll out dough to 1/8-inch-thick circle on lightly floured surface. Gently pick up dough circle with both
hands. Hold it up to the light to check for places where dough is too thick. Return to board. Let rest until dough is slightly dry but can be handled without breaking.
6. Lightly flour dough circle; roll loosely on rolling pin.
7. Loosely roll the dough on a rolling pin.
8. Slide rolling pin out; press dough roll gently with hand and cut into strips of desired width with sharp knife. Carefully unfold strips.
9. Cut the dough into strips of desired width.
10 Pasta can be dried and stored at this point. Hang strips over pasta rack or clean broom handle covered with plastic wrap and propped between two chairs. Dry for at least 3 hours; store in airtight container at room temperature for 4 days. To serve, cook pasta in large pot of boiling salted water 3 to 4 minutes just until al dente. Drain well.
11. Dry the pasta using a drying rack.

Your performance will be rated using the rubric below.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Follows correctly the procedures in preparing and cooking homemade pasta and performs the skill without supervision.</td>
</tr>
<tr>
<td>3</td>
<td>Follows correctly the procedures in preparing and cooking homemade pasta and performs the skill without some assistance or supervision.</td>
</tr>
<tr>
<td>2</td>
<td>Follows correctly the procedures in preparing and cooking homemade pasta with minor errors and performs the skill with some assistance and/or supervision.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to follow the procedures in preparing and cooking homemade pasta and performs the skill unsatisfactorily.</td>
</tr>
</tbody>
</table>
Learning Outcome 4 Store Starch and Cereal Dishes

Introduction
Proper storage of food is very crucial in keeping food safe because the manner and temperature of storage will affect the food's susceptibility to bacterial growth, other contaminants, and infestation. Storing food will not improve its quality, it will only delay the rate of deterioration, and thus, the proper period of storage should also be observed.

FIFO (First In, First Out) in storing food is very important. Though it is a long-time method in store-keeping where the first food stored should be the first food to be out from the storage it is high time to make it a habit or put into practice. Write the expiry date, date received and date of storage to the food package and regularly check the expiration date.

How to Store Pasta Noodles
Pasta is stored in airtight containers.
Pasta noodles are usually sold dry at the grocery store, allowing you to store them with other staples in your pantry. Dry noodles have a long storage life when properly packaged. Improper storage causes the pasta to become moist, which leads to mildew. Even without moisture, pasta can become stale if it's not stored correctly. Proper storage ensures your pasta to always taste its best.

1. Dry Pasta
   - Remove the pasta from the store packaging if the noodles come in a box or other non-airtight container.
   - Place the noodles in a sealable plastic bag or other container that closes tightly. For long noodles, such as spaghetti, use a tall plastic storage container.
   - Seal the bag or screw the lid on tightly. Store the pasta in a cool, dry place. Dry pasta stores indefinitely, but should be used within two years to prevent loss of flavor. Store dried egg noodles for up to six months.

   Dried pasta need not to be refrigerated. It can be stored on the shelf in an airtight container in a dry area that is not exposed to extreme temperature. Dried pasta can be stored indefinitely and still be safe to eat but the USDA recommends storing dried pasta for no more than two years to obtain the best quality. Some manufacturers will stamp their packages with a "best if used by" date, which indicates that the flavor, color and nutritional value may be affected if used beyond that date.
2. **Cooked Pasta**

- Pour the noodles into a colander. Allow as much moisture as possible to drain. Noodles left in standing water become overly soft and mushy.
- Sprinkle 1 tsp. salad oil over the noodles. Toss the pasta so the noodles are evenly coated in the oil. Salad oil prevents the pasta from sticking together.
- Place the pasta in a tight-sealed container. Store in the refrigerator for three to five days.
- Cooked pasta can be stored unsauced in an airtight container and refrigerated for 4 or 5 days. The sauce should be refrigerated separate from the pasta and can be stored for 6 or 7 days. This prevents the pasta from soaking up too much flavor and oil from the sauce, which causes the taste of the pasta to be drowned out. If the pasta is stored together with the sauce, it should be eaten within 1 or 2 days to limit the amount of sauce that is absorbed. If cooked pasta is not going to be used within the suggested time period, it should be frozen and then it can be stored for approximately 3 months. Frozen cooked pasta should be thawed in the refrigerator and not on the kitchen counter.

To store, cook the pasta as you normally would and then rinse with cold water and allow it to drain well.

Add a small amount of olive oil or butter to help prevent the pasta from clumping together while it is stored. Use only enough oil or butter to lightly coat the pasta.
To refrigerate, place the pasta in an airtight plastic bag or an airtight container and place in the refrigerator. To freeze, place in an airtight plastic freezer bag and press out as much excess air as possible and place in the freezer.

If storing sauced pasta, eat within 1 to 2 days to prevent it from absorbing too much sauce.

- When refrigerating or freezing cooked pasta, be sure it is stored in a well-sealed container so that it does not absorb any odor. Cooked lasagna and baked pasta dishes can be refrigerated or frozen in the same manner as plain cooked pasta. The lasagna and casseroles should be first cut into individual servings before placing them in a sealed bag or container. This will make it easier when reheating.

If you have an entire lasagna or pasta dish to refrigerate or freeze, it can be left in the baking dish and tightly covered before storing.
The lasagna and baked pasta dishes can be refrigerated for 3 or 4 days or they can be placed in a freezer and kept for approximately 3 months. If frozen, the pasta dish should be thawed in the refrigerator and not on the kitchen counter.

3. Fresh Pasta.

- Fresh pasta should ideally be used on the same day as manufactured. This is not always possible, but if it is used within the next two days it will give adequate results. After this it tends to crack through excess drying. It must be stored, keep it well-covered in the fridge, to minimize the risk of this happening. Frozen filled pastas will keep for up to three months if held at -18°C or lower.

- Fresh pasta can be stored in the refrigerator for 2 or 3 days. If the pasta will not be used within that time, it can be frozen and stored in the freezer for 2 to 3 months. Homemade pasta can be stored in the refrigerator for 1 or 2 days or frozen for 2 to 3 months. Homemade pasta can also be allowed to dry thoroughly and then placed in a plastic bag or airtight container. The length of time it will take to dry will vary depending on the type of pasta and its size, shape and thickness. If dried completely, the pasta can then be stored in a cool dry place for a couple of months. If you are going to use the pasta on the same day as it is made, you can allow it to dry on a clean towel for a couple of hours before you cook it unless it is stuffed pasta. Stuffed pasta, such as ravioli, should be cooked within half an hour, otherwise it will begin to discolor and become damp.

If it is not going to be cooked immediately it should be placed on a lightly floured towel that is placed on a baking sheet, sprinkled lightly with flour, and then placed in the freezer. Once they are frozen they can be stored in a freezer proof bag or wrap and then place it in the freezer for 8 or 9 months.
4. **Frozen pasta** does not have to be thawed before it is cooked. Just place the frozen pasta into boiling water and reheat it. It will need to cook a little longer than unfrozen pasta.

Tips & Warnings

- Store pasta sauce separate from the noodles, otherwise the noodles will become mushy.

- You can freeze cooked pasta but it may be too soft once thawed. Use frozen pasta in baked dishes so the softer texture is not noticeable.

---

**Review of Learning Outcome 4**

A. Explain the principle behind FIFO.

B. Make a slogan showing the importance of proper storing of food.

Your output will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Done creatively and neatly showing much relevance to the given topic</td>
</tr>
<tr>
<td>4</td>
<td>Done creatively and neat enough with relevance to the given topic</td>
</tr>
<tr>
<td>3</td>
<td>Done creatively and neat enough but no relevance to the given topic</td>
</tr>
<tr>
<td>2</td>
<td>Done simply and neat enough but not so relevant to the given topic</td>
</tr>
<tr>
<td>1</td>
<td>Done poorly with erasures and irrelevant to the given topic</td>
</tr>
</tbody>
</table>
Prepare and cook any cereal dish from among those recipes which you have compiled in the previous activity.

Your performance will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>P E R F O R M A N C E   L E V E L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of tools and equipment</td>
<td>Excellent (4 pts.) Very Satisfactory (3 pts.) Satisfactory (2 pts.) Needs Improvement (1 pt.) No Attempt (0 pt.) Points Earned</td>
</tr>
<tr>
<td>Uses tools and equipment correctly and confidently at all times</td>
<td>Uses tools and equipment correctly and confidently most of the times</td>
</tr>
<tr>
<td>2. Application of procedures</td>
<td>Manifests very clear understanding of the step-by-step procedure</td>
</tr>
<tr>
<td>Works independently with ease and confidence at all times</td>
<td>Works independently with ease and confidence most of the time</td>
</tr>
<tr>
<td>3. Safety work habits</td>
<td>Observes safety precautions at all times</td>
</tr>
<tr>
<td>4. Final Output</td>
<td>Output is very presentable and taste exceeds the standard.</td>
</tr>
<tr>
<td>5. Time management</td>
<td>Work completed ahead of time</td>
</tr>
</tbody>
</table>

TOTAL POINTS
Post Test
A. Multiple Choice.
Directions: Read each question carefully. Choose the letter which corresponds to the correct answer and write it in your test notebook.
1. Knife is chef’s best buddy. It is the busiest tool being used by people assigned inside the kitchen. Which of the following knives is used for decorative works such as garnishes?
   A. Bread knife   C. Channel knife
   B. Butcher knife D. Paring knife
2. It is a perforated bowl of varying sizes made of stainless steel, aluminum or plastic used to drain washed or cooked ingredients from liquid.
   A. Canister   C. Mixing bowl
   B. Colander   D. Soup bowl
3. It is used for turning and lifting eggs, pan cakes and meats on griddles, grills, sheet pans, and the likes and also used to scrape and clean griddles.
   A. Measuring spoon   C. Rubber scraper
   B. Offset spatula   D. Wooden spoon
4. It is used to scrape off all the contents of bowls and pans from the sides and fold in beaten eggs in batter or whipped cream.
   A. Paring knife   C. Wire whisk
   B. Rubber spatula   D. Wooden spoon
5. It is a screen – type mesh supported by a round metal frame used for sifting dry ingredients like starch and flour.
   A. Colander   C. Sieve
   B. Funnel   D. Skimmer
6. It is a device with loops of stainless steel wire fastened to a handle. It is used for blending, mixing, whipping eggs or batter, and for blending gravies, sauces, and soups.
   A. Fork   C. Spoon
   B. Knife   D. Whisk
7. It is a miniature Bain Marie with an upper dish containing indentations each sized to hold an egg or contains separate device for poaching.
   A. Egg Poacher   C. Frying pan
   B. Double boiler   D. Omelet pan
8. It is a chamber or compartment used for cooking, baking, heating, or drying.
   A. Blender   C. Mixer
   B. Burner   D. Oven
9. It is the process of washing and sanitizing dishes, glassware, flatware, pots, and pans either manually or mechanically.
   A. Bleaching       C. Ware washing
   B. Hand washing    D. Washing machine

10. A dishwashing machine capable of washing, rinsing, and drying dishes, flatware, and glassware.
    A. Hand washing    C. Mechanical ware washing
    B. Manual ware washing D. Washing machine

11. It is the egg’s outer covering which accounts for about 9 to 12% of its total weight depending on egg size.
    A. Chalaza         C. Shell
    B. Germinal disc   D. Yolk

12. This is the entrance of the latebra, the channel leading to the center of the yolk.
    A. Chalaza         C. Shell
    B. Germinal disc   D. Yolk

13. It is the yellow to yellow-orange portion which makes up to about 33% of the liquid weight of the egg.
    A. Chalaza         C. Shell
    B. Germinal disc   D. Yolk

14. A disease that is carried and transmitted to people by food is referred to as food borne ________________.
    A. Bacteria       C. Infection
    B. Illness        D. Intoxication

15. It is a disease that results from eating food containing harmful microorganism.
    A. Food-borne bacteria C. Food-borne infection
    B. Food-borne illness D. Food-borne intoxication

16. It is a disease that results from eating food containing toxins from bacteria, molds or certain plants or animals.
    A. Food-borne bacteria C. Food-borne infection
    B. Food-borne illness D. Food-borne intoxication

17. It is used for mixing creams, butter and for tossing salads.
    A. Electric mixer   C. Wire whisk
    B. Serving spoon    D. Wooden spoon

18. It is used for preparing meat, chicken, and other grains or legumes, such as mongo and white beans in lesser time.
    A. Double boiler    C. pressure cooker
    B. Frying pan       D. rice cooker
19. It is a long chainlike molecule, sometimes called the linear fraction, and is produced by linking together 500 to 2,000 glucose molecules which contributes to the gelling characteristics of cooked and cooled starch mixtures.
   A. Amylopectin     C. Dextrin
   B. Amylose         D. mucin

20. This problem is usually encountered when using acid or acid ingredients such as lemon or vinegar.
   A. Scorching       C. Thinning of gel.
   B. Skin formation  D. Weak gelling

21. This results when there is too much liquid in relation to the starch.
   A. Scorching       C. Thinning of gel.
   B. Skin formation  D. Weak gelling

22. This problem can be reduced by covering the container of the starch gel with a waterproof cover.
   A. Scorching       C. Thinning of gel.
   B. Skin formation  D. Weak gelling

23. This can be avoided by temperature control and constant stirring so the starch granules do not settle at the bottom of the cooking pan.
   A. Scorching       C. Thinning of gel.
   B. Skin formation  D. Weak gelling

24. Food stuff has a required shelf life and storing requirement. Which of the following food item can be stored in the refrigerator for 2 or 3 days?
   A. Cooked pasta    C. Fresh pasta
   B. Dried pasta     D. Frozen pasta

25. FIFO stands for __________
   A. Fan In Fan On   C. First In First Out
   B. First In Fight Out  D. Fit In Fit Out
B. Give one risk in the preparation and cooking of starch, cereal dishes and other foods and give some guidelines pertaining to food safety. (26-30)

Your answer will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>SCORE</th>
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</tr>
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<tbody>
<tr>
<td>4</td>
<td>Explains very clearly the complete guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
<tr>
<td>3</td>
<td>Explains clearly the complete guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
<tr>
<td>2</td>
<td>Explains partially the guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to explain any guidelines to consider pertaining to food safety related to the given risk.</td>
</tr>
</tbody>
</table>
QUARTER II
PREPARE VEGETABLE AND SEAFOOD DISHES

Overview

This quarter will guide you, learners to acquire the essential knowledge and competencies and develop your skills with understanding in the preparation, cooking, presentation, and storing vegetables and seafood dishes. Products/performances required in every activity will help you to practice gained understanding.

Objectives

At the end of the lesson, you are expected to:
1. perform Mise’en place;
2. prepare and cook vegetable and seafood dishes;
3. present vegetable and seafood dishes; and
4. store vegetable and seafood dishes.

Let’s See What You Know

Pretest 2

Multiple Choice.

Directions: Read the following questions carefully and choose the letter that best describes the statement. Write your answer in your test notebook.

1. Which of the following vegetables is rich in carbohydrates?
   A. legumes, peas, and beans  
   B. Nuts, olives, and avocado  
   C. Mushroom, tomatoes, and radish  
   D. Seeds, roots, and tubers

2. What is the flavor component of vegetables which gives strong flavor and odor to some vegetables like onions, leeks, garlic, chives, cabbage, and broccoli?
   A. Flavonoids  
   B. Nuts, olives, and avocado  
   C. Sugar  
   D. Sulfur compounds
3. Which tool is used to drain excess water after washing vegetables?
   A. Bowls  C. Steamer
   B. Colander  D. Utility tray

4. Which of the following is cooking by placing blanched or raw vegetables in the pan, adding liquid (stock, water, wine) then covering and cooking it slowly?
   A. Boiling  C. Braising
   B. Baking  D. Sautéeing

5. Which fat soluble compound is responsible for the green coloring of plants?
   A. Anthocyanins  C. Chlorophyll
   B. Carotenoids  D. Lycopene

6. Mrs. Cabrillas needs more supply of Vitamin A. which of the following will she eat to give her the nutrient she needs?
   A. Alugbati  C. Lettuce
   B. Potatoes  D. Saluyot

7. Which of the following plating styles is not a classic arrangement?
   A. The starch or vegetable item is heaped in the center while the main item is sliced and leaned up against it.
   B. The main item in the center, with vegetable distributed around it.
   C. The vegetable item in front and main item, starch item and garnish at the rear.
   D. The main item is in the center with neat piles of vegetables carefully arranged around.

8. Chef Shaneshan will cook chopsuey. She is about to remove the hard core of a cabbage. Which of the following knife will she use?
   A. Butcher knife  C. Cutting knife
   B. Channel knife  D. Paring knife

9. What kind of knife is used in removing the hard core of a cabbage?
   A. Butcher knife  C. Cutting knife
   B. Channel knife  D. Paring knife

10. At what temperature in a dry, dark place should potatoes and onions be stored?
    A. 50 – 65°F  C. 60 – 85°F
    B. 40 – 45°F  D. 70 – 95°F

11. Which of the following vegetables is cooked uncovered?
    A. Fruit vegetables  C. Roots and tubers
    B. Green vegetables  D. Yellow vegetables

12. Which kind of fish has no internal bone structure?
    A. Fin fish  C. Round fish
    B. Freshwater fish  D. Shell fish
13. Which of the following fish is high in fat?
A. Bass   C. Mackerel
B. Cod    D. Red Snapper

14. Which of the following fish is low in fat?
A. Cod    C. Trout
B. Salmon D. Tuna

15. Which market form of fish is viscera, head, tail and fins are removed?
A. Butterfly C. Fillet
B. Dressed   D. Sticks

16. Which of the following is a freshwater fish?
A. Bluefish C. Grouper
B. Cat fish  D. Sole

17. Which market form of fish are both sides of a fish still joined but bones are removed?
A. Butterfly C. Fillet
B. Drawn     D. Steak

18. Which of the following is the second step in scaling whole fish?
A. Begin to rake the scales from the tail towards the head.
B. Remove the scales on both sides of the fish.
C. Hold the fish down firmly with your hand near its head.
D. Lay your fish flat on the board.

19. Which of the following is the third step in opening an oyster?
A. Cut muscle from bottom cup.
B. Insert oyster knife at hinge slowly but firmly
C. Push knife into oyster and slice muscle from top shell
D. Twist knife handle to open the oyster.

20. Which of the following is a characteristic of a fresh fish?
A. With fresh and foul odor
B. Eyes are dull, shiny and bulging
C. Gills are pink or red
D. Flesh shrink when pressed

21. How many colors is suggested on a plate to make it balance?
A. Four to five C. Three to four
B. One to two   D. Two to three

22. Which of the following seafood is cooked just enough to heat to keep it juicy and plump?
A. Fat fish   C. Flat fish
B. Lean fish  D. Shellfish

23. Which of the following enhances baked fish when served?
A. Butter    C. Lemon
B. Cream     D. Sauce
24. What cooking method is suited to fat fish.
   A. Baking                    C. Deep-frying
   B. Boiling                   D. Sautéing

25. Which is basted to baked lean fish to help prevent it from drying up.
   A. Butter                    C. Soy sauce
   B. Cream                     D. Tomato sauce

B. Give five characteristics of a fresh fish.
26. ____________________________________________________
27. ____________________________________________________
28. ____________________________________________________
29. ____________________________________________________
30. ____________________________________________________
LESSON 1 PREPARE VEGETABLE DISHES

Overview

Vegetables are plants or parts of plants like leaves, fruits, tubers, roots, bulbs, stems, shoots, and flower used in a dish either raw or cooked. Vegetables give color, texture and flavor to our meals. They also give vitamins and minerals.

Vegetables provide nutrients vital for health and maintenance of your body. Eating vegetables provides health benefits to people like reduced risk of some chronic diseases including heart attack and stroke, protect them against certain types of cancers, reduce obesity and type two diabetes, lower blood pressures, reduce the risk of developing kidney stones and help decrease bone loss.

Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, and vitamin C.

- Diets rich in potassium may help maintain normal blood pressure. Vegetable sources of potassium include sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, spinach, lentils, and kidney beans.
- Dietary fiber from vegetables, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as vegetables help provide a feeling of fullness with fewer calories.
- Folate (folic acid) helps the body form red blood cells. Women of childbearing age who may become pregnant should consume adequate folate from foods, and in addition, 400 mcg of synthetic folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spinal bifida, and anencephaly during fetal development.
- Vitamin A keeps eyes and skin healthy and helps to protect against infections.
- Vitamin C helps heal cuts and wounds, and keeps teeth and gums healthy. Vitamin C aids in iron absorption.
Learning Outcome 1 Perform Mise’ En Place

Vegetables need to be prepared before they are ready to serve or used as an ingredient in a cooked dish. Prior to preparation you need to identify the various kinds of vegetables and different tools and equipment needed in the preparation of vegetables. It is an important factor to consider in the preparation of vegetables.

Classifications of Vegetables

a. According to parts of plants

- Gourd family
  - cucumber, pumpkin, chayote

- Seeds and pods
  - beans, peas, corn, okra

1. Fruit Vegetables
  - avocado, eggplant, sweet pepper, tomato
- Roots and tubers
  - beet, carrot, radish, turnip, artichoke, potato, sweet potato

- Cabbage family
  - cabbage, broccoli, cauliflower, Brussels sprouts, bokchoy

- Onion family
  - onion, scallion, leek, garlic, shallot

- Leafy greens
  - spinach, lettuce
• Stalks, stems, and shoots
  - artichoke, asparagus, celery, fennel, bamboo, shoots

• Mushrooms

2. **According to Chemical Composition**
   - Carbohydrates-rich vegetables – seeds, roots, tubers
   - Protein-rich vegetables – legumes, peas, beans
   - Fat-rich vegetables – nuts, olives, avocado
   - High moisture content – mushroom, tomatoes, radish, green leafy vegetables

3. **According to Nutritive Value**
   The following is based on their nutrient content since fruits and vegetables are good sources of vitamins and minerals.
   - Vitamin A-rich vegetables – green leafy and yellow fruits and vegetables
   - Vitamin C-rich vegetables – yellow vegetables
   - Vitamin B (complex) – legumes, peas, beans
Tools and Equipment Needed in Preparing Vegetables

- **paring knife** - used in paring
- **chef knife** - used in cutting
- **chopping board** - used to hold item while chopping
- **colander** - used to drain excess water after washing
- **bowls** - used to hold vegetables
Flavor Components of Vegetables

1. Sugar –
   Fructose – the natural sugar that provides the sweetness in vegetables.

2. Glutamic Acid –
   This forms a product called monosodium glutamate when combined with salt. It is found in large amount from young and fresh vegetables.
3. Sulfur compounds –
   Give the characteristic strong flavor and odor of some vegetables like onions, leeks, garlic, chives, cabbage and broccoli.

**Color Components**

1. Chlorophyll – a fat soluble compound responsible for the green color of plants. When combined with acid, it forms pheophytin which produces an olive green color.
   When combine with alkali, it forms chlorophyllins which produces a more intense green color. The addition of baking soda when cooking that results to brighter green color, is an example.

2. Carotenoids – the yellow, orange to red soluble pigments found in plants.
   2.1 - beta carotene from carrots and squash
   2.2 - lycopene, from tomatoes

3. Flavonoids
   3.1 - Anthoxanthin – responsible for the yellow pigments
   3.2 - Anthocyanins – responsible for red and blue to violet pigments (beets) Tube, eggplants
Factors to consider in choosing good quality vegetables

1. Freshness
   Fresh vegetables should be crisp and bright in colors.

2. Absence of decay or insect infestation

3. No mechanical damage or injury.

4. Right degree of maturity

5. Variety
   Different varieties differ in color, shape, texture and sometimes flavor.
Vegetables are good sources of food nutrients that are very important in everyday meals.

Nutritional Value of Vegetables

1. Vitamin A
   - Green leafy vegetables are sources of vitamin A.
   - Example:
     - alugbati
     - ampalaya leaves
     - kalabasa leaves
     - malunggay
     - petchay
     - sili leaves

2. Vitamin C
   - Example:
     - cabbage – type vegetables
     - bell peppers
     - lettuce
     - potatoes
     - dark green and yellow vegetables

3. Vitamin B – complex
   - Beans and leafy greens are rich sources of vitamin B – complex
   - Example:
     - ampalaya tops
     - kulitis
     - pepper leaves
     - saluyot
     - dried beans
4. Complex carbohydrates

Complex carbohydrates are carbohydrate molecules with more than 20 – sugar residue. They are called as polysaccharide.

**Functions of Carbohydrate:**

1. Source of energy (protein sparing and prevents ketosis)
2. Source of B-vitamins for CHO metabolism
3. Type of carbohydrate chosen determines:
   - Fiber content
   - Glycemic load of diet
   - Nutrient density and phytochemical content

Example:

wheat bran
whole grain breads and cereals
cabbage
carrots
Brussels sprouts

**Preparing Fresh Vegetables**

1. **Washing**
   - Wash all vegetables thoroughly
   - Scrub well unpeeled vegetables, like potatoes for baking
   - Wash green leafy vegetables in several changes of cold water
   - After washing, drain well and refrigerate lightly covered to prevent drying.
2. **Soaking**
   - Do not soak vegetables for long periods to prevent flavor and nutrient loss.
   - Cabbage, broccoli, cauliflower may be soaked for 30 minutes in cold salted water to eliminate insects.
   - Limp vegetables can be soaked briefly in cold water to restore crispness.

3. **Peeling and Cutting**
   - Peel vegetables as thinly as possible.
   - Cut vegetables into uniform pieces for even cooking.
   - Treat vegetables that brown easily with acid (potatoes, eggplants, sweet potato) or hold under water until ready to use.
   - Save edible trim for soups, stocks and purees.

**Basic Knife Cuts**
1. Chopping – done with a straight, downward cutting motion.
2. Chiffonade (shredding) – making very fine parallel cuts.
3. Dicing – producing cube shapes
   - Diamond (lozenge) – thinly slicing and cutting into strips of appropriate width
5. Mincing – producing very fine cut usually for onions and garlic
6. Julienne and baton net – making long rectangular cut
   - Pays Anne (Fermi ere) – making curved or uneven cuts of the same thickness
8. Rondelle – making cylindrical cut
9. Bias – making diagonal cut
10. Oblique, or roll cuts – making diagonal cut by rolling the long cylindrical vegetables

*Apply safe and accurate cutting techniques in preparing vegetables according to enterprise standards.*
A.Trimming Artichoke bottom

1. Start by filling a bowl with cold water and lemon into it. (You could also use a dash of vinegar) this will slow the browning on the surface of the artichoke when it is cut and exposed to air.

2. Pull out the tough outer, dark green leaves of artichoke.

3. Continue removing leaves until you are left with light colored, tender leaves. Rub surfaces with lemon.

4. Slice off the top one inch.

5. Trim the remaining dark green surfaces at the base, including stalk and continue to rub with lemon.
6. Cut the artichoke in half.

7. Use spoon to remove hairy fibers in the center of the artichoke.

8. Pull out all of the tough red fibers, leaving the soft green leaves in place.

9. Cut the artichokes lengthwise into sizes that suit your recipe and place it in the water bath with lemon before cooking.
B. Trimming Asparagus

1. Hold a spear of asparagus in each hand.

2. Bend downward with each end until it breaks into two.

3. Repeat with the whole bunch of asparagus. Purplish ends on the left are destined for stock, and greenish spears to be trimmed.

4. Trim or cut them into one inch length for cooking.
C. Preparing Avocados

1. Grip the avocado gently on one side with one hand, cut the avocado lengthwise around the seed.

2. Open the avocado into halves to expose the seed.

3. Scoop out the seed with the use of spoon or scooper.

4. Gently tap the seed with a knife and twist to get the seed out and discard.

5. Scoop out the avocado flesh with a spoon or scooper.
6. Slice avocado into segments.

D. Cutting and Shredding Cabbage

1. Pull off any bruised or wilted outer leaves from a red or green cabbage head.

2. Cut the cabbage into halves.

3. Cut the halves into quarters lying flat side down on the cutting board.
4. Use a paring knife to remove the hard core. Repeat with remaining cabbage quarters.

5. Cut into slices or shred the cabbage to your desired thickness.

E. Peeling and crushing garlic

1. To remove the paper skin of garlic, cut off the base of the clove.

2. Place the clove on a board and gently slam it with flat side of a knife.
3. The skin will burst and can easily be removed.

4. Cut the garlic into slices as thin as possible.

5. From garlic slices, mince it.

4. Crush the garlic as you want.
F. Cleaning leeks

1. Cut off and discard the dark green leaves. Trim and discard the roots.

2. Cut the stalk into half lengthwise.

3. Slice them crosswise.

4. Transfer them to a bowl of cold water and swish them around a few times.
5. With hands loosely cupped, lift the leeks out of the bowl and place them on a plate or work surface (or colander).

6. Discard the water with the remaining grit.
7. Repeat until the water is clear and ready to be cooked.

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Formative Assessment

Directions: Identify and classify the given pictures. Write your answer in the appropriate column.

<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>![Image of green vegetables]</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>![Image of corn]</td>
<td></td>
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</tbody>
</table>
B. Directions: Identify the different methods of preparing fresh vegetables. Write the correct method on the space provided.

1. 
2. 
3. 
4. 
5. 
6. 
7.
Learning Outcome 2 Prepare Vegetable Dishes

Effects of Cooking Vegetables
1. Changes in texture
   - Fibers are either softened or toughened.
     A. Cellulose and hemicellulose – heating generally softens fibers
     B. Addition of acid toughen fibers
     C. Addition of alkali like baking soda soften hemicellulose
     D. Addition of lime causes firmness or delay softening due to the reaction of calcium from lime (“apog”)
2. Water is either lost or absorbed.
   A. Vegetables contain high amount of water, leafy and succulent vegetables lose water and become limp.
   B. Vegetables with significant amount of starch (dried beans, root crops, tubers) absorb water because of the hygroscopic property of starch.
3. Changes in color
   Cooking for a short time, helps maintain color. The effect of heat, acid, alkali, and metal on the pigment are summarized below:

<table>
<thead>
<tr>
<th>Pigment</th>
<th>Effect of acid</th>
<th>Effect of alkali</th>
<th>Effect of prolonged cooking</th>
<th>Solubility in water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorophyll</td>
<td>Olive green</td>
<td>Intensifies green color</td>
<td>Olive green</td>
<td>Slightly Soluble</td>
</tr>
<tr>
<td>Carotene</td>
<td>Little effect</td>
<td>Little effect</td>
<td>Little effect unless excessive way darkens</td>
<td>Slightly Soluble</td>
</tr>
<tr>
<td>Anthocyanin</td>
<td>Color is stable</td>
<td>Deeper red purple or blue depending on alkalinity</td>
<td>Little effect</td>
<td>Very soluble</td>
</tr>
<tr>
<td>Anthoxanthins</td>
<td>No effect</td>
<td>Yellow</td>
<td>Darken if excessive in the presence of iron</td>
<td>Very soluble</td>
</tr>
</tbody>
</table>
4. Changes in nutrients
   A. Carbohydrate
      - moist heat cooking – gelatinization of starch
      - dry heat cooking – dextrinization of starch
      - carmelization of sugar
   B. Protein become more soluble and digestible
   C. Vitamin may be destroyed in heat like vitamin C
   D. Minerals are washed into the cooking liquid or oxidized

**General Rules of Vegetable Cookery**
- Don’t overcook.
- Prepare vegetable as close to service time as possible and in small quantities.
- If the vegetable must be cooked ahead, undercook slightly and chill rapidly. Reheat at service time.
- Never use baking soda with green vegetables.
- Cut vegetables uniformly for even cooking.
- Cook green vegetables and strong – flavored vegetables uncovered.

