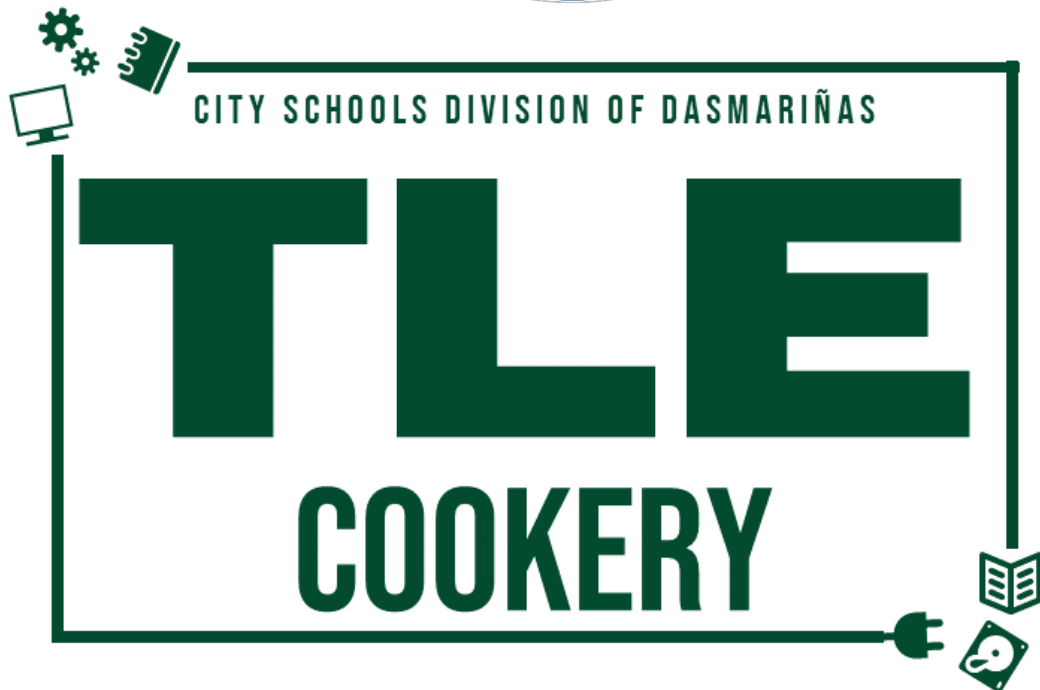


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SELF-LEARNING MATERIAL

TLE

Cookery

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Guide in Using Learner's Module

For the Parents/Guardian

This module is designed to assist you as the learning facilitator at home. It provides you with activities and lesson information that the learners need to accomplish in a distance learning modality.

For the Learner

This module is designed to guide you in your independent learning activities at your own pace and time. This also aims to help you acquire the competencies required by the Department of Education at the comfort of your home.

You are expected to answer all activities on separate sheets of paper and submit the outputs to your respective teachers on the time and date agreed upon.

Module 1

What I need to know?

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

The module is only composed of one lesson:

- Use of Kitchen Tools, Equipment and Paraphernalia

After going through this module, you are expected to:

1. identify types of tools, equipment, and paraphernalia;
2. classify the types of appropriate cleaning tools and equipment based on their uses; and
3. describe the various types of kitchen tools, equipment, and paraphernalia.

One of the basic skills that every person must learn and acquire is cooking. Let us begin by answering the questions:

1. What is your most favorite dish?
2. Do you know how to cook it?
3. What are the 5 kitchen tools that you are familiar already? What are their use/function?
4. What kitchen equipment do you think you will need to cook your favorite dish?

I *What is new?*

If you are already familiar with how you can prepare or cook your favourite dish, good for you. But, if you still do not know, you are giving yourself more reason to continue learning this module. Before cooking takes place, one must be familiar with the correct utensils, tools, and equipment in the kitchen. Knowing them will make the job faster and more efficient. Each tool, utensil, or equipment has been designed to accomplish a specific job in the kitchen. Aside from that, it is also important to consider other factors and not only the price when buying them.

Each tool, utensil and equipment is made of different material. This material has its own advantages and disadvantages. One must be familiar with the appearance and the main function of these kitchen tools, utensils, and equipment in order to maximize their use and make cooking tasks more effective and efficient.

D *What I know?*

Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. Loisa wants to bake a cake for her mother's birthday. What baking pan material is the best to be used for her baking?

- | | |
|--------------|--------------------|
| A. Aluminium | C. Glass |
| B. Cast iron | D. Stainless steel |

2. This kitchen utensil is used to transfer cooked pasta to a waiting plate without a mess.

- | | |
|-----------------|-------------------|
| A. Pasta server | C. Serving spoon |
| B. Scraper | D. Two-tined fork |

3. It is used for levelling off dry ingredients when measuring and can also be used to spread frosting or sandwich filling.

- | | |
|-------------------|------------|
| A. Pastry brush | C. Spatula |
| B. Rubber scraper | D. Spoon |

4. Jojie will cook puto and kutsinta for snacks. Which kitchen tool will she use to cook these snacks?

- | | |
|--------------|------------------|
| A. Casserole | C. Double-boiler |
| B. Broiler | D. Steamer |

5. This is commonly used to know the exact amount of a cup of dry ingredients like flour and sugar.

- | | |
|--------------------|--------------------|
| A. Measuring cup | C. Measuring spoon |
| B. Measuring glass | D. Weighing scale |

II. Arrange the letters to form the right word that is being described in each statement.

- | | |
|-----------|---|
| NOEV | 6. It is a chamber or compartment used for heating, baking or drying food. |
| OUSP DLAE | 7. This is a type of spoon used for soup, stew, gravy, or sauces. |
| RAGETR | 8. It is used to shred or separate food ingredients like carrot, cheese, or cabbage into tiny or fine pieces. |
| RCOLADNE | 9. This looks like perforated bowl which is commonly used for draining liquids from solid ingredients such as boiled pasta and when washing vegetables or fruits. |
| LFNUEN | 10. This tool is used to transfer liquid ingredient to another container to avoid spilling. |

D What is in?

What do you think are the possible career or job opportunities that are aligned with Cookery?

Notes to the Teacher

It will be helpful if the learners will be reviewed or oriented on the essence of Entrepreneurship so you can instill that they can use their knowledge on cooking to start their own food business if they want to. Review them the concepts about:

- Relevance of the course
- Career opportunities
- Environment and Market

D What is it?

Let us have the background of what happens in a commercial cooking industry. Commercial cooking is related with food service. Generally, business establishments related to this prepares food for public consumption. These businesses are classified into three main categories:

- **Quick Service** – It is also known as fast food restaurants. Examples of these are burger, chicken, pizza, sandwich, and short order restaurants where there is no generally table service. The kitchen and dining rooms are designed for quick service and convenience.

- **Full Service** – This type of food service is good for dinner house or white tablecloth restaurants. It includes table service, sit-down cafeteria, club, and fine-dining restaurants where the ambiance or the dining experience has more emphasis.
- **Non-commercial** – These are food service operations that are generally included in other businesses like school canteen, hospital cafeteria, and the like.

Many commercial restaurants come and go depending on the public desires. Restaurants often concern themselves with only those things that can be seen by the public. These types of restaurants make use of kitchen tools, utensils, and equipment depending on their use and the need of the said establishments. The following are examples of materials that are commonly used in the kitchen:

1. **Aluminum** – Aluminum material is for multipurpose. It is lightweight, attractive and less expensive, and gives even heat distribution. It is available in sheet or cast aluminum. But there is a disadvantage in using this material, the lighter gauges dents and scratches easily, making the utensil unusable. Aluminum also turns dark when used with alkalis, such as potatoes, beets, carrots and other vegetables. Acidic vegetables like tomatoes will brighten it.
2. **Stainless Steel** – This material is popularly used for tools and equipment because of its durability but it is quite expensive. It is also easier to clean and shine. Choose those with copper, aluminum or laminated steel bottoms to spread heat and keep the pot from getting heat dark spots.
3. **Ceramic and Heat-proof Glass** – These materials are mainly used as baking dishes, casseroles, and measuring glass. They are great for cooking but make sure to use only those that can withstand very high temperature like Pyrex, a heat-proof glass, but of course since they are breakable, you need to have extra care in using it.
4. **Cast iron** – This material is sturdy and heavy but prone to rust so it is advisable to oil it before keeping. Rubbing shortening or salad oil on the inside and drying it will help prevent rust formation. Since it is quite oily or greasy because of the lubricant used, use liquid soap or degreaser before using it to remove those sticky feeling.
5. **Teflon** – This became quite popular the first time it was introduced. Why? It has a special coating applied inside the aluminum pots and pans that makes them non-stick. It prevents the food from sticking onto the pan, and only requires very little amount of oil or butter when cooking. Great right?! But always use nonstick wooden spoon or spatula only when cooking to avoid scratching and removing that special coating.

KITCHEN TOOLS, UTENSILS, AND EQUIPMENT





I know you are already familiar with some of these kitchen tools, utensils, and equipment since some of them is commonly used in the household. But do you understand the difference among these? Let's see.







The term **kitchen tools** are hand-held instruments or items that usually include a broad range of products such as kitchen utensils. **Kitchen utensils**, on the other hand, are hand-held







implements or instruments used for specific purpose in the kitchen. The term **kitchen equipment** refers to appliances that work with the use of electricity.

Take a look at the chart. Listed there are the common tools, equipment, and paraphernalia that are used in the Commercial Cooking industry. It is presented in a chart in a classified format so it will be easier for you to identify them.







A. Cutting Tools, Utensils, and Equipment

Tool/Equipment	Picture	Function(s)
1. Butcher knife	 <p>Image retrieved from https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQ QnknFhzHUfY30qK6gxoAPc8niBAou6Bf0GxpAbKx1jsWBfbu5HQ</p>	This is made of heavy blade with a saber or flat grind and is used to section raw meat, poultry, and fish. It can also be used as a cleaver to separate small joints or to cut bones.
2. Boning knife	 <p>Image retrieved from https://d3vxa2wxjeif4.cloudfront.net/catalog/product/cache/2/image/9df78eab33525d08d6e5fb8d27136e95/c/d/cd01-l.jp</p>	This is used to remove raw meat from the bone. Its blade is thinner and shorter than Chef's knife and about 6 inches long.
3. Chef's knife/French knife	 <p>Image retrieved from https://www.wpclipart.com/household/kitchen/utensils/knife/Chefs_knife.png.html</p>	It is an all-purpose knife used for general cutting, chopping, mincing, and slicing purposes. The blade is normally 8-12 inches long.
4. Filleting knife	 <p>Image retrieved from https://www.ergochef.com/pro-series-75-inch-flexible-fillet-knife-1375.php</p>	This knife is similar to the shape and size of a boning knife, but it is thinner and with a more flexible blade. It is used for filleting the fish.






5. Slicer	 <p>Image retrieved from https://www.pinterest.ph/marknward3/kitchen-knives/https://www.pinterest.ph/marknward3/kitchen-knives/</p>	This knife has a flexible or rigid blade and may be tapered-ground or has fluted edge. It is commonly used for slicing cooked meat or for smoked salmon.
5. Paring knife	 <p>Image retrieved from https://www.pinterest.ph/pin/140526450847335747/?lp=true</p>	This is used for removing the outer skin of fruits and vegetables and for decorative, trimming, or garnishing purposes.
6. Fruit and Salad knife	 <p>Image retrieved from https://www.amazon.com/Zyliss-Fresh-Salad-Knife-Green/dp/B0018RYBW2</p>	It is used to cut salad greens, fruits, and some vegetables.
7. Citrus knife	 <p>Image retrieved from https://www.kuhnrikon.co.uk/citrus-knife</p>	It has two-sided, serrated edge which is used for sectioning citrus fruits like lemon.
8. Peeler	 <p>Image retrieved from https://jaccard.com/products/copy-of-advanced-ceramic-8-chefs-knife</p>	This tool is used to peel also fruits and vegetables in a more uniform manner.
9. Grater	 <p>Image retrieved from https://kitchenbasix.com/products/cheese-grater-shredder-stainless-steel-4-sided-boxed-grater-large-grating-surface-with-razor-sharp-blades-perfect-to-slice-grate-shred-zest-fruits-vegetables-cheeses-chocolate-more</p>	It is used to shred or grate foods into smaller, finer pieces.

10. Potato masher	 <p>Image retrieved from https://www.amazon.com/Best-Manufacturers-Waffle-Potato-Masher/dp/B000KI8E0K</p>	This is used for mashing soft ingredients such as cooked potatoes, carrots, and other soft vegetables.
11. Can and bottle opener	 <p>Image retrieved from https://www.amazon.com/Swing-A-Way-Compact-Can-Opener-Black/dp/B001CDAW66</p>	This aids in opening the lid of a bottle or a can.
12. Food processor	 <p>Image from https://www.flipkart.com/food-processors/pr?sid=i9e,m38,rj3</p>	This equipment is used for cutting, dicing, and chopping foods into uniform sizes.
13. Sharpening stone	 <p>Image from https://www.amazon.de/messerschleifstein-doppelseitig-feine-mittlere-K%C3%B6nig/dp/B013OVYONA</p>	It is used to sharpen knives.
14. Kitchen shears	 <p>Image retrieved from https://www.kitchenwarehouse.com.au/Mundial-Kitchen-Shears-21cm</p>	It is used for opening packages and cutting tape, string, labels or tags from the items.
15. Cutting/Chopping board	 <p>Image retrieved from https://www.amazon.com/JAMIE-OLIVER-Acacia-Cutting-Board/dp/B01D6KCOQ8</p>	This tool where the food item to be cut is placed. It protects the table when cutting and also prevents the knife from being easily damaged.

A. Measuring Tools and Utensils




Tool/Equipment	Picture	Function(s)
1. Measuring cups	 <p>Image retrieved from https://www.stokesstores.com/en/thinkkitchen-stainless-steel-measuring-cups.html</p>	These are a set of cups that come in 1 cup, $\frac{3}{4}$ c., $\frac{1}{2}$ c., $\frac{1}{4}$ c., and $\frac{1}{8}$ c., and are used for measuring dry ingredients like flour or sugar.
2. Liquid measuring glass	 <p>Image retrieved from https://www.walmart.com/ip/Pyrex-4-Piece-Measuring-Cup-Set/45801443</p>	It is used for measuring liquid ingredients in ounces (oz.) or milliliters (ml.)
3. Measuring spoons	 <p>Image retrieved from https://www.katom.com/229-722.html</p>	These are a set of spoons with measurements of 1 tbsp., $\frac{3}{4}$ tbsp., $\frac{1}{2}$ tbsp., $\frac{1}{4}$ tbsp., and can be used to measure dry and liquid ingredients in small amounts.
4. Kitchen scale	 <p>Image retrieved from https://www.bigw.com.au/product/property-10-kg-large-capacity-kitchen-scale-940/p/3316986/</p>	It is used to measure small amount of dry ingredients in grams up to 1 kilogram.
5. Digital scale	 <p>Image retrieved from https://www.amazon.com/Escali-136KP-Alimento-Listed-Digital/dp/B002YLA0VM</p>	This equipment is used for measuring foods like meat, fruits, vegetables, and fish.
6. Scoop/Dipper	 <p>Image retrieved from https://www.natisco.com.au/</p>	This is for measuring soft foods like mashed potato, ice cream or cookie batter and makes even measurements.

B. Mixing Tools, Utensils, and Equipment






Tool/Equipment	Picture	Function(s)
1. Mixing bowl/Stainless steel bowl	 <p>Image Retrieved from https://www.groupon.com/deals/gg-cm-polished-stainless-steel-mixing-bowl-set-5-piece</p>	This is mainly used for mixing ingredients or can also be used as container.
2. Wooden spoon	 <p>Image retrieved from https://yamzar.com.au/kitchenware/serving-wooden-spoons/kh-wooden-spoon/</p>	It is used to mix ingredients, to cream, to stir and also to cook.
3. Rubber scraper	 <p>Retrieved from https://www.gourmet-web.com/Rubber-Scraper-Pallet-Beech-Wood-caoutchouc</p>	This is used to scrape the ingredients from the container's bottom and to mix ingredients.
4. Whisk	 <p>Retrieved from https://www.amazon.com/OXO-Grips-11-Inch-Better-Balloon/dp/B00004OCNS</p>	It is mainly used for whipping eggs or batter but can also be used for blending gravies, sauces, and soups.
5. Electric Hand Mixer/Stand Mixer	 <p>Retrieved from https://www.ebay.com/itm/KitchenAid-7-Speed-Soft-Start-Electric-Handheld-Food-Hand-Mixer-Black-145-Watt-/112454023182</p>	This equipment has a set of rotating beaters which are used for stirring, whisking, or beating.

6. Blender	 <p>Retrieved from https://www.thegoodguys.com.au/kitchenaid-diamond-blender---empire-red-5ksb1585aer</p>	This is an equipment that is used to chop, blend, and liquefy food ingredients.
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C. Straining Tools and Utensils





Tool/Equipment	Picture	Function(s)
1. Strainer	 <p>Retrieved from http://eckraus.com/10-strainer-double-mesh-stainless-steel/</p>	This is used to separate solid from liquid ingredients and also to separate unwanted particles from the ingredient.
2. Colander	 <p>Retrieved from https://www.indiamart.com/proddetail/stainless-steel-colander-14998413373.html</p>	It is used for washing and draining vegetables and fruits. It can also be used to separate liquid from solid ingredients, e.g. water from the pasta.
3. Sieve/Sifter	 <p>Retrieved from https://wildrosegeological.com/product/4-stainless-steel-sieve/</p>	It is used for separating wanted from unwanted materials with the help of a fine mesh, net, or metal. This is usually used for sifting dry ingredients like flour or sugar.

D. Serving Tools and Utensils

Tool/Equipment	Picture	Function(s)
1. Pasta server	 <p>Retrieved from https://www.ebay.com/itm/Pasta-Spaghetti-Server-Spoon-Fork-Scooper-Kitchen-Tool-Utensil-Noodle-Claw-Black-/381316235980</p>	It is made of wood or stainless steel which is used to hold pasta noodles so they can be easily removed from the pot and placed on the waiting dish.
2. Tongs	 <p>Retrieved from https://www.amazon.com/Winco-Utility-Rubber-Locking-9-Inch/dp/B00750ZQ1Q</p>	This utensil is used for handling and transferring food ingredients.
3. Soup Ladle	 <p>Retrieved from https://www.amazon.com/Chef-Kitchen-Tools-Large-Ladle/dp/B01KJCNIHK</p>	It is a large, long-handled spoon with a cup-shaped bowl which is commonly used for serving stews and soups, gravies, or sauces.
4. Serving spoon	 <p>Retrieved from https://www.amazon.com/OXO-Steel-Serving-Spoon-2-Inch/dp/B00004OCMD</p>	It is used for preparing and serving food from the main dish.
5. Two tine fork	 <p>Retrieved from https://www.amazon.com/Winco-NC-PF2-2-Prong-Fork-Nylon/dp/B00MHSP9XG</p>	It has two tines which are used to test the doneness of vegetables and meats. They can also be used for holding meat while slicing.