**Standard Quality of Cooked Vegetables**
1. **Color**
   - Bright, natural color

2. **Appearance on plate**
   - Cut neatly and uniformly
   - Attractively arranged with appropriate combinations and garnishes

3. **Texture**
   - Cooked to the right degree of doneness
   - Crisp – tender, not overcooked and mushy
   - Potatoes, squash, sweet potatoes, tomatoes should be cooked through with smooth texture

4. **Flavor**
   - Natural flavor and sweetness
   - Strong – flavored vegetables should be pleasantly mild, with no off flavors or bitterness
5. Seasonings
   Seasonings should not mask the natural flavors

6. Sauces
   Do not use heavily. Vegetable should not be greasy

7. Vegetable combinations
   Vegetables should be cooked separately for different cooking times, and then combined
   Combine acid vegetables like tomatoes, to green vegetables just before service to prevent discoloration of greens.

**Cooking Frozen and Canned Vegetables**

A.) Frozen Vegetables
   - Examine all frozen products when received to check quality.
   - Frozen vegetable requires shorter time in cooking because they have been partially cooked.
   - Cook from the frozen state. Can cook directly into steamer or boiling salted water.
   - Corn on the cob and vegetables that freeze in solid block like squash, should be thawed for even cooking.
   - Add less salt. Most frozen vegetables are slightly salted during processing.
B.) Canned Vegetables

- Drain vegetables and place half the liquid in a cooking pot, and bring to boil.
- Add vegetables and heat to serving time. Do not boil for a long time.
- Season liquid before adding vegetables to blend flavors of herbs and spices.
- Use butter to enhance the flavor of most vegetables.

<table>
<thead>
<tr>
<th>Frozen vegetables</th>
<th>Canned vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Examine all frozen products when received to check quality</td>
<td>1. Drain vegetables and place half the liquid in a cooking pot, and bring to boil.</td>
</tr>
<tr>
<td>2. Frozen vegetable requires shorter time in cooking because they have been partially cooked</td>
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</tr>
<tr>
<td>3. Cook from the frozen state. Can be cooked directly into steamer or boiling salted water.</td>
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<td>4. Corn on the cob and vegetables frozen in solid block like squash, should be thawed for even cooking</td>
<td>4. Use butter to enhance the flavor of most vegetables</td>
</tr>
<tr>
<td>5. Add less salt. Most frozen vegetables are slightly salted during processing</td>
<td></td>
</tr>
</tbody>
</table>
Culinary Terms of Vegetables

Assortments of fresh vegetables like carrots, turnips, peas, pearl onions, green beans, cauliflower, asparagus and artichokes.

- **Bouquet ere** – bouquet of vegetables
- **Printanière** – spring vegetables
- **Jardinière** – garden vegetables
- **Primeurs** – first spring vegetables
- **Clamart** – peas
- **Ceecy** – carrots
- **Doria** – cucumbers cooked in butter
- **Dubarry** – cauliflower
- **Fermière** – carrots, turnips, onions, celery cut into uniform slices
- **Florentine** – spinach
- **Forestière** – mushrooms
- **Judic** – braised lettuce
- **Lyonnaise** – onions
- **Nicoise** – tomatoes concasse cooked with garlic
- **Parmientier** – potatoes
- **Princesse** – asparagus
- **Provençale** – tomatoes with garlic, parsley and sometimes mushrooms or olives

Directions: Make a compilation of technical words commonly used in the world of culinary for vegetable cookery. Follow concrete instructions below:

- Make a personalized and improvised dictionary (half folded bond paper).
- Include local and foreign terminologies which are used in vegetable cookery.
- Limit your dictionary to a minimum of 10 pages and a maximum of 20 pages.
- Bind and cover it.
- You can work in collaboration with others and submit after 1 week.
Your output will be rated using the scoring rubric below.

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Done creatively and neatly with more than twenty pages</td>
</tr>
<tr>
<td>4</td>
<td>Done creatively and neat enough with 15 to 20 pages</td>
</tr>
<tr>
<td>3</td>
<td>Done creatively and neat enough but with 10 to 14 pages</td>
</tr>
<tr>
<td>2</td>
<td>Done simply and neat enough but with 10 to 14 pages</td>
</tr>
<tr>
<td>1</td>
<td>Done poorly with less than 10 pages</td>
</tr>
</tbody>
</table>

**Ways of Cooking Vegetables**

1. **Boiling and steaming** – Vegetables are drained as soon as they are cooked and then cool quickly under cold water to prevent overcooking from the residual heat. They are reheated quickly by sautéing in butter or other fat. Seasonings and sauces are added at this stage.

2. **Sautéing and Pan – Frying** Both methods may be used to complete cooking or precooked or blanched vegetables. Also used for complete cooking of raw vegetables.

3. **Braising** The blanched or raw vegetable, is placed in the pan then liquid is added (stock, water, wine) to cover vegetables, then cooked slowly.
4. Baking
Cooking starchy vegetables using heat of the oven, rather than range top. Starchy vegetables are baked because the dry heat produces a desirable texture.

5. Deep – frying
Vegetables large enough to coat with breading or batter may be fried. Quick – cooking vegetables can be fried raw. Some, may be precooked by simmering or steaming briefly to reduce the cooking time in frying.

**Let’s Do it!**

Directions: Find a partner and perform the different ways of cooking vegetables. Choose at least 2 from the given recipes.

**Boiling Vegetables**

**Tools/Equipment Needed:**
- Stove
- Pots and pan
- Chopping board
- Knife
- Strainer
- Ladle

**Ingredients:**
- Vegetables (any kind)
- Water
Procedure:

**Boiling Vegetables**
1. Trim, peel and cut vegetables as required.
2. Add required amount of water to the pot.
3. Add salt and bring to boil.
4. Place vegetables in the pot and return the water to a boil.
5. Reduce heat to a simmer and cook vegetable, to required doneness.
   - Green vegetables and strong flavored vegetables are cooked uncovered.
6. Drain vegetables quickly to avoid overcooking.

**Steaming Vegetables**
1. Trim and cut vegetables as required.
2. Pre-heat the steamer.
3. Arrange vegetables in pan or baskets for cooking. Make a shallow, even layers for uniform cooking.
4. Steam for required time.
5. Remove vegetables from steamer.
6. Finish vegetables according to recipe and serve at once, or cool quickly.

Your performance will be rated using the scoring rubric below:

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<thead>
<tr>
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<tr>
<td>4</td>
<td>Follows correctly the procedures in boiling/steaming vegetables and performs the skill very satisfactorily without supervision and with initiative and adaptability to problem situations.</td>
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</table>
Sautéing Vegetables

Tools/Equipment Needed:
   Stove
   Pots and pan
   Ladle
   Strainer
   Spatula

Ingredients:
   Vegetables (any kind)

Procedure:
   **Sautéing Vegetables**
   1. Prepare vegetables as required.
   2. Place sauté pan on high heat.
   3. When pot is hot, add small amount of clarified butter, oil or other fat enough to coat the bottom of the pan.
   4. Add vegetables. Do not overload the pan, or the temperature will be lowered too much and the vegetables will simmer instead of sauté.
   5. After the heat has recovered, flip the pan to toss vegetables.
   6. Continue to flip as necessary.
   7. As soon as vegetables are cooked, remove from pan and serve.

   **Frying Vegetables**
   1. Prepare mise-en place. Use a griddle if only a small amount of fat is required.
   2. Heat the pan and add fat, and let it heat.
   3. Place prepared vegetables in the pan. Cook to desired degree of browning.
   4. Turn vegetables with a spatula and continue to cook until done.
   5. Remove from pan, and drain on absorbent paper to eliminate excess fat.
Your performance will be rated using the scoring rubric below:

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**Braising Vegetables**

**Tools/Equipment Needed:**
- Stove
- Pots and pan
- Strainer
- Ladle

**Ingredients:**
- Vegetables
- Water or wine

**Procedure:**
2. Place vegetables in a pan. (Vegetables may or may not be cooked in fat before adding liquid)
3. Add liquid, stock, water or wine or combination of liquids.
4. Cover the pan and cook vegetables.
5. Remove from heat, and serve vegetables with the cooking liquid, or drained off the liquid and reduced over high heat before serving to concentrate flavor.
Your performance will be rated using the scoring rubric below:

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**Cooking Vegetables by Baking and Deep Frying**

**Tools/Equipment Needed:**
- Oven, Stove
- Fryer
- Pots and pan
- Baking pan

**Ingredients:**
- Vegetables
- Breading
- Oil

**Procedure:**

**Baking Vegetables**
1. Collect all equipment and food products.
2. Prepare vegetables as required.
3. Place in appropriate pan and set in pre-heated oven.
4. Bake to desired doneness.

**Deep-Frying Vegetables**
1. Collect all equipment and food products.
2. Pre-heat fryer to proper temperature (325°F - 350°F).
3. Prepare food items as required. Apply breading or batter if necessary.
4. Place proper amount of food in fryer. Do not overload.
5. Fry to desired doneness.
6. Remove from pan. Drain to remove excess fat.
7. Serve at once or if necessary, hold uncovered in a warm place for the shortest possible time.

Your performance will be rated using the scoring rubric below:

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**Performance Activity 2**
Directions: Given the different recipes, follow the procedures by pair or by group.

**Vegetable Tagliatelle**

**Tools/Equipment Needed:**
- Chopping board
- Knife
- Pots and pan
- Coriander
- Ladle
Ingredients:
- 450 grams zucchini, trimmed
- 450 grams carrots, peeled and trimmed
- 450 grams celery root, peeled
- 4 tbsp. butter

Procedure:
1. Cut vegetables lengthwise into thin slices. About 1/8 inches thick, cut into long thin strips to resemble flat noodles.
2. Blanch each vegetable separately into boiling salted water. Refresh under cold water and drain.

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Sautéed Mushroom

Tools/Equipment Needed:
- Pan
- Ladle
- Plate

Ingredients:
- 1 1/2kg mushrooms, fresh
- 10 tbsp. clarified butter or salt to taste
- pepper to taste

Procedure:
1. Rinse the mushrooms quickly and dry them with towels. Trim off the bottom of the stems and slice the mushrooms.
3. Place mushrooms in the pan. Do not overload. Sauté over high heat until browned. Do not overcook.
4. Season with salt and pepper.
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**Braised Celery**

**Tool/Equipment Needed:**
- Chopping board
- Knife
- Pan
- Ladle

**Ingredients:**
- 1 kg celery
- 4 tbsp butter
- 1 ½ pt. brown stock or chicken stock
- salt to taste
- pepper to taste
Procedure:
1. Trim and wash celery. Peel the outside part and use the tender inner stems. Cut into 1 ½ inches lengths.
2. Heat the butter in a braising pot and add the celery. Cook over moderate heat until the celery is just beginning to soften.
3. Add enough stock to cover the celery. Season with salt and pepper to taste. Cover and cook slowly in an oven or range top until tender.
4. Drain the celery and keep it warm. Reduce the stock over high heat. Adjust the seasonings and pour the sauce over the celery.

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Glazed Sweet Potatoes

**Tools/Equipment Needed:**
- Pan
- Ladle
- Knife
- Chopping board
- Baking pan

**Ingredients:**
- 1.8 kg sweet potatoes
- 6 tbsp. water
- ¾ c light corn syrup or maple syrup
- 6 tbsp. brown sugar
- 8 tbsp. orange juice
- 2 tbsp. lemon juice
- 2 tbsp. butter
- ½ tsp cinnamon
- 1/8 t ground cloves
- ¼ t salt
Procedure:
1. Scrub sweet potatoes. Boil or steam until tender. Do not overcook.
2. Spread the potatoes on a sheet pan to cool.
3. Peel the potatoes when they are cool enough to handle. Cut into uniform pieces. Arrange in a buttered baking pan.
4. Place water, syrup and sugar in a saucepan. Stir over heat until sugar is dissolved. Add remaining ingredients and boil mixture to form heavy syrup.
5. Pour syrup over potatoes.
6. Bake at 350°F until potatoes are thoroughly cooked and glazed, about 45 – 60 minutes.

Your performance will be rated using the scoring rubric below:

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</thead>
<tbody>
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Lumpiang Ubod with Egg Wrapper

Materials Needed:

- Wok
- Turner
- Knife
- Chopping board
- colander
- measuring spoon
- measuring cups
- casserole
Ingredients:

- ½ kl stripped ubod
- 1 kl stripped sweet potato
- ½ kl carrot
- ½ kl cabbage
- 2 stalk celery
- 2 cups ground peanut
- 1 head garlic
- 2pcs onion
- ½ kl ground pork
- 1/4kl shrimps
- 2T fish sauce
- 1pc pork bouillon

Procedure:

1. Blanch the ubod first
2. Sauté the garlic and onion, put the ground pork and 2T fish sauce
3. Put sweet potato until tender
4. Put the ubod, carrots, cabbage and celery
5. Put the ground peanut
6. Season to taste

Sauce:

Ingredients:

- ½ kl sugar
- 1/4T fish sauce
- ½ cup ground peanut
- ¼ cup minced garlic
- 1 stalk chopped celery
- ¼ cup cornstarch mixed with ¼ cup water
- 1.5L water

Procedure:

1. Caramelized sugar, put 1.5 liter of water and let it boil
2. Put the minced garlic, celery and peanut
3. Let it boil
4. Thickened with cornstarch dispensed in water
A. Directions: Make a research on various recipes of the following vegetables:
   a. Malunggay Leaves
   b. Bell Pepper
   c. Sayote

E. Directions: Make a research on the different ways of cooking vegetables in the Philippines and other countries. Follow the instructions below:
   • Group yourselves into 5 groups
   • Assign a leader.
   • Leaders will assign task to each member.
   • Work on your research following the assigned country
     a. Group I - Asian Countries
     b. Group II - European Countries
     c. Group III - American Countries
     d. Group IV - African Countries
     e. Group V - Ethnic ways of cooking in the Philippines.

Learning Outcome 3 Present Vegetable Dishes
   • Presentation of prepared vegetable dishes
   • Factors to consider in plating vegetable dishes

   Essential Factors of Food Presentation

1. Good preparation and cooking techniques –
   Proper cutting and cooking of vegetables

2. Professional Skills
   Ability to perform according to required standards

3. Visual Sense
   Effective food presentation depends on the understanding of techniques involving balance, arrangement, and garniture.
   • Balance
Select foods and garnishes that offer variety and contrast. This should be applied to colors, shapes, textures and flavors.

- **Portion size**
  - Match portion sizes and plates
  - Balance the portion sizes of the items on the plate

- **Arrangement on the plate**
  Many chefs display their creativity in plating presentations. One important thing is, to keep in mind the convenience and comfort of the diner when plating.

**Plating Styles with Vegetable Dishes**

Classic arrangement:
1. Main item in front, vegetables, starch items and garnish at the rear.

2. Main item in the center, with vegetable distributed around it.

3. Main item in the center with neat piles of vegetables carefully arranged around.
4. A starch or vegetable item heaped in the center, the main item sliced and leaning up against it.

Guidelines in Plating

1. Keep food off the rim of the plate.  
   Select a plate large enough to hold food without hanging off the edge.

2. Arrange the items for the convenience of the customer.  
   Always arrange the best side of food on plate to avoid letting the diner rearrange them before eating.

3. Keep space between items, unless, they are stacked on one another.  
   Arrange vegetable on plate, that every item should be identifiable.

4. Maintain unity.  
   Create a center of attention and relate everything to it.

5. Make every component count.  
   Garnishes are not added just for color, but sometimes they are needed to balance a plate by providing an additional element.
6. Add sauce or gravy attractively on plate.
   Pour sauce around or under the dish or covering only a part of
   the dish. Always think of the sauce as part of the overall design
   of the plate.

7. Keep it simple.
   Avoid making food too elaborate.

Creative Presentation Techniques

- **Vegetable Purees**
  1. Cook vegetable until soft, then drain well.
  2. In food processor, process vegetable to smooth puree.
  3. Add melted butter or margarine.
  4. Season with salt and pepper and process again.
  5. Add whipping cream.
  6. Using ice-cream scoop or spoon, shape puree on heatproof plate and place in oven or microwave until hot.

- **Ribbon Vegetables**
  1. With vegetable peeler, shred carrot, corvette and radish into long ribbons, about 2.5 cm. wide, pressing lightly with peeler so ribbons will be very thin.
  2. Toss vegetables with melted butter or margarine.
  3. Cook until tender – crisp.

- **Vegetable Rings**
  1. With sharp knife, cut 3 peppers, (green, yellow, red) and onion into rings.
  2. Remove core, seeds and membranes from peppers.
  3. Toss vegetables with melted butter or margarine.
  4. Cook until tender – crisp.
  5. Serve hot or refrigerate to serve chilled.
Photo Collection
Directions: Follow instructions below:
1. Make a photo album on the creative presentation techniques for vegetable cookery.
2. It should contain a minimum of 10 pages and a maximum of 15 pages.
3. Label each creative presentation.
4. Your output will be rated using the scoring rubric below:

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
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</table>
Directions: Prepare and present creatively a Stir Fried Mixed Vegetables applying your own presentation design. Follow the procedures and ingredients given.

**Stir Fried Mixed Vegetables**

![Image of Stir Fried Mixed Vegetables]

**Tools/Equipment Needed:**
- Pan
- Mixing Bowl
- Ladle
- Chopping Board
- Knife
- Plate for serving

**Ingredients:**
- 350 g Chinese cabbage, cut into chunks
- 8 dried black mushrooms, cut julienne
- 4 tbsp carrots, cut julienne
- 4 tbsp baby corn, drained
- 4 scallions, cut into shreds
- 4 tbsp oil
- 1 garlic cloves, crushed
- 2 slices ginger root
- ½ t salt
- 12 tbsp water or chicken stock
- 1/8 c cornstarch
- 12 tbsp water, cold
- ½ t sesame oil
Procedure:
2. Add garlic.
3. Add ginger and salt.
4. Add cabbage and stir fry.
5. Add the remaining vegetables except shredded cabbage. Continue to stir fry for 1 -2 minutes, then add shredded cabbage.
6. Add the stock, soy sauce, and cook until vegetables are crispy.
7. Mix cornstarch with cold water, then stir into vegetables to thicken the sauce.
8. Stir the sesame oil and serve at once.

Your performance will be rated using the scoring rubric below:

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<td>4</td>
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</tr>
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<td>3</td>
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</tr>
<tr>
<td>2</td>
<td>Follows correctly the procedures in preparing, cooking and presenting stir fried vegetables with minor errors and performs the skill satisfactorily with some assistance and/or supervision.</td>
</tr>
<tr>
<td>1</td>
<td>Was not able to follow the procedures in preparing, cooking and presenting stir fried vegetables and performs the skill unsatisfactorily.</td>
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Learning Outcome 4 Store Vegetable Dishes

**Fresh Vegetables**
1. Potatoes and onions are stored at cool temperature. (50 -65°F) in a dry, dark place.
2. Other vegetables must be refrigerated. To prevent drying they should be kept covered or wrapped.
3. Peeled and cut vegetables should be covered or wrapped, and use quickly to prevent spoilage.
4. Potatoes, eggplants and other vegetables that brown when cut should be treated with an acid or blanched them to inactivate the enzyme that cause browning. Raw, cut potatoes are held in cold water for a short time.
5. Store all fresh vegetables for a short time.

**Frozen Vegetables**
1. Store at 0°F (-18°C). or colder in original container until ready for use.
2. Do not refreeze thawed vegetables.

**Dried Vegetables**
1. Store in a cool (less than 75°F) dry, well ventilated place.
2. Keep well sealed and off the floor.

**Canned Vegetables**
1. Keep in a cool dry place, away from sunlight and off the floor.
2. Discard cans that show signs of damage (swollen, badly dented rusted cans).
Leftovers

1. Don’t mix batches.
2. Store leftover creamed vegetables for one day only. Before storing, cool rapidly by placing the container on ice.
Overview
Seafood is any form of sea life regarded as food by humans. Seafood includes fish and shellfish. Shellfish include various species of mollusks, crustaceans, and echinoderms. A wide variety of fish and seafood are available in the market from many different sources. There are so many methods for cooking seafood, most of them are fast and easy, making them the perfect choice for a quick and healthy meal. This lesson provides information about fish and shellfish, ways on preparing and cooking fish, along with some of the most popular seafood recipes, and presenting and storing seafood.

Learning Outcome 1 Perform Mise’ En Place
You are about to learn the following from this lesson:
- Tools and equipment needed
- Types of seafood-shellfish, fin fish, others
- Variety of fish-structure, body shape, market forms, fat contents, water source, processed fish, others
- Market forms of fish and fish products
- Fish cuts
- Composition and nutritive value of fish (scaling, cutting of tails and fins, Eviscerating, cleansing, canning)
Classifications of Seafood

Fish products are divided into two categories
1. Fin fish – fish with fins and internal skeletons
   A. Saltwater fish –
      • Flatfish
         ▪ Flounder
         ▪ Sole
      • Round fish
         ▪ Black sea bars
         ▪ Bluefish
         ▪ Cod
         ▪ Grouper
   B. Freshwater fish
      • Cat fish
      • Eel
      • Tilapia

2. Shell fish – fish with external shells but no internal bone structure. They have hard outer shells.

Two classifications of Shellfish

A. Mollusks – are soft sea animals
   • Bivalves – they have a pair of hinged shells (clams, oysters)
   • Univalves – they have a single shell (abalone)
   • Cephalopods – (octopus, squid)

B. Crustaceans – are animals with segmented shells and jointed legs (shrimps, crabs)
Parts of a Fish

Composition and Structure:
Fish consists of water, protein, fats and small amount of minerals and vitamins.
Fish has very little connective tissue. It means:

1. Fish cooks very quickly, even at low heat.
2. Fish is naturally tender. High heat will result to toughening of protein.
3. Moist-heat methods are used not to create tenderness but to preserve moistness and provide variety.
4. Cooked fish must be handled very carefully.

1. Fat Fish -- are those that are high in fat. (salmon, tuna, trout, mackerel)
2. Lean Fish – are those that are low in fat. (sole, cod, red snapper, bass)
Market Forms

1. Whole or round – completely intact, as caught

2. Drawn – viscera removed

3. Dressed -- viscera, scales, head, tail and fins removed

4. Steaks – cross-section slices, each containing a section of backbone

5. Fillets – boneless side of fish, with or without skin

6. Butterflied fillets – both sides of a fish still joined, but with bones removed
7. Sticks or tranches – cross-section slices of fillets

Characteristics and Market forms of Shellfish

Shellfish

Characteristics

Mollusks
- Oysters have rough, irregular shells.
- Flesh of oyster is extremely soft and delicate and contains high percentage of water.
- Hard-shell clams – can be eaten raw
- Soft-shell clams are called steamers. The usual way to cook is to steam.
- The shells of mussels are not as heavy as clamshells, yellow to orange in color and firm but tender when cooked.
- Scallops are creamy white in color and have a sweet flavor.
- Squid is somewhat chewy and are cut up or either fried quickly.

Crustaceans
- The lobster shell is dark green or bluish green but turns red when cooked.
- Live lobster must be alive when cooked.

Market Forms

Mollusks
1. live in the shell
2. shucked – fresh or frozen
3. canned
Crustaceans
1. live
2. cooked meat, fresh or frozen

Directions: Identify the market forms of fish. Write your answer in your test notebook.

Review of Learning Outcome 1

1. __________
2. ___________
3. ____________

4. ____________

5. ____________

6. ____________

7. ____________
Learning Outcome 2 Handle Seafood Dishes

Checking freshness of fish

Fin Fish

1. Fresh and mild odor

2. Eyes are clear, shiny and bulging

3. Red or pink gills

4. Texture of flesh is firm or elastic

5. Shiny scales, and tightly cling, on skin
Shellfish
1. Oysters, clams, mussels in the shell must be alive. Tightly closed shells when jostled.
2. Live or shucked oysters must have a very mild, sweet smell.
3. Discard any mussels that are very light in weight or seem to be hollow.
4. Strong fishy odor or a brownish color is a sign of age or spoilage.
5. Live lobster must be alive when cooked. The meat will be firm and the tail springs back when straightened.
6. Frozen shrimp should be solidly frozen when received.
7. Glazed shrimp should be shiny with no freezer burn.
8. All shrimps should smell fresh and sweet. A strong fishy or iodine smell indicates age or spoilage.
9. Live crabs should be kept alive until cooked.
10. Frozen crabmeat should be treated like any other frozen fish.
Handling and Storage of Fish

Fresh Fish
1. Store on crushed ice. Use drip pans to allow for drainage of melted ice. Change ice daily. Cover container or store in separate box away from other foods. Whole fish should be drawn because entrails deteriorate rapidly. Cut fish should be wrapped or left in original moisture-proof wrap.
2. In refrigerated box at 30° to 34°F (-1° to 1°C).
3. Fresh fish may be stored for 1 to 2 days. If kept longer, wrap and freeze immediately.
4. Check store fish for freshness just before using.

Frozen Fish
1. Frozen products should be frozen, not thawed when received.
2. Items should be well wrapped, with no freezer burn.
3. Store at 0°F (-18°C. or colder.
4. Maximum storage time
   Fat fish -- 2 months
   Lean fish -- 6 months
5. Rotate stock – first in, first out

Thawing and Handling of Frozen fish
1. Thaw in refrigerator, never at room temperature. If pressed for time, keep in original moisture-proof wrapper and thaw under cold running water.
2. Small pieces like fillets and steaks can be cooked from frozen state to prevent excessive drip loss. Large fish should be thawed for even cooking.
3. Fillets that are to be breaded can be partially thawed.
4. Handle thawed fish as fresh fish. Do not refreeze.
5. Breaded, battered and other frozen prepared fish items are mostly cooked from frozen state.

Shellfish

1. MUSSELS
   Keep refrigerated (32°F to 35°F/0° to 2°C) and protect from light. Store in original sack and keep sack damp.

2. SCALLOPS
   - Shucked scallops can be cooked without further preparation.
   - Keep scallops covered and refrigerated (30°F to 34°F). Do not let them rest directly on ice or they will lose flavor and become watery.

3. LOBSTERS
   - Live lobsters are either live or cup up before cooking. Live lobsters are plunged head first into boiling water, then simmered for 5 – 6 minutes. If served hot, they are drained well and split in half, and claws are cracked.
   - Live lobsters can be kept in two ways
     1. packed in moist seaweed, kept in a cool place
     2. in saltwater
   - Cooked lobster meat must be covered and refrigerated at 30° to 34°F. It is very perishable and should be used in 1 – 2 days.

4. SHRIMPS
   - Kept frozen at 0°F (-18°C) or lower
   - Thaw in refrigerator
   - Peeled shrimp should be wrapped before placing on ice
   - Shrimp served hot must be peeled and deveined before cooking
   - Shrimp to be served cold, must be peeled after cooking to preserve flavor.
5. CRABS
- Live crabs should be kept alive until cooked.
- Frozen crabmeat is very perishable when thawed. It must be treated like any other frozen fish.

Enhancement Activity

Directions: Follow the instructions below:
- Visit at least 2 market/supermarkets and list down the fish/seafood that they are selling and their characteristics.
- Identify the kind and market forms of fish and other seafood products available in the market visited.
- Make documentation with picture of each market form. Include description of each.

Your output will be rated using the given rubric.

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Learning Outcome 3 Cook Seafood

Are you ready for cooking? Fasten your seatbelt and carry on.

- Principles of cooking fish and seafood dishes (dry heat and moist heat cookery)
- Variety of shellfish and fish dishes

**Cooking Techniques for Fish and Shellfish**

*Fish* is very delicate and easily overcooked. During cooking, test for doneness must be observed.

1. The fish just separates into flakes
2. If bone is present, the flesh separates from the bone, and the bone is no longer pink
3. The flesh becomes opaque (usually white)

**Lean fish**

- Lean fish has almost no fat, so it easily becomes dry. It is best served with sauces to enhance moistness and gives richness.
- Poaching is the moist heat method suited
- Fish should be basted with butter or oil if broiled or baked.
- Lean fish maybe fried or sautéed to gain palatability from added fat.

**Fat fish**

- The fat in fish, enables them to tolerate more heat without becoming dry.
- Fat fish can be cooked by poaching.
- Fat fish are well suited to broiling and baking. The dry heat methods eliminate excessive oiliness.
- Large fat fish like salmon, and mackerel may be cooked in fat, but care should be taken to avoid excessive greasiness.

**Shellfish**

- Cook oyster just enough to heat thoroughly to keep it juicy and plump.
- Clams become tough and rubbery if overcooked
- Shrimps like other shellfish, become tough and rubbery when cooked at high temperature.
Scaling Whole Fish

Once your work area and fish are ready, you can begin the actual scaling process.

1. Lay your fish flat on the board or hold it steady in the water.

2. Hold the fish down firmly with your hand near its head.

3. Begin to rake the scales from the tail towards the head. They should start coming off in clumps.

4. Be sure to remove the scales on both sides of the fish, as well as scales near the fins, the collar and the tail.

5. When you think you have gotten most of the scales, rinse the fish off again with water. This will wash away any loose scales and help you to identify any remaining scales that need to be removed.
Filleting Fish

First, cut behind the head while angling the knife toward the front of the fish. There is a lot of good flesh on the top side where the fillet extends under the bony plate of the skull and angling the knife will ensure you don’t waste it. Cut down to the bone and follow the line through to just behind the fins.

Turn the fish and run the knife just clear of the fins with a slight downward angle. When you feel the knife is down to the bone reduce the angle and follow the bone until you come up against the backbone.

Peel the fillet back and run the knife over the backbone severing the small lateral fish bones in the process. Stop at this point.

Turn the fish over and repeat the procedure.

Repeat the second cut near the dorsal fin with the knife angled slightly down.
Continue this along the length of the fish

Reverse the direction of the filleting knife and follow the bones by "feeling them" with the fillet knife until the fish backbone is reached

Peel the fillet back and cut around the backbone and through the small lateral bones. Run the fillet knife right through to the skin on the underside of the fish.

Cut over the belly flap either through or over the belly bones. It can be easily cut through here with the razor sharp filleting knife.
Cut any remaining attached sinew or skin.
Remove the first fillet.

Flip the fish back to the original side and cut the bones around the gut cavity.