E. Cooking/Baking Tools, Utensils and Equipment






Tool/Equipment	Picture	Function(s)
1. Casserole	 <p>Retrieved from https://www.perfectpans.com/castey-deep-casserole-pot-269-p.asp</p>	This is a large, deep round dish with handles that can be used for baking, cooking, or even serving.
2. Frying pan or skillet	 <p>Retrieved from https://www.amazon.com/Utopia-Kitchen-Induction-Aluminum-Frying-Pan/dp/B00VGXM1DY</p>	This is a flat-bottomed pan with one long handle which is used for frying, searing, and sautéing.
3. Saucepan	 <p>Retrieved from https://www.lecreuset.com/new-nonstick-saucepan</p>	It is a deep cooking round pan with one long handle and lid used mainly for stews and sauces.
4. Food Steamer	 <p>Retrieved from https://www.makro.co.za/appliances/russell-hobbs-br-3l-satin-quartz-steamer-stainless-steel-65217EA</p>	This is a kitchen equipment that is used to cook or prepared foods with steam heat by means of holding the food in a closed vessel.
4. Double boiler	 <p>Retrieved from https://www.kitchencollection.com/procter-silex-stainless-steel-2-quart-double-boiler-08231</p>	It is a saucepan with a detachable upper compartment heated by boiling water in the lower one. It can be used to melt chocolates or to keep gravy warm.

5. Stove	 <p>Retrieved from https://www.flipkart.com/pigeon-ultra-glass-stainless-steel-manual-gas-stove/p/itmehdqupfky8zpf</p>	Stove can be electrical or gas equipment that is used to cook or heat food.
6. Oven	 <p>Retrieved from https://www.ajmadison.com/b.php/Ranges/N-25</p>	It is a gas or electrical equipment that looks like a closed compartment for heating and baking purposes.
7. Baking pans	 <p>Retrieved from https://www.ebay.com/itm/Large-12-Cup-Carbon-Steel-Muffin-Cupcake-Mold-Nonstick-Bakeware-Baking-Pan-Tray-/263283069069</p>	These tools differ in shapes and sizes that are used as container for baking.
8. Spatula/Turner	 <p>Retrieved from https://www.nordicware.com/silicone-spatula</p>	This utensil aids in cooking by means of flipping fried foods over.

Take note that some tools and utensils mentioned above like soup ladle is also used for cooking.

F. Auxiliary Tools and Equipment

Tool/Equipment	Picture	Function(s)
1. Refrigerator/Freezer		This equipment is used to keep food items chilled and frozen to prevent bacteria from multiplying.

	<p>Retrieved from http://dahlakonline.com/shop/appliances/refrigerators/refrigerators/</p>	
2. Griddle	 <p>Retrieved from https://www.blackstoneproducts.com/product/17-table-top-griddle/</p>	It is a cooking tool consists of a broad flat surface that is commonly used for frying or grilling purposes.
3. Microwave oven	 <p>Retrieved from https://www.samsung.com/my/cooking-appliances/microwave-oven-convection-mc455thrcsr/</p>	This equipment is usually used for heating foods and sometimes for baking.
4. Tray	 <p>Retrieved from https://www.amazon.com/Wood-Food-Serving-Double-Handles/dp/B01ALKAS6Y</p>	This tool is used for preparing food ingredients, materials, and for gathering tools and utensils.
5. Funnel	 <p>Retrieved from https://www.amazon.com/Hopkins-05064-FloTool-Large-Funnel/dp/B00004X141</p>	This tool is used for transferring liquid from one container to another to avoid spillage.
6. Metal spatula	 <p>Retrieved from https://www.purespadirect.com/EPILLYSS-Metal-Spatula-p/vb-302270.htm</p>	It is used for levelling off dry ingredients when measuring and also for spreading frosting on cake.

E

What is more?

Do the following tasks:

1. Search for a recipe and copy or print it. After that, paste the said recipe on your notebook.
2. Read and analyze the recipe and figure out the tools, utensils, and equipment that you think should be used to execute it.
3. Under the recipe, list down the kitchen tools, utensil, and equipment, draw and write their function or use for the said recipe.
4. For example, the recipe calls for beaten eggs. Write under the pasted recipe the words:
Materials to be used:
-whisk (drawing) – for beating the eggs
5. Make sure that all the items that you will use for this activity are actually applicable so please read the procedures carefully before doing the task. Do not forget to complete your task as well.

E

What I can do?

PERFORMANCE ASSESSMENT

You are a salesclerk in a kitchen ware store. Your task is to demonstrate the proper use of some kitchen items that your store sells to convince the customers to buy your kitchen products. Before you start with the demo, your store manager should first check on your performance and he will evaluate you based on accuracy of the demonstration, organization of your presentation, skills, and audience impact. The demonstration can be submitted through social media, printed picture, or as a drawing that will be submitted to your teacher, whatever is applicable in your present condition.

Criteria	Exemplary (3)	Accomplished (2)	Developing (1)
Content Accuracy	The demonstration is comprehensive, accurate, and relevant.	The demonstration is complete, somehow accurate and relevant.	The demonstration is incomplete and lacks accuracy.
Skills	The demonstrator is remarkably skilful. He/she used props and utilized them well.	The demonstrator is skillful but needs to look at the copy from time to time. Props were used in demonstration.	The demonstrator lacks the skills and did not used props.
Organization	The procedure done is very organized and systematic. Visual aids are used to determine the steps for audience's sake.	The procedure done is organized. Some visual aids are used to determine the steps for audience's sake.	The procedure done is a little organized. Few visual aids are used to determine the steps for audience's sake.
Impact	The demonstration possesses great potential and very entertaining.	The demonstration is promising and entertaining.	The demonstration needs improvement

E *What else can I do?*

Since you have already learned the proper utilization of kitchen tools, equipment, and paraphernalia, it is now time to try how you think you can apply the information that you learned in your life. Cite at least five (5) ways on how you will be able to use the knowledge that you gained about this lesson on your real-life situation.

1. _____
2. _____
3. _____
4. _____
5. _____

A *What I have learned?*

I learned that:

1. Businesses are classified as quick service, full service, and non-commercial.
2. The tools and materials at the kitchen are classified as made of aluminum, stainless steel, ceramic and heat-proof glass, cast iron, and Teflon.
3. Kitchen tool is a broad term for hand-held instruments or items in the kitchen while kitchen utensils are hand-held instrument used for a specific purpose.
4. Kitchen appliance refers to appliances that work with the use of electricity.
5. Kitchen tools, utensils, and equipment are classified according to their use or function – for cutting, measuring, cooking, straining, etc.

A *What I can achieve?*

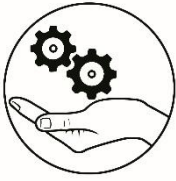
I. Classify the following kitchen tools, utensils, and equipment according to their function or use. Do this on a separate sheet.

Blender	Steamer	Whisk	Butcher knife
Frying pan	Saucepan	Kitchen scale	Peeler
Two-tined fork	Wooden spoon	Measuring cups	Soup Ladle

Used for Mixing	Used for Measuring	Used for Cooking	Used for Serving

II. Give five examples of kitchen devices and identify the use or function of each.

Kitchen Device	Use/Function
1.	
2.	
3.	
4.	
5.	



Additional Activities

List down ten (10) kitchen utensils, tools, and equipment that you already know. Write their uses or functions.

Module 2

I ***What I need to know?***

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

The module is only composed of one lesson:

- Maintain Appropriate Kitchen Tools, Equipment and Paraphernalia

After going through this module, you are expected to:

1. select various types of chemicals for cleaning and sanitizing kitchen tools, equipment, and paraphernalia;
2. clean and sanitize kitchen tools and equipment following manufacturers' instruction;
3. use cleaning tools, equipment, and paraphernalia in accordance to standard operating procedures; and
4. maintain kitchen tools, equipment, and work areas.

I

What is new?

Look at the picture of the chef and his kitchen below. Do you think this kind of kitchen is clean enough to prepare and cook food?



Image retrieved from https://es.123rf.com/photo_15191244_tema-cocina-2-imagen-ilustraci%C3%B3n-vectorial.html

Our health matters. To have a healthy body, we should not only be particular with the food that we eat. Rather, we should also take consideration of the cleanliness of our environment and materials. If you are preparing the food, it is vital that the clean and hygienic process must be followed. The safety of the food that we eat also depends on how the person prepares them. This is why you have to learn the proper ways of cleaning and sanitizing of the tools and equipment that we always use for food preparation.