Release the rest of the fillet from the backbone.

**Skinning Fish**

When filleting or skinning fish keep the skinning knife clean and wet, this lubricates the blade and gives a much cleaner cut, more control of the knife and far less drag on the sides of the blade.
Stop when you have an inch or two (25 to 50mm) of fillet released.

Change your grip on the fillet to a secure grip on the tab of fish skin you created with the first cut.

Firmly hold the knife still and at a fixed angle.

Wriggle the skin from side to side while pulling backwards on the tab of fish skin.

Continue this motion through the fillet. You can see that even though the skin in the left hand is creased under the tension it has no effect where the fillet knife is separating the fish skin from the flesh.

The fillet and skin are parted and no fleshes have been wasted nor have left any skin or scales on the fillet. If you scroll up you will note the knife has not moved over the last four fish skinning pictures.
Deboning Fish

Gentle strokes of a knife angled towards the gut cavity will reveal the position and lay of the fine bones. Follow this line, cutting completely through, to release the top part of the fillet.

The line of fine bones stops around two thirds of the way down the fillet. At this point put the knife on the other side of the line of bones and run the knife up the fillet until the point is well under the bones around the gut cavity.

Separate the two and reinsert the knife at an angle suitable to cut the flesh from the underside of the gut bones

Keep the knife following close to the fish bones to recover as much flesh as possible
The fillet is now deboned and the piece on the right of the picture above is discarded or washed and put aside with the fish heads and back bones for making fish stock.

Open oysters and clams for waste minimization techniques and environmental considerations in relation to seafood.

A. Opening Oyster

Hold oyster cup side down and hinge pointed towards you.

1. Insert oyster knife at hinge slowly but firmly and push the knife between the shells. Use a slight side to side rocking movement with your knife as you push in.

2. Work tip of knife into the oyster (about 1/2 inch).

3. Twist knife handle to pop oyster open.

4. Push knife into oyster and slice muscle from top shell.
5. Open top shell.

6. Cut muscle from bottom cup. Turn the meat over for most professional appearance.

B. Opening Clams

Scrub clams under cool running water using a stiff kitchen brush.

Over a bowl, hold the clam firmly in your hand and insert the clam knife between the top shell and bottom shell. A towel can be used to protect your hand. Work the knife around to cut through the hinge muscle. The bowl will catch the liquor from the clam.
Open the shell. Slide the knife between the clam and the shell. Detach the clam.

The clam is now ready to be cooked or eaten raw.

Cleaning a Squid

- Pull off the head
- Remove the ink sac
- Cut Tentacles
- Remove beak from tentacles
**Splitting a Lobster**

**How to Cut Lobster in Lengthwise**

1. Place the lobster on its back on a tea towel to prevent slipping.

2. Using a heavy sharp knife, cut right through the underside of the body and tail, down the center.
4. Turn the lobster around and continue the cut through the center of the head. Place the lobster on its back on a tea towel to prevent slipping.

4. Using a heavy sharp knife, cut right through the underside of the body and tail, down the center.

A lobster split is not only an attractive style for presentation, but also enables easy access to the delicious meat inside. Turn the lobster around and continue the cut through the center of the head.

Let’s Do it!

The following will be the different activities that you need to undertake:

- By group you will do collaborative learning and study the step by step procedures on how to perform scaling, filleting, skinning, deboning, opening oyster, opening clams, cleaning a squid, and splitting lobster. Be ready for a demonstration.
- You can watch a video in You Tube or visit markets to see actual demonstration for deeper learning.
- Bring the materials needed for the purpose of demonstration of the lesson.
- You will demonstrate the different ways of preparing fish and seafood prior to the cooking activities.
Guidelines for Baking Fish

1. Fat fish are best for baking because they are less likely to dry out.
2. Lean fish may be baked but care should be taken not to overcook it. Basting with butter or oil helps prevent drying.
3. Baking temperature is 350°F to 400°F.
4. Served baked fish with a sauce or seasoned butter to enhance moistness and improve palatability.
Guidelines for Broiling or Grilling Fish
1. Overcooking should be avoided in cooking fish.
2. Select appropriate fish for broiling or grilling.
3. Fat fish and lean fish should be coated with fat before broiling to reduce drying.
4. Lean fish may be dredged in flour before dipping in oil or melted butter. The flour helps form a flavorful browned crust.
5. To prevent splitting during cooking, score the skin with a sharp knife. For small fillets, scoring may not be necessary.
6. Broil fish to order and serve immediately.
7. Broiled fish may be garnished lightly with paprika if more color is desired.
8. Thick cuts should be turned once during broiling in order to cook evenly. Thin pieces may be arranged on an oiled pan and broiled on one side only. Lobster is also broiled without turning.
Directions: Perform the given recipe. Your performance will be rated using the given rubric below.

**Broiled Shrimp Campy**

**Tools/Equipment Needed:**
- Broiler, griller
- Brush
- Baking Sheet

**Ingredients:**
- 680 g large shrimp, peeled and deveined, tails left on, patted dry
- 1 tablespoon olive oil
- 2 cloves garlic, minced
- Coarse salt and ground pepper
- 2 tablespoons freshly squeezed lemon juice
- 2 tablespoons chopped fresh parsley
- Lemon wedges, for serving
Procedure:
1. Heat broiler with rack set 4 inches from heat. Place shrimp on a large broiler proof rimmed baking sheet.

2. Sprinkle with oil and garlic, and season generously with salt and pepper; toss to coat. Arrange shrimp in a single layer.

3. Broil until opaque throughout, 3 to 4 minutes. Sprinkle with lemon juice and parsley; toss to combine. Serve immediately; garnish with lemon wedges.

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Guidelines for Sautéing and Pan Frying Fish and Shellfish

1. Lean fish are suited to sautéing because of the added fat.
2. Fat fish can be sautéed with care so as not to become greasy.
3. Breading the fish with flour or starchy products forms a crust that browns attractively, enhances flavor, helps hold the fish and prevent sticking.
4. Use fat, enough to cover the bottom of the pan.
5. Be sure the pan is hot before adding fish. Small items are sautéed over high heat, larger items require lower heat to cook evenly.
6. Very large fish may be browned in fat, and finished in an oven, uncovered.
7. Brown the most attractive side – the presentation side.
8. Handle fish carefully during and after cooking to avoid breaking the fish.
9. Sauté or fry to order and serve immediately.

Directions: Given the different recipes by group prepare and cook fish and shellfish. Your performance will be evaluated using the given rubric.

**Fillet of Sole Meniere**

**Tools/Equipment Needed:**
- Mixing bowl
- Ladle
- Pan
- Spatula

**Ingredients:**
- Fish
- Emeril's Fish Rub (or any combination of seasonings you like)
- 2 tbs. butter
- Lemon juice
Procedure:

1. Season all the fillets by sprinkling the seasoning and pressing it into the meat.
2. Get a spatula to handle the fish. If you have 10-12" filets cut them in half unless you're using a fish spatula.
3. Heat the pan on medium heat and add the butter. When the butter is melted put some fish in the pan. Leave it on one side for about three to four minutes.
4. Move them around often to assure they're not sticking.
5. Flip one piece to check the brownness. If it's partially browned flip them all and continue to cook until the other side is browned.
6. Add more oil as needed.
7. Once it's out of the pan put six or eight drops of lemon juice on each piece. You may use other sauces if you want.

*Note:* Testing the degree of doneness is as simple as taking your spatula and gently pushing on the thickest part of the fillet in the spinal bone line. When done, meat separates when you gently push with spatula.

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**Guidelines in Deep-Frying**

1. Lean fish, both whole or small portions, and shellfish like shrimps, clams and oysters are best for deep-frying.

2. Fish to be fried is breaded or buttered to prevent sticking from frying pan. The batter also provides a crisp, flavorful, and attractive coating.

3. Frozen breaded fish can be fried without thawing.
4. Fried fish is usually served with lemon or cold sauce such as tartar, remoulade or cocktail sauce on the side.

5. The oil used should be enough to submerge the food item during frying.

Cooking fish or shellfish by deep frying using the standard breading procedure.

**Tools/Equipment Needed:**
- Stove
- Mixing bowls
- Ladle
- Refrigerator
- Baking sheet
- Food tong

**Ingredients:**
- 1 cup self-rising cornmeal
- 1/2 cup self-rising flour
- 3/4 tsp table salt
- 1/2 tsp powdered white pepper
- 1/3 tsp cayenne pepper (optional)
- 1/4 tsp garlic salt
- 2 tbsp. peanut oil
- 1 large egg
- 1 tsp cool tap water
Procedure:

1. Use a small bowl and prepare an egg wash by mixing 1 large egg with 1 tsp of water.

2. In another bowl, place the cornmeal, flour, salt, pepper, cayenne pepper, garlic salt, and blend well. This breading recipe will bread about 2 pounds of fillets.

3. Rinse the fillets and pat dry, then place them into the refrigerator for about 30 minutes.

4. Place the fillets in the egg wash, then the Breading Mix before placing them on the prepared cookie sheet.

5. Prepare the cookie sheet by spreading the peanut oil evenly on the sheet.

6. The oven should be preheated to 375. Cook the fillets 5 minutes on each side.

You did a great cooking. It’s time to plate and present your dish. Go on and enjoy learning and doing.
Learning Outcome 4 Plate/Present Seafood Dishes

Part of serving any kind of food is presentation. You don’t have to be a trained chef to learn the basics of plating, which is the art of presenting food in an attractive way. The following topics and activities will help you learn the fundamentals of plating and perform it for better understanding.

Fundamental of Plating

1. Balance – select foods and garnishes that offer variety and contrast
   - color – two or three colors on a plate
   - shapes – variety of shapes
   - textures – variety of textures
   - flavors –

2. Portion size
   - match portion sizes and plates – select plates large enough to hold all the items without crowding
   - balance the portion sizes of the items on the plate – don’t let the main item get lost with excessive garnish
   - arrangement on the plate –

   Guidelines to help plating attractive
   1. Keep food off the rim of the plate.
   2. Arrange the items for the convenience of the customer.
   3. Keep space between items. Each item should have its own identity.
   4. Maintain unity. Create a center of attention and relate everything to it
   5. Make every component count.
   6. Add gravy or sauce attractively.
   7. Keep it simple.

3. Serve hot foods hot, on hot plates
   Serve cold foods cold, on cold plates

Examples of Garnishes or Accompaniment for Plating
   - Bouquetiere - bouquet of vegetables
   - Jardinière - garden vegetables
   - Clamart - peas
   - Crecy - carrots
- Doria - cucumbers (cooked in butter)
- Dubarry - cauliflower
- Fermiere - carrots, turnips, onions and celery cut into uniform slices
- Forestiere - mushrooms
- Lyonnaise - onions
- Nicoise - tomatoes concasse cooked with garlic

### Serving Baked Fish
- Serve baked fish with a sauce or seasoned butter to enhance moistness and improves palatability. Serving with lemon also enhances the fish.
- For service, the fish is removed from the dish, the liquid is strained, degreased, reduced and finished by adding butter, cream or veloute sauce.

### Serving Broiled Lobster
Serve immediately with melted butter or appropriate sauce and garnish.

### Serving Sautéed and Pan Fried
- Remove the fish with spatula and place on serving plate with presentation side up.
- Sprinkle fish with lemon juice and chopped parsley.
- Heat raw butter in the sauté pan until it turns light brown. Pour over fish immediately and serve at once.
Serving Poached or Simmered Fish in Court bouillon
Served poached fish with appropriate sauce, such as hollandaise for hot fish and a mayonnaise – based sauce for cold fish. Mild vinaigrette go well with both hot and cold poached fish.

Serving Poached Fish in Fumet and Wine
- Reduce the cuisson over high heat to about ¼ of its volume.
- Add fish veloute and heavy cream and bring to boil.
- Adjust seasoning with salt, white pepper and lemon juice.
- Strain the sauce.
- Arrange the fish on plates for service, coat with sauce and serve immediately.

Glazing
Poached fish is sometimes glazed before serving
1. Combine the finished sauce with egg yolk, hollandaise sauce or lightly whipped cream.
2. Coat the fish with the sauce and run the plate under a broiler until the sauce is golden brown.
Review of Learning Outcome 4

A. Directions: Briefly explain the relationships of the following in food preparation. Write your answers in your test notebook.

1. Balance

2. Portion size

3. Serving hot food on hot plates

4. Serving cold foods on cold plates

5. Garnishes
Directions: Given the recipe, perform the following by group:

**Broiled Fish Steaks**

**Tools/Equipment Needed:**
- Oven
- Baking sheet
- Brush
- Fork
- Plate

**Ingredients:**
- 3 fish steaks, 1” thick
- ½ tsp. salt
- Dash of pepper
- 2 tsp. lemon juice
- 2 tbsp. butter, melted

**Procedure:**
1. Sprinkle both sides of fish with salt, pepper and lemon juice.
2. Brush with half of the butter.
3. Put fish in broiler pan in 550 degree oven, don’t cover.
4. Broil with tops about 4 inches from heat until light brown.
5. Brush fish with butter turn very carefully.
6. Brush with rest of the butter.
7. Broil until fish flakes easily with fork, 4 – 6 more minutes.
Poached Fillet of Sole in White Wine Sauce

Tools/Equipment Needed:
- Pan
- Baking dish
- Food tong
- Spoon
- Broiler/oven

Ingredients:
- 2 lbs. sole fillets
- 2 lbs. spinach, cooked and drained
- ½ C. dry white wine
- 1 C. fish stock
- 3 tbsp. butter
- 4 tbsp. flour
- 1 C. grated cheese
- Salt and pepper

Procedure:
1. Roll and secure each fillet with toothpicks
2. Poached for 8 minutes in wine/fish stock
3. Drain and save liquid

Sauce
1. Melt butter
2. Blend in flour, salt and pepper and fish liquid
3. Assemble butter in shallow serving dish
4. Arrange spinach on bottom
5. Cover with poached fish (remove toothpicks
6. Spoon sauce over fish
7. Sprinkle with cheese
8. Broil under hot broiler a few minutes
<table>
<thead>
<tr>
<th>Skill Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Can perform the skill without supervision and with initiative and adaptability to problem situations.</td>
</tr>
<tr>
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<td>Can perform the skill satisfactorily without assistance or supervision.</td>
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</table>

Learning Outcome 5 Store Seafood

Storing of Fish and Shellfish

1. On crushed ice – use drip pans to allow for drainage of melted ice. Change ice daily. Cover container or store in separate box away from other foods.
   a. Whole fish should be drawn (that is, viscera removed) as soon as possible because the entrails deteriorate quickly.
   b. Cut fish (fillets, steaks, portions) should be wrapped or left in original moisture proof wrap.
2. Refrigerate at 30° to 34°F (-1° to 1°C).
3. Fish may be stored for 1 to 2 days. If it must be kept longer, you must wrap and freeze it immediately.
4. Check stored fish for freshness just before you use it. Even if it was fresh when received, it may not be fresh after few days in storage.
Frozen Fish

1. Store at 0°F (-18°C. or colder).
2. Keep well wrapped to prevent freezer burn.
3. Maximum storage time: Fat fish – 2 months; Lean fish – 6 months.

Shellfish

A. Oyster

1. Keep live oyster in a cold, wet place in the cartons or sacks.
2. Store fresh shucked oysters in original container in refrigerator at 30° to 34°F (-1° to 1°C). They will keep up to 1 week.
3. Keep frozen oysters in freezer at 0°F (-18°C. or colder, until ready for use.

Lobster and Shrimp

1. Store at 0°F (-18°C. or colder).
2. Fresh or thawed shrimp in shell are stored on crushed ice, like whole fish.
3. Peeled shrimp lose soluble nutrients and flavor when stored unwrapped on ice. They should be wrapped before placing on ice or covered and simply refrigerated.
4. Packed in moist seaweed or in moist, heavy paper, kept in a cool place.
### Review of Learning Outcome 5

Directions: Match Column A with Column B. Write the letter of the correct letter of your answer in your test notebook. Items in column B may be answered twice or more.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
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</thead>
<tbody>
<tr>
<td>1. Removed viscera first before storing</td>
<td>A. fresh fish</td>
</tr>
<tr>
<td>2. Wrapped to prevent freezer burns</td>
<td>B. frozen fish</td>
</tr>
<tr>
<td>3. Kept in cold, wet cartons</td>
<td>C. lobster and shrimp</td>
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<tr>
<td>4. Packed in moist seaweed</td>
<td>D. shellfish</td>
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<tr>
<td>5. First in, first out</td>
<td>e. all of the above</td>
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<tr>
<td>6. Wrapped before freezing</td>
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<tr>
<td>7. Left in original moisture proof wrapped</td>
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<tr>
<td>8. Refrigerate at 30° to 34°F (-1° to 1°C)</td>
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<tr>
<td>9. Store at 0°F (-18°C or colder)</td>
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<tr>
<td>10. Stored for 1 to 2 days</td>
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### Let’s Do it!

Directions: Perform experimental fish cookery. Make your own recipe and prepare, cook and present the product. Explain how to properly store your output. Your performance will be evaluated using the given rubric.

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Let’s See How Much You Learned

Post Test 2

Multiple Choice.

Directions: Read the following questions carefully and choose the letter that best describes the statement. Write your answer in your test notebook.

1. Which of the following vegetables is rich in carbohydrates?
   A. legumes, peas, and beans
   B. Nuts, olives, and avocado
   C. Mushroom, tomatoes, and radish
   D. Seeds, roots, and tubers

2. What is the flavor component of vegetables which gives strong flavor and odor to some vegetables like onions, leeks, garlic, chives, cabbage, and broccoli?
   A. Flavonoids
   B. Nuts, olives, and avocado
   C. Sugar
   D. Sulfur compounds

3. Which tool is used to drain excess water after washing vegetables?
   A. Bowls
   B. Colander
   C. Steamer
   D. Utility tray

4. Which of the following is cooking by placing blanched or raw vegetables in the pan, adding liquid (stock, water, wine) then covering and cooking it slowly?
   A. Boiling
   B. Baking
   C. Braising
   D. Sautéeing

5. Which fat soluble compound is responsible for the green coloring of plants?
   A. Anthocyanins
   B. Carotenoids
   C. Chlorophyll
   D. Lycopene

6. Mrs. Cabrillas needs more supply of Vitamin A. Which of the following will she eat to give her the nutrient she needs?
   A. Alugbati
   B. Potatoes
   C. Lettuce
   D. Saluyot

7. Which of the following plating styles is not a classic arrangement?
   A. The starch or vegetable item is heaped in the center while the main item is sliced and leaned up against it.
   B. The main item in the center, with vegetable distributed around it.
   C. The vegetable item in front and main item, starch item and garnish at the rear.
   D. The main item is in the center with neat piles of vegetables carefully arranged around.
8. Chef Shaneshan will cook chopsuey. She is about to remove the hard core of a cabbage. Which of the following knife will she use?
   A. Butcher knife
   B. Channel knife
   C. Cutting knife
   D. Paring knife

9. What kind of knife is used in removing the hard core of a cabbage?
   A. Butcher knife
   B. Channel knife
   C. Cutting knife
   D. Paring knife

10. At what temperature in a dry, dark place should potatoes and onions be stored?
    A. 50 – 65°F
    B. 40 – 45°F
    C. 60 – 85°F
    D. 70 – 95°F

11. Which of the following vegetables is cooked uncovered?
    A. Fruit vegetables
    B. Green vegetables
    C. Roots and tubers
    D. Yellow vegetables

12. Which kind of fish has no internal bone structure?
    A. Fin fish
    B. Freshwater fish
    C. Round fish
    D. Shell fish

13. Which of the following fish is high in fat?
    A. Bass
    B. Cod
    C. Mackerel
    D. Red Snapper

14. Which of the following fish is low in fat?
    A. Cod
    B. Salmon
    C. Trout
    D. Tuna

15. Which market form of fish is viscera, head, tail and fins are removed?
    A. Butterfly
    B. Dressed
    C. Fillet
    D. Sticks

16. Which of the following is a freshwater fish?
    A. Bluefish
    B. Cat fish
    C. Grouper
    D. Sole

17. Which market form of fish are both sides of a fish still joined but bones are removed?
    A. Butterfly
    B. Drawn
    C. Fillet
    D. Steak

18. Which of the following is the second step in scaling whole fish?
    A. Begin to rake the scales from the tail towards the head.
    B. Remove the scales on both sides of the fish.
    C. Hold the fish down firmly with your hand near its head.
    D. Lay your fish flat on the board.
19. Which of the following is the third step in opening an oyster?
   A. Cut muscle from bottom cup.
   B. Insert oyster knife at hinge slowly but firmly
   C. Push knife into oyster and slice muscle from top shell
   D. Twist knife handle to open the oyster.

20. Which of the following is a characteristic of a fresh fish?
   A. With fresh and foul odor
   B. Eyes are dull, shiny and bulging
   C. Gills are pink or red
   D. Flesh shrink when pressed

21. How many colors is suggested on a plate to make it balance?
   A. Four to five
   B. One to two
   C. Three to four
   D. Two to three

22. Which of the following seafood is cooked just enough to heat to keep it juicy and plump?
   A. Fat fish
   B. Lean fish
   C. Flat fish
   D. Shellfish

23. Which of the following enhances baked fish when served?
   A. Butter
   B. Cream
   C. Lemon
   D. Sauce

24. What cooking method is suited to fat fish.
   A. Baking
   B. Boiling
   C. Deep-frying
   D. Sautéing

25. Which is basted to baked lean fish to help prevent it from drying up.
   A. Butter
   B. Cream
   C. Soy sauce
   D. Tomato sauce

26. Give five characteristics of a fresh fish.
**QUARTER 3**

**PREPARE STOCKS, SAUCES AND SOUPS, AND POUlTRY AND GAME DISHES**

**Overview**

This quarter will enable students or learners to acquire competencies in: preparing, storing, reconstituting and evaluating stocks, sauces and soups; cooking, plating/presenting, and storing poultry and game dishes, preparing, cooking, plating/presenting and storing meat dishes.

**Objectives:**

At the end of the quarter students are expected to:

1. prepare stocks required for menu item;
2. prepare soups required for menu item;
3. prepare sauce required for menu item;
4. store and reconstitute stocks, sauces and soups;
5. perform mise’en place;
6. cook poultry and meat dishes;
7. plate and present poultry and meat dishes;
8. evaluate finished products; and
9. store poultry and meat.

**Let’s See What You Know**

**Pre-Test**

Directions: Read and understand the statements/questions below. Choose the letter of the correct answer and write it in your test notebook.

1. As a chef of a fine dining restaurant, Genie simmers meat, fish, and vegetables. Which of the following liquids is a by-product after the different food stuffs have been simmered?
   - A. glaze
   - B. sauce
   - C. stock
   - D. water
2. Which of the following stocks uses veal bone as its main ingredient?
   A. brown stock    C. prawn stock
   B. ham stock      D. white stock
3. What kind of stock uses fish as its main ingredient?
   A. brown stock    C. glace viande
   B. fish stock     D. ham stock
4. What stock uses chicken bone as its main ingredient?
   A. fish stock     C. prawn stock
   B. ham stock      D. chicken stock
5. Among the different types of stock, which one is the easiest to prepare?
   A. brown stock    C. white stock
   B. fish stock     D. vegetable stock
6. What stock is made by boiling prawn shell?
   A. fish stock     C. prawn stock
   B. ham stock      D. vegetable stock
7. As a rule, which should not be added to the stock because it causes saltiness?
   A. MSG            C. spices
   B. salt           D. sugar
8. Mrs. Sante will be having visitors for dinner. If she will prepare stock for their dinner, which of the following flavoring agents will she use to give aroma to the stock?
   A. aromatic flavoring C. ginger
   B. garlic           D. smoke
9. What makes the stock tasty and appetizing?
   A. appearance     C. ingredients
   B. color          D. smell
10. Which of the following is a clear soup?
    A. bisques        C. cream
    B. bouillon       D. puree
11. Which of the following examples is a thick soup?
    A. bisques        C. consommé
    B. bouillon       D. fruit
12. Which of the following is not a thickening agent?
    A. flour          C. rice
    B. grain          D. salt
13. Which of the four basic sauces whose basic ingredient is milk is thickened with flour enriched with butter?
    A. Hollandaise sauce C. veloute sauce
    B. savory butter     D. white sauce
14. Which among the four basic sauces has a chief ingredient of chicken broth thickened with flour and enriched with butter seasoning?
   A. Hollandaise sauce   C. veloute sauce
   B. savory butter       D. white sauce

15. Which of the four basic sauces has three basic ingredients like butter, egg yolk, and lemon juice with seasoning for accent?
   A. Hollandaise sauce   C. white sauce
   B. savory butter       D. veloute sauce

16. Which of the four basic sauces has a basic ingredient like butter that is creamed and blended with other ingredients to give individual flavor?
   A. Hollandaise sauce   C. veloute sauce
   B. savory butter       D. white sauce

17. Which of the following is not a thickening agent?
   A. dairy cream   C. flour
   B. egg          D. spice

18. What do you call birds that are hunted for food?
   A. game   C. poultry
   B. livestock    D. swine

19. Which of the following poultry originated from China and is noted for its tender and flavorful meat?
   A. chicken   C. itik
   B. goose     D. pecking duck

20. What do you call young immature pigeon of either sex with extra tender meat is called___.
   A. duck       C. rooster
   B. fryer      D. squab

21. Poultry is composed of different parts. Which of the following do breast meat belong?
   A. dark meat   C. variety meat
   B. tough meat  D. white meat

22. Which of the following characteristics is a good quality of a live poultry?
   A. free from pin feathers and shows no cuts
   B. has clear eye
   C. heavy and the skin is watery
   D. well-developed thighs

23. What do you call young chicken that is usually 9 to 12 weeks of age?
   A. fryer        C. roaster
   B. hen          D. stag

24. How many days should a whole chicken should be refrigerated?
   A. 1 day       C. 2 to 4 days
   B. 1 to 2 days D. 3 to 4 days
25. How do you classify the fleshy part of chicken like breast?
   A. entrails       C. viscera
   B. dark meat      D. white meat

26. In cookery, we apply different cooking methods depending on the ingredients that we have. If you will cook a matured poultry, which of the following methods will you apply?
   A. boiling        C. roasting
   B. frying         D. stewing

27. What cookery method is suitable for the less tender cuts?
   A. boiling        C. roasting
   B. frying         D. stewing

28. What is the best cooking temperature for poultry?
   A. high temperature C. low to moderate temperature
   B. low temperature  D. moderate temperature

29. What factor affects the poultry meat’s tenderness and juiciness?
   A. age            C. cuts
   B. cookery        D. sex

30. Which of the following can be done to prevent drying when reheating?
   A. cook using sauces and gravy
   B. overcook the poultry meat
   C. remove fat before cooking
   D. none of the above
Overview:

This lesson covers the skills, knowledge, and attitudes required to prepare various stocks, sauces, and soup in a commercial kitchen or catering operation.

Learning Outcomes:
At the end of this Lesson you are expected to do the following:
1. prepare stocks for required menu items;
2. prepare soups required for menu items;
3. prepare sauces required for menu items;
4. store and reconstitute stocks, sauces and soups; and
5. evaluate the finished product.

Learning Outcome 1 Prepare Stocks for Required Menu Items

Principles of Preparing Stocks

**Stocks**- are among the most basic preparations found in professional kitchen. They are referred to in French as *fonds de cuisine*, or “the foundation of cooking.” It is a flavorful liquid prepared by simmering meaty bones from meat or poultry, seafood and/or vegetables in water with aromatics until their flavor, aroma, color and body, and nutritive value are extracted.

- a clear, thin liquid flavored by soluble substances extracted from meat, poultry, and fish; and their bones, and from vegetables and seasonings.
Classification of Stocks

Chicken stock – made from the chicken bones.

White stock – made from beef or veal bones.

Brown stock – made from beef or veal bones that have been browned in an oven.

Fish stock – made from fish bones and trimmings left over after filleting.
Ingredients in Preparing Stocks

1. **Bones**
   Most of the flavor and body of stocks are derived from the bones of beef, veal, chicken, fish, and pork. The kinds of bones used determine the kind of stock, except vegetable stock.

2. **Mirepoix**
   - is the French term for the combination of coarsely chopped onions, carrots and celery used to flavor stocks.

   **Basic formula for Mirepoix** – used to flavor white stocks and soups, tomato paste or puree is often included for brown stock, gravy, stew or soup.
   
   2 parts onion  
   1 part celery  
   1 part carrot

3. **Acid products** - Acid helps dissolve connective tissues, and extract flavor and body from bones.

4. **Scraps and left-over** - Scraps may be used in stocks if they are clear, wholesome, and appropriate to the stock being made.
5. Seasoning and spices

6. **Bouquet garni** – assortment of fresh herbs and aromatic ingredients tied in a bundle with string so it can be removed easily from the stock.

**Guidelines for preparing stock**

1. Follow the correct procedures for cooling and storing stock and make sure that any stock you use is flavorful and wholesome.

2. Follow the cooking time for stock
   - The following are approximate cooking time for different stocks; the time will vary according to numerous factors such as ingredients quality, volume and cooking temperature.
   - White beef stock – 8 to 10 hours
   - White and brown Veal Game stock – 6 to 8 hours
   - White poultry and Game Bird Stocks – 3 to 4 hours
   - Fish Stock – 45 minutes to 1 hour
   - Vegetables Stock – 45 minutes to 1 hour, depending on the specific ingredients and the size of vegetables cut

3. The stock ingredients are boiled starting with cold water. This promotes the extraction of protein which may be sealed in by hot water.

4. Stocks are simmered gently, with small bubbles at the bottom but not breaking at the surface. If a stock is boiled, it will be cloudy.

5. Salt is not usually added to a stock, as this causes it to become too salty, since most stocks are preserved to make soup and sauces.

6. Meat is added to the stock before the vegetables and the “scum” that rises to the surface is skimmed off before further ingredients are added.
Different Kinds of Spices and Seasoning

- Bay Leaf
- Cajun Seasoning
- Cinnamon
- Curry Powder
- Flax Seed
- Ginger
- Mixed Spices & Seasoning
- Mustard
- Nutmeg
- Oregano
- Paprika
- Pepper & Peppercorns
Activity 1. PREPARE STOCK (Group Activity)

Directions: Choose any of the given stocks and prepare following the given procedure. Your performance and output will be rated using the given rubric.

White stock

Basic White stock

Tools and Equipment:

- Stove
- Stock pot
- Chopping board
- Knife
- Skimmer/Strainer
- Ladle
- Container

Ingredients:

- 4 -5 kg bones; chicken, veal or beef
- 1 L water, cold
- 450 g onion, chopped
- 16 tbsp. carrot, chopped
- 16 tbsp. celery, chopped
Bouquet Garni
1 pc dried bay leaf
1/4 tsp Dried thyme
1/4 tsp peppercorns
6-8 stems parsley
2 whole cloves

Procedure:
1. Cut the bones into pieces, 3 to 4 inches long for easy extraction.
2. Rinse in cold water to remove impurities that cloud the stock.
3. Place the bones in the stockpot and cover with cold water to speed extraction.
4. Bring water to a boil and then, reduce to simmer. Skim the scum that comes from the surface for a clear stock. Do not let the stock boil because it makes the stock cloudy.
5. Keep the water level above the bones because bones cooked while exposed to air will turn dark and darken the stock. Also, bones will not release flavor into the water.
6. Add the mirepoix.
7. Simmer for recommended length of time:
8. Strain through several layers of cheesecloth.
9. Cool the stock as quickly as possible by:

   ✓ Setting the pot in a sink and allow cold water to flow under the pot and around it.
   ✓ Stirring the pot occasionally so all the stock cools evenly.

10. When cooled, refrigerate the stock properly in covered containers for 2-3 days. If properly frozen, it will last for several months.
**Directions:**

Ask your teacher to assess your performance in the following critical task and performance criteria below.

You will be rated based on the evaluation on the right side.

<table>
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Teacher will initial level achieved.

**PERFORMANCE STANDARDS**

For acceptable achievement, all items should receive an answer.

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<td>4. Bring water to boil and then reduce to simmer. Skim the scum.</td>
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<td>5. Keep the water level above the bones</td>
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<td>6. Add mirepoix</td>
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</table>
Basic Brown Stock

Tools and Equipment:

- Stove
- Stock pot
- Chopping board
- Knife
- Skimmer/Strainer
- Ladle
- Container

Ingredients:

- 4 ½ kg. bones; chicken, veal or beef
- 10-12 qtr. water, cold

Mirepoix

- 450 g onion, chopped
- 16 tbsp. carrot, chopped
- 16 tbsp. celery, chopped
- 450 g tomato puree
Bouquet Garni

1 pc dried bay leaf
1/4 tsp Dried thyme
1/4 tsp peppercorns
6-8 stems parsley
2 whole cloves

Procedure:

1. Cut the bones into pieces, 3-4 inches long. Use veal or beef bones.
2. Do not wash or blanch the bones. The moisture would hinder browning.
3. Place the bones in a roasting pan in one layer, and brown in a hot oven at 375°F (190°C. or higher. The bones must be well browned to color the stock sufficiently. Bones may be oiled lightly before browning.
4. When the bones are well browned, remove from pan and place in a stockpot. Cover with cold water and bring to simmer.
5. Drain and reserve the fat from the roasting pan. Deglaze the pan by adding water and stirring over heat until all the brown drippings are dissolved or loosened. Add to stockpot.
6. While the stock is getting started, place the mirepoix in the roasting pan with some of the reserved fat and brown the vegetable well in the oven.
7. When the water in the stockpot comes to a simmer, skim the scum at the surface.
8. Add the browned vegetable and tomato puree to the stockpot.
9. Put the bouquet garni by tying it to the handle of the pot for easy removal.
10. Continue to simmer for recommended length of time, 6-8 hours.
11. Strain through several layers of cheesecloth.
12. Cool the stock and refrigerate properly in a covered container to keep for 2-3 days. If properly frozen, it will last for several months.
How Well Did You Perform?

Find out by accomplishing the Scoring Rubric honestly and sincerely. Remember it is your learning at stake!

Directions:
Ask your teacher to assess your performance in the following critical task and performance criteria below.

You will be rated based on the evaluation on the right side.

<table>
<thead>
<tr>
<th>Level Achieved</th>
<th>PERFORMANCE LEVELS</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>Can perform the skill satisfactorily without supervision and with initiative and adaptability to problem situations.</td>
</tr>
<tr>
<td>3</td>
<td>Can perform the skill satisfactorily without assistance or supervision.</td>
</tr>
<tr>
<td>2</td>
<td>Can perform the skill satisfactorily but requires some assistance and/or supervision.</td>
</tr>
<tr>
<td>1</td>
<td>Can perform parts of the skill satisfactorily, but requires considerable assistance and/or supervision.</td>
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</table>

Teacher will initial level achieved.

<table>
<thead>
<tr>
<th>PERFORMANCE STANDARDS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>For acceptable achievement, all items should receive an answer.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Cut the bones into pieces, 3 to 4 inches long.</td>
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<tr>
<td>2. Rinse in cold water to remove impurities that cloud the stock.</td>
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<tr>
<td>3. Place the bones in the stockpot and cover with cold water to speed extraction</td>
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<tr>
<td>4. Bring water to boil and then reduce to simmer. Skim the scum.</td>
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</tbody>
</table>
5. Keep the water level above the bones
6. Add mirepoix
7. Simmer for recommended length of time
8. Strain through several layers of cheesecloth
9. Cool the stock as quickly as possible
10. When cool, refrigerate the stock properly in covered containers to keep for 2-3 days.

Review of Learning Outcome 1

Directions: Read the following questions carefully and choose the letter of the correct answer. Write your answer in your test notebook.

1. What do you call the liquid in which meat, fish, and sometimes vegetables have been cooked?
   A. glaze   C. stock
   B. sauce   D. water

2. Which of the following stocks uses veal bone as its main ingredient?
   A. brown stock   C. prawn stock
   B. ham stock     D. white stock

3. What kind of stock uses fish as its main ingredient?
   A. brown stock   C. glace viands
   B. fish stock    D. ham stock

4. What stock uses chicken bone as its main ingredient?
   A. fish stock
   B. ham stock
   C. prawn stocks
   D. chicken stocks

5. Which one is the easiest to prepare?
   A. brown stock   C. white stock
   B. fish stock    D. vegetable stock
Learning Outcome 2 Prepare Soups Required for Menu Item

Soups

Soups are based on stocks added with other ingredients for variety of flavor, consistency, appearance and aroma.

A well-prepared soup always makes a memorable impression. Soups offer a full array of flavoring ingredients and garnishing opportunities. Soups also allow the use of trimmings and leftover creatively.

Classifications of Soups

1. Clear Soups

Clear Soups. They are soups based on a clear, unthickened broth or stock. They may be served plain or garnished with a variety of vegetables and meats. They are very similar to stocks, except that broths are based on meats rather than bones so they are richer and have a more defined flavor. Broths can be used as a liquid in preparing soups. A good quality broth should be clear, aromatic and rich-tasting with a very evident flavor of the major ingredient. One strong and clear broth or stock is a consommé. It is made by combining lean chopped meat, egg whites, mirepoix, herbs and spices and an acidic ingredient like tomatoes, wine, or lemon juice. The combination is called “clarification” since the particles that make the broth appear cloudy are trapped as it cooks. A good quality consommé is crystal – clear, has a good body, amber to brown in color, and completely fat-free.
• Broth and bouillon simple clear soup without solid ingredients.
  Broth and bouillon are similar to stock in technique and in cooking time. The major distinction between broth and stock is that broths can be served as is, whereas stocks are used in production of other dishes.

• Vegetable soup – clear seasoned stock or broth with the addition of one or more vegetable, meat, or poultry.

• Consommé’ – rich, flavorful stock or broth that has been clarified to make it perfectly clear and transparent.

2. Thick Soups

**Thick Soups** are soups that are thickened to provide a heavier consistency. Thick soup is a cream soup based on béchamel sauce and is finished with a heavy cream. A béchamel sauce is milk thickened with roux. But some thick soups are veloute sauce-based, stock thickened with roux. A veloute sauce base is usually finished with a liaison of heavy cream egg yolk. A thick soup should have a velvety smooth texture and the thickness of heavy cream. It is always essential to strain out the solids and at times to puree and put back in the soup. Cream soups may be served hot or cold.

A kind of cream soup based on crustaceans like shrimps and lobsters is bisque. It is made by simmering a crustacean in a stock or a fish fumet.

Another thick vegetable soup is the chowder made with broth, milk or water as base, then thickened with roux. Cold, thick soups such as vichyssoise are simply cream soups served cold. Others like gazpacho or a chilled cantaloupe soup are based on a puree of cooked or raw ingredients brought to the correct consistency by adding fruits or vegetable juice as a liquid.
- Cream soups – are soups thickened with roux, beurremanie, liaison or other thickening agents, plus milk, or cream.

- Purees – vegetable soup thickened with starch
- Bisques – are thickened soups made from shellfish.

- Chowders – are hearty soups made from fish, shellfish or vegetables usually contain milk and potatoes.

- Veloutes – soup thickened with egg, butter and cream.

3. Other types of soup
   a. Dessert soup
      A. Ginataan – a Filipino soup made from coconut milk, milk, fruit, and tapioca pearl served hot or cold.
      B. Osheriku – a Japanese asuki bean soup
      C. Tonge sui – a Chinese soup

   b. Fruit Soup can be served hot or cold depending on the recipe where dried fruits are used like raisins and prunes. Fruit soup may include milk, sweet or savory dumplings, spices or alcoholic beverages like brandy and champagne.

   c. Cold soup is variations on the traditional soup wherein the temperature when served is kept at or below temperature.

   d. Asian soup is a traditional soup which is typical broth, clear soup, or starch thickened soup.

Other thickening agents for soup
   1. rice
   2. flour
   3. grain
   4. corn starch
Ingredients of soup
- Meat (chicken, beef, pork, lamb, fish)
- Salt
- Pepper
- Vegetables (carrots, string beans, turnips, tomatoes, mushrooms, celery, leek)
- Onion
- Garlic
- Water
- Eggs
- Cornstarch
- Seasoning (MSG, convenience products)
- Butter
- Cream
- Garnishes (slices of lemon, egg, shredded vegetables, pimiento strips)

Basic Principles of Preparing Soup

1st Principle. Starting with Cold Water
Why cold water? Most protein, vitamins and minerals dissolve in cold water. Part of the flavor comes from these components. Using hot water would lessen the flavor and nutritive content of stock.

2nd Principle. Cutting vegetable to appropriate size for the type of stock.
The size of cut helps the maximum flavor to be extracted.
Example 1: A fish stock only simmers for a half hour (30 minutes) so the cut should be julienne (thin strips: ¼ inch thick 2-3 inches long)
Example 2: A brown stock simmers for 4-6 hours and sometimes 24 hours, so the cut should be 1” cubed so that stock will have time to extract the flavor and will not fall apart after a long cooking.

3rd Principle. Select your protein based. Beef, Chicken, Pork and Fish
All bones are washed, roasted or blanched. Roasted for brown sauce and blanched for white stock.

4th Principle. Simmering
Gentle extractions aid in flavor and nutrition. Boiling causes cloudiness through agitation of the ingredients.

5th Principle. Skimming
Keep the stock clear. The scum on top of stocks contains impurities.
Cooking soups

Meats, Poultry and Fish
- Cuts of meat that are less tender should be added early in the cooking process
- Poultry needs to be added early enough so that it cooks thoroughly
- Add fish closed to the end of the cooking process to keep it from overcooking.

Grains and Pasta
- Allow a little more time in cooking.

Beans and Legumes
- Soaked beans, lentils and black-eyed peas should be added with the liquid so they will fully cook

Dense or Starchy Vegetables
- A small-diced cut of potatoes, carrots, and winter squashes will require 30–45 minutes to cook.

Green Vegetables:
- These vegetables should be added during the final 15–20 minutes of cooking the soup

Adjusting Consistency
Thick soups may continue to thicken during cooking and may need additional stock or water added to adjust the consistency

Degreasing
Broth-based soups maybe prepared in advance, cooled and refrigerated. This facilitates removing of congealed fat from the surface. Skim the top layer of fat from a hot soup with a ladle, alternately.
Perform the Suggested Soup Recipes
Directions: Find a partner and perform the given soup recipe.

CREAM OF POTATO SOUP

**TOOLS AND EQUIPMENT**

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<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
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<tbody>
<tr>
<td>casserole</td>
<td>½ cup</td>
<td>chopped bacon</td>
</tr>
<tr>
<td>gas or electric stove</td>
<td>¾ kg</td>
<td>potatoes</td>
</tr>
<tr>
<td>knife</td>
<td>3 cups</td>
<td>water</td>
</tr>
<tr>
<td>chopping board</td>
<td>2 bulbs</td>
<td>onions, chopped</td>
</tr>
<tr>
<td>strainer</td>
<td>1 whole</td>
<td>chicken bouillon cube</td>
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<tr>
<td>saucepot</td>
<td>2 cups</td>
<td>hot water</td>
</tr>
<tr>
<td>measuring cup</td>
<td>¼ cups</td>
<td>butter</td>
</tr>
<tr>
<td>measuring spoon</td>
<td>¼ tsp.</td>
<td>pepper</td>
</tr>
<tr>
<td>wooden spoon</td>
<td>2 tbsp.</td>
<td>Gold Medal all-purpose flour</td>
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<tr>
<td>soup ladle</td>
<td>½ tsp.</td>
<td>salt</td>
</tr>
<tr>
<td></td>
<td>1½ c</td>
<td>all-purpose cream</td>
</tr>
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</table>

**PROCEDURE:**

1. Cook bacon until crispy. Cool. Set aside, peel potatoes and cut into cubes, place in a saucepot and add water and chopped onions. Bring to a boil and cook until potatoes are tender. Remove potatoes and sear the broth.

2. Add chicken bouillon cube to the reserved potato broth to make potato chicken broth and stir until dissolved. Add the hot water. Place cooked potatoes in blender in 2 batches, adding ¾ cup of the potato-chicken broth with each batch. Cover and blend for 1 minute or until smooth. Set aside.

3. Melt butter in a saucepan. Add flour, salt and pepper. Add all-purpose cream at once. Stir while cooking until slightly thickened and bubbly. Cook for 1 minute more. Stir until heated through. If necessary, stir in
additional milk to make the desired consistency. Serve with sprinkled bacon bits.

Find out how well you performed by accomplishing the Scoring Rubric honestly and sincerely. Remember it is your learning at stake!

*Direction:* Evaluate your finished product, using the given score sheet.

**Criteria for Evaluating and Presenting Soup**

<table>
<thead>
<tr>
<th>I. Products:</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
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<td>1. General Appearance</td>
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<td>a. attractive and appealing to appetite</td>
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<tr>
<td>b. pleasing and good color combination</td>
<td></td>
<td></td>
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<tr>
<td>c. ingredients cooked just right</td>
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<td></td>
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<tr>
<td>d. correct consistency</td>
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<tr>
<td>2. Palatability</td>
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<tr>
<td>a. delicious</td>
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<tr>
<td>a. highly nutritious</td>
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<th>II. Procedures:</th>
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<tbody>
<tr>
<td>1. Use of Resources:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a. kept working table is kept orderly while preparing the ingredients</td>
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<td></td>
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</tr>
<tr>
<td>b. used only the proper and needed utensils and dishes</td>
<td></td>
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<tr>
<td>c. used time-saving techniques and devices</td>
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</tr>
<tr>
<td>2. Cleanliness and sanitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. was well-groomed and properly dressed for cooking, used clean apron, hair nets, hand towel and pot holder</td>
<td></td>
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<tr>
<td>b. Observed sanitary handling of food</td>
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<td>3. Conservation of nutrients</td>
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</tr>
<tr>
<td>a. followed proper preparation and cooking procedures</td>
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<tr>
<td>b. followed the recipe correctly</td>
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**Score:** (maximum 42 points)

**Comments:**
Show that you learned something by doing this activity

**CONSOMME A LA MADRILENE**

<table>
<thead>
<tr>
<th>TOOLS AND EQUIPMENT</th>
<th>QUANTITY</th>
<th>INGREDIENTS</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>casserole</td>
<td>1kg.</td>
<td>Lean beef, cut in 3 portion</td>
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</tr>
<tr>
<td>gas or electric stove</td>
<td>½ kg</td>
<td>bone marrow</td>
<td></td>
</tr>
<tr>
<td>knife</td>
<td>3 ½ liter</td>
<td>cold water</td>
<td></td>
</tr>
<tr>
<td>chopping board</td>
<td>3 large</td>
<td>carrots, cut up</td>
<td></td>
</tr>
<tr>
<td>measuring cup</td>
<td>2 cloves</td>
<td>onion, stuck with 3 cloves</td>
<td></td>
</tr>
<tr>
<td>measuring spoon</td>
<td>2 stalks</td>
<td>celery w/leaves.</td>
<td></td>
</tr>
<tr>
<td>wooden spoon</td>
<td>3</td>
<td>leeks, sliced lengthwise and</td>
<td></td>
</tr>
<tr>
<td>soup ladle</td>
<td>1½ tbsp.</td>
<td>wash salt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>peppercorns</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>spring parsley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 clove</td>
<td>clove garlic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1pc</td>
<td>bay leaf</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 large</td>
<td>egg whites, beaten</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>crushed eggshells</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 cup</td>
<td>tomato puree</td>
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<tr>
<td></td>
<td>2 tbsp</td>
<td>finely chopped onions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>½ tsp</td>
<td>dried basil</td>
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</table>
PROCEDURE:

1. Combine the beef, bone and water in a stockpot and bring to a boil. Simmer for 5 minutes and skim. Cover and simmer for 1 hour.
2. Add to the onion stock with cloves, the carrots, celery, leeks, salt peppercorns, parsley, thyme, garlic and bay leaf. Cover and cook slowly for 4 – 5 hours.
3. Strain through a double thickness of cheesecloth and skim off fat. Use absorbent paper towels. Remove the remaining particles and reserve the meat for another purpose.
4. To clarify the consommé, return it to the heat and add beaten egg whites and eggshells.
5. Bring to a rolling boil and strain once more through 3 thickness cheesecloth.
6. Pour 6 cups of consommé into a saucepan and reserve the remainder for another use.
7. Add the tomato puree, onion, and dried basil. Simmer for 20 minutes, remove from the heat and strain through cheesecloth.
8. Serve hot.

Find out how well you performed by accomplishing the Scoring Rubric honestly and sincerely. Remember it is your learning at stake!

**Direction:** Evaluate your finished product, using the given score sheet.

**Criteria for Evaluating and Presenting Soup**

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<td></td>
<td></td>
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<tr>
<td>c. ingredients cooked just right</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>d. correct consistency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Palatability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. delicious</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>b. taste just right</td>
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</table>
a. kept working table is kept orderly while preparing the ingredients

b. used only the proper and needed utensils and dishes

c. used time-saving techniques and devices

2. Cleanliness and sanitation

a. was well-groomed and properly dressed for cooking, used clean apron, hair nets, hand towel and pot holder

b. Observed sanitary handling of food

3. Conservation of nutrients

a. followed proper preparation and cooking procedures

b. followed the recipe correctly

Score: (maximum 42 points)

Comments:

**EGG DROP SOUP**

<table>
<thead>
<tr>
<th>TOOLS AND EQUIPMENT</th>
<th>QUANTITY</th>
<th>INGREDIENTS DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>casserole</td>
<td>6 ½ cups</td>
<td>prepared basic chicken stock</td>
</tr>
<tr>
<td>stockpot with cover</td>
<td>2 tbsp.</td>
<td>light soy sauce</td>
</tr>
<tr>
<td>gas or electric stove</td>
<td>2 tbsp.</td>
<td>sherry</td>
</tr>
<tr>
<td>knife</td>
<td>¼ tsp.</td>
<td>white pepper</td>
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<tr>
<td>chopping board</td>
<td>2 large</td>
<td>egg whites</td>
</tr>
<tr>
<td>mortar and pestle</td>
<td>1 tbsp.</td>
<td>salt</td>
</tr>
<tr>
<td>strainer</td>
<td>2 tbsp.</td>
<td>sesame oil</td>
</tr>
<tr>
<td>measuring cup</td>
<td>1/8 tsp</td>
<td>cornstarch</td>
</tr>
<tr>
<td>measuring spoon</td>
<td>2 large</td>
<td>eggs</td>
</tr>
<tr>
<td>wooden spoon</td>
<td>1 tbsp.</td>
<td>scallions, thinly sliced</td>
</tr>
<tr>
<td>soup ladle</td>
<td></td>
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</tbody>
</table>
PROCEDURE:

1. In a 2-quart soup pot, pour 6 cups of chicken broth to a simmer. Add the soy sauce, sherry, pepper, and salt.
2. Beat the egg whites lightly. Drizzle into the chicken broth mixture.
3. Mix the cornstarch with the remaining ½ cup chicken stock until lump free. Add to the soup. Stir in the sesame oil, garnish with scallions and serve hot.

Evaluate your finished product, using the given score sheet.

Criteria for Evaluating and Presenting Soup

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<tr>
<td>c. ingredients cooked just right</td>
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</tr>
<tr>
<td>d. correct consistency</td>
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<tr>
<td>2. Palatability</td>
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</tr>
<tr>
<td>a. delicious</td>
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<tr>
<td>b. taste just right</td>
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<tr>
<td>3. Nutritive value</td>
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<tr>
<td>a. highly nutritious</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. Procedures:

1. Use of Resources:
   a. kept working table is kept orderly while preparing the ingredients
   b. used only the proper and needed utensils and dishes
   c. used time-saving techniques and devices

2. Cleanliness and sanitation
   a. was well-groomed and properly dressed for cooking, used clean apron, hair nets, hand towel and pot holder
   b. Observed sanitary handling of food

3. Conservation of nutrients
   a. followed proper preparation and cooking procedures
   b. followed the recipe correctly

Score: (maximum 42 points)
CREAMY CARROT SOUP

TOOLS AND EQUIPMENT
- casserole
- stockpot with cover
- gas or electric stove
- knife
- chopping board
- measuring cup
- measuring spoon
- wooden spoon
- soup ladle

INGREDIENTS

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>22 grams</td>
<td>butter</td>
</tr>
<tr>
<td>1 medium</td>
<td>onion, chopped</td>
</tr>
<tr>
<td>3 strips</td>
<td>bacon, chopped</td>
</tr>
<tr>
<td>600 grams</td>
<td>carrots, cubed</td>
</tr>
<tr>
<td>1 pc</td>
<td>small chicken cube</td>
</tr>
<tr>
<td>½ cup</td>
<td>cream</td>
</tr>
<tr>
<td>dash</td>
<td>salt/ pepper</td>
</tr>
</tbody>
</table>

PROCEDURE:

1. Melt butter in a large saucepan, add onion and bacon, stir constantly over heat until onion is soft.
2. Add carrots to pan, then chicken stock and cube, bring to a boil, reduce heat, cover, simmer for about 30 minutes or until carrots are tender. Remove saucepan from heat.
3. Blend or process mixture in several batches until smooth.
4. Return mixture to pan, stir in cream, reheat, and stir constantly without boiling.
5. Season with salt and pepper. Serve hot
Directions: Evaluate your finished product, using the given score sheet.

Criteria for Evaluating and Presenting Soup

I. Products:

<table>
<thead>
<tr>
<th></th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. attractive and appealing to appetite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. pleasing and good color combination</td>
<td></td>
<td></td>
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<tr>
<td>c. ingredients cooked just right</td>
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<td></td>
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<tr>
<td>d. correct consistency</td>
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</table>

II. Procedures:

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</thead>
<tbody>
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<td>1. Use of Resources:</td>
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<td></td>
<td></td>
</tr>
<tr>
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<tr>
<td>2. Cleanliness and sanitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. was well-groomed and properly dressed for cooking, used clean apron, hair nets, hand towel and pot holder</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>b. Observed sanitary handling of food</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Conservation of nutrients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. followed proper preparation and cooking procedures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. followed the recipe correctly</td>
<td></td>
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</table>

Score: (maximum 42 points)

Comments:
CHICKEN AND CORN CHOWDER

TOOLS AND EQUIPMENT

<table>
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<th>DESCRIPTION</th>
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<tbody>
<tr>
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<td>1 pc</td>
</tr>
<tr>
<td>saucepot</td>
<td>1 pc</td>
</tr>
<tr>
<td>gas or electric stove</td>
<td>1 pc</td>
</tr>
<tr>
<td>knife</td>
<td>1 pc</td>
</tr>
<tr>
<td>chopping board</td>
<td>1 pc</td>
</tr>
<tr>
<td>mortar and pestle</td>
<td>1 pc</td>
</tr>
<tr>
<td>strainer</td>
<td>1 pc</td>
</tr>
<tr>
<td>measuring cup</td>
<td>1 pc</td>
</tr>
<tr>
<td>measuring spoon</td>
<td>1 pc</td>
</tr>
<tr>
<td>wooden spoon</td>
<td>1 pc</td>
</tr>
<tr>
<td>soup ladle</td>
<td>1 pc</td>
</tr>
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INGREDIENTS

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>200 grams</td>
<td>butter</td>
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<tr>
<td>1 tsp.</td>
<td>salt</td>
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<tr>
<td>6 strips</td>
<td>carrot, strips</td>
</tr>
<tr>
<td>½ cup</td>
<td>onion, sliced</td>
</tr>
<tr>
<td>6 cup</td>
<td>water</td>
</tr>
<tr>
<td>6 strips</td>
<td>bacon strips</td>
</tr>
<tr>
<td>½ cup</td>
<td>chopped onion</td>
</tr>
<tr>
<td>1 can</td>
<td>cubed celery</td>
</tr>
<tr>
<td>½ cup</td>
<td>cube carrot</td>
</tr>
<tr>
<td>1 can</td>
<td>chicken stock</td>
</tr>
<tr>
<td>½ cup</td>
<td>gold medal all-purpose flour</td>
</tr>
<tr>
<td>1 can</td>
<td>small corn kernels</td>
</tr>
</tbody>
</table>

PROCEDURE:

1. In a saucepan, put chicken breast, salt, carrot, onion, and water. Bring to a boil. Cook for 20 minutes.
3. In a saucepan, put bacon strips. Cook until brown. Set aside.
4. Retain about 2 tablespoons of the bacon drippings.
5. In a saucepan, using the bacon drippings, sauté onions until soft. Add chicken meat. Mix well. Add flour. Stir well.
6. Add the chicken mixture. Let it simmer. Stir until thick.

To serve: Put soup in a bowl, top with chopped bacon. Serve while hot. It may be served with barley-garlic, bread, and bacon at the side.
Evaluate your finished product, using the given score sheet.

Criteria for Evaluating and Presenting Soup

<table>
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<td></td>
<td></td>
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</table>

| II. Procedures:              |          |          |          |
| 1. Use of Resources:         |          |          |          |
| a. kept working table is kept orderly while preparing the ingredients |          |          |          |
| b. used only the proper and needed utensils and dishes |          |          |          |
| c. used time-saving techniques and devices |          |          |          |
| 2. Cleanliness and sanitation|          |          |          |
| a. was well-groomed and properly dressed for cooking, used clean apron, hair nets, hand towel and pot holder |          |          |          |
| b. Observed sanitary handling of food |          |          |          |
| 3. Conservation of nutrients |          |          |          |
| a. followed proper preparation and cooking procedures |          |          |          |
| b. followed the recipe correctly |          |          |          |

Score: (maximum 42 points)

Comments:
Review of Learning Outcome 2

Directions: Read the question carefully and choose the letter of the correct answer. Write your answer in your test booklet.

1. Which of the following is a clear soup?
   A. bisque  C. cream
   B. bouillon  D. puree
2. What substance is added that gives taste to the food?
   A. decoration  C. seasoning
   B. flavoring  D. thickening
3. What type of soup can be served either hot or cold?
   A. ancient soup  C. dessert soup
   B. cold soup  D. fruit soup
4. What utensil is appropriate in serving hot soup?
   A. bowl  C. soup bowl
   B. basin  D. tray
5. What makes a soup appetizing?
   A. garnish  C. taste
   B. ingredients  D. all of the above

Enhancement Activity

Photo Gallery

Directions:
- Make a photo album of different soups creatively served here and abroad.
- It should contain minimum of 10 pages and maximum of 15 pages
- Label each creative presentation
Learning Outcome 3 Prepare Sauces Required for Menu Item

Sauces

One of the important components of a dish is the sauce. Sauces serve a particular function in the composition of a dish. These enhance the taste of the food to be served as well as add moisture or succulence to food that are cooked dry. Sauces also enhance the appearance of a dish by adding luster and sheen. A sauce that includes a flavor complementary to a food brings out the flavor of that food. It defines and enriches the overall taste and its texture. Sauce is a fluid dressing for poultry, meat, fish, dessert and other culinary products.

*Sauce* is a flavorful liquid, usually thickened that is used to season, flavor and enhance other foods. It adds:

1. Moistness
2. Flavor
3. Richness
4. Appearance (color and shine)
5. Appeal

Basic Sauces for Meat, Vegetables, and Fish

1. White sauce - Its basic ingredient is milk which is thickened with flour enriched with butter.
2. Veloute sauce - Its chief ingredients are veal, chicken and fish broth, thickened with blonde roux.
3. Hollandaise – It is a rich emulsified sauce made from butter, egg yolks, lemon juice and cayenne. Emulsion – (as fat in milk) consists of liquid dispersed with or without an emulsifier in another liquid that usually would not mix together.
4. Brown sauce / Espagnole – It is a brown roux-based sauce made with margarine or butter, flavor and brown stock.
5. Tomato – It is made from stock (ham/pork) and tomato products seasoned with spices and herbs.

A. Variation of Sauces

1. Hot Sauces – made just before they are to be used.
2. Cold sauces – cooked ahead of time, then cooled, covered, and placed in the refrigerator to chill.
B. **Thickening Agents**

Thickening agent – thickens sauce to the right consistency. The sauce must be thick enough to cling lightly to the food.

Starches are the most commonly used thickeners for sauce making. Flour is the principal starch used. Other products include cornstarch, arrowroot, waxy maize, pre-gelatinized starch, bread crumbs, and other vegetables and grain products like potato starch and rice flour.

Starches thicken by gelatinization, which is the process by which starch granules absorb water and swell many times their original sizes.

Starch granules must be separated before heating in liquid to avoid lumping. Lumping occurs because the starch on the outside of the lump quickly gelatinizes into a coating that prevents the liquid from reaching the starch inside.

Starch granules are separated in two ways:
- Mixing the starch with fat. Example: roux
- Mixing the starch with a cold liquid. Example: slurry

Roux – is a cooked mixture of equal parts by weight of fat and flour.

1. **Fat**

A. Clarified butter. Using clarified butter results to finest sauces because of its flavor.

B. Margarine. Used as a substitute for butter because of its lower cost.

C. Animal fat. Chicken fat, beef drippings and lard.

D. Vegetable oil and shortening. Can be used for roux, but it adds no flavor.
2. Flour

The thickening power of flour depends on its starch content. Bread flour is commonly used in commercial cooking. It is sometimes browned for use in brown roux. Heavily browned flour has only 1/3 the thickening power of not brown flour.

A roux must be cooked so that the sauce does not have a raw, starchy taste of flour. The kinds of roux differ on how much they are cooked.

- White roux – cooked just enough to cook the raw taste of flour; used for béchamel and other white sauces based on milk.

- Blond roux – cooked little longer to a slightly darker color; used for veloutes.’

- Brown roux – cooked to a light brown color and a nutty aroma. Flour may be browned before adding to the fat. It contributes flavor and color to brown sauces.