D *What I know?*

I. Write TRUE if the statement is correct, otherwise, write FALSE.

1. Sanitizing removes most of the bacteria present in the kitchen tools, after washing.
2. In the absence of chemical sanitizer, hot water may be used for sanitizing purposes.
3. Follow the manufacturer's procedure before using the sanitizer.
4. All utensils and tools must be towel-dried before using them.
5. Use cold, soapy water in washing the kitchen tools and utensils.
6. The first procedure for manual dishwashing is rinse the dirty dishes right away.
7. The other term for dishwashing is warewashing.
8. There is only one way to wash the kitchen tools and utensils and that is the manual warewashing method.
9. The use of hot water is the common method used by food establishments in sanitizing their kitchen tools and utensils.
10. The concentration of the sanitizing chemical solution does not affect its effectiveness.

II. Identify the term being referred to in each sentence.

- _____ 1. Aside from concentration, these two are also factors that affect the effectiveness of a chemical sanitizers.
- _____ 2. If steam is to be used for sanitizing, this is the temperature used to expose the surface to steam for 15 minutes.
- _____ 3. This is the last step to be done for manual dishwashing.
- _____ 4. These cleaners are used on heavily soiled surfaces that detergents cannot remove.
- _____ 5. Vinegar and lemon are examples of this natural cleaning agent.

D

What is in?

What kind of cleaning and sanitizing materials do you always use at home? List them on your notebook or use separate paper for your answer.



Notes to the Teacher

Ask the learner to recall the things that your family always uses for cleaning and sanitizing the kitchen, its tools and utensils. Ask him or her to write the answers on the notebook.

- A. Washing the kitchen utensils and tools
- B. Cleaning the sink
- C. Cleaning the stove
- D. Cleaning the refrigerator
- E. Cleaning the oven
- F. Sanitizing purposes

D

What is it?

After learning about the use of kitchen tools, utensils, and equipment, it is now time to study about the importance of maintaining their cleanliness and sanitation. This is vital as these materials are used in preparation and cooking of food. Aside from that, unwanted diseases brought by pest and bacteria will be avoided if the kitchen, the tools, and equipment are danger-free. Maintenance of the kitchen tools, equipment and paraphernalia is easy. All we need to do is to be familiar with the proper procedures and the various types of chemicals for cleaning and sanitizing. Doing so will not only make our work in the kitchen easier, but we would be sure of health and safety in our kitchen.



Retrieved from https://www.tutorialspoint.com/hotel_housekeeping/hotel_housekeeping_cleaning_equipment.htm

Cleaning and sanitation are two of the most important factors that a cook must consider as the health and safety of the cook as well as the one who would eat the food depend on them. Do you know the difference between cleaning and sanitizing?

Cleaning is the process of removing the food and other types of soil (dirt) from the surface such as a dish, a glass, or a pan. This is done with a cleaning agent. A cleaning agent is a product that contains chemicals which remove the food, soil, oil, or other unwanted substances. But take note, not all cleaning agents are safe to be used on any food-contact surfaces so it is wise to select which cleaning agent is suitable to be used.

A *food-contact surface* is any surface of utensil or equipment that food normally comes in direct contact such as pan, plates, chopping board and the like. Examples of products that we cannot use on any food-contact surfaces are metal cleaners, most bathroom cleaners, and glass cleaners because they might leave an unsafe residue on the food-contact surfaces. Aside from that, knowing the right cleaning agent will make cleaning easier.

Cleaning agents are divided into four categories – detergents, solvent cleaners, acid cleaners, and abrasive cleaners.

1. **Detergents** – Detergents are used to wash tableware, surfaces, and equipment. These products can penetrate soil quickly and soften it. Examples of detergents are dishwashing liquid and automatic dishwasher detergents.
2. **Solvent cleaners** – Solvent cleaners must be used periodically on surfaces where grease has burned on. They are also often called **degreasers**.
3. **Acid cleaners** – These cleaning agents are used periodically on mineral deposits and other dirt that detergents cannot remove. These cleaners are often used to remove water scale in washing machines and steam tables.
4. **Abrasive cleaners** - These cleaners are used to remove heavy soil accumulated on the surfaces that are hard to remove with detergents. Some abrasive cleaners, like bleach, can also disinfect.

In cleaning and sanitizing the kitchen tools and utensils, there are two methods applied – the manual warewashing and the mechanical warewashing. **Warewashing** or dishwashing is the process of washing and sanitizing dishes, glassware, flatware, pots, pans, and the like either *manually* or *mechanically*.

Manual Dishwashing Procedure:

In manual dishwashing, you have to follow the five rules – scrape and pre-rinse, wash, rinse, sanitize, drain and air-dry.

1. *Scrape and Pre-rinse*. This is the removal of the soil from the surface of the dish or material to be washed. The purpose of this is to keep the wash water cleaner for a longer while.

2. *Wash.* In this part, the use of warm water at 110°F – 120°F and a good detergent is a must. Scrub well with a brush to remove all the traces of hardened leftover food and grease.
3. *Rinse.* Use clean warm water to rinse off the detergent. Change the water frequently or use running water instead.
4. *Sanitize.* Place the utensils and tools on the rack and immerse them in hot water at the temperature of at least 170°F for 30 seconds.
5. *Drain and air-dry.* Avoid the use of a towel for drying as this may contaminate the tools and utensils. After sanitizing, drain the water from the cleaned and sanitized tools and utensils and allow them to air-dry on the rack.

Mechanical Dishwashing Procedure:

The steps in washing dishes by machine are almost the same with the manual method except that the machine does the procedure. Here are the proper ways on how to use the machine for dishwashing.

1. Scrape and pre-rinse
2. Arrange the dishes on the rack so that the dishwasher spray will strike all the surfaces.
3. Run machine for a full cycle.
4. Set the sanitizing temperature at 180°F for machine sanitation by heat method and 140°F for machine sanitation by chemical solution.
5. Air-dry and inspect the dishes. Do not touch food-contact surfaces such as the glass rim or plate's middle surface.

Sanitizing is the procedure done after washing. It is done to reduce the number of microorganisms, that have not been removed after cleaning, to a safe level. Always remember to wash first the material to be sanitized properly before sanitizing or else, it will not be effective. There are two methods that are commonly used in sanitizing – heat and the use of chemical sanitizing solutions.

Use of Heat Method:

There are three ways on how to use heat for sanitizing purposes:

- *Steam* – The surface is exposed to steam at 170°F for 15 minutes or at a higher temperature of 200°F but for 5 minutes only.
- *Hot air* – In this method, the hot air is applied to the surface at 180°F for 20 minutes.

Note: If the food establishment is practicing the three-sink method for cleaning and sanitizing, third sink or compartment is designated for sanitizing purposes. This three-sink method is WASH, RINSE, and SANITIZE.

- *Hot water* – If hot water is used in the third compartment of a three-sink method, soak the cleaned tools or utensil in hot water with a temperature between 171–180°F (77°C – 82°C) for at least 30 seconds. If a high-temperature ware washing machine is to be used, the final sanitizing rinse must be at least 180°F (82°C). The use of hot water is the method most commonly used in food establishments.



Retrieved from <http://sanimag.sanimarc.com/sani-columns/3-sink-dishwashing-method/>

Use of Chemical Sanitizing Solutions:

When you use chemical sanitizing solution for sanitizing the tools and utensils, you should only use those that have been proven safe and effective. These chemicals are the following:

Chemical Solution	Sanitizing	Advantages	Disadvantages
<i>Chlorine</i> – 50 ppm (parts per million) in water between 75–100°F for 7 seconds		<ul style="list-style-type: none"> • Highly effective • Generally inexpensive • Not affected by hard water and salts • Can be often used on a wide variety of bacteria 	<ul style="list-style-type: none"> • Can be corrosive and irritating to the skin • Effectiveness decreases with increasing pH solution. • Weakens when stored and when exposed to light • Loses effectiveness in the presence of organic matter.
<i>Iodine</i> – 12.5–25 ppm in water at least 75°F for 30 seconds		<ul style="list-style-type: none"> • Forms brown color that is indicative of germicidal strength • Not affected by hard water salts • Less irritating to the skin than chlorine • The activity is not lost as rapidly as chlorine in the presence of organic matter. 	<ul style="list-style-type: none"> • Bacterial effectiveness decreases greatly with an increase in pH (most active at pH 3.0 and very low acting at pH 7.0) • Less effective against bacterial spores and bacteriophage (viruses that infect and replicate bacteria) than chlorine • Should not be used at temperatures greater than 120°F • May discolor equipment and surfaces.
<i>Quaternary Ammonium Compounds</i> – up to 200 ppm in water at least 75°F for 30 seconds		<ul style="list-style-type: none"> • Nontoxic, odorless, colorless, noncorrosive, and non-irritating • Stable, both in heat and in presence of organic matter • Active over a wide pH range. 	<ul style="list-style-type: none"> • Slow in the destruction of coliform and psychrophilic organisms • Non-compatible with anionic detergents and hard water salts • Not effective against bacteriophage.

However, there are different factors that influence the effectiveness of chemical sanitizers. The three factors that must be considered are:

- a. Concentration** – If you put very little amount of sanitizer, the harmful microorganisms will not be reduced. On the other hand, too much of it can be toxic and dangerous.
- b. Temperature** – Generally, the chemical sanitizers work best in water that is between 55°F (13°C) and 120°F (49°C).
- c. Contact time** – Remember, for the sanitizer to really work, the cleaned item must be in contact with the sanitizer (either heat or approved chemical) for the *recommended* length of time.

In every food establishment, it is a must to have the appropriate **sanitizer testing kit** to measure the chemical sanitizer concentrations. If ever you will have the chance to work in a food establishment and encounter this, you have to determine first which chemical is being used – chlorine, iodine, or quaternary ammonium in order to test the strength of the sanitizing solution accurately. Since test kits are not interchangeable, be sure to check with your supplier so you will be assured that you are using the correct kit. The said test kit must then be used throughout the day in measuring the chemical sanitizer concentrations.

What is more?

Given below are the steps in preparing the basic sanitizing solution. Follow the steps and show your home-made solution to your teacher. Use this to sanitize your kitchen utensils or tools. Your performance will be rated with the scoring rubric.

Basic Sanitizing Solution:

1. Get a gallon of clean water.
2. Measure 1 teaspoon or approximately 10.80 ml. of chlorine solution.
3. Mix the chlorine solution with the gallon of clean water.
4. Demonstrate how to use this in disinfecting the kitchen tools or utensils by taking a video or pictures of your procedure.

Note: The tools, utensils, and equipment should be soaked for at least two minutes.

Do not rinse after soaking.

SCORING RUBRIC

4	3	2	1
Follows the procedures in cleaning and sanitizing tools and utensils correctly and efficiently.	Follows the procedures in cleaning and sanitizing tools and utensils correctly satisfactorily.	Follows the procedures in cleaning and sanitizing tools and utensils with minor errors.	Was not able to follow the procedures in cleaning and sanitizing tools and utensils.
Performs the skill without supervision and with initiative and adaptability to problem situation.	Performs the skills without supervision satisfactorily.	Performs the skills satisfactorily with some teacher's supervision and/or assistance.	Performs the skills unsatisfactorily
Able to finish the task ahead of time	Able to finish the task on time	Able to finish the task a little late	Was not able to finish the task

Do the following tasks:

1. Search for a recipe and copy or print it. After that, paste the said recipe on your notebook.
2. Read and analyze the recipe and figure out the tools, utensils, and equipment that you think should be used to execute it.
3. Under the recipe, list down the kitchen tools, utensil, and equipment, draw and write their function or use for the said recipe.
4. For example, the recipe calls for beaten eggs. Write under the pasted recipe the words:

Materials to be used:

-whisk (drawing) – for beating the eggs

5. Make sure that all the items that you will use for this activity are actually applicable so please read the procedures carefully before doing the task. Do not forget to complete your task as well.



What I can do?

PERFORMANCE ASSESSMENT

You are an advertiser hired by an industrial company. Your task is to create a poster that will ensure cleaning and sanitizing in the kitchen that will be posted in the kitchen area. Before the poster is approved, this finished poster must first be evaluated by the coordinator according to content, creativity, presentation, and attractiveness. Submit this poster to your coordinator (teacher) for evaluation.

Criteria	Exemplary (3)	Developing (2)	Beginning (1)
Content Poster contains appropriate items and information (information is appropriate to assigned topic).	Content is accurate and all required information is presented in a logical order.	Content is accurate but some required information is missing and/or not presented in a logical order but is still generally easy to follow.	Content is inaccurate. Information is incomplete, inaccurate, or not presented in a logical order, making it difficult to follow.
Presentation Poster is clean, neat, and creative. The information is well organized, interesting, accurate, and reflects an understanding of the topic.	Presentation is neat, clean, well-organized and presented in a creative way. Presentation is colorful and creative. Information is interesting and accurate.	Presentation is mostly neat and clean. Information is organized in a logical manner and shows some degree of creativity. The overall presentation is interesting.	Presentation has no flow. Insufficient information and lacking some of the member's information.
Creativity Images, pictures, clip art and drawn artwork are colorful and appropriate to the assigned topic. The layout flows well and shows creativity. The overall result is pleasing to the eye.	Images, pictures, clip art and drawn artwork are colorful, and appropriate to the topic. Layout flows well, shows creativity, and is pleasing to the eye.	Images, pictures, and clip art and drawn artwork are mostly colorful and appropriate. Layout may show some degree of creativity but is not organized logically and/or is cluttered.	No images or artwork included.
Attractiveness Poster is attractive and eye-catching. Its overall quality contains all the information presented in a beautiful manner.	Poster is colorful, eye-catching, and big enough to attract attention from a safe distance.	Poster is quite attractive, but the size is too small.	Poster is dull and small.

E *What else can I do?*

Since you have already learned the proper utilization of kitchen tools, equipment, and paraphernalia, it is now time to try how you think you can apply the information that you learned in your life. Cite at least five (5) ways on how you will be able to use the knowledge that you gained about this lesson on your real-life situation.

1. _____
2. _____
3. _____
4. _____
5. _____

A *What I have learned?*

I learned that:

1. Cleaning is the process of removing food remnants and other soil (dirt) on the food surface.
2. Sanitizing is done after washing or cleaning to ensure that the number of microorganisms that are not removed after cleaning will be reduced to the safe level.
3. A food contact surface is any surface that the food comes in contact with such as plate, chopping board, pans, tray, etc.
4. Cleaning agents are divided into four categories – detergents, abrasive cleaners, solvent cleaners, and acid cleaners.
5. There are two methods that we can apply in cleaning and sanitizing the kitchen tools and utensils: the manual warewashing and mechanical warewashing.
6. In manual dishwashing, there are five rules to apply: scrape, pre-rinse, wash, rinse, sanitize, drain, and air-dry.
7. We use machine such as dish washer in mechanical warewashing. The procedures are almost the same except that the machine does the procedure.
8. There are two methods that are commonly used in sanitizing: heat and the use of chemical sanitizing solutions.

9. The three ways on how to use heat for sanitizing purposes are through steam, hot air, and hot water.
10. There are chemical sanitizing solutions for tools and utensils that food business establishments can use. These are the chlorine, iodine, and quaternary compounds.
11. Three factors that affect the effectiveness of chemical sanitizers are
12. the concentration, temperature, and contact time.

What I can achieve?

I. Write AGREE if the answer is true, if otherwise, change the underlined word or phrase to make it correct.

1. Cleaning is the process of reducing the amount of bacteria that are not removed by cleaning, in a safe level.
2. Hot water is the most common sanitizing method used in food establishments.
3. The third compartment for the three-sink method is the wash method.
4. The presence of too little sanitizer can result to inadequate reduction of harmful microorganism.
5. Towel-dry is best for drying the tools and utensils after sanitizing.
6. Scrape and pre-rinse is the first step for manual dishwashing.
7. Contact time does not affect the effectiveness of a chemical sanitizer.
8. It is required that all food establishments have sanitizer testing kit for safety purpose.
9. The other term for abrasive cleaner is degreaser.
10. Cleaning is different from sanitizing.

II. Arrange the proper steps in manual dishwashing in order. Write the numbers 1-5.

- _____ A. Drain the water and air-dry.
- _____ B. Scrape and pre-rinse the dishes with warm water.
- _____ C. Sanitize the cleaned dishes, tools, and utensils.
- _____ D. Wash the tools and utensils with prescribed cleaning detergent.
- _____ E. Rinse the tools and utensils with clean, running, water.

Module 3

I *What I need to know?*

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

After going through this module, you are expected to:

The module is divided into two lessons, namely:

- Learning Outcome 1 – Carry out measurements and calculations in a required task.
- Learning Outcome 2 – Calculate cost of production

After going through this module, you are expected to:

1. self-checked and corrected numerical computations for accuracy;
2. identified and converted systems of measurement according to recipe requirements;
3. measured ingredients according to recipe requirement;
4. costs of production are computed according to standard procedure.

I *What is new?*

Answer the following. Choose the correct abbreviations of each measurement in column B. Write the chosen answer on a separate sheet of paper.

A	B
1. Tbsp. - _____	grams
2. Tsp. - _____	ounce
3. g. - _____	kilo
4. Oz. - _____	Tablespoon
5. k - _____	teaspoon

D

What I know?

PERFORM MENSURATION AND CALCULATIONS

Are you ready to learn something about mensuration and calculation? We all knew that food is one of the biggest aspects of a culture. Cooking can be a source of your finances in terms of business industry aside from providing food to your love ones. In cooking they say that real chef don't measure, but that is a myth because real chefs mostly do measure, and when they don't, it is because they have been cooking for a long time or they master it already. They already familiarized certain ingredients and its measurement.

The chefs understand nor familiarized the amounts of ingredients they are adding because they started out measuring for a long time already. The primary reason why you should measure because you will learn about cooking better. As you are measuring, it is a great idea to begin learning what is in each measured ingredient. In this module you will learn how to properly measure ingredients, convert ingredients into different conversion measurement to make cooking easy.



https://www.google.com/search?q=cooking+measuring+materials+PNG&tbm=isch&ved=2ahUKEwiGyMr7o_qAhXpxosBHR7IAp8Q2-cCegQIABAA&oeq=cooking+measuring+materials+PNG&gs_lcp=CgNpbWcODFD9IiRNGC5X2gAcAB4AIABlwGIacsFkgEDNv4xmAEoAEBqgELZ3dzLXdpei1pbWIAAQE&scient=img&ei=AiOoX4a_DOmNr7wPnuqL-Ak&bih=620&biw=1337#imgsrc=BlrZokAM5qZ4UM

D

What is in?

In this course, you will get so many different learning activities. Preparing you to be knowledgeable and skillful about mensuration and calculations that you can use in the future. Get ready to learn some skills as you go on further learning using this module.