C. Common Problems in Sauce

1. Discarding 3. poor texture 5. oil streaking
2. oiling-off 4. synersis (weeping)
METHODS OF PREPARING SAUCES

Sauces Blanches
(White Sauce)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Butter</th>
<th>Flour</th>
<th>Liquid: Milk or Stock or Cream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Sauce</td>
<td>1 tbsp.</td>
<td>1 tbsp.</td>
<td>1 cup</td>
</tr>
<tr>
<td>General Sauce</td>
<td>1½ tbsp.</td>
<td>1 ½ tbsp.</td>
<td>1 cup</td>
</tr>
<tr>
<td>Thick Sauce</td>
<td>5 tsps.</td>
<td>2 tsps.</td>
<td>1 cup</td>
</tr>
<tr>
<td>Soufflé Sauce</td>
<td>2 tbsp.</td>
<td>2 tbsp.</td>
<td>1 cup</td>
</tr>
</tbody>
</table>

Hygienic Principles and Practices in Sauce Making

1. Make sure all equipment is perfectly clean.
2. Hold sauce no longer than 1 ½ hours. Make only enough to serve in this time, and discard any that is left over.
3. Never mix an old batch of sauce with a new batch.
4. Never hold hollandaise or béarnaise or any other acid product in aluminum. Use stainless-steel containers.

Making Roux

Procedure

1. Melt fat.
2. Add correct amount of flour, and stir until fat and flour is thoroughly mixed.

3. Cook to the desired degree of white, blond or brown roux.

Basic Finishing Techniques in Sauce Making

1. Reduction

- Using reduction to concentrate basic flavors. The water evaporates when simmered. The sauce becomes more concentrated and more flavorful.
- Using reduction to adjust textures. The sauce may be simmered until it reaches the desired thickness. Stock or other liquid may be added to thickened sauce to thin it out, then simmer to reduce to the right consistency.
- Using reduction to add new flavors. Glazes or reduced stocks are added to sauces to give flavor.
2. Straining
   This is very important in order to produce a smooth, lump free sauce. Straining through a china cap lined with several layers of cheesecloth is effective.

3. Deglazing
   To deglaze means to swirl a liquid in a sauté pan to cooked particles of food remaining on the bottom.
   Liquid such as wine or stock is used to deglaze then reduced by one-half or three-fourths. This reduction, with the added flavor of the pan drippings, is then added to the sauce.

4. Enriching with butter and cream
   - Liaison mixture of egg yolks and cream added to sauce to give extra richness and smoothness.
   - Heavy cream - added to give flavor and richness to sauce
   - Butter - Add softened butter to hot sauce and swirl until it melts. Serve immediately to prevent separation of butter. Butter gives extra shine and smoothness to the sauce.
5. **Seasoning** – adds and develop flavor
   Ex: salt
   lemon juice
   cayenne
   white pepper
   sherry and Madeira

---

**Let’s Do it!**

Perform the following activity:

**MAKING PAN GRAVY**

**Tools/Equipment Needed:**
- Roasting pan
- Saucepan
- Strainer
- Ladle

**Procedure:**

**Method 1**
1. Remove the roast from the roasting pan.
2. Clarify the fat.
3. Deglaze the pan.
4. Combine with stock and simmer.
5. Make a roux or a slurry of arrowroot or cornstarch and water.
6. Thicken the gravy with the roux or cornstarch slurry.
7. Strain.
8. Adjust seasoning.
Method 2
1. Remove the roast from the roasting pan.
2. Clarify the fat.
3. Add flour to the roasting pan and make a roux.
4. Add stock. Stir until thickened and the pan is deglaze.
6. Adjust consistency, if necessary, with more stock or more roux.
7. Season.

Directions: Evaluate your finished products using the score sheet.

<table>
<thead>
<tr>
<th>I. Product:</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Color combination is attractive and appealing</td>
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<td>b. ingredients cooked just right</td>
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<td></td>
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<tr>
<td>c. correct consistency not mushy/ very</td>
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</tr>
<tr>
<td>thick/thin consistency</td>
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</tbody>
</table>

II. Procedure:

| 1. Use of Resources:                           |          |          |          |
| a. kept working table orderly while preparing |          |          |          |
|      the ingredients                           |          |          |          |
| b. used only the proper and needed            |          |          |          |
|      utensils and dishes                       |          |          |          |
| c. used time-saving techniques and devices     |          |          |          |
| 2. Cleanliness and Sanitation                  |          |          |          |
| a. observed well-groomed and properly         |          |          |          |
|      dressed for cooking, use clean            |          |          |          |
|      apron, hair nets, hand towel and pot     |          |          |          |
|      holders                                   |          |          |          |
| b. observed sanitary handling of food         |          |          |          |
BÉCHAMEL SAUCE

**Purpose:** Prepare and cook béchamel sauce using ingredients and procedures listed below:

**Tools/Equipment Needed:**
- Saucepan
- Ladle
- Cheesecloth
- Spoon

**Ingredients:**
- 4 tbsp. clarified butter
- 4 tbsp. bread flour
- ¼ gal milk
- ¼ pc bay leaf
- ¼ pc onions
- Salt to taste
- Nutmeg to taste
- White pepper to taste
Procedure:
1. Heat the butter in a heavy sauce pan in a very low heat. Add the flour and make a white roux. Cool the roux slightly.
2. In another sauce pan, scald the milk. Gradually add it to the roux, beating constantly.
3. Bring the sauce to a boil, stirring constantly. Reduce heat to simmer.
4. Stick the bay leaf and onions and add to the sauce. Simmer at least 15 - 30 minutes or more. Stir occasionally while cooking.
5. Adjust the consistency with more hot milk if necessary.
6. Season lightly with salt, nutmeg and white pepper. Spice flavor should not dominate.

Directions: Evaluate your finished products using the score sheet.

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</tr>
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<td>II. Procedure:</td>
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<tr>
<td>4. Use of Resources:</td>
<td></td>
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<tr>
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<tr>
<td>a. observed well-groomed and</td>
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</table>
HOLLANDAISE SAUCE

Tools/Equipment Needed:
- Saucepan
- Beater
- Ladle
- Spoon
- Strainer
- Mixing bowl

Ingredients:
- 1 kg. butter
- 12pcs egg yolks
- 4 tbsp. cold water
- 6 tbsp. lemon juice
- Salt to taste
- Cayenne to taste
Procedure:
1. Clarify the butter. Keep the butter warm but not hot.
2. Place the egg yolks and cold water in a stainless steel bowl and beat well. Beat in a few drops of lemon juice.
3. Hold the bowl over a hot water bath and continue to beat until the yolks are thickened and creamy.
4. Remove the bowl from the heat. Using a ladle, slowly and gradually beat in the warm butter. Add the butter drop by drop at first. If the sauce becomes too thick to beat before all the butter is added, beat in a little of the lemon juice.
5. When all the butter has been added, beat in lemon juice to taste and adjust seasoning with salt and cayenne. Keep warm for service. Hold no longer than 1 ½ hours.

Evaluate your finished products using the score sheet.

<table>
<thead>
<tr>
<th>I. Product:</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Color combination is attractive and appealing</td>
<td></td>
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<tr>
<td>b. ingredients cooked just right</td>
<td></td>
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<tr>
<td>c. correct consistency not mushy/ very thick/thin consistency</td>
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<tr>
<td>2. Palatability</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a. delicious</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. tastes just right</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Nutritive Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. highly nutritious</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Procedure:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Use of Resources:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. kept working table orderly while preparing the ingredients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. used only the proper and needed utensils and dishes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. used time-saving techniques and</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Review of Learning Outcome 3

Directions: Choose the correct answer from the given choices. Write the letter of your answer in your test notebook.

1. A roux-based sauce made with margarine or butter, flavor, and brown stock.
   A. brown sauce
   B. butter sauce
   C. Hollandaise sauce
   D. Tomato sauce

2. Sauce made from melted butter or margarine to which seasonings are added.
   A. brown sauce
   B. Butter sauce
   C. Hollandaise sauce
   D. Tomato sauce

3. Sauce made by forming an emulsion with fat such as margarine, butter or salad oil and egg.
   A. Brown sauced
   B. Butter sauce
   C. Hollandaise or a Dutch
   D. Tomato sauce
4. Sauce made with tomatoes and seasoned with spices and herbs.
   A. Brown sauce
   B. Butter sauce
   C. Hollandaise sauce
   D. Tomato sauce
5. Sauce made from a blend of salad oil, vinegar and seasoning.
   A. Brown sauce
   B. Butter sauce
   C. Tomato sauce
   D. White sauce

Research Hour

Directions: Make a research on at least ten sauces and the food where it is commonly used in the Philippines, and ten from different countries. Include pictures and descriptions.

Learning Outcome 4 Store and Reconstitute Stocks, Sauces and Soups

Storage of Stocks/Sauces and Soups

Stock is a clear, flavored liquid that freezes well. Chilled stock can be frozen in 1 gallon amounts to be used for sauces. However, once a stock has been used to make a sauce, the sauce itself should not be frozen. Sauces do not freeze well and should be made in amounts needed on the day of production.

The stock should never be put in the refrigerator while it is hot. The large volume of hot liquid can raise the internal temperature of the refrigerator to the point that the stock will cool sufficiently within two hours and may warm everything else in the refrigerator. A good way to cool the stock is to place the hot stock pot in a sink full of cold water and ice cubes until it is lukewarm but it should not exceed one hour. After leaving it uncovered for the first half hour and stirring occasionally to cool, it should be covered with an upside down plate to prevent evaporation which would cause the stock to become too
concentrated. Refrigerated stock cools better in shallow pans. If covered, stock lasts up to five days but it is best if used in two days.

**Storage of Starch and Sauces**

Sauces and starches should be kept in airtight container and stored in a cool dry place away from the moisture, oxygen, lights, and pests. Food made with starches contains egg, milk, cream of other dairy products all of which make them prone to bacterial contamination and to food-borne illnesses. Sauces made with these ingredients should be kept out of the temperature danger zone. Thickened sauce should also be prepared, served, and stored with caution. These products should be stored in the refrigerator and never left to stay for long at room temperature.

**Storing Equipment**

1. Glass/Plastic Container
2. Stock pot
3. Refrigerator

**Ways to Reconstitute Stocks**

1. Skim the surface and strain off the stock through a china cup lined with several layers of cheesecloth.
2. Cool the stock as quickly as possible as follows:
   - Set the pot in a sink with blocks, rack or some other object under it. This is called venting. This allows cold water to flow under the pot or around it.
   - Run cold water into the sink, but not higher than the level of the stock.
   - Stir the pot occasionally so the stocks cool evenly. Cooling stock quickly and properly is important. Improperly cooled stock may spoil in 6 to 8 hrs.
3. When cool, refrigerate the stock in covered containers. Stock will keep 2 to 3 days if properly refrigerated. Stock can also be frozen and will last for several months.

**Ways to Reconstitute Stocks, Sauce and Soup**

1. by adding water
2. By using other liquid like evaporating milk, coconut milk, and fruit juices
Enhancement Activity

Photo Grid
Make an album (collage or scrapbook) of different stocks, sauces, and soups. Includes description, ingredients, and procedures, storing procedures and how it is reconstituted. Your output will be evaluated using rubrics.

Great Job!

Congratulations! You did a great job!
Rest and relax a while then move on to the next lesson. Good luck!
Overview

This lesson deals with the selection, preparation, cooking, presentation, and storage of poultry and game in a commercial kitchen or catering operation.

At the end of lesson you are expected to do the following:
1. perform mise’ en place;
2. cook poultry and game dishes;
3. plates/present and evaluate poultry and game bird dishes; and
4. store poultry and game bird

Learning Outcome 1 Perform Mise’en Place

Selecting and Purchasing Poultry and Game

Poultry consumption in the Philippines has increased remarkably in the last decade. This is evident in the popularity of chicken dishes in restaurants all over the country.

Poultry refers to several kinds of fowl that are used as food and the term includes chicken, turkey, duck, pigeon, and quail. These are usually domesticated raised mainly for meat and/or eggs. Birds such as smites that are hunted for food are games.

Classification of Poultry and Games

<table>
<thead>
<tr>
<th>Bird</th>
<th>Uses</th>
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</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>Meat, eggs</td>
</tr>
<tr>
<td>Duck</td>
<td>Meat, eggs feathers</td>
</tr>
<tr>
<td>Turkey</td>
<td>Meat</td>
</tr>
<tr>
<td>Goose</td>
<td>Meat, feather, eggs</td>
</tr>
<tr>
<td>Quail</td>
<td>Meat, eggs</td>
</tr>
<tr>
<td>Pigeon</td>
<td>Meat</td>
</tr>
</tbody>
</table>
Chickens and other poultry may be divided into classes which are essentially of the same physical characteristics associated with age, sex, live weight and/or breed.

1. Broiler or Fryer. A broiler or fryer is young chicken, usually 9 to 12 weeks of age, of either sex, is tender-meat with soft, pliable, smooth-textured skin.
2. Roaster. A roaster is usually 5 to 6 months of age.
3. Capon. A capon is a surgically desexed male chicken usually under 8 months of age.
4. Stag. A stag is a male chicken, usually under 10 months of age, with coarse skin, with somewhat toughened and darkened flesh.
5. Hen or Stewing Chicken. It is a mature female chicken which is usually more than 10 months of age. It can also be a culled layer.
6. Cock or Rooster. It is a mature male chicken with coarse skin, toughened and darkened meat and hardened breastbone tip.
7. Jumbo Broiler. This is a large chicken about 4 kg. dressed weight which are on sale especially during the Christmas holiday.

Other Poultry

1. Peking duck. This is a breed of duck that originated from China and is noted for its tender and flavorful meat.
2. Duck or Itik is available and popular in many towns of Rizal as fried itik.
3. Squab. This is a young immature pigeon of either sex and has extra tender meat.

Selecting Good Quality Poultry and Game

1. *Live Poultry*
   a. It has clear eyes.
   b. A young chicken has fine and soft feet. If it is old, the feet are thick and scaly.
   c. The bone at the tip of the breast is soft in younger chicken and thick in older one.
   d. Small feathers indicate that the chicken is young.
2. **Whole Poultry**. These are slaughtered birds that have been bled and de-feathered.
   a. Their head, feet and viscera are still intact.
   b. They are clean, well fleshe.
   c. They have moderate fat coverings.
   d. They are free from pin feathers and show no cuts, scars or missing skin.

3. **Dressed Poultry**. These are slaughtered birds that have been bled, de-feathered, and the visceral organs are removed.
   a. The skin is smooth and yellow in color
   b. The breast is plump
   c. The thighs are well-developed
   d. It has no objectionable odor
   e. It is heavy and the skin is not watery

4. **Ready-to-Cook**. The dressed birds may be cut up and marinated or seasoned.

5. **Poultry Parts**. Several pieces of a single poultry part are usually packed in one carton, wrapped and chilled or frozen. The various poultry parts are divided into any of the following:
   a. dark meat – drumsticks, thighs, wings, neck, backs, and rib cage
   b. white meat – breasts
   c. giblets – gizzard and heart

**Nutritional Value/Components of Poultry and Game**

Like meat, poultry contains high quality proteins. Chicken, the most consumed among the fowls, has 22.6% protein, 76.3% water and traces of fat, vitamins and minerals.

Poultry meat consists of dark and white muscles. **Dark muscles** are those found in parts of fowl’s body which are always used. These are the legs, thigh, wings, neck and rib cage. These are richer in fat, have more connective tissues, and have higher riboflavin and myoglobin content. Most people prefer the dark meat than white meat (from the breast) because of its juiciness and flavor. **Variety** meats refer to the meat of such organs as the gizzard, heart, kidneys and liver.
Preparation of poultry for cooking
- Slaughter and bleeding
- Scaldding
- Defeathering
- Evisceration
- Deboning

Market forms of poultry

**Live poultry**
Live poultry should be healthy, alert, and well-feathered. Avoid poultry which have bruises, blisters and broken bones.

**Whole poultry**
Though not alive, the criteria for selecting live poultry also apply to whole poultry.

**Dressed poultry**
This is the most available poultry form in the market. Dressed poultry are actually slaughtered poultry with the head, feet, blood, feathers and internal organs removed. Good quality dressed poultry should be free from slime, off-odors and discoloration.

**Drawn poultry**
These are dressed poultry that have been chilled or frozen. They are usually available in groceries.

**Ready-to cook**
These are poultry parts such as wings, breast, thighs, or drumsticks which have been separately packed in a single container and frozen or chilled.
Different Cuts of Poultry

Whole Chicken
Whole Chickens are marketed either fresh or frozen.

Halves
The bird is split from front to back through the backbone and keel to produce 2 halves of approximately equal weight.

Breast Quarters
Halves may be further cut into which include the wing. A breast quarter, including portions of the back, is all white meat.
**Split Breast**
A breast quarter with the wing removed.

**Split Breast without Back**
A breast quarter with wing and back portion removed.

**Boneless, Skinless Breast**
Split breast that has been skinned and deboned.

**8-Piece Cut**
The whole bird is cut into 2 breast halves with ribs and back portion, 2 wings, 2 thighs with back portion and 2 drumsticks. The parts may be packaged together and labelled as whole cut-up chicken. These are usually sold without giblets.

**Whole Chicken Wing**
The whole chicken wing is an all-white meat portion composed of three sections; the drumette, mid-section, and tip.
**Wing Drummettes**  
The first section between the shoulder and the elbow.

**Wing Mid-Section with Tip**  
The flat center section and the flipper (wing tip).

**Wing Mid-Section**  
The section between the elbow and the tip, sometimes called the wing flat or mid-joint.

**Whole Chicken Leg**  
The whole chicken leg is the drumstick-thigh combination. The whole leg differs from the leg quarter and does not contain a portion of the back.

**Boneless, Skinless Leg**  
Whole chicken leg with skin and bone removed.
Thigh
The thigh is the portion of the leg above the knee joint.

Boneless, Skinless Thigh
Thigh with skin and bone removed.

Drumsticks
Drumsticks include the lower portion of the leg quarter (the portion between the knee joint and the hock).

Giblets
Includes heart, liver, and neck.
Directions: Read each of the following questions carefully and choose the letter of the correct answer. Write your answer in your test notebook.

1. What do you call the birds that are hunted for food?
   A. game  
   B. livestock  
   C. poultry  
   D. swine

2. What do you call a desexed male chicken usually under 8 months old?
   A. broiler  
   B. capon  
   C. hen  
   D. rooster

3. Which of the following poultry originated from China and is noted for its tender and flavorful meat?
   A. chicken  
   B. goose  
   C. itik  
   D. pecking duck

4. What do you call the young immature pigeon of either sex with extra tender meat?
   A. duck  
   B. fryer  
   C. rooster  
   D. squab

5. Which of the following classes of poultry is on sale especially during the Christmas Holiday?
   A. broiler  
   B. capon  
   C. jumbo broiler  
   D. roaster

6. To what part of poultry does breast meat belong?
   A. dark meat  
   B. tough meat  
   C. variety meat  
   D. white meat

7. Which of the following characteristics is a good quality of a live poultry?
   A. free from pin feathers and shows no cuts  
   B. has clear eye  
   C. heavy and the skin is watery  
   D. thighs well develop

8. What do you call a young chicken that is usually 9 to 12 weeks of age?
   A. fryer  
   B. hen  
   C. roaster  
   D. stag

9. How many days should a whole chicken be refrigerated?
   A. 1 day  
   B. 1 to 2 days  
   C. 2 to 4 days  
   D. 3 to 4 days

10. What is a male chicken under 10 months old?
    A. fryer  
    B. hen  
    C. rooster  
    D. stag
Enhancement Activity

Directions: Make a research on the following:

- Market forms of poultry
- Different cuts of poultry
- Characteristics of good quality poultry
- Preparation of poultry for cooking
Learning Outcome 2 Cook Poultry and Game Dishes

Principles of Poultry Cookery

1. The fat distribution and maturity of the fowl affect the quality of the product. Mature birds are best cooked using moist heat. Dry heat is suitable for young birds.

2. The best cooking temperature for poultry is at low to moderate heat. This temperature range produces a more flavorful and tender product. This also minimizes nutrient loss and shrinkage of meat.

3. To prevent the risk of microbial contamination, stuffing of turkey and chickens should be done immediately before roasting. It is best not to fill the cavity completely as this will prevent the poultry from being thoroughly cooked.

4. Because of its susceptibility to microbial growth, cooked poultry should be eaten immediately or refrigerated if not consumed. Leftover stuffing should be stored separately to prevent contamination.

5. Because poultry meat is pale-colored, it is best to employ dry heat cooking with fat for a brown color.

6. When roasting chicken, cuts should be placed with the breast-side down to produce a juicier and tenderer product.

7. To improve the palatability of lean poultry meat, basting can be done.

Causes of Food Spoilage and Contamination

All food should be safe and free from contamination and spoilage at all points in its journey from its source until it reaches the consumers. However, food contamination is a serious public health problem resulting in foodborne diseases that affect many people every year. Hence, awareness of potential sources of food contamination is an important component of good nutrition and good health.

Food may be contaminated by different microorganisms or by chemicals that can cause health problems for anyone who eats it.

The common causes of food contamination and food spoilage are:

1. Failure to properly refrigerate food
2. Failure to thoroughly heat or cook food
3. Infected employees/workers because of poor personal hygiene practices
4. Foods prepared a day or more before they are served
5. Raw, contaminated ingredients incorporated into foods that receive no further cooking
6. Cross-contamination of cooked foods through improperly cleaned equipment
7. Failure to reheat foods to temperature that kills bacteria
8. Prolonged exposure to temperatures favorable to bacterial growth

Poultry Cookery

Poultry, like meat may be cooked by either dry or moist heat method. The choice of method depends mainly upon the age of the bird instead of location of the part in the carcass as in the case of meats. Fat content should also be taken into consideration.

1. **Moist Heat Method**
   As discussed earlier in this lesson, chicken are categorized into classes. All classes of chicken and other poultry for that matter may be cooked by moist-heat cookery. Common Filipino dishes are tinola, sinampalukang manok, manok na pinaupo, and relyeno.

2. **Dry Heat Method**
   The dry method is usually reserved for young tender poultry. The poultry class of these chickens is specially termed “broilers and fryers.” Somewhat older but still immature birds such as capons and roasters are also suitable for roasting. They are still tender but have more fat than the broilers or fryers.

   Older birds need to be tenderized by moist cooking prior to dry heat cooking.

   One point to remember in poultry cookery; moist heat cookery may be applied to all classes and kinds of poultry but dry heat cookery is reserved for tender birds.
Steps in Fabricating Chicken

1. Cut along center of breast bone

2. Here you can view the cut made
3. Using the knife, scimitar may be preferred but a fillet knife would work well too. Cut along one side of the breast bone to the base of the chicken.

4. Separate skin that is attached to breast from leg quarter

5. With your thumb under the wing joint press upward and out to separate joint
6. With knife, cut between joint to remove and cut any skin not separated from carcass yet.

7. Here is a picture of detached breast and wing.

8. Cut around wing joint to remove wing.
9. A small thin piece of meat located on underside of breast that can be removed by pulling the tenderloin, good for chicken tenders. Repeat steps 3-9 for the other side of breast.

10. Cut around leg quarter going up high towards backbone then circling down toward other side.

11. Halfway through you will hit the joint.
12. Using your thumb push up and out to snap apart joint.

13. Finish cut through joint to remove leg quarter. Repeat steps 10-13 for other leg quarter.

Deboning Chicken

STEP 1: Place the chicken, breast side up, on a clean cutting surface. Stretch out each wing flat against the board by pulling the tip. With a boning knife, cut off the wing tip and next joint, leaving the largest wing bone still attached.
STEP 2: At the neck, cut out the wishbone by pulling the skin up and out of the way and sliding the knife along the underside of the wishbone. Continue cutting around and under the wishbone until it is free and can be pulled out with your fingers.

STEP 3: Turn the bird over, and with breast side down, cut along the backbone from the neck to the tail.

STEP 4: With short sharp strokes of your knife, keeping the knife close to the bones cut the flesh and skin, carefully using your fingers to pull the flesh away from the carcass.

Cut through the ball-and-socket joints connecting the wing and thigh bones to the carcass, so that they are separated from the carcass but still attached to the skin. When step is completed on both sides, meat will be attached only along the ridge of the breastbone. Gently (the skin tears easily) pull to separate the breastbone and carcass from the flesh.
**STEP 5:** Cut the flesh from the curved (saber) bone near the wing and remove the bone.

**STEP 6:** The partially-boned bird with leg and wing bones left in, is now ready for stuffing.

**STEP 7:** While holding the wing bone from inside the bird, cut through the tendons and scrape the meat from the bone with the knife. Pull out the bone, using the knife to free it.

**STEP 8:** Cut off end of the leg bone using a cleaver or thick-bladed cook’s knife. Note: The use of a cook’s knife for chopping through chicken bone is acceptable for this application but not recommended for cutting through other bone.

**STEP 9:** Repeat step #7 to remove the leg bone. Reposition wing and leg meat so skin side is out.
STEP 10: The whole chicken is now completely deboned, with the skin intact and ready to be stuffed, rolled, and roasted.

Now, you are ready for Rellenong Manok Recipe (Stuffed deboned Chicken)

Enhancement activity

Activity No.2 – Market Visit
Directions: This will be a collaborative activity. Follow the instructions below:
- Find a partner
- Visit a supermarket or a wet market near you and do the following:
  - List down the market forms of poultry being sold
  - Take note of the appearance, color, odor and its cuts
  - Make a report of your activity
  - Submit your report in a short bond paper with folder
Directions: Demonstrate the steps in fabricating and deboning chicken by following the procedures on page 279.

Your performance will be evaluated using the rubric below:

<table>
<thead>
<tr>
<th>Directions:</th>
<th>SCORING RUBRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask the teacher to assess your performance in the following critical task and performance criteria below.</td>
<td><strong>PERFORMANCE LEVELS</strong></td>
</tr>
<tr>
<td>You will be rated based on the overall evaluation on the right side.</td>
<td><strong>10</strong> - Can perform the skill very satisfactorily without supervision and with initiative and adaptability to problem situations.</td>
</tr>
<tr>
<td></td>
<td><strong>7</strong> - Can perform the skill satisfactorily without assistance or supervision.</td>
</tr>
<tr>
<td></td>
<td><strong>4</strong> - Can perform the skill less satisfactorily but requires some assistance and/or supervision.</td>
</tr>
<tr>
<td></td>
<td><strong>1</strong> - Can perform parts of the skill satisfactorily, but requires considerable assistance and/or supervision.</td>
</tr>
</tbody>
</table>

Instructor will initial level achieved.
Preparation and Cooking of Chicken

Chicken Galantina/Relleno

Direction: Find a partner and perform the given chicken recipe. Performance activity will be evaluated based on the given rubric.

**TOOLS AND EQUIPMENT**

<table>
<thead>
<tr>
<th>TOOL</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>knife</td>
<td>1</td>
<td>whole chicken, deboned</td>
</tr>
<tr>
<td>chopping board</td>
<td>½ k</td>
<td>ground pork</td>
</tr>
<tr>
<td>measuring cup</td>
<td>½ k</td>
<td>ground beef</td>
</tr>
<tr>
<td>measuring spoon</td>
<td>300 g</td>
<td>ground chicken</td>
</tr>
<tr>
<td>oven</td>
<td>4 pieces</td>
<td>sausage</td>
</tr>
<tr>
<td>wooden spoon</td>
<td>3 tbsp.</td>
<td>sweet pickle relish</td>
</tr>
<tr>
<td></td>
<td>1/2 cup</td>
<td>raisins</td>
</tr>
<tr>
<td></td>
<td>2 pieces</td>
<td>hard boiled eggs</td>
</tr>
<tr>
<td></td>
<td>3/4 cup</td>
<td>minced ham</td>
</tr>
<tr>
<td></td>
<td>3/4 cup</td>
<td>cup chopped Vienna sausage</td>
</tr>
<tr>
<td></td>
<td>1/2 cup</td>
<td>minced onion</td>
</tr>
<tr>
<td></td>
<td>1/2 cup</td>
<td>grated carrot</td>
</tr>
<tr>
<td></td>
<td>1/2 cup</td>
<td>chopped red bell pepper</td>
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<tr>
<td></td>
<td>5 tbsp.</td>
<td>bread crumbs</td>
</tr>
<tr>
<td></td>
<td>3/4 cup</td>
<td>soy sauce</td>
</tr>
<tr>
<td></td>
<td>1 1/2 tsp.</td>
<td>Juice of 1 lemon</td>
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<tr>
<td></td>
<td>1/2 tsp.</td>
<td>salt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ground black pepper</td>
</tr>
</tbody>
</table>

pinoykitchenette.blogspot.com
Cooking Procedure

1. Combine ground pork, ham, sausage, bell pepper, carrot, onion, raisins, sweet pickle relish, salt, and pepper. Mix well.

2. Add the bread crumbs and then continue mixing. Set aside.

3. Combine lemon juice and soy sauce in a large container. Stir.

4. Marinate the whole chicken in the lemon and soy sauce mixture for 30 minutes.

5. Remove the chicken from the mixture and then stuff with half of the meat and vegetable mixture.

6. Arrange the boiled eggs inside the chicken and then continue to put-in the rest of the meat mixture.

7. Secure the chicken by wrapping it in aluminum foil

8. Meanwhile pre heat oven at 350 degree Fahrenheit.

9. Bake the Chicken Relleno for about 1 hour

10. Remove from oven. Remove aluminum foil on the surface then brush with butter on top and on side

11. Bake again for 15-20 minutes or until golden brown.

12. Allow to cool

13. Slice into serving pieces.

**Direction:** Evaluate your finished products using the score sheet.

<table>
<thead>
<tr>
<th>I. Product:</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
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<tr>
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<tr>
<td>a. Color combination is attractive and appealing</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>b. ingredients cooked just right</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>c. correct consistency not mushy/ very thick/thin consistency</td>
<td>_______</td>
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<td>_______</td>
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<tr>
<td>2. Palatability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. delicious</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>B. tastes just right</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>3. Nutritive Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. highly nutritious</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Procedure:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Use of Resources:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. kept working table orderly while preparing the ingredients</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>b. used only the proper and needed utensils and dishes</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>c. used time-saving techniques and devices</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>2. Cleanliness and Sanitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. observed well-groomed and properly dressed for cooking, use clean apron, hair nets, hand towel and pot holders</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>b. observed sanitary handling of food</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>3. Conservation of Nutrients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. followed proper preparation and cooking procedures</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
</tbody>
</table>

**SCORE:** (maximum of 42 pts.)

**COMMENTS:**

310
## Italian Chicken Roll-Ups

<table>
<thead>
<tr>
<th>TOOLS AND EQUIPMENT</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>casserole</td>
<td>8</td>
<td>boneless skinless chicken breast halves (4 ounces each)</td>
</tr>
<tr>
<td>gas or electric stove</td>
<td></td>
<td></td>
</tr>
<tr>
<td>knife</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chopping board</td>
<td>8</td>
<td>thin slices (4 ounces) ham</td>
</tr>
<tr>
<td>measuring cup</td>
<td>4</td>
<td>slices cheese, halved</td>
</tr>
<tr>
<td>measuring spoon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wooden spoon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>frying pan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/3</td>
<td>cup seasoned bread crumbs</td>
<td></td>
</tr>
<tr>
<td>1/2</td>
<td>cup grated cheese</td>
<td></td>
</tr>
<tr>
<td>.1/4</td>
<td>cup minced fresh parsley</td>
<td></td>
</tr>
<tr>
<td>1/2</td>
<td>cup milk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cooking spray</td>
<td></td>
</tr>
</tbody>
</table>

### Procedure

1. Preheat oven to 425°.
2. Flatten chicken to 1/4-in. thickness.
3. Place a slice of ham and half slice of provolone cheese on each piece of chicken.
4. Roll up from a short side and tuck in ends; secure with a toothpick.
5. In a shallow bowl, combine crumbs, Romano cheese and parsley.
6. Pour milk into another bowl. Dip chicken rolls in milk, then roll in crumb mixture.
7. Place roll-ups, seam side down, on a greased baking sheet. Spritz chicken with cooking spray.
8. Bake, uncovered, 25 minutes or until meat is no longer pink.
9. Remove toothpicks. **Yield:** 8 servings.
**Direction:** Evaluate your finished products using the score sheet below.