D What is it?

Now let us test your knowledge in answering questions. Below are sets of questions where you can tell your ideas regarding our topic:

1. How important to measure certain ingredients accurately?
2. What are the advantages of knowing the correct way and exact tools in measuring dry and liquid ingredients?
3. Why we need to familiarize and to have guide in weights and measurement conversion in cooking?
4. How important to know the peso mark-up?
5. What are the advantages of being knowledgeable in costing in business?

Rating	Description
5	The answer is complete, brief yet accurate, and free from any spelling or grammatical errors.
4	The answer is brief, mostly accurate, and with few spelling or grammatical errors.
3	The answer is wordy but quite accurate and with few spelling or grammatical errors.
2	The answer is too wordy but quite accurate and with some spelling or grammatical errors.
1	The answer is irrelevant with some grammatical and spelling errors.

E What is more?

TABLES OF WEIGHTS AND MEASURE

General Ingredient Equivalent Chart

COMMON ABBREVIATIONS			
Abbreviation	Kitchen Term	Abbreviation	Kitchen Term
Tbsp. o T	Tablespoon	c	cup
Tsp. or t	teaspoon	gal.	gallon
g.	grams	°F	Degrees Fahrenheit
Oz.	ounces	°C	Degrees Celsius
lb	pounds	med.	medium
pt.	pint	Sec.	second
c.	cups	Min.	minimum
k	kilos	hr.	hour
qt.	quart	sq.	square

LO1.1 Conversion of weights and measurements

These charts can help you convert your recipes to the measuring system you are most familiar with. Measuring and conversion is very important to ensure correct and accurate quantity of ingredients measurement.

Weights

Imperial	Metric	Imperial	Metric
½ oz	15 g	8 oz	227 g
1 oz	29 g	10 oz	283 g
2 oz	57 g	12 oz	340 g
3 oz	85 g	13 oz	369 g
4 oz	113 g	14 oz	397 g
5 oz	141 g	15 oz	425 g
6 oz	170 g	1 lb.	453 g

CUP TABLESPOON	ONCES	MILLILITERS	
8 CUPS	64 oz	1895 ml	128
6 CUPS	48 oz	1420 ml	96
5 CUPS	40 oz	1180 ml	80
4 CUPS	32 oz	960 ml	64
2 CUPS	16 oz	480 ml	32
1 CUP	8 oz	240 ml	16
¾ CUP	6 oz	177 ml	12
2/3 CUP	5 oz	158 ml	11
½ CUP	4 oz	118 ml	8
3/8 CUP	3 oz	90 ml	6
1/3 CUP	2.5 oz	79 ml	5.5
¼ CUP	2 oz	59 ml	4
1/8 CUPS	1 oz	30 ml	3
1/16 CUPS	½ oz	15 ml	1

Temperature

Fahrenheit	Celsius	Temperature
100°F	37 °C	VERY LOW
150 °F	65 °C	
200 °F	93 °C	
250 °F	121 °C	
300 °F	150 °C	SLOW
325 °F	160 °C	MODERATELY SLOW
350 °F	180 °C	
375 °F	190 °C	MODERATE
400 °F	200 °C	
425 °F	220 °C	
450 °F	230 °C	MODERATELY HOT
500 °F	260 °C	
525 °F	274 °C	HOT
550 °F	288 °C	

PROCEDURE ON HOW TO MEASURE INGREDIENTS CORRECTLY

It is important to know how accurately and correctly measure a certain ingredient to ensure good cooking results, it's not all ingredients are measured as the same process. Familiarizing different uses of measuring tools used in cooking is very important as knowing the correct way on how to measure ingredients. Measure ingredients accurately with the used of specific measuring tools. Therefore, always observe the following procedures

DRY INGREDIENTS

- **Rice and flour.** Fill the measuring cup with a scooper or another cup, until overflowing, level-off by sweeping with a metal spatula or with a straight flat side of a knife.



Retrieved: <https://food52.com/blog/7728-measuringflour-right-3-tips-for-better-baked-goods>
<https://food52.com/blog/5444-how-to-measure-flour>

- **Sifted flour.** Put measured flour in a sifter (be sure that the mixing bowl is under of your sifter) and tap the sifter side with your palm to let the sifted flour go down/separate to the mixing bowl.



Retrieved: <https://www.gretchensbakery.com/do-i-sift-the-flour-before-or-after-i-measure/>

- **Sugar** (*Granulated or white sugar and Confectionary sugar*). Sift sugar in a sifter to take out lumps, if any. Scoop with spoon into measuring cup. **Do not** pack and tap the sugar down let it overflow the measuring cup/measuring spoon and level off with spatula.



Retrieved: <https://www.tasteofhome.com/article/how-to-make-sugar-cookies>

- **Brown Sugar.** Pack into just enough to hold its shape. Level off with a spatula.



Retrieved: <https://www.recipetips.com/kitchen-tips/t--584/measuring-tips-and-techniques.asp>



Granulated/White Sugar

Level off measuring spoon with *straight edge of a knife* to measure small amounts of **salt, pepper, leavening agents or solid fats**. (Do not pack and tap in to measuring spoon)

Retrieved: <https://www.dhgate.com/product/stainless-steel-measuring-sugar-spoons-cups/437386941.html>

- **Butter** - Butter can be easily divided in cups measurement. 1 bar of butter is equal to 1 cup. Half of the bar is $\frac{1}{2}$ cups then cut half bar to next half equal to $\frac{1}{4}$ then until cut in cube size for $\frac{1}{8}$ cup. (Put the butter at *room temperature* for a couple of minutes before using to soften its texture and cut easily portioned butter to its desired measurement



1BAR= 1cup

$\frac{1}{4}$ CUP	$\frac{1}{2}$ CUP
$\frac{1}{8}$ C	

Retrieved: <https://www.quora.com/How-much-is-3-4-of-a-stick-of-butter>

Weighing Scale- To measure dry ingredients like fruits and vegetables in kilos and grams.
(Kinds of weighing scale commonly used in cooking preparations (*Digital and Balance scale*))



Retrieved: <https://glowroad.com/electronic-kitchen-digital-weighing-scale-e-lv-premium-quality-multipurpose-lcd-screen-digital-weighing-scale-machine-upto-10-kg-weight-measure-for-measuring-fruits-spice-food-vegetable-and-more/az/B01GPPVZDE#&gid=1&pid=1>

Retrieved: <https://www.colourbox.com/image/sliced-fruits-and-vegetables-on-kitchen-scale-isolated-on-white-with-clipping-path-image-2149644>

LIQUID INGREDIENTS

- **Liquid measuring cup-** (To measure milk, water and juices). Put the cup on the top of the table, adjust yourself to a position where your eyes are level in the glass guide lines and pour the liquid with your desired measurement.



LO1.2 SUBSTITUTION OF INGREDIENTS

Are you ready to learn something about ingredients substitution? How many times have you been ready to cook and found you were out of a certain ingredient? Sometimes it is inconvenient to run out and purchase the necessary ingredient in a nearby store, but if there's no available in nearby places you will a lot time and effort to go to supermarket again just to buy same product with same amount per pack even though you just need a small amount of it. -- It's easier to use a similar product as a replacement. There are, however, several factors to consider when substituting ingredients. Take into account differences in flavor, moisture, texture and weight.

In this module you will learn how to substitute ingredients in a certain excess ingredient you have in your kitchen. By this, you can save money, time, and effort to purchase another product just for a small amount you needed.

Ingredients substitutions have many factors to consider. In terms of chemical reactions like acid, flavor and texture of the finish ingredient. I hope this lesson will help you in everyday cooking preparations.

The following table gives substitutes that may be used to get a finished product similar to the original ingredient.

WHEN YOU NEED	IN THIS AMOUNT:	SUBSTITUTIONS:
Apple Pie Spice	1 teaspoon	1/2 teaspoon cinnamon plus 1/4 teaspoon nutmeg plus 1/8 teaspoon cardamom
Baking Powder	1 teaspoon	½ teaspoon cream of tartar plus ¼ teaspoon baking soda
Broth	1 cup	1 cup hot water plus 1 teaspoon bouillon granules or 1 bouillon cube
Buttermilk	1 cup	1 tablespoon lemon juice or vinegar plus enough milk to measure 1 cup; let stand for 5minutes. Or 1 cup plain yogurt
Cajun Seasoning	1 teaspoon	¼ teaspoon cayenne pepper, ½ teaspoon dried thyme, ¼ teaspoon dried basil and 1 minced garlic

Chili Sauce	1 cup	1 cup tomato sauce, 1/4 cup brown sugar, 2 tablespoons vinegar, 1/4 teaspoon cinnamon, dash of ground cloves and dash of allspice
Chocolate, Semisweet	1 square (1 ounce)	1 square (1 ounce) unsweetened chocolate plus 1 tablespoon sugar or 3 tablespoons semisweet chocolate chips
Chocolate	1 square (1 ounce)	3 tablespoons baking cocoa plus 1 tablespoon shortening or vegetable oil
Cornstarch (for thickening)	1 tablespoon	2 tablespoon all- purpose flour
Corn Syrup, Dark	1 cup	¾ cup light syrup plus ¼ cup molasses
Corn Syrup Light	1 cup	1 cup sugar plus ¼ cup water
Cracker Crumbs	1 cup	1 cup dry breadcrumbs
Cream, Half and Half	1 cup	1 tablespoon melted butter plus enough whole milk to measure 1 cup
Cream of Tartar	½ teaspoon	1/1/2 tsp lemon juice or vinegar
Egg	1 whole	2 egg whites or 2 egg yolks or ¼ cup egg substitute
Flour Cake	1 cup	1 cup minus 2 tablespoon (7/8 cup) all purpose
Flour, Self –Rising	1 cup	1 cup all- purpose flour plus 1 teaspoon baking powder, ½ teaspoon salt and ¼ teaspoon baking soda
Garlic, Fresh	1 clove	1/8 teaspoon garlic powder
Ginger root, Fresh	1 teaspoon	¼ teaspoon ground ginger
Honey	1 cup	1-1/4 cups sugar plus ¼ cup water
Lemon Juice	1 teaspoon	¼ teaspoon cider vinegar
Lemon Peel	1 teaspoon	½ teaspoon lemon extract
Milk, Whole	1 cup	½ cup evaporated milk plus ½ cup water or 1 cup water plus 1/3 cup nonfat dry milk powder
Molasses	1 cup	1 cup honey
Mustard, Prepared	1 tablespoon	½ teaspoon ground mustard plus 2 teaspoon vinegar
Onion	1 small (1/3 cup chopped)	1 teaspoon onion powder or 1 tablespoon dried minced onion
Poultry Seasoning	1 teaspoon	¾ teaspoon rubbed sage plus ¼ teaspoon dried thyme

Sour Cream	1 cup	1 cup plain Yogurt
Sugar	1 cup	1 cup packed brown sugar, or 2 cups sifted confectioners' sugar
Tomato Juice	1 cup	$\frac{1}{2}$ cup tomato sauce plus $\frac{1}{2}$ cup water
Tomato Sauce	2 cups	$\frac{3}{4}$ cups tomato paste plus 1 cup water
Yeast	1 package ($\frac{1}{4}$ ounce) active dry	1 cake ($\frac{5}{8}$ - ounce) compressed yeast

LO 2.1 CALCULATE COST OF PRODUCTION

Percentage Mark-Up

Mark-up is the difference between how much an item costs you, and how much you sell that item for--it is your profit per item.

1. **How to calculate your peso mark-up?**

Example

<i>Selling price</i>	15.00
<i>Purchase cost/ buying price</i>	- 10.00
<i>Peso mark-up</i>	<u>5.00</u>

2. **To calculate your percentage mark-up based on cost or selling price.** Once you choose which you will be using to calculate, it is important you stick to the method you choose throughout all your calculations, or you will end up with wrong data. If you decide to calculate your percent mark-up based on cost, follow Step 3. If you decide to calculate your percent mark-up based on selling price, go on to Step 4.

3. **Calculate percent mark-up based on cost.** This is done by dividing the peso mark-up by the cost

Example

<i>Peso mark-up</i>	5.00
<i>Purchase cost/ buying price</i>	$\div 10.00$
<i>Percentage Mark up</i>	<u>.5 or 50%</u>

4. **Calculate your percent mark-up based on selling price.** This is done by dividing the peso mark-up by the selling price

Example

<i>Peso mark-up</i>	5.00
<i>Selling price</i>	$\div 15.00$
<i>Percentage mark up</i>	<u>.33 or 33%</u>

5. **Make sure you consistently use either cost of the product or selling price to find the percent mark-up on an item.** Even though the cost, selling price, and peso mark-up will always be the same, the percentage mark-up will be different depending on if you calculate it using selling price or cost. Using selling price will give you a lower percentage mark-up (assuming you are making a profit), while using cost will give you a higher percentage mark-up.

E

What I can do?

- I. Direction.** Complete the following table. Answer and show your solution in a separate sheet of paper.

Items Purchase	Cost/buying price	Selling Price	Peso Markup	Percentage mark up
Suman	5.00	7.00		
Puto	7.00	10.00		
Pulvoron	3.00	4.00		
BananaChips	25.00	35.00		
Bananaque	10.00	15.00		

- II. Directions:** Fill in the blanks with the correct word or group of words that make the statements complete and correct

1. Brown sugar is needed to be _____ into the measuring cup before levelling off to hold its shape.
2. Spring scales should be adjusted so that pointer is at _____.
3. Powder ingredients like flour and sugar needs to be _____ to take out lumps.
4. Butter should be place in a _____ to easily cut into the desired measurement to smoothen its texture.
5. Rice and flour are measured through _____.

E

What else can I do?

List down 5 measuring tools and materials needed in cooking or baking.

You can print, draw, or cut out pictures from old magazines for the tools and materials and **label its uses** (Just choose one option).

Measuring Tools and Materials used in



SCORE	CRITERIA
10	Properly drawn or compiled complete 5 measuring tools in a very clean and attractive manner and were able to classify and label their uses.
6	Properly drawn or compiled (3-4) kitchen tools in a clean and attractive manner and were able to classify and labelled them with not more than three errors.
2	Properly drawn or compiled (1-2) kitchen tools in a clean and attractive manner and were able to classify and labelled them with two errors and below.

Use the given Rating Scale as your guide for doing your activity

What I have learned?

You are almost done in this module. I hope you learned a lot. Now it is time to show to your subject teacher the activity you are about to demonstrate to assess your knowledge and practical skills.

What I can achieve?

LO 1 Activity- MEASURING DRY AND LIQUID INGREDIENTS

Choose ANY of the tasks given and perform it.

OPTION1: Show your knowledge in tools familiarization and demonstration. Use the given Rating Scale as your guide for doing your activity. Choose 2 kitchen measuring tools. Take a short **video presentation** of an actual demonstration of each kitchen measuring tool. The content should have the **kitchen measuring tool name, proper demonstration on how to measure a certain dry and liquid ingredient.**

Example: Ingredients: 1. Flour (DRY INGREDIENTS) - show how to properly measure flour in a measuring cup **wearing the complete personal protective equipment x 0076 (mask, hairnet, and apron)**

OPTION 2: Draw or cut-out pictures from old magazines of at least 5 kitchen measuring tools and indicate their uses. The content should also be properly labeled with this information: **Kitchen measuring tool name and kinds of ingredients measured.**

Send your output through **ANY** of the following:

a.) Video demonstration – send to your TLE teacher thru FB messenger.

b.) Drawing and Cut-outs- place on a bond paper and attach it in your activity sheet upon submission

NOTE: Ask guidance or assistance from your guardian in making this activity.

RUBRICS FOR SCORING	SCORE
Observe proper way of measuring dry and liquid ingredients and using of correct tools with no mistake	10
Observe proper way of measuring dry and liquid ingredients and using of correct tools with less than 2 mistakes	7
Observe proper way of measuring dry and liquid ingredients and using of correct tools with more than 3 mistakes.	3

LO.2 Activity:

I. Costing and Cooking of Native Delicacies

Option 1: Research and choose your own native delicacies recipe, print or cut outs sample picture of the kakanin of your choice.

- In your chosen recipe you will make a list of each Ingredients with indicated *Unit cost, Total cost, Peso mark up and Selling Price* per serving.
- Compute for the mark up percentage of your Native Delicacy

Option 2: Find a vendor of native delicacies in your nearby area. Choose one of her/his product and take a photo of it ask permission if he/she can make some selfie with you together with her/his product. (*Optional*). Assess her/his product by answering the rubrics below.

- Interview the vendor on how he/she made the said products answering the following: *Unit cost, Total cost, Peso mark up and Selling Price* per serving
- What makes her/him decide to sell the product?
(*Observe social distancing and wear protective materials if you will go out for an interview*)

Submit it in the form of: Choose only one.

- Put your output in a long bond paper in a form of Narrative.
- Compile and encode it in WORD DOCUMENT and submit your file to your teacher's social media class account.

RUBRICS FOR KAKANIN PRODUCT:

For Option1-Rubrics for your Native Delicacy output. (The teacher will place points in rubrics)

Characteristic	Good (10)	Fair (7)	Poor(3)
Shape: Well formed when served			
Color: Uniformly blended color and attractive			
Texture: Well Cooked			
Flavor: Pleasing flavor according to each exact flavor			
Presentation: Attractive plating and packaging			

Assessment

LO1 Direction: Answer in a separate sheet of paper.