<table>
<thead>
<tr>
<th>I. Product:</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Color combination is attractive and appealing</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>B. ingredients cooked just right</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>C. correct consistency not mushy/ very thick/thin consistency</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
</tbody>
</table>

| 2. Palatability | | | |
| A. delicious | _______ | _______ | _______ |
| B. tastes just right | _______ | _______ | _______ |

| 3. Nutritive Value | | | |
| A. highly nutritious | _______ | _______ | _______ |

| II. Procedure: | | | |
| 3. Use of Resources: | | | |
| a. kept working table orderly while preparing the ingredients | _______ | _______ | _______ |
| b. used only the proper and needed utensils and dishes | _______ | _______ | _______ |
| c. used time-saving techniques and devices | _______ | _______ | _______ |

| 4. Cleanliness and Sanitation | | | |
| a. observed well-groomed and properly dressed for cooking, use clean | | | |
| apron, hair nets, hand towel and pot holders | _______ | _______ | _______ |
| b. observed sanitary handling of food | _______ | _______ | _______ |

| 5. Conservation of Nutrients | | | |
| A. followed proper preparation and cooking procedures | _______ | _______ | _______ |

**SCORE:** (maximum of 42 pts.)

**COMMENTS:**
Learning Outcome 3 Plate/Present Poultry and Game Dishes

Portion Control for Cooked Poultry and Game

Chicken
- Meat shrinks about 25% when cooked. A quarter-pound hamburger (4 oz.) will actually yield a 3 ounce portion after cooking. An 8 ounce steak will yield about 6 ounces of cooked meat.
- A chicken breast is generally 3 - 4 ounces.
- A chicken thigh is usually 2 ounces, while a leg is 1 - 2 ounces.
- Chicken wings are high in fat. It takes 2 wings to equal a 1 ounce choice (or exchange) with that.

How to Do Control Portion Sizes – Portion Control Secrets

It’s not always what you eat, but how much you eat - It’s the size of your servings that really counts!

Most of us tend to underestimate the amount of food we eat and tend to overestimate the recommended portion sizes for many foods. Almost everyone underestimates the amount of calories they consume, and people who weigh more do so, to a greater degree.

**Portion:** A “portion” is how much food you choose to eat at one time (breakfast, lunch, dinner, or snack), whether in a restaurant, from a package, or in your own kitchen. Portions can be bigger or smaller than the recommended food servings. There is no standard portion size and no single right or wrong portion size.

**Serving:** A "serving" size is the amount of food listed (and recommended) on a product’s Nutrition Facts (panel of packaged food) or the amount of food recommended in the Food Guide Pyramid and the Dietary Guidelines* for Americans. Sometimes, the portion size and serving size match; sometimes they do not. A serving is a standard amount used to help give advice about how much to eat, or to identify how many calories and nutrients are in a food.
How to Control Portion Sizes:

Eating smaller portions of food is one of the easiest ways to cut back on calories—but it can also be one of the most challenging, with the current trend of super-sizing. How do you know a reasonable portion of food when you see it? Visualize the objects mentioned below when eating out, planning a meal, or grabbing a snack.

Factors to consider in presenting/plating poultry dishes
- Types of service wares
- Plating
- Garnishing
- Sauces
- Accompaniments

Plating/ Presenting Poultry Dishes

Creative Food Presentation Techniques

The way food is presented affects a person’s perception of how it will taste. People instinctively reject bruised apples and browned bananas, and recognize well-marbled beef and perfectly ripe produce. Prepared dishes work in the same manner. The perfect dish includes food that tastes as good as it looks.

Much of the artistry of cooking comes after the food has been cooked and it is time to transfer it from pot to plate. Here, chefs rise above cooks as they
arrange the different components on a plate like interior designers place furniture to create culinary masterpieces.

The home chef faces similar circumstances on a nightly basis. Whether you’re entertaining, preparing a special meal or jazzing up an old favorite, these food presentation tips will set your dishes apart from the crowd.

**Plating the Food**

Plating is the act of arranging the meal on the individual plate immediately before it’s served. Presentation should look natural. It should feel as though everything that is on the plate is meant to be exactly where it is. Try to strike a balance between having enough food on the plate to convey hospitality without overcrowding the plate—and potentially offending your guest. Try to leave one-third of the plate empty, and plate your dish immediately before you serve it. It goes without saying that hot food should be hot and cold food should be cold; always check the temperature of your food before you serve it to a guest. After you have put the food on the plate, check to see that the plate is clean. Plate edges should be especially immaculate. Clean spills or sauces away with a moistened clean sponge or paper towel.
Decorate the Frame

If the food is the masterpiece, then the plate is its frame. Adapt artistic framing strategies to your cooking for a quick way to improve your food’s presentation. Buy beautiful bowls and plates in a variety of shapes and colors. The same bowl of soup looks dramatically different in a small Asian ceramic cup and an oversized, shallow white French consommé bowl.

You can also decorate the rim of a plate, just as you’d decorate a frame. Use culinary elements like colorful spices or confectioner’s sugar; specialty salts like Hawaiian alaea or Himalayan pink salt which also lend themselves wonderfully to this purpose.

For small appetizers, part of the presentation is making the display platter look beautiful. Make a bed of uncooked soba noodles or flat rice sticks, shafts of wheat, or large sprigs of fresh herbs like rosemary and thyme. This is also a good trick to use if you are preparing a hors d’oeuvre platter.

If you’re decorating a plate that will hold hot food, be aware that by the time you’re finished garnishing the plate, the food may not be hot. In some cases, you can garnish the plate before you plate the food. If this is impossible, work quickly and have all of your garnishes close by.
Mix Shapes, Colors and Textures

Food is naturally beautiful. Combine foods with different shapes, colors and textures on the same plate. Grilled filet mignon becomes even more decadent when it appears on the plate with stark white mashed potatoes and a bright green steamed vegetable.

In this case, these different elements combine for a dish that catches the eye. If your plate will contain multiple elements, use an odd number of dishes rather than an even number for further interest. Grilled filet mignon with mashed potatoes and steamed asparagus looks great, but add a stack of sliced tomatoes and the combination becomes regimented and less remarkable.

Try to integrate a variety of shapes in each dish. Risotto is boring when paired with rice, as the two are nearly identical in shape, color and size. Meatballs and Brussels sprouts are different colors but the same shape. But meatballs and rice make an interesting combination, as do risotto and Brussels sprouts.

For a restaurant-worthy twist on traditional side-by-side plating, stack the components of your dish vertically. Arrange asparagus into a teepee on the plate, with a dipping sauce in the center; make salads more cylindrical than vertical. This approach can make any plate instantly more interesting.

Keep in mind that sometimes the most aesthetically pleasing plate of food does not include a garnish. For example, crème brûlée features a delicate, crunchy top layer. While its appearance can certainly be improved with a small garnish or beautiful brûlée dish, the texture and color of the caramelized sugar is beautiful enough on its own.
Garnishes

Garnishes can be as simple or intricate as you like. For a twist on the traditional parsley sprig, use a sprig or two of an herb or spice that was used in the dish. A ham flavored with rosemary might feature a sprig of rosemary on each plate. Spicy pad Thai can include a wedge of lemon or lime and a dash of paprika sprinkled around the plate.

You can also garnish with small fans of fruits and vegetables like cucumber, pineapple, avocado, citrus, kiwi or apple. Slice the fruit or vegetable into thin rounds, leaving ¼” of flesh connected on one side to hold the rounds together. Gently spread out the slices and arrange them neatly in an arc. Several kitchen tools are available that will help you transform nearly any fruit into an attractive garnish for a plate.

The key to selecting a garnish is picking a garnish that will improve the dish. Garnishes add color and continue a theme, such as a brightly colored orchid on top of passion fruit crème brûlée. They can accent a dish’s color, like chives on top of a baked potato, or a dish’s flavor.

Garnishes can provide complementary flavor, like peanuts in pad Thai, or contrasting flavor, like a lemon wedge with seafood. An entrée’s sauce also makes a delicious garnish. Swirl it around or atop the plate for visual and gustatory interest.

The way food looks on the plate is the most commonly ignored facet of cooking at home. Too often, other considerations such as time, money, and food allergies push presentation out of mind. Since most children and their families eat their main meals at home, attractive food presentation is just as important at home as it is in a restaurant. A dish that looks good is more likely
to be eaten. Even picky kids will forego sugary cereal in favor of Mickey Mouse-shaped waffles or a plate with over easy egg eyes, a bacon smile and potato cheeks. You can even trick your own palate into liking Brussels sprouts, zucchini and other healthy produce with a beautiful arrangement on a dish.

**Direction:** Choose the correct answer from the given choices. Write the letter on your answer sheet.

1. Act of arranging the meal on the individual plate immediately before it’s serving
   A. Garnishing  
   B. Cooking  
   C. Plating  
   D. Serving

2. If the food is the masterpiece, then the plate is its ________
   A. Accessories  
   B. Base  
   C. body  
   D. Frame

3. To enhance in appearance by adding decorative touches
   A. Plating  
   B. Presenting  
   C. Garnishing  
   D. Serving
Learning Outcome 4 Store Poultry and Game Bird

Techniques in Storing Poultry

Poultry may be frozen whole, in halves, cut into pieces, or parts after they are dressed. Parts can be packed separately, ready to cook, or for easy meal preparation and thawing.

Handling and Storage of Poultry

_Poultry_ spoils very quickly unless it is properly handled and stored. After being brought home from the market, it should be unwrapped as quickly as possible and wiped off with a damp cloth. Then it should be lightly covered with waxed paper, placed in shallow utensils and stored in a cold part of the refrigerator near the freezing unit or ice. Cooked poultry should be cooled as quickly as possible, covered to prevent drying and refrigerated. Removing the bones saves space. Frozen poultry must be kept in the freezing unit until it is thawed for cooking.

Freezing and Thawing Poultry

To prepare poultry properly for freezing, it should be wrapped tightly in a moisture-vapor proof film, foil or paper and then frozen at -170°C (0°F) or lower. Although there are no abrupt changes in quality during the first few months of poultry storage, it has always been a good practice to use these chickens first which have been in storage longest and those with torn wrapper.

Storage Time for Poultry and Game

<table>
<thead>
<tr>
<th>Product</th>
<th>Refrigerator (35-40°F)</th>
<th>Freezer (0°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken and turkey (Whole)</td>
<td>1 – 2 days</td>
<td>12 months</td>
</tr>
<tr>
<td>Chicken (pieces)</td>
<td>1 – 2 days</td>
<td>9 months</td>
</tr>
<tr>
<td>Turkey (pieces)</td>
<td>1 – 2 days</td>
<td>6 months</td>
</tr>
<tr>
<td>Duck and Goose (whole)</td>
<td>1 – 2 days</td>
<td>6 months</td>
</tr>
<tr>
<td>Giblets</td>
<td>1 – 2 days</td>
<td>3 – 4 months</td>
</tr>
<tr>
<td>Wild duck, pheasant. Goose</td>
<td>1 – 2 days</td>
<td>6 months</td>
</tr>
</tbody>
</table>
It is not recommended to refreeze poultry after it has been thawed. Freezing and thawing release fluids called drip and the chances of bacterial spoilage are increased. Water holding capacity of meat is also affected by subsequent thawing.

When thawing, it is advisable to thaw slowly inside the refrigerator to give tissues a better chance to rehydrate. Immediately cook the thawed meat since bacterial growth is rapid upon thawing. Slow thawing may be effected by placing the 1 to 2 kg. chicken in the refrigerator for 12 to 24 hours or to place it under running tap water for ½ to 1 hour, in their original wrap In both cases. However, frozen poultry or any other market forms of poultry should not be allowed to thaw or soak in a bowl of water because of possible bacterial build.

### Safety Practices in Handling and Storing Poultry and Game Products

#### How to Handle Chicken Safely

Raw chicken and poultry can carry the salmonella bacteria, which is responsible for more cases of food poisoning than any other pathogen. Fortunately, it's easy to avoid getting sick from chicken and poultry, as long as you follow safe food handling practices.

#### Safe Shopping for Chicken and Poultry

During distribution to retail stores, fresh chicken is kept cold in order to extend its shelf life as well as to prevent bacteria growth. Packages of chicken should feel cold to the touch, and should be among the last items you select before checking out.

Packages of chicken should be wrapped in plastic bags to prevent leakage onto other items in your grocery cart.

<table>
<thead>
<tr>
<th>Cooked poultry dishes</th>
<th>2 – 4 days</th>
<th>4 – 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canned poultry, opened</td>
<td>1 day</td>
<td>NR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canned meats, opened</th>
<th>2 – 4 days</th>
<th>4 – 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 day</td>
<td>NR</td>
</tr>
</tbody>
</table>
Once you're home, you should immediately place your chicken in a refrigerator that maintains a temperature of 40°F or colder, and use it within 2 days. Otherwise, it should be frozen at 0°F.

**Safe Handling of Chicken and Poultry**

Just like meat, fish or any animal-based food product, raw or undercooked chicken carry certain bacteria. These bacteria can cause illness in large numbers.

Therefore, to avoid illness we need to limit bacteria's ability to multiply, or kill them altogether. Limiting their ability to multiply requires making sure that food products are not left at room temperatures — or specifically, temperatures between 40°F and 140°F — for more than an hour.

And remember, freezing doesn't kill bacteria, either — it just makes them cold. The only way to kill food-borne pathogens is by thoroughly cooking the food.

Another concern with respect to working with uncooked poultry is cross-contamination. Cross-contamination can happen when raw poultry — or even just its juices — somehow come into contact with any other food products but especially ones that are already cooked or ones that will be eaten raw, such as salad vegetables or greens.

**Fresh vs. Frozen Chicken and Poultry**

If the label on a raw poultry product bears the term "fresh," that indicates that it has never been colder than 26°F. Poultry that has at any time been kept at 0°F or colder must have a label indicating that it is "frozen" or "previously frozen," whatever the case may be.

Interestingly, poultry that has been kept at temperatures colder than 26°F but warmer than 0°F can be labeled neither fresh nor frozen.
Chicken and Poultry Product Dating

Federal regulations don't require poultry products to be dated. However, most retailers will date the chicken products that they sell.

If they do opt to date the product, regulations do require that there be a phrase signifying whether the date is a "sell by" date or a "use before" date, and the explanation must appear right next to the date.

Basics for Handling Food Safely

- Shopping
- Storage
- Preparation
- Thawing
- Cooking
- Serving
- Leftovers
- Refreezing

Safe steps in food handling, cooking, and storage are essential to prevent foodborne illness. You can't see, smell, or taste harmful bacteria that may cause illness. In every step of food preparation, follow the four Fight BAC!™ guidelines to keep food safe:

- Clean — Wash hands and surfaces often.
- Separate — Don't cross-contaminate.
- Cook — Cook to proper temperatures.
- Chill — Refrigerate promptly.

Shopping

- Purchase refrigerated or frozen items after selecting your non-perishables.
- Never choose meat or poultry in packaging that is torn or leaking.
- Do not buy food without expiration dates.
Storage

- Always refrigerate perishable food within 2 hours (1 hour when the temperature is above 90 °F).
- Check the temperature of your refrigerator and freezer with an appliance thermometer. The refrigerator should be at 40 °F or below and the freezer at 0 °F or below.
- Cook or freeze fresh poultry, fish, ground meats, and variety meats within 2 days; other beef, veal, lamb, or pork, within 3 to 5 days.
- Perishable food such as meat and poultry should be wrapped securely to maintain quality and to prevent meat juices from getting onto other food.
- To maintain quality when freezing meat and poultry in its original package, wrap the package again with foil or plastic wrap that is recommended for the freezer.
- In general, high-acid canned food such as tomatoes, grapefruit, and pineapple can be stored on the shelf for 12 to 18 months. Low-acid canned food such as meat, poultry, fish, and most vegetables will keep 2 to 5 years — if the can remains in good condition and has been stored in a cool, clean, and dry place. Discard cans that are dented, leaking, bulging, or rusted.

Preparation

- Always wash hands with warm water and soap for 20 seconds before and after handling food.
- Don't cross-contaminate. Keep raw meat, poultry, fish, and their juices away from other food. After cutting raw meats, wash cutting board, utensils, and countertops with hot, soapy water.
- Cutting boards, utensils, and countertops can be sanitized by using a solution of 1 tablespoon of unscented, liquid chlorine bleach in 1 gallon of water.
- Marinate meat and poultry in a covered dish in the refrigerator.

Thawing

- **Refrigerator:** The refrigerator allows slow, safe thawing. Make sure thawing meat and poultry juices do not drip onto other food.
- **Cold Water:** For faster thawing, place food in a leak-proof plastic bag. Submerge in cold tap water. Change the water every 30 minutes. Cook immediately after thawing.
Microwave: Cook meat and poultry immediately after microwave thawing

Cooking

Cook all raw poultry, beef, pork, lamb and veal steaks, chops, and roasts to a minimum internal temperature of 145 °F as measured with a food thermometer before removing meat from the heat source. For safety and quality, allow meat to rest for at least three minutes before carving or consuming. For reasons of personal preference, consumers may choose to cook meat to higher temperatures.

Poultry: Cook all poultry to an internal temperature of 165 °F as measured with a food thermometer.

Serving

- Hot food should be held at 140 °F or warmer.
- Cold food should be held at 40 °F or colder.
- When serving food at a buffet, keep food hot with chafing dishes, slow cookers, and warming trays. Keep food cold by nesting dishes in bowls of ice or use small serving trays and replace them often.
- Perishable food should not be left out more than 2 hours at room temperature (1 hour when the temperature is above 90 °F).

Leftovers

- Discard any food left out at room temperature for more than 2 hours (1 hour if the temperature was above 90 °F).
- Place food into shallow containers and immediately put in the refrigerator or freezer for rapid cooling.
- Use cooked leftovers within 4 days.
- Reheat leftovers to 165 °F.

Refreezing

Meat and poultry defrosted in the refrigerator may be refrozen before or after cooking. If thawed by other methods, cook before refreezing.
Post-Test
Directions: Read and understand the statements/questions below. Choose the letter of the correct answer and write it on your test notebook.

1. As a chef of a fine dining restaurant, Genie simmers meat, fish, and vegetables. Which of the following liquids is a by-product after the different food stuffs have been simmered?
   A. glaze  
   B. sauce  
   C. stock  
   D. water

2. Which of the following stocks uses veal bone as its main ingredient?
   A. brown stock  
   B. ham stock  
   C. prawn stock  
   D. white stock

3. What kind of stock uses fish as its main ingredient?
   A. brown stock  
   B. fish stock  
   C. glace viande  
   D. ham stock

4. What stock uses chicken bone as its main ingredient?
   A. fish stock  
   B. ham stock  
   C. prawn stock  
   D. chicken stock

5. Among the different types of stock, which one is the easiest to prepare?
   A. brown stock  
   B. fish stock  
   C. white stock  
   D. vegetable stock

6. What stock is made by boiling prawn shell?
   A. fish stock  
   B. ham stock  
   C. prawn stock  
   D. vegetable stock

7. As a rule, which should not be added to the stock because it causes saltiness?
   A. MSG  
   B. salt  
   C. spices  
   D. sugar

8. Mrs. Sante will be having visitors for dinner. If she will prepare stock for their dinner, which of the following flavoring agents will she use to give aroma to the stock?
   A. aromatic flavoring  
   B. garlic  
   C. ginger  
   D. smoke
9. What makes the stock tasty and appetizing?
   A. appearance  B. color
   C. ingredients  D. smell

10. Which of the following is a clear soup?
   A. bisques  B. bouillon
   C. cream  D. puree

11. Which of the following examples is a thick soup?
   A. bisques  B. bouillon
   C. consommé  D. fruit

12. Which of the following is not a thickening agent?
   A. flour  B. grain
   C. rice  D. salt

13. Which of the four basic sauces whose basic ingredient is milk is thickened
    with flour enriched with butter?
   A. Hollandaise sauce  B. savory butter
   C. veloute sauce  D. white sauce

14. Which among the four basic sauces has a chief ingredient of chicken
    broth thickened with flour and enriched with butter seasoning?
   A. Hollandaise sauce  B. savory butter
   C. veloute sauce  D. white sauce

15. Which of the four basic sauces has three basic ingredients like butter,
    egg yolk, and lemon juice with seasoning for accent?
   A. Hollandaise sauce  B. savory butter
   C. white sauce  D. veloute sauce

16. Which of the four basic sauces has a basic ingredient like butter that is
    creamed and blended with other ingredients to give individual flavor?
   A. Hollandaise sauce  B. savory butter
   C. veloute sauce  D. white sauce

17. Which of the following is not a thickening agent?
   A. dairy cream  B. egg
   C. flour  D. spice

18. What do you call birds that are hunted for food?
   A. game  B. livestock
   C. poultry  D. swine

19. Which of the following poultry originated from China and is noted for its
    tender and flavorful meat?
   A. chicken  B. goose
   C. itik  D. pecking duck

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20. What do you call to young immature pigeon of either sex with extra tender meat is called____.
   A. duck        C. rooster
   B. fryer       D. squab

21. Poultry is composed of different parts. Which of the following do breast meat belong?
   A. dark meat    C. variety meat
   B. tough meat   D. white meat

22. Which of the following characteristics is a good quality of a live poultry?
   A. free from pin feathers and shows no cuts
   B. has clear eye
   C. heavy and the skin is watery
   D. well-developed thighs

23. What do you call to young chicken that is usually 9 to 12 weeks of age?
   A. fryer        C. roaster
   B. hen          D. stag

24. How many days should a whole chicken be refrigerated?
   A. 1 day        C. 2 to 4 days
   B. 1 to 2 days  D. 3 to 4 days

25. How do you classify the fleshy part of chicken like breast?
   A. entrails     C. viscera
   B. dark meat    D. white meat

26. In cookery, we apply different cooking methods depending on the ingredients that we have. If you will cook a matured poultry, which of the following methods will you apply?
   A. boiling      C. roasting
   B. frying       D. stewing

27. What cookery method is suitable for the less tender cuts?
   A. boiling      C. roasting
   B. frying       D. stewing

28. What is the best cooking temperature for poultry?
   A. high temperature  C. low to moderate temperature
   B. low temperature   D. moderate temperature

29. What factor affects the poultry meat’s tenderness and juiciness?
   A. age            C. cuts
   B. cookery        D. sex

30. Which of the following can be done to prevent drying when reheating?
   A. cook using sauces and gravy
   B. overcook the poultry meat
   C. remove fat before cooking
   D. none of the above
QUARTER 4
PREPARING AND COOKING MEAT

Overview

This quarter will enable students or learners to acquire competencies in: preparing and cooking meat which includes: performing mise’ en place, cooking and evaluating meat dishes, presenting/plating meat dishes, and storing meat.

Objectives:

At the end of the quarter students are expected to:
1. perform mise ‘en place;
2. cook meat cuts;
3. present and evaluate meat dishes; and
4. store meat.

Let’s See What You Know

Pre-Test
Directions: Read the following statements/questions carefully and choose the letter with the correct answer. Write your answer in your test note book.

1. What animal produces veal meat?
   A. calf  C. hog  B. deer  D. sheep

2. Which of the following market forms of meat does not undergo chilling?
   A. cured meat  C. frozen meat
   B. fresh meat  D. processed meat

3. What part of the meat helps you identify the less tender cuts?
   A. bone  C. flesh  B. fat  D. ligament

4. What part of the meat has the greatest amount of quality protein?
   A. Bone  C. Flesh  B. Fat  D. Ligament
5. Which of the following meat cuts requires long and slow cooking temperature?
   A. less tender          C. tender
   B. slightly tough       D. tough

6. What is a long – bladed hatchet or a heavy knife used by a butcher?
   A. butchers knife       C. cleaver knife
   B. chopper knife        D. set of slicing knife

7. Which of the cooking methods does not belong to dry heat method?
   A. baking               C. roasting
   B. broiling             D. stewing

8. What do you call the cooking method when meat is cooked in steaming liquid in which bubbles are breaking on the surface?
   A. boiling              C. roasting
   B. broiling             D. stewing

9. What is an oil-acid mixture which is used to enhance the flavor of meat?
   A. brine solution       C. soy sauce and vinegar
   B. marinade             D. salt and calamansi

10. Which of the following tools is used for carving?
    A. cleaver knife        C. slicer
    B. fork                 D. razor knife

11. To which meat cut do internal organs belong?
    A. less tender cuts     C. tough cuts
    B. tender cuts          D. variety cuts

12. Where should meat products be stored?
    A. crisper               C. dry shelf
    B. cold shelf           D. freezer

13. Which of the following is the tenderest cut of beef?
    A. chunk                 C. sirloin
    B. round cut             D. tenderloin

14. When buying meat, what should you consider first?
    A. brand                 C. quality
    B. price                 D. round cut

15. What is your primary consideration when storing goods?
    A. expiration date       C. quantity
    B. fragility             D. size

16. These are taken from the internal organs of animals.
    A. less tender cuts      C. tough cuts
    B. tender cuts           D. variety cuts

17. A slaughtered animal is called ________________.
    A. a carabeef           C. a pork
    B. a carcass           D. a poultry
18. The most common method of preserving meat is ________________.
   A. curing            C. refrigerating
   B. drying            D. salting

19. In this method, salt, sugar, potassium, or sodium nitrate etc. are used
    in preserving meat by drying
   A. curing            C. freezing
   B. dehydration       D. salting

20. The following are the characteristics of good quality pork, except ____
    A. breast is plump  C. no foul odor
    B. flesh is pink    D. texture is fine and firm

21. A tool used for cutting through bones.
    A. butcher knife    C. cleaver
    B. chef knife       D. utility knife

22. Used for carving and slicing cooked meats.
    A. butcher knife    C. slicer
    B. chef knife       D. utility knife

23. A knife used for general purposes.
    A. Butcher knife     C. Cleaver
    B. Chef knife        D. Utility knife

24. It is used in carving roasts chicken and duck.
    A. Carving knife     C. Slicer
    B. Cleaver knife     D. Utility knife

25. Used for cutting, trimming raw meats.
    A. butcher knife    C. cleaver
    B. chef knife       D. utility knife

26. Meat of swine is called:
    A. Beef            C. Chevon
    B. Carabeef        D. Pork

27. Veal is the meat of:
    A. Cattle over 1 year old  C. Sheep
    B. Goat                D. Young calf

28. Deer meat is called:
    A. Beef            C. Chevon
    B. Carabeef        D. Pork

29. Meat of cattle over 1 year old
    A. Beef            C. Pork
    B. Carabeef        D. Chevon

30. Meat of sheep is called:
    A. Lamb            C. Pork
    B. Carabeef        D. Chevon
Overview:

This lesson covers the skills, knowledge, and attitudes required to prepare and cook meat.

Learning Outcomes:
At the end of the lesson you are expected to do the following:
1. perform mise’n place;
2. cook meat cuts;
3. present and evaluate meat dishes; and
4. store meat.

Introduction of Meat

Meat is a term for the flesh of cattle (beef and veal), sheep (lamb) and pigs (pork). Meat comprises water, protein, fat, and various amounts of minerals and vitamins.

Beef is divided into large sections called primal cuts. These beef primal cuts or “primal” are then broken down further into individual steak and other retail cuts. A “side” of beef is literally one side of the beef carcass that is split through the backbone. Each side is then halved between the 12th and 13th ribs into sections called the forequarter and hindquarter.

Pork is divided into large sections called primal cuts. These primal cuts are then broken down further into individual retail cuts.

Pork is another choice, as far as meat types are concerned. Pork is derived from pig and is classified as red meat. However, this meat is less fatty than beef.

Beef is very popular and is used across the globe. This meat is obtained from cow and is one of the much sought-after types of red meat.

Sheep meat is also a staple food in some parts of the world and is consumed in many regions. Sheep meat is otherwise known as mutton (meat of mature sheep) or lamb (immature sheep) also classified as red meat.
Learning Outcome 1 Perform Mise’en Place

Types of Knives and their Uses

1. French knife or chef’s knife – for general purpose chopping, slicing, and dicing.

2. Utility knife – used for carving roast chicken and duck.


4. Slicer – used for carving and slicing cooked meats.

5. Butcher knife – used for cutting, sectioning, and trimming raw meats in the butcher shop.

6. Scimitar or steak knife - used for accurate cutting of steaks.

7. Cleaver – used for cutting through bones.
Composition of Meat

1. Water – 70% of muscle tissue.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Percentage Water</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw</td>
<td>Cooked</td>
</tr>
<tr>
<td>Chicken fryer, whole</td>
<td>66%</td>
<td>60%</td>
</tr>
<tr>
<td>White meat chicken, with skin</td>
<td>69%</td>
<td>61%</td>
</tr>
<tr>
<td>Dark meat chicken, with skin</td>
<td>66%</td>
<td>59%</td>
</tr>
<tr>
<td>Ground beef, 85% lean</td>
<td>64%</td>
<td>60%</td>
</tr>
<tr>
<td>Ground beef, 73% lean</td>
<td>56%</td>
<td>55%</td>
</tr>
<tr>
<td>Beef, eye of round</td>
<td>73%</td>
<td>65%</td>
</tr>
<tr>
<td>Beef, whole brisket</td>
<td>71%</td>
<td>56%</td>
</tr>
</tbody>
</table>

2. Protein – 20% of muscle tissue. Protein coagulates when it is heated. It becomes firmer and loses moisture. When protein has coagulated to the desired degree, the meat is said to be done.

3. Fat – 5% of the muscle tissue. The fat in meat contributes to:

   A. **Juiciness**

   Marbling is fat that is deposited within the muscle tissue. Surface fats protect the meat from drying out during cooking. Adding surface fat is called barding.
B. Tenderness

Marbling separates muscle fibers, making meat easier to chew.

C. Flavor- Fat is the main source of flavor in meat.

4. Carbohydrates – it plays a necessary part in the complex reaction, called the maillard reaction, which takes place when meats are browned by roasting, broiling or sautéing. Without carbohydrates, desirable flavor-appearance of browned meats would not be achieved.

Structure of Meat

1. Muscle fibers

Lean meat is composed of long, thin muscle fibers bound together in bundles. These determine the texture or grain of a piece of meat.

- Fine – grained meat is composed of small fibers bound in small fibers.
- Course – textured meat has large fibers.

2. Connective tissue

These are network of proteins that bind the muscle fibers together. Connective tissue is tough. Meats are high in connective tissue if the muscles are more exercised like meat from legs and the meat comes from older animals.
Two Kinds of Connective Tissue

A. Collagen – white connective tissue that dissolves or breaks down by long, slow cooking with liquid. Moist-heat cooking methods at low temperature are not effective for turning a meat high in connective tissue into a tender, juicy finished product. Acid helps dissolve collagen.

J. Elastin – yellow connective tissue and is not broken down in cooking. Tenderizing can be accomplished only by removing the elastin, by pounding and by slicing and grinding.

Basic Preparation Methods of Meat

1. Washing
   Generally, the only occasion in which you will have to wash meat is when it comes into contact with blood during preparation. After washing, dry the food thoroughly with absorbent kitchen paper.

2. Skinning
   Most of the meat you dealt with has been already skinned by the supplier.

3. Dicing
   Meat are diced when it is cut into cubes for various types of casseroles, stems, curries, and dishes such as steak, kidney pie and pudding.

4. Trimming
   Reasons for trimming:
   a. Improve the appearance of the cut or joint
   b. Leave as much of the meat intact as possible.
   c. Leave an even thickness of fat (where fat is to be left). How much fat you trim off will depend on the type of meat, preference, and the cooking process to be used.
   d. Remove as much gristles and sinews as possible.
5. **Slicing**

It is the cutting of meat by determining the direction of the grain (the muscle fibers), and cut across the grain. This is particularly important with tougher cuts such as steak, in which the grain is also quite obvious. You slice meat with—instead of against—the grain.

6. **Seasoning**

It is the addition of salt and white or black pepper to improve the flavor of food.

   a. Use white pepper or cayenne pepper on food which you want to keep attractive with white color.
   b. Add salt to roast and grill after the meat has browned. Adding salt before cooking will extract the juices of the meat to the surface, and slows down the browning reactions (which need high temperature and dry heat).

7. **Coating**

The two basic coatings are:

   a. Flour – coat the meat before cooking, otherwise the flour becomes sticky and unpleasant.
   b. Bread crumbs – coat the meat in flour, then egg wash (egg wash is made of lightly beaten whole egg with a little water/milk) and finally with the bread crumbs.

**Different kinds of meat and its source**

1. **Pork** – meat from domesticated pigs, typically high in fat, commonly slaughtered one year or less of age to ensure tender cuts.
2. **Beef** - meat from cattle over one year old

3. **Lamb** – meats of domesticated sheep. Its texture is a direct result of what it consumes and the age at which it is slaughtered.

4. **Carabeef** – meat from carabao.

5. **Chevon** – meat from deer/goat.
5. **Veal** – flesh of a young calf, 4-5 months old. Because of its age, it is considered by some to be the finest meat.

---

**Review of Learning Outcome 1**

Directions: Match Column A with Column B. Write the letter of your answer in separate sheet.

**A.**

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____1. Used for cutting through bones.</td>
<td>A. Butcher knife</td>
</tr>
<tr>
<td>_____2. Used for carving and slicing cooked meats</td>
<td>B. Chef knife</td>
</tr>
<tr>
<td>_____3. For general purposes.</td>
<td>C. Cleaver</td>
</tr>
<tr>
<td>_____5. Used for cutting, trimming raw meats.</td>
<td>E. Slicer</td>
</tr>
</tbody>
</table>

**B.**

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____1. Young calf</td>
<td>A. beef</td>
</tr>
<tr>
<td>_____2. goat</td>
<td>B. carabeef</td>
</tr>
<tr>
<td>_____3. Sheep</td>
<td>C. veal</td>
</tr>
<tr>
<td>_____4. Cattle over one year old</td>
<td>D. lamb</td>
</tr>
<tr>
<td>_____5. Carabao</td>
<td>E. chevon</td>
</tr>
</tbody>
</table>
Learning Outcome 2 Cook Meat Cuts

Meat Dishes and Entrees

In the classical menu, the term entrée refers to the courses after the Grosse piece. Basically, entrees are divided into cold entrees and hot entrees. Today, however, the entrees are usually served as the main dish with suitable vegetable and salad garnishes. Both hot and cold entrees are frequently described as simple dishes on the menu, where they appear in various categories, such as hot snacks garnishes for main dishes and specialties of the day. The main difference between main grosses piece is that the entries are cut up before being cooked. They do not require the same methods of preparation as the grosses pieces which are prepared in single large pieces. It is, therefore, not possible to group the two types of dishes in the same category.

Four kinds of doneness in meat

1. Rare – when pressed with a finger, the meat is very soft with jelly like texture.
2. Medium Rare – when pressed with a finger, meat feels springy and resistant
3. Medium – when pressed with a finger, meat feels firm and there is a definite resistance.
4. Well Done – when pressed with a finger the meat feels hard and rough.

Nutrient Content of Meat

Meat consists of water protein and fat, with a few minerals and some B vitamins.

1. Protein – High-quality protein is the major constituent of meat after water, accounting for about 20 percent of its weight. Meat contains 7 grams of protein per ounce.
2. Fat – content can vary widely, according to the grade of meat and its cut.
3. Carbohydrates – Meat contains very little carbohydrates, glycogen, found in liver and muscle tissue is present when the animal is alive, but the glucose that makes up the glycogen is broken down to lactic acid during and after slaughter.

4. Vitamins – Meat is an excellent source of certain B vitamins – thiamin (B1), riboflavin (B2), pyridoxine (B6), vitamin (B12) niacin and some folate. Niacin is obtained from tryptophan, an amino acid plentiful in meats and milk.

5. Minerals – Meat is an excellent source of iron, zinc, copper, phosphorous, and a few other trace minerals.

**Safe Cooking Temperatures for Various Meat**

<table>
<thead>
<tr>
<th>MEAT</th>
<th>°C</th>
<th>°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef, rare</td>
<td>52</td>
<td>125</td>
</tr>
<tr>
<td>Beef, medium</td>
<td>57</td>
<td>135</td>
</tr>
<tr>
<td>Beef, medium well</td>
<td>68</td>
<td>155</td>
</tr>
<tr>
<td>Beef, well done</td>
<td>71</td>
<td>160</td>
</tr>
<tr>
<td>Ground beef</td>
<td>74</td>
<td>165</td>
</tr>
<tr>
<td>Pork</td>
<td>71</td>
<td>160</td>
</tr>
</tbody>
</table>

**Market forms of meat**

Fresh meat – meat that is recently slaughtered, has not been preserved, frozen
Chilled meat – meat that is placed in chiller or slightly cold
Cured meat – meat preserved by salting, smoking or aging
Processed meat – meat preserved by chemical process
Meat cuts
Primary Cuts of Meat

Beef

Veal
Lamb

Pork
Marinades

Good marinade will add flavor to your favorite meat and make it more tender and juicy. Making a marinade is very simple. All you need are three basic components. The first, is an acid, such as lemon juice, vinegar, yogurt, or wine. The acid is important as it breaks down the meat and tenderizes it. The second, is oil. This protects and preserves the food while marinated and also when it’s being cooked. The third, is any herb and/or spice. This is what gives a marinade its unique flavor and zest. Feel free to experiment by grouping one or more ingredients from each component.

Here are some general guidelines for marinating:

- Meat and poultry are generally marinated for 2 hours up to 2 days.
- Seafood and fish should be marinated for no longer than one hour.
- Use a non-reactive container - steer clear of aluminum, copper, or cast iron.
- Wait for your marinade to cool down before pouring over the meat of your choice.
- Always refrigerate your meat while it's marinating.
- Never reuse marinades!

Types of Marinades


This sweet, fruity marinade works great on any cut of pork or chicken. What you get with this marinade is a great Hawaiian Teriyaki flavor. Try this marinade when you are simply placing cut strips of pork or chicken over rice. You can make extra marinade to use as a sauce as long as you keep it separate from the meat.
**Pork Chop Marinade**
This is a great Asian style marinade that works well on all cuts of pork, particularly pork chops, reminiscent of a Teriyaki marinade with a hint of heat from the chili sauce. You can, if you like, heat this up with some extra chili sauce or perhaps a pinch of cayenne.

**Jamaican Jerk Marinade**
You've heard of Jerk seasonings and Jerk rubs, well this is a jerk marinade that gets that jerk flavor deep into the meat. You can use this marinade on all kinds of meat and poultry.

**Pork Rib Marinade**
BBQ Guru posted this marinade recipe to the forum. It uses a pork rub for the seasoning with vinegar and water to turn it into a marinade.

**Teriyaki Marinade**
Want to get that great Teriyaki flavor into your favorite dish? This marinade will surely add flavor to whatever you're grilling. This marinade works particularly well with pork and poultry.

**Pork Chop and Tenderloin Marinade**
Doug Freeman sent in this marinade recipe for grilled pork. You may leave out the liquid smoke if you are so inclined.

**Bourbon Marinade**
This is a great, sweet bourbon marinade that works perfectly on any food. This is a mild marinade so you will want several hours marinating time with it before you grill.

**Mustard-Vinegar Marinade**
This is a simple mustard marinade that tenderizes and adds flavor. It works well on pork or poultry.
Effects of Heat to Meat

1. It tenderizes connective tissue if moisture is present and cooking is slow.

2. It coagulates protein. Even meats low in connective tissue can be tough and dry if cooked at excessively high heats for too long.

3. High heat toughens and shrinks protein and results in excessive moisture lost.

4. Roasts cooked at low temperature shrink less and loss less moisture.
5 Moist heat penetrates meat quickly. To avoid over cooking, meat should be simmered, never boiled.

Methods of cooking meat

1. **Dry heat cooking**, such as roasting, broiling, or sautéing.
2. **Moist heat cooking**, like braising, steaming, or poaching.

Choosing the Right Cooking Technique

Using the appropriate cooking method for the type of food being prepared is a major part of the culinary arts. Tough cuts of meat like beef brisket or lamb shank need to be cooked slowly, at low heat, for a long time, and with plenty of moisture. Prepared properly, these cuts can be incredibly tender and delicious. On the other hand, dry-heat methods typically involve very high temperatures and short cooking times. A piece of brisket cooked in this way — on a grill, let's say would be tough, chewy and largely inedible. Interestingly enough, a beef tenderloin steak cooked using a slow, moist-heat method such as braising would also turn out tough, chewy and inedible.

Dry heat cooking

Dry heat cooking refers to any cooking technique where the heat is transferred to the food item without using any moisture. Dry-heat cooking typically involves high heat, with temperatures of 300°F or hotter.

Baking or roasting in an oven is a dry heat method because it uses hot air to conduct the heat. Pan-searing a steak is considered dry-heat cooking because the heat transfer takes place through the hot metal of the pan.

Note: The browning of food (including the process by which meat is browned, called the Maillard reaction) can only be achieved through dry-heat cooking. Examples of dry-heat methods include:
Roasting & Baking

Forms of dry-heat cooking that use hot, dry air to cook food roasting and baking. Like other dry-heat cooking methods, roasting and baking brown the surface of the food, which in turn develops complex flavors and aromas.

Both words describe a method of cooking an item by enveloping it in hot, dry air, generally inside an oven and at temperatures of at least 300°F and often much hotter. A convection oven, which circulates hot air throughout the oven, can enhance the browning reaction.

Grilling & Broiling

http://culinaryarts.about.com/od/dryheatcooking/a/grilling.htm

Dry-heat cooking methods that rely on heat being conducted through the air from an open flame are grilling and broiling. This type of cooking produces browning reactions on the surface of the food, thus encouraging the development of complex flavors and aromas. Grilling cooks hot and fast, because air is a poor conductor of heat. Broiling and grilling require the food to be quite close to the heat source, which in this case, is likely to be an open flame.
Sautéing & Pan-Frying

Sautéing is a form of dry-heat cooking that uses a very hot pan and a small amount of fat to cook the food very quickly. Like other dry-heat cooking methods, sautéing browns the food's surface as it cooks and develops complex flavors and aromas.

Sautéing requires a very hot pan.

When sautéing, it's important to heat the pan for a minute, then add a small amount of fat and let it get hot as well, before adding the food to the pan. This hot fat helps brown the surface of the food. Another key is to avoid overloading or overcrowding the pan.

Deep-Frying

Since deep-frying involves submerging food in hot, liquid fat, it might take some time to get used to the idea that it's actually a form of dry-heat cooking.

But if you've ever seen the violent reaction of hot oil to even a tiny drop of water, you know that oil and water are a couple of opposites that has nothing to do with each other.
**Moist heat cooking**

Moist heat cooking methods include any technique that involves cooking with moisture — whether it's steam, water, stock, wine or some other liquid. Cooking temperatures are much lower, anywhere from 140°F to a maximum of 212°F, because water doesn't get any hotter than that. Examples of moist-heat cooking methods include:

**Simmering**

With simmering, the cooking liquid is a bit hotter than poaching from 180°F to 205°F. Here we will see bubbles forming and gently rising to the surface of the water, but the water still isn't at a full rolling boil. Because it surrounds the food in water that maintains a more or less constant temperature, simmering cooks food very evenly. It's an excellent choice for culinary preparations including stocks or soups, starchy items such as potatoes or pastas, and many others.

**Boiling**

The hottest of these three stages is boiling, where the water reaches its highest possible temperature of 212°F. It's actually the least likely of the three to be used for cooking. That's because the violent agitation caused by the rolling boil can be too rough on food and will often damage it. Water at a full boil would be a bad choice for cooking an egg outside its shell, as we do when preparing poached eggs, because the agitation would cause the egg to fall apart. The same holds true for delicate fish as well as some pastas.
Steaming

Steaming is a moist-heat cooking technique that employs hot steam to conduct the heat to the food item.

Cooking With Steam

Steaming can be done on a stovetop, with a pot containing a small amount of liquid that is brought to a simmer. The item to be cooked is then placed in a basket suspended above the liquid and the pot covered.

Braising & Stewing

Braising is a form of moist-heat cooking in which the item to be cooked is partially covered with liquid and then simmered slowly at a low temperature.

Though it can be done on the stovetop, braising is best done in the oven, because the heat fully surrounds the pot and causes the food to cook more evenly than if it were only heated from below.

Begin by Searing

Because moist heat does not permit the various browning reactions that dry heat produces, giving cooked meats the brown, outer crust that also helps to develop complex flavors and aromas, it's customary to sear meat in a
pan with a small amount of hot fat before braising it. This step helps to develop flavors as well as making the meat more appealing visually. Read more about how to braise meat

**How Braising Works**

Braising is a good choice of cooking method for cuts of meat that are tougher or from older animals. The connective tissues that are more prevalent in cuts like this, and which can make meats tough and chewy when improperly cooked, are slowly dissolved through long, slow application of moist heat. So you end up with a tender piece of meat.

**Factors Affecting Choice of Cooking Methods in Meat**

1. **Cuts of meat**
   - Tender cuts like ribs and loin cuts are used for roasting, broiling and grilling
   - Less tender cuts from leg or round are used for braising
   - Tougher cuts from chuck or shoulder are usually braced
   - Least tender cuts from shanks, breast, brisket, and flank are cooked by moist heat.
   - Ground meat and cubed usually made from trimmings can be cooked by dry heat or moist heat.
2. Fat content

- Meats high in fat are cooked without added fat, such as roasting or broiling.
- Meats low in fat are often cooked with added fat to prevent dryness, like sautéing, pan frying or braising.

3. Desired quality

- Tenderness is not the only goal of cooking. To develop flavor and appearance is also one of the objectives to get the desired quality.
PREPARE AND COOK MEAT

This will be a group collaboration activity. Perform recipes using different methods of cooking meat. Your outputs will be evaluated using a performance score sheet.

Roasted Meat

Tools/Equipment Needed:

- Knife
- Chopping board
- Roasting pan
- Rack
- Oven
- Pan
- Serving plate

Materials/ingredients needed:

- Meat (any kind)
- Seasoning
- Brown Stock
- Mirepoix
Procedure:
1. Collect all equipment and food supplies. Use roasting pans that have low side and just large enough to hold the roast.
2. Prepare a trim meat for roasting.
3. Season meat several hours or the day before.
4. Place meat fat side up on a rack in the roasting pan.
5. Place meat in preheated oven.
6. Roast to desired doneness.
7. Remove roast from oven and let stand in a warm place for 15-30 minutes.
8. Prepare pan gravy from drippings by;
   a. degrees pan used in roasting meat
   b. add mirepoix and let brown
   c. deglaze with brown stock
   d. simmer for desired time
   e. strain and skim fat
9. Slice roast meat across the grain and serve with gravy.

Direction: Evaluate your finished products using the score sheet.

<table>
<thead>
<tr>
<th>I. Product:</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Appearance</td>
<td></td>
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II. Procedure:

1. Use of Resources:
   a. kept working table orderly while preparing the ingredients
   b. used only the proper and needed utensils and dishes
   c. used time-saving techniques and devices

2. Cleanliness and Sanitation
   a. was well-groomed and properly dressed for cooking, use of clean apron, hair nets, hand towel and pot holders
   b. used sanitary handling of food

3. Conservation of Nutrients
   a. followed proper preparation and cooking procedures

SCORE: (maximum of 42 pts.)
Braised Short Ribs

**Purpose:** Prepare and cook braised short ribs

![Braised Short Ribs Image](image)

**Tools/Equipment Needed:**
- Oven
- String for tying
- Pan
- Ladle
- Strainer

**Ingredients Needed:**
- 25 kg short rib sections
- 250 ml oil
- 300 g onions
- 150 g celery
- 150 g carrots
- 150 g bread flour
- 25 l brown stock
- 150 ml tomato puree
- 2 pcs. Bay leaves
- Salt to taste
- Pepper to taste

**Procedure:**

1. Tie the short ribs so the meat will stay on the bone during cooking.
2. Dry the meat so it will brown easily.
3. Heat the oil in a heavy skillet until very hot. Brown the meat on all sides. Transfer browned meat to a browning pan.
4. Sauté onions, celery and carrot to the skillet until lightly browned.
5. Stir in the bread flour to make a roux.
6. Add the brown stock and tomato puree. Simmer until thickens.
7. Add bay leaf and season to taste with salt and pepper.
8. Pour the sauce over the steaks. Cover and braise until tender.
9. Transfer the steaks in a serving plate.
10. Strain the sauce and pour over steaks.

*Direction:* Evaluate your finished products using the score sheet.

<table>
<thead>
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Broiling/Grilling Meats

**Purpose:** To prepare and cook meat for broiling or grilling.

**Tools/Equipment Needed:**
- Broiler or Griller
- Brush for meat
- Fork
- Knife
- Tong
- Ladle

**Ingredients Needed:**
- Meat
- Oil
- Salt and pepper to taste
Procedure:

1. Collect and prepare all equipment and supplies. Trim excess fat from meats to avoid flare-ups.
2. Preheat the broiler or grill.
3. Brush the meat with oil, or dip it in oil and let excess drip off. Place the meat on the broiler or grill. The oil helps prevent sticking and keeps the product moist.
4. When one side is brown and the meat is cooked halfway, turn it over with a fork (piercing only the fat, not the meat, or juices will be lost) or tongs.
5. Cook the second side until the meat is cooked to the desired doneness. If the meat is to be brushed with a glaze or sauce, it is usually best to wait until the product is partially cooked on each side before applying the first coat. After the meat has been cooked on both sides ½ to ¾ done, brush the top with a light coat of the sauce. Turnover and repeat as necessary.
6. Remove from broiler or grill and serve immediately.

Direction: Evaluate your finished products using the score sheet.

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**SCORE: (maximum of 42 pts.)**
MORCON

<table>
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<tr>
<th>TOOLS AND EQUIPMENT</th>
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<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Measuring spoon</td>
<td>1k</td>
<td>beef, sliced 1/4 inch thick (3 pcs.)</td>
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<tr>
<td>Measuring cup</td>
<td>¼ k</td>
<td>ground beef liver</td>
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<tr>
<td>Knife</td>
<td>200 grams</td>
<td>sliced sausages or ham</td>
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<tr>
<td>Weighing scale</td>
<td>200 grams</td>
<td>pork fat (cut is strips)</td>
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<tr>
<td>Pot or pressure cooker</td>
<td>3 pcs.</td>
<td>hard boiled eggs, sliced</td>
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<td></td>
<td>100 grams</td>
<td>cheddar cheese in strips</td>
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<td></td>
<td>100 grams</td>
<td>grated cheddar cheese</td>
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<td>2</td>
<td>onions, chopped</td>
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<td>5 pcs.</td>
<td>bay leaf (laurel)</td>
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<td>½ tsp</td>
<td>ground black pepper</td>
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<td>½ cup</td>
<td>vinegar</td>
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<td>2 tsp.</td>
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<td></td>
<td>2 cups</td>
<td>water</td>
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<td></td>
<td>2 meters</td>
<td>thread or string (for tying)</td>
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PROCEDURE:

1. Spread and stretch the sliced beef on your working table.
2. Arrange the filling on the sliced beef: sausage strips, cheese strips, sliced eggs, pork fat and some ground liver.
3. Roll the sliced beef with all the filling inside and secure with a thread or string.
4. Repeat the procedure for the two remaining beef slices.
5. On a pot, place the beef rolls and put the water, the remaining ground liver, grated cheese, chopped onions, bay leaves, ground black pepper and salt.
6. Cover the pot and bring to a boil. Simmer for one hour.
7. Add the vinegar and continue to simmer for another hour or until beef is tender.
8. Slice the beef morcon, arrange on a platter, and top with the sauce/ gravy. 
   (Estimated cooking time: 2 to 3 hours.)

Cooking Tips:
- A spoon or two of flour can be added to water to thicken the sauce.
- Instead of boiling in a pot, you can use a pressure cooker for faster cooking.
- Optional: Garnish with olives before serving.

Evaluate your finished products using the score sheet.

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SCORE: (maximum of 42 pts.)
Learning Outcome 3 Plate/Present Meat Dishes

Basic Principles of Platter Presentation

1. Presentation must have three elements.
   - Centerpiece may be an uncut portion of the main food item.
   - Slices or serving portions of the main food item, arrange artistically.
   - Garnish, arranged artistically in proportion to the cut slices.

2. The food should be easy to handle and serve, so one portion can be removed without ruining the arrangement.

3. Simple arrangements are easier to serve, and more likely to be still attractive when they are half demolished by the guests.
4. Attractive platter are made of metals, mirrors, china, plastic or woods, presentable and suitable for use with food.

![Attractive platter](image)

5. It must look attractive and appropriate not only by itself, but among other presentations on the table.

![Food presentation](image)

**How to Present Food on a Plate**

When you're plating food, the goal is to create a dining experience that tempts all of the senses, not just the palate. When food looks appetizing the body actually produces more fluids that aid in nutrient absorption - so you might even say that beautiful food is more wholesome than food that doesn't look appealing. To achieve restaurant-quality presentation, start with brightly-colored, well-cooked food. Layer the food and play with contrasting colors and textures to increase its visual appeal. Finally, garnish the plate with flavorful herbs or spices to take it to the next level. See Step 1 and beyond to learn how to make the next meal you will cook look irresistible.
Starting With Beautiful Food

Avoid a monochromatic color scheme. A plate of food looks most appealing when there’s a high level of contrast in colors.

- When you’re planning meals, think ahead about the colors you want to feature on the plate. You might not be able to represent all the colors of the rainbow at every meal, but challenge yourself to have as much color as possible.
- If you’re about to serve several like-colored foods, like grilled chicken and mashed potatoes, adding a serving or two of fruits and vegetables is a fantastic and easy way to add pops of color. The richest greens, oranges, reds, purples, blues, pinks and yellows on your plate probably take the form of fruits and vegetables.
- If you’re not sure how to add color, utilize garnishes. Nearly any savory dish is well-served by a sprinkling of fresh chives, parsley, dill, or mint. Lemon and lime wedges are welcome alongside poultry and seafood dishes.
Bring out vegetables' brightest colors. The way you cook your vegetables has a lot of bearing on the overall visual effect of a meal.

- Lightly steam instead of boiling. Steaming vegetables makes them look appetizing and flavorful, while boiling creates the opposite effect.
- Roast or sauté them with a little oil or butter. Roasted or sautéed vegetables look quite appetizing when they're allowed to caramelize a little in oil or butter.

Sear your meat and let it rest. Many meat dishes look most appetizing when the meat has been seared. The sight of a steak or piece of grilled salmon with a brown, crispy sear will make your dinner guests' mouths start to water. In addition to searing your meat, you should let it rest for several minutes before cutting it. This allows the juices to absorb back into the meat, so that they don't end up running all over the plate.

- There are exceptions to the rule of searing your meat. For example, if you're serving braised beef, you'll have to think of creative ways to make the meat look appetizing even though it doesn't have a crispy crust. Serving it with a sauce is a good way to add visual interest.

Cook fried foods carefully. Underdone or overcooked fried foods are difficult to present in an appealing way. Fried foods can look beautiful on a plate, but it's important to fry them well and have a plan for dealing with the oil so it doesn't muck up the rest of the dish. Cook fried foods until they're golden brown, then let them drain on a plate lined with paper towels to absorb the extra oil. Otherwise, the food will leave streaks of grease on the plates.

- Fried foods often continue browning a bit after they've been removed from the hot oil.
Take **texture into account.** Texture and color go hand in hand when it comes to how appetizing food looks on the plate. If your food looks too oily, too dry, mushy, tough, or otherwise difficult to chew and swallow, it won't matter how perfectly colorful it looks. Take pains to cook food well so that it comes out to the right texture.

- The way you handle the food just after it has been cooked, and before it is plated, can really affect the texture. Pasta, for example, should be kept in water or tossed in a bit of oil just after cooking so that it doesn't start to clump. Fried foods should not be covered with airtight lids, because the heat from the food will end up steaming the breading and causing the food to get soggy.

- Once the food is on the plate, a spritz of oil or water can improve its visual appeal if it looks too dry.

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**Experiment with interesting shapes.**

- Cutting vegetables in interesting shapes can make the simple become special. You can cook and serve vegetables, desserts, pot pies and other foods inside unique-shaped dishes to create attractive shapes.

**Plating it with Care**

- When in doubt, choose white plates. White plates don't compete visually with the food you're serving. They provide contrast, making colors appear brighter and textures more interesting. If you have a set of special plates with a pattern or a certain color scheme, it's fine to use
them. Just make sure they complement the food you're serving instead of vying for attention.

• Don't forget to take the rest of the table into consideration, too. Cutlery, glasses and linens will enhance the overall appearance of the dish upon the table.

**Visualize the finished plate.**

• Consider how to present the main portion in relation to the side dishes. Consider where it will look best on the plate with the other elements of the dish. Consider also how to get best impact—the appearance and symmetry are all affected by whether the food is sliced thinly, thickly or left whole.

**Limit portion sizes.**

• Only fill about two thirds of each plate with food. The rest of the plate should be left empty. The negative space will provide contrast with the food, making it look more appetizing. If the plate is loaded with food, the food itself won't look as visually pleasing. Keep standard serving sizes in mind and aim to serve just the right amount of each part of the dish.

• As a general rule, half of the food on the plate should comprise of vegetables, one fourth meat or another protein, and one fourth starch.

• Start plating food in the center of the dish and work outward from there, so that the food is centered in the middle of the plate.

**Follow the rule of odds.**

• Having an odd number of elements on a dish is more visually appealing than having an even number. It creates the impression that piece of food is being framed by the others. Keep this in mind whether you're
serving different types of food or more than one piece of the same food. For example, if you're serving scallops, serve either 3 or 5 instead of 4.

**Play with different textures**

- Creating a texture contrast is a good way to draw the eye. Too many soft or crunchy foods on a plate are unappealing, but a combination of both is delicious. Different textures harmonize to create a pleasing dining experience. Leaving one of the elements out would result in a less appealing dish.
- To quickly add some crunch to a dish, try topping it with some crushed, roasted walnuts and almonds

**Layer foods to add height.**

- It's common to see food layering in restaurants, but home cooks don't usually try it. Adding height to a dish can take it from ordinary to stunning. Don't be afraid to show off your culinary skills by using stacking and layering methods to make your presentation more professional.
- An easy way to start layering food is to serve the protein on a bed of starch. For example, serve a kabob on a heap of rice, or serve grilled swordfish on a pile of mashed potatoes.
- Aim to make foods look bigger, not smaller. Fluff up your salads. For example, instead of smooshing them down. Create a little cross-hatched stack of cooked asparagus instead of presenting it in one flat layer.
Use sauce wisely

- If you're serving a curry, stew or soupy casserole, you might want to drain the food of its sauce before serving, then pour on just the right amount when you plate the dish. That way you can control the amount of sauce and use it to make the dish look decorative.

Keep up with food styling trends.

- Remember that styles change even within the space of a few years or even months, so keep up-to-date by checking out cooking magazines, cooking or foodie websites and cooking shows for current ideas.

Adding Appetizing Touches

Use garnishes that enhance the flavor of the meal. No matter what you're serving, make sure the garnish actually makes the dish better instead of just cluttering up the plate.

Employ drizzles and swirls.

- Another way to finish food is with a drizzle or swirl of a concentrated sauce or liquid. For savory dishes, this might be a small squeeze of remoulade, pesto, or flavored oil. For sweet dishes, adding chocolate sauce, fruit jam, or crème anglaise might be the most delicious way to add that finishing touch.
- Rather than just pouring a sauce over your food, consider putting it in a squeeze bottle so you can create a pretty swirl or pattern. If you don't
have a squeeze bottle, put the sauce in a plastic food storage bag, cut a small piece off one of the corners, and squeeze the sauce through the bag.

- Don't overdo it. The key is to add a touch of color, flavor and texture without overpowering the main part of the dish.

Make sure the plate is clean

- Examine the edges of the plate for fingerprints and smudges. A great way to clean up the edges of a plate is to dip a paper towel in a cup of water with a dash of white vinegar. Wipe the rim of the plate so that no food residue or prints are visible. This gives your presentation a professional touch.

The 5 Basic Elements of Plating

1. **Create a Framework**
   Start with drawings and sketches to visualize the plate. Find inspiration from a picture or object. Assemble a ‘practice’ plate to work on executing your vision.

2. **Keep It Simple**
   Select one ingredient to focus on and use space to simplify the presentation. Clutter distracts from the main elements of your dish that might confuse the diners on what to focus on.

3. **Balance the Dish**
   Play with colors, shapes and textures to ensure diners are not overwhelmed. The presentation should never overpower flavor and function.
4. **Get the Right Portion Size**

Ensure that there is the right amount of ingredients and the plate complements the dish, not too big or too small. Strike the right proportion of protein, carbohydrates and vegetables to create a nutritionally balanced meal.

5. **Highlight the Key Ingredient**

Ensure that the main ingredient stands out and pay equal attention to the ‘support’. This refers to the other elements on the plate such as garnishes, sauces and even the plate itself.

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**Review of Learning Outcome 3**

*Direction*: Select the best answer. Write only the letter on your answer sheet.

1. In platter presentation uncut portion of the main food item is
   - A. garnish  
   - B. serving portions  
   - C. centerpiece

2. It is arranged artistically in proportion to the cut slices.
   - A. slices  
   - B. serving portions  
   - C. garnish

3. The food should be easy to handle and
   - A. garnish  
   - B. serve  
   - C. arrangement

4. Use attractive platter presentation made of metals, mirrors, plastic or wood, and
   - A. china  
   - B. pan  
   - C. platter

5. The act of serving or arranging portions of the main food item artistically.
   - A. slicing  
   - B. garnishing  
   - C. setting
Learning Outcome 4 Store meat

Methods of Preserving Meat

There are different methods of preserving meat. These include drying or dehydration, smoking, salting, curing, refrigerating, freezing, canning and freeze drying.

A. Drying – This is the most common method of preserving meat. Drying involves the reduction of the original 70% of water content of the meat to about 15%. The removal of the moisture content does three things, namely:

- Enzymatic changes are retarded;
- Growth of microorganisms is much hampered
- Microbes lose water and become inert.

Ways of Drying Meat

1. Natural sun drying – Natural sunlight is used to reduce the amount of moisture content of meat. Portable solar dyers can provide sanitary means of drying meat. Dryers with screen covers are recommended for outdoor use and lengthens the storage life of meat.

2. Dehydration or artificial drying – Oven is used for drying the meat. Although this is more expensive than sun drying, dehydration is a more efficient method of removing moisture from meat. Products dried in this way are of higher quality and can be sold at better prices.

B. Smoking – Meat is smoked to create a distinctive color and flavor, thus helping its preservation. The flavor, color, and attractive glaze on the surface of the meat is desired like in ham, bacon, and tinapa. The heat generated during smoking destroys the enzymes and dries the product artificially, thus preventing the growth of molds and vegetative bacteria on the surface. Cold and hot smoking are the two types of smoking. Smoked meats include ham, bacon, and chicken.

- Cold Smoking – The temperature is held between 26 to 43°C and the products are smoked over a period of days or weeks. The products thus pick up a strong smoked flavor and are dehydrated as well.
2. **Hot Smoking** – The temperature is higher, from 71 to 79ºC. The high temperature speeds up the drying process, giving the product a mild smoked flavor.

2. **Salting** – Salt improves the keeping quality of meat. It removes the water from the tissue of the meat and the cells of spoilage organisms that may be present in the meat.

**C. Curing** – In this method, salt, sugar, potassium or sodium nitrate, and other curing elements such as ascorbic acid, phosphate blend, and spices are used to prolong the keeping quality of meat. Curing agents also help improve the flavor and appearance of meat and retain its original color. Sugar minimizes the hardness of the straight cure process. It also makes the product more appetizing and provides energy to the nitrate-reducing bacteria which gives the red color. Spices give the desired flavor and aroma.

**D. Refrigerating** – Meat is stored at a temperature range of 2 to 10ºC to retard mold and bacterial growth for a limited period.

**E. Freezing** – Meat is preserved at a temperature of 10ºC and below. Freezing deactivates enzymes and bacteria. Meat can be preserved for two months to one year using this method.

**F. Canning** – Meat preserved by canning is packed in sealed cans or jars which are subjected to a temperature of 100ºC and above 5-7 kilo pressured for a specific period of time. This process destroys the organism that causes spoilage. It maintains the high quality of meat product and extends its life for about a year.

**G. Freeze Drying** – The process involves the removal of moisture from the meat tissues by transforming the moisture content into ice and gas. The product to be dried is first frozen and the ice is sublimed from the frozen mass, removing 98% of the water content. The remaining moisture is further reduced to 0.5% or lower by subjecting the product to high temperature as possible without destroying it. The texture, appearance, flavor, and nutritive value of freeze dried products are comparable to frozen foods. The products have a long shelf life and require no refrigeration. This method needs special equipment such as modern freeze dryer.
Evaluating the Quality of Preserved Meat Products

Good quality pork has less than 1 ¼ cm of golden brown fat that covers the surface of the meat and a thoroughly cooked interior where meat has even pinkish color. It has also a juicy and tender texture, a pleasing aroma and a tender seasoned and pleasing taste with a slight hint of smoky flavor.

Sausages of good quality are uniform in size and length. Each sausage in a whole piece has no rupture of casing even when pricked. The interior has a pinkish color when thoroughly cooked. A combination of juicy meat with spicy seasoning marks their flavor.

Proper Storage of Preserved Meat

Many processed items prepared for future use may be stored in the freezer. These should be wrapped in plastic or foil to prevent the occurrence of freezer burn and avoid having a pulpy texture that comes from loss of moisture. Each item should be labeled with the name of the product, date of expiry, and quantity.

Processed food held in storage should be well-covered or wrapped to keep them from absorbing odors and flavors from other foods. They should be held below danger zone temperatures. Processed meat should be packed in desired and easy to thaw market units. Thawing a 25kilo pack of ground meat, for example, will be difficult. Systematic freezing of food in quantity for long-term storage requires special freezing equipment.

Food Storage Chart

<table>
<thead>
<tr>
<th>Food</th>
<th>Suggested Maximum Temperature (ºC.)</th>
<th>Recommended Maximum Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canned Products</td>
<td>21</td>
<td>12 months</td>
</tr>
<tr>
<td>Frozen Products</td>
<td>-18 to -29</td>
<td>6–12 months, in original package</td>
</tr>
<tr>
<td>beef poultry</td>
<td>-18 to 29</td>
<td>3-6 months, in original package</td>
</tr>
<tr>
<td>Fresh Pork</td>
<td>18 to 29</td>
<td>1-3 months, in original package</td>
</tr>
<tr>
<td>(not ground)</td>
<td>3 to 4</td>
<td>3-5 days, in semi-moisture proof paper</td>
</tr>
<tr>
<td>Sausage, ground meat</td>
<td></td>
<td>1-4 weeks, tightly wrapped</td>
</tr>
<tr>
<td>Cold cuts, Sliced</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cured bacon</td>
<td>3 to 4</td>
<td></td>
</tr>
</tbody>
</table>
### Storage Procedures for Meat Products

#### Safe Storage
- Meat is among the most perishable foods. This perishable ability makes it a potentially hazardous food. At ambient temperatures, meat spoils so fast. It is therefore necessary to keep it in chilled storage.

#### Hygiene Practices in Storing Meat Products

To achieve high standards of sanitation, the following measures should be strictly observed:

1. See to it that physical equipment and layout are conducive to sanitary practices.
2. Handle, store, and refrigerate food properly to prevent spoilage and contamination.
3. Safeguard the food during distribution and service.
4. Wash and sanitize dishes, glasses, utensils, and equipment.
5. Clean floors, walls, ceilings, counters, tables, and chairs regularly.
6. Eliminate vermin and rodents from food areas.
7. Maintain adequate employer supervision and a constant program of education in sanitation for food service workers.
8. Make sure that food service employees are in good health, and are not carriers of communicable diseases. The three principal groups of communicable diseases that must be guarded against in public feeding operations are respiratory, intestinal, and skin diseases. Require medical examinations for food service employees.
9. Provide a regular employee education on food service sanitation.

#### Techniques in Storing Meat

Most canned foods can be stored at room temperature in a cold place and hold their eating quality for several months. They are safe to eat as long as there is no bulge on the can. Below 24°C is a good temperature for storage. Canned ham and other perishable meats should be stored in the refrigerator unless storage recommendations on the can state otherwise. These meats should not be frozen.
Storing - take time to store the food items. Store new purchases behind old ones and always use the old stock first. It is easy to put new purchases at the front. However, older stocks are overlooked and thus cause spoilage. These may include cereal and cereal products, sweeteners, oils, seasonings, and unopened cans and jars. Do not use kitchen cabinets above the refrigerator, stove, or oven for food storage.

Never use the area under the sink for storing food because openings around water and drain pipes are impossible to seal. Pipes may leak and damage the food.

If you reuse glass jars, wash them thoroughly, wipe, and air-dry before using. This helps remove any trace of odors that may remain.

1. Refrigerator storage. A refrigerator provides cold temperature for storing perishable foods such as dairy products, meat, fish, poultry, eggs, fruits, and vegetables.

   Protein foods should be stored in the coldest part of the refrigerator. Fruits and vegetables can be stored in less cold sections or in a special compartment such as the crisper.

   If refrigerated foods are not properly wrapped, they will dry out and lose nutrients and flavor. Food should be well covered with plastic, foil or wax paper, or should be put in tightly covered containers. Garlic and sausages are strong-flavored foods and should be wrapped tightly in plastic or foil and stored in an air-tight container to prevent the transfer of aromas to other foods.

2. Freezer storage. For proper freezing and storage, the temperature inside the freezer should be 18ºC or lower.

   Store frozen foods in their original packages. Foods to be frozen should be put in moisture-vapor proof wrapping.

   If plastic containers are used, allow about 2.5 cm of headspace at the top between the food and the lid so the food can expand when if freezes.

   Thaw frozen foods in the refrigerator. Do not allow food to thaw at room temperature. At this point, microorganisms will begin to grow.

   Our sanitary laws and regulations are so designed to safeguard and promote health.
Bacteria are all around us, but they are so small that they cannot be seen by the naked eye. There are hundreds of different kinds of bacteria. Some harmless bacteria are useful and necessary such as those essential in preparing cheese. Other bacteria are essential in agriculture and industry. However, many types of bacteria are dangerous and cause diseases if allowed to multiply and be transmitted to humans.

Food contaminated with bacteria can make people sick. Some of the common illnesses are salmonellosis, perfringens poisoning, staphylococcal poisoning, and botulism.

Sanitation is the best preventive measure against food-borne diseases. Sanitation means keeping bacteria out of food through personal hygiene and proper handling procedures. It also means keeping the food at proper temperatures so bacteria already present do not have much chance to multiply.

Bacteria enter food in two ways. Some are naturally present in food when you buy it. Others get in because of careless handling when food is prepared and served. Bacteria cannot travel by themselves; they are carried about by people, animals, and insects as well as objects. Salmonella bacteria, for instance, can be found in food such as raw meat, poultry, eggs, and dairy products. From these foods, the bacteria contaminate other foods in the kitchen.

Staphylococcus bacteria are found not only in raw meat but in food handlers with poor personal hygiene. The bacteria from food handlers can be transmitted to the food through sneezing and coughing.

Bacteria thrive on food, moisture, and the right temperature in order to grow. With careless handling these growing conditions can occur in any kitchen.
PORK TOCINO
Standard recipe developed by Calamba Manpower

<table>
<thead>
<tr>
<th>TOOLS AND EQUIPMENT</th>
<th>INGREDIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>knife</td>
<td>1 k</td>
</tr>
<tr>
<td>chopping board</td>
<td>1 tbsp.</td>
</tr>
<tr>
<td>mortar and pestle</td>
<td>½ tsp.</td>
</tr>
<tr>
<td>strainer</td>
<td>1 tbsp.</td>
</tr>
<tr>
<td>strainer</td>
<td>¼ cup</td>
</tr>
<tr>
<td>strainer</td>
<td>Second mixture</td>
</tr>
<tr>
<td>strainer</td>
<td>1 cup</td>
</tr>
<tr>
<td>strainer</td>
<td>2 tbsp.</td>
</tr>
<tr>
<td>strainer</td>
<td>2 tbsp.</td>
</tr>
<tr>
<td>strainer</td>
<td>1 tsp</td>
</tr>
<tr>
<td>strainer</td>
<td>¼ cup</td>
</tr>
<tr>
<td>strainer</td>
<td>2 tsp.</td>
</tr>
<tr>
<td>strainer</td>
<td>1 tsp</td>
</tr>
<tr>
<td>measuring cup</td>
<td>Pork, slice thinly</td>
</tr>
<tr>
<td>measuring spoon</td>
<td>salt</td>
</tr>
<tr>
<td>wooden spoon</td>
<td>curing salt</td>
</tr>
<tr>
<td>mixing bowl</td>
<td>phosphate</td>
</tr>
<tr>
<td></td>
<td>water</td>
</tr>
<tr>
<td></td>
<td>sugar</td>
</tr>
<tr>
<td></td>
<td>Garlic</td>
</tr>
<tr>
<td></td>
<td>Anisado wine or Rhum</td>
</tr>
<tr>
<td></td>
<td>Meat enhancer (optional)</td>
</tr>
<tr>
<td></td>
<td>Pineapple juice</td>
</tr>
<tr>
<td></td>
<td>Oyster sauce</td>
</tr>
<tr>
<td></td>
<td>Worcestershire sauce</td>
</tr>
</tbody>
</table>

PROCEDURE:

1. In a bowl, combine all ingredients for the 1<sup>st</sup> mixture together. Set aside.
2. On another bowl, mix all ingredients for the 2<sup>nd</sup> mixture.
3. Combine 1<sup>st</sup> and 2<sup>nd</sup> mixture
4. Pack it by 250 grams.
Let’s See How Much You Learned

Posttest

Directions: Read the following statements/questions carefully and choose the letter with the correct answer. Write your answer in your test note book.

1. What animal produces veal meat?
   A. calf
   B. deer
   C. hog
   D. sheep

2. Which of the following market forms of meat does not undergo chilling?
   A. cured meat
   B. fresh meat
   C. frozen meat
   D. processed meat

3. What part of the meat helps you identify the less tender cuts?
   A. bone
   B. fat
   C. flesh
   D. ligament

4. What part of the meat has the greatest amount of quality protein?
   A. Bone
   B. Fat
   C. Flesh
   D. Ligament

5. Which of the following meat cuts requires long and slow cooking temperature?
   A. less tender
   B. slightly tough
   C. tender
   D. tough

6. What is a long – bladed hatchet or a heavy knife used by a butcher?
   A. butchers knife
   B. chopper knife
   C. cleaver knife
   D. set of slicing knife
7. Which of the cooking methods does not belong to dry heat method?
   A. baking
   B. broiling
   C. roasting
   D. stewing

8. What do you call the cooking method when meat is cooked in steaming liquid, and bubbles are breaking on the surface?
   A. boiling
   B. broiling
   C. roasting
   D. stewing

9. What is an oil-acid mixture which is used to enhance the flavor of meat.
   A. brine solution
   B. marinade
   C. soy sauce and vinegar
   D. salt and calamansi

10. Which of the following tools is used for carving?
    A. cleaver knife
    B. fork
    C.licer
    D. razor knife

11. To which meat cut do internal organs belong?
    A. less tender cuts
    B. tender cuts
    C. tough cuts
    D. variety cuts

12. Where should meat products be stored?
    A. crisper
    B. cold shelf
    C. dry shelf
    D. freezer

13. Which of the following is the tenderest cut of beef?
    A. chunk
    B. round cut
    C. sirloin
    D. tenderloin

14. When buying meat, what should you first consider?
    A. brand
    B. price
    C. quality
    D. round cut
15. What is your primary consideration when storing goods?
   A. expiration date
   B. fragility
   C. quantity
   D. size

16. These are taken from the internal organs of animals.
   A. less tender cuts
   B. tender cuts
   C. tough cuts
   D. variety cuts

17. A slaughtered animal is called _____________.
   A. a carabeef
   B. a carcass
   C. a pork
   D. a poultry

18. The most common method of preserving meat is _____________.
   A. Curing
   B. drying
   C. refrigerating
   D. salting

19. In this method, salt, sugar, potassium or sodium nitrate etc. are used in preserving meat by drying
   A. curing
   B. dehydration
   C. freezing
   D. salting

20. The following are the characteristics of good quality pork, except ___.
   A. breast is plump
   B. flesh is pink
   C. no foul odor
   D. texture is fine and firm

21. A tool used for cutting through bones.
   A. butcher knife
   B. chef knife
   C. cleaver
   D. utility knife

22. Used for carving and slicing cooked meats.
   A. butcher knife
   B. chef knife
   C. slicer
   D. utility knife
23. A knife used for general purposes.
   A. Butcher knife
   B. Chef knife
   C. Cleaver
   D. Utility knife

24. It is used in carving roasts chicken and duck.
   A. Carving knife
   B. Cleaver knife
   C. Slicer
   D. Utility knife

25. Used for cutting, trimming raw meats.
   A. Butcher knife
   B. Chef knife
   C. Cleaver
   D. Utility knife

26. Meat of swine is called:
   A. Beef
   B. Carabeef
   C. Chevon
   D. Pork

27. Veal is the meat of:
   A. Cattle over 1 year old
   B. Goat
   C. Sheep
   D. Young calf

28. Deer meat is called:
   A. Beef
   B. Carabeef
   C. Chevon
   D. Pork

29. Meat of cattle over 1 year old
   A. Beef
   B. Carabeef
   C. Pork
   D. Chevon

30. Meat of sheep is called:
   A. Lamb
   B. Carabeef
   C. Pork
   D. Chevon
A. **Multiple Choice.**

*Directions:* Read the following questions carefully and choose the letter that best describes the statement. Write your answer on your test notebook.

1. Which of the following sources of starch is rarely used in manufacturing food starch?
   - A. Cassava
   - B. Corn
   - C. Potato
   - D. Rice

2. Which of the following starch properties/reactions is the resistance to flow; increase in thickness or consistency.
   - A. Dextrinization
   - B. Gelatinization
   - C. Retrogradation
   - D. Viscosity

3. Which of the following is suggested if you will hold pasta for a short time for later service?
   - A. Cook pasta ahead of time and chilled
   - B. Drain and add sauce
   - C. Drain, toss with a small amount of oil, cover and hold in warmer
   - D. Slightly undercook the pasta

4. Which is the process of making a new product to be sold to the customers.
   - A. Product Analysis
   - B. Product Conceptualization
   - C. Product Development
   - D. Product Implementation

5. Which is a meaningful and unforgettable statement that captures the essence of your brand.
   - A. Branding
   - B. Product Naming
   - C. Tagline
   - D. Unique Selling Proposition

6. What managerial tool is used to assess the environment to gather important information used for strategic planning.
   - A. Environmental Scanning
   - B. SWOT Analysis
   - C. Survey Analysis
   - D. WOTS Analysis
7. Which of the following are the right step by step procedures in manual dishwashing?
   A. Drain and air-dry, scrape and pre-rinse, rinse, sanitize, and wash dishes.
   B. Rinse, scrape and pre-rinse, wash, drain, air-dry and sanitize dishes
   C. Scrape and pre-rinse, rinse, wash, sanitize, drain and air-dry dishes
   D. Scrape and pre-rinse, wash, rinse, sanitize, drain and air-dry dishes

8. Which of the following parts of an egg is produced by the oviduct and consist of four alternating layers of thick and thin consistencies.
   A. Air cell
   B. Albumen
   C. Chalaza
   D. Yolk

9. Egg contains high quality protein with all the essential amino acids. Which of the following vitamins not found in eggs?
   A. B1
   B. C
   C. D
   D. K

10. The appearance of egg is important for consumer appeal. How are egg shells evaluated?
    A. cleanliness, shape, texture and soundness
    B. grade, texture, cleanliness, shape
    C. shape, texture, cleanliness and size
    D. texture, soundness, size and cleanliness

11. Which of the following market forms of eggs is seldom used in cooking.
    A. Dried egg
    B. Fresh egg
    C. Frozen egg
    D. Shelled egg

12. Which of the following raises coagulation temperature producing softer, weaker gel when added to egg used in culinary.
    A. Alkali
    B. Salt
    C. Sugar
    D. Vinegar

13. What kind of egg dish is prepared by slipping shelled eggs into barely simmering water and gently cooking until the egg holds its shape?
    A. Fried egg
    B. Poached egg
    C. Scrambled egg
    D. Soft-boiled egg

14. Which of the following tools is not used in cooking omelet?
    A. Bowls
    B. Fork
    C. Sauté pan
    D. Skimmer

15. Which of the following is true in plating egg dishes?
    A. Choose serving dish small enough to let each food item stand out
    B. Play with color and texture
    C. Protein dish should cover half of the plate
    D. Use even numbers in setting the dish.
16. What animal produces veal meat?
   A. Calf
   B. Deer
   C. Hog
   D. Sheep

17. Which of the following market forms of meat does not undergo chilling?
   A. Cured meat
   B. Fresh meat
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   A. Bone
   B. Fat
   C. Flesh
   D. Ligament

19. What part of the meat has the greatest amount of quality protein?
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   C. Flesh
   D. Ligament

20. Which of the following meat cuts requires long and slow cooking temperature?
   A. Less tender
   B. Slightly tough
   C. Tender
   D. Tough

21. What do you call the young immature pigeon of either sex with extra tender meat?
   A. Duck
   B. Fryer
   C. Rooster
   D. Squab

22. What part of poultry does breast meat belongs?
   A. Dark meat
   B. Tough meat
   C. Variety meat
   D. White meat

23. Which of the following characteristics is a good quality of a live poultry?
   A. Free from pin feathers and shows no cuts
   B. Eyes are clear
   C. Skin is heavy and watery
   D. Thighs well develop

24. What do you call young chicken that is usually 9 to 12 weeks of age?
   A. Fryer
   B. Hen
   C. Roaster
   D. Stag

25. How many days should a whole chicken be refrigerated?
   A. 1 day
   B. 1 to 2 days
   C. 2 to 4 days
   D. 3 to 4 days
26. How do you classify fleshy part of chicken like breast?
   A. Entrails       C. Viscera
   B. Dark meat      D. White meat

27. What cookery method is used for a matured poultry?
   A. Boiling        C. Roasting
   B. Frying         D. Stewing

28. What cookery method is suitable for the less tender cuts?
   A. Boiling        C. Roasting
   B. Frying         D. Stewing

29. What is the best cooking temperature for poultry?
   A. High temperature C. Low to moderate temperature
   B. Low temperature D. Moderate temperature

30. What factor affects the poultry meat’s tenderness and juiciness?
   A. Age            C. Cuts
   B. Cookery        D. Sex

31. What do you call a long – bladed hatchet or a heavy knife used by a butcher?
   A. Butchers knife  B. Chopper knife
   C. Cleaver knife  D. Set of slicing knife

32. Which of the cooking methods does not belong to dry heat method?
   A. Baking        B. Broiling
   C. Roasting      D. Stewing

33. What do you call the cooking method when meat is cooked in steaming liquid and bubbles are breaking on the surface?
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   C. Roasting      D. Stewing

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   A. Brine solution B. Marinade
   C. Soy sauce and vinegar D. Salt and calamansi
35. Which of the following tools is used for carving?
   A. Cleaver knife
   B. Fork
   C. Slicer
   D. Razor knife

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   C. Tough cuts
   D. Variety cuts

37. Where should meat products be stored?
   A. Crisper
   B. Cold shelf
   C. Dry shelf
   D. Freezer

38. Which of the following is the tenderest cut of beef?
   A. Chunk
   B. Round cut
   C. Sirloin
   D. Tenderloin

39. When buying meat, what should you first consider?
   A. Brand
   B. Price
   C. Quality
   D. Round cut

40. What is your primary consideration when storing goods?
   A. Expiration date
   B. Fragility
   C. Quantity
   D. Size

41. What is the flavor component of vegetables which gives strong flavor and odor to some vegetables like onions, leeks, garlic, chives, cabbage, and broccoli?
   A. Flavonoids
   B. Glutamic acid
   C. Sugar
   D. Sulfur compounds

42. Which is a way of cooking by placing blanched or raw vegetables in the pan, adding liquid (stock, water, wine) then covering and cooking it slowly?
   A. Boiling
   B. Baking
   C. Braising
   D. Sautéing
43. Which of the following plating styles is not a classic arrangement?
   A. The starch or vegetable item is heaped in the center while the main item is sliced and leaned up against it.
   B. The main item is in the center, with vegetable distributed around it.
   C. The vegetable item is in front and main item, starch item and garnish at the rear.
   D. The main item is in the center with neat piles of vegetables carefully arranged around.

44. Which of the following vegetables is cooked uncovered?
   A. Fruit vegetables  
   B. Green vegetables  
   C. Roots and tubers  
   D. Yellow vegetables

45. Which of the following is a freshwater fish?
   A. Bluefish  
   B. Cat fish  
   C. Grouper  
   D. Sole

46. Which is the market form of fish where both sides of a fish are still joined but bones are removed?
   A. Butterfly  
   B. Drawn  
   C. Fillet  
   D. Steak

47. Which of the following is a characteristic of a fresh fish?
   A. Fresh and foul odor  
   B. Eyes are dull, shiny and bulging  
   C. Red or pink gills  
   D. Flesh shrinks when pressed

48. Which of the following seafood is cooked just enough to heat to keep juicy and plump?
   A. Fat fish  
   B. Lean fish  
   C. Flat fish  
   D. Shellfish

49. What is the cooking method suited to fat fish?
   A. Baking  
   B. Boiling  
   C. Deep-frying  
   D. Sautéing

50. What is used to baste lean fish to help prevent from drying up?
   A. Butter  
   B. Cream  
   C. Soy sauce  
   D. Tomato sauce
SYNTHESIS

Over the past years, a transition in cooking and food preparation skills has been observed. This transition in cooking and food preparation skills involves the increased use of readily prepared or cooked food, which require less preparation and time than the traditional way of cooking. But cooking is an expression of creativity, happiness, magic, and culture. The satisfaction gained by the chef and other persons preparing, cooking, serving and storing the food is unquestionable; not to mention the pleasure it gives to the customer.

Different food products may come and go but the demand for food cooked in traditional way, in restaurants, food chains, and others is indispensable. Varieties of foods such as egg, cereal and starch, vegetables, seafood, red meat, poultry dishes and also stocks, soups and sauces are still made available to meet the customer’s satisfaction.

Taste is not the only sense that can motivate customers but touch also play with contrasts of temperatures and textures, and so with smell and sight for colors, shapes and others, whereby the five senses become one of the main points of reference in the creative cooking process.

Now, if you have a passion for delicious food and love for cooking gain applicable and practical guidance that will teach you to become successful chef or businessman in the field of cookery someday.
GLOSSARY

**aromatic** – having a smell of fragrant spicy

**béchamel sauce** – a white sauce made of cream, butter, flour and flavored with onion and seasoning.

**Birefringence** - When starch granules are viewed under the microscope using polarized light, they exhibit a phenomenon known as birefringence. The refraction of polarized light by the intact crystalline regions in starch give characteristic "Maltese cross" patterns on each granule. The disappearance of these crosses on heating a starch suspension can be used to determine gelatinization temperature.

**bouillon** – a clear soup from beef, chicken, and other meat.

**broth** – a fluid food made by boiling meat and vegetable in water

**butcher** – a person who slaughters animals for food

**chowder** – a soup usually of clams or fish, stewed vegetables often in milk.

**clarification** – to make or become clear

**coating** – to cover with flour

**combine** – to mix the ingredients in the bowl

**consommé** – a clear soup made of meat and sometimes vegetables boiled in water.

**contamination** – unintended presence of harmful substances or disease causing microorganisms in food

**damp** - moist slightly wet
dark meat - the dark meat parts which include the legs, drumstick, wings and neck.
decomposition – the state of being rotten or spoiled
dressed - slaughtered birds that have been bled, defeathered and the organs are removed
drip – to fall or let fall in drops
drippings- the juice that drips from roasting or baking meat or a sauce made from it.
entrails- the animals internal organs such as liver, heart and gizzard
entrees – main course
foodhandling – any operation in the production, preparation, processing, packaging, storage, transport, distribution and sale of food
freeze– to preserve meat by refrigeration below freezing point
frozen – subject to long and serve cold, chilly or cold manner
fumet – the savory color of meat while cooking
games – birds that are hunted for food.
Haugh – unit for describing egg freshness, based on the thickness of the albumen
Leavener - substances that are used to make bread and other baked goods rise
marinade – an oil-acid mixture used to give flavor and to tenderize meat.
mirepoix – a mixture of vegetable, herbs, and spices with or without meat, used to enhance flavor of meat, fish and shell fish.
perishable food – subject to decay or spoilage
**pheasant** – long tailed domesticated bird

**plump** – fleshy

**poach** – to cook food in hot liquid in such a manner that it retains its original shape

**portion** – a part of whole or to divide into parts

**processed food** – meat processed by curing ingredients

**quality** – characteristics

**reconstitute** – to add appropriate amount of water to sauce or soup.

**roux** – a melted butter mixed with brown flour for thickening soup and grains.

**sanitation** – keeping the food equipment, utensils, and work area clean.

**sauce** – a thickened liquid used to flavor and enhance other food

**savory** – a hardy, annual aromatic culinary herb of the mint family

**scum** – a firmly layer of impure matters on the surface of a liquid

**seasoning** – a spice for enhancing the flavor of food

**simmer** – to cook very gently in water just below the boiling point

**skim** – to remove floating water from the surface with a ladle

**slaughter** – to butcher an animal for food.

**spice** – an aromatic, pungent vegetable substance used to flavor food and beverages.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>spoilage –</td>
<td>to become rotten or decayed</td>
</tr>
<tr>
<td>stew –</td>
<td>to simmer or boil in a small quantity of liquid.</td>
</tr>
<tr>
<td>Stock-</td>
<td>a liquid in which meat fish and sometimes vegetables have been cooked</td>
</tr>
<tr>
<td>storage–</td>
<td>a space for storing</td>
</tr>
<tr>
<td>stripped off</td>
<td>to remove or to take away</td>
</tr>
<tr>
<td>suitable–</td>
<td>appropriate</td>
</tr>
<tr>
<td>tender cut-</td>
<td>part of meat that requires less period of cooking</td>
</tr>
<tr>
<td>thaw –</td>
<td>to change from a frozen solid to a liquid by gradual warming.</td>
</tr>
<tr>
<td>tough cut–</td>
<td>part of meat that requires longer period of cooking</td>
</tr>
<tr>
<td>veloutes –</td>
<td>a rich white sauce made by thickening chicken or veal stock with flour and water.</td>
</tr>
<tr>
<td>vermin–</td>
<td>various small animals or insects such as rats or cockroaches that are destructive, annoying or hazardous to health.</td>
</tr>
<tr>
<td>wastage -</td>
<td>loss by use</td>
</tr>
<tr>
<td>white meat-</td>
<td>includes the white, fleshy part of the chicken such as the breast.</td>
</tr>
</tbody>
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