I. Convert the following measurement as stated in each number:

1. 8 CUPS = _____ Tablespoon
2. 1 CUP = _____ ml
3. _____ grams = $\frac{1}{4}$ kilo
4. 1000 grams = _____ kilo
5. 4 tbsp = _____ cup

II. Choose the correct letter for your final answer.

1. What degree of Fahrenheit is considered as a very low temperature?
A. 250 °F B. 325-350 °F C. 425-450 °F D. 500 °F
2. Big amount of dry ingredients like flour and sugar are measured through what kind of measuring tool?
A. Liquid Cup B. Measuring Cup C. Measuring Spoon D. Spoon
3. Why we need to sift powdered ingredients like sugar, flour and rice?
A. to take out lumps
B. to make the texture smooth
C. to get accurate measurement
D. none of the above
4. What kind of tool is needed in sifting dry ingredients?
A. Cup B. Sifter C. Spoon D. Weighing Scale
5. What kind of measuring tool is used to measure large amount of dry and liquid ingredients that measures in grams and kilo?
A. Colander B. Sifter C. Spoon D. Weighing Scale

III. Write the substitution for the following ingredients. Write your answer on a separate sheet of paper.

1. 1 cup Buttermilk
3. 1 tablespoon Corn-starch
5. 2 cups Tomato sauce
2. 1 cup Chili Sauce
4. 1 cup Cake Flour

IV. Answer the following by completing the table below. Show your solution.

Item	Unit Cost	Total Cost	Peso Mark-up	Selling Price per Serving
2kilos of chicken	160.00/Kilo	320.00		
2head of garlic	50/Kilo 20pcs/head in 1kilo	5.00		
2Tbsp soy sauce	17.00/bottle APPROX.35 Tbsp in 1bottle	1.00		
1 tsp group black pepper	1.00/small pack $\frac{1}{2}$ tsp/pack	2.00		
$\frac{1}{2}$ cup Vinegar	15.00/bottle APPROX. 2cups /1bottle	3.75		
2 Tbsp Cooking Oil	135.00/1000ml APPROX.68Tbsp/1000ml	4.00		
TOTAL				

Module 4

I *What I need to know?*

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

The module is divided into two lessons, namely:

- LO1- Read and Interpret Kitchen Layout
- LO2- Create Kitchen Layout

After going through this module, you are expected to:

1. identify signs and symbols according to job specifications
2. classify sign, symbols and data are determined according to classification or as appropriate in drawing.
3. identify the appropriate types of kitchens and layouts

I *What is new?*

LO1 Interpret Kitchen Layout

Are you ready to learn on how to interpret kitchen layout? Have you imagine designing your own kitchen lay out in the future? That is sound so interesting right? Planning and construction of any building begins from designing its floor plan including kitchen plans and a set of electrical, telecom, piping, ceiling plans. The kitchen is popular gathering spot in most homes. In a typical Filipino home small kitchen will do but practically we are ideally extended family and that should be considered in planning a bigger kitchen design in planning future homes. A lot entertaining is done in this room as family and friends gather in an area close to where meals are being prepared especially, we Filipinos are very hospitable and love to entertain and serve meals with our guests.

The kitchen is where families spend an important amount of time. Much of that time may be spent rushing around trying to get ready for a new day each morning, but it is also a place where the family may meet at the end of the day to talk about the day's events. There is no doubt about the fact that kitchens are where memories are made and shared on regular basis. In planning kitchen layout, you spend some time creating a practical yet beautiful space during your house planning or even remodel with a new kitchen design layout.

LO2. Sketch Kitchen layout





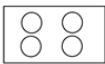
Most families have spent more than enough time in their kitchen analyzing which areas they want to improve during the time of renovation. They have many designs in mind but considering if that's appropriate for their area.

When you entertain guest, is there enough room for family and friends to gather outside of the main cooking area so they can chat and talk while they watch the food being prepared? Or must everyone stand inside the kitchen during this busy time because there is nowhere else to stand? These and many other issues are all areas that can be addressed in a kitchen design layout.

D

What I know?

LO 1: Match Column A to B.

1. Dishwasher	A. 
2. Cabinet with sink	B. 
3. Refrigerator	C. 
4. Stove or Range	D. 
5. Toilet	E. 

LO 2:

I. Direction: Choose the best answer.

1. *A kitchen work stations where refrigerator and pantry items are here.*
A. Clean-Up Station C. Preparation/Cooking Station
B. Food Storage Station D. None of the above
2. *What is the basic layout principles?*
A. Baking Triangle C. Storage Triangle
B. Cooking Triangle D. Work Triangle
3. *What are the primary kitchen work stations?*
A. Food Storage, Preparation/Cooking and Clean-Up Station
B. Food Storage, Preparation/Cooking and Over-all Section Station
C. Work Triangle, Preparation/Cooking and Material Storage Station
D. None of the above
4. *What kind of kitchen layout is the most flexible and most popular?*
A. Island Option B. G-Shaped C. L-Shaped D. U-Shaped
5. *What type of kitchen shape layout is ideal for larger families needing extra storage space?*
A. Island Option B. G-Shaped C. L-Shaped D. U-Shaped

D

What is in?

In this module, you will be introduced to different learning activities. Preparing you to be knowledgeable and skillful about Kitchen Layouts.

Get ready to learn new knowledge and skills as you go on further learning using this module.

We are here to guide you on how to accomplish each task included here with the content focusing on: **Interpret Kitchen Layouts** and **Sketch Kitchen Layout**

D

What is it?

Now let us test your knowledge in answering questions. Below are sets of questions where you can tell your ideas regarding our topic:

1. Why we need to plan before constructing kitchen layouts?
2. How this kitchen symbols helps us in planning kitchen layouts?
3. If you will be given the chance, will you design your own kitchen layouts? Why?
4. What can you say about the kitchen layouts you research?
5. Do you have any idea if what kind of kitchen layout designs are those? Explain

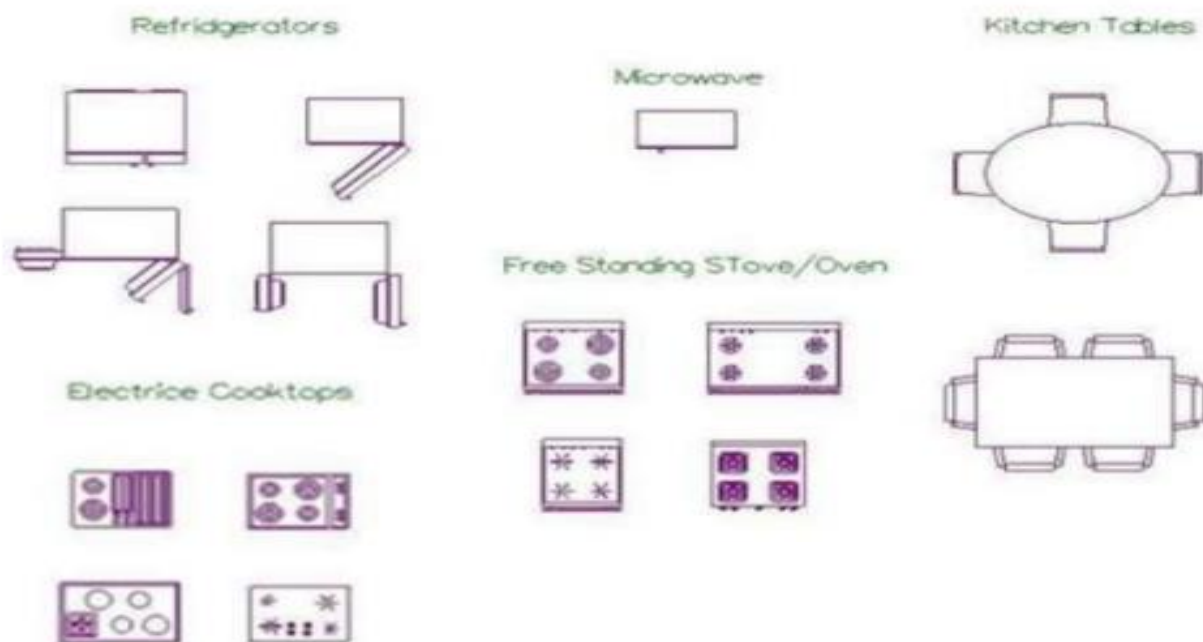
Rating	Description
5	The answer is complete, brief yet accurate, and free from any spelling or grammatical errors.
4	The answer is brief, mostly accurate, and with few spelling or grammatical errors.
3	The answer is wordy but quite accurate and with few spelling or grammatical errors.
2	The answer is too wordy but quite accurate and with some spelling or grammatical errors.
1	The answer is irrelevant with some grammatical and spelling errors.

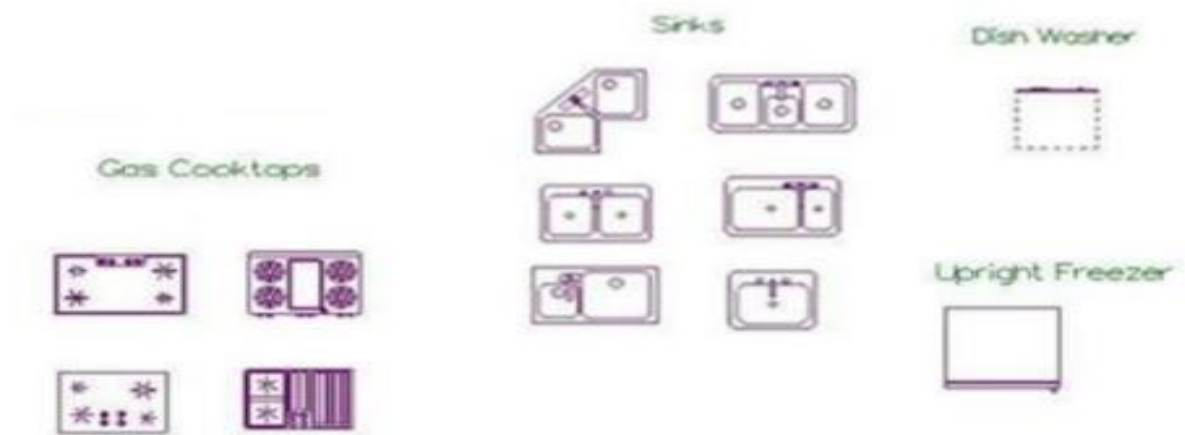
L01

E What is more?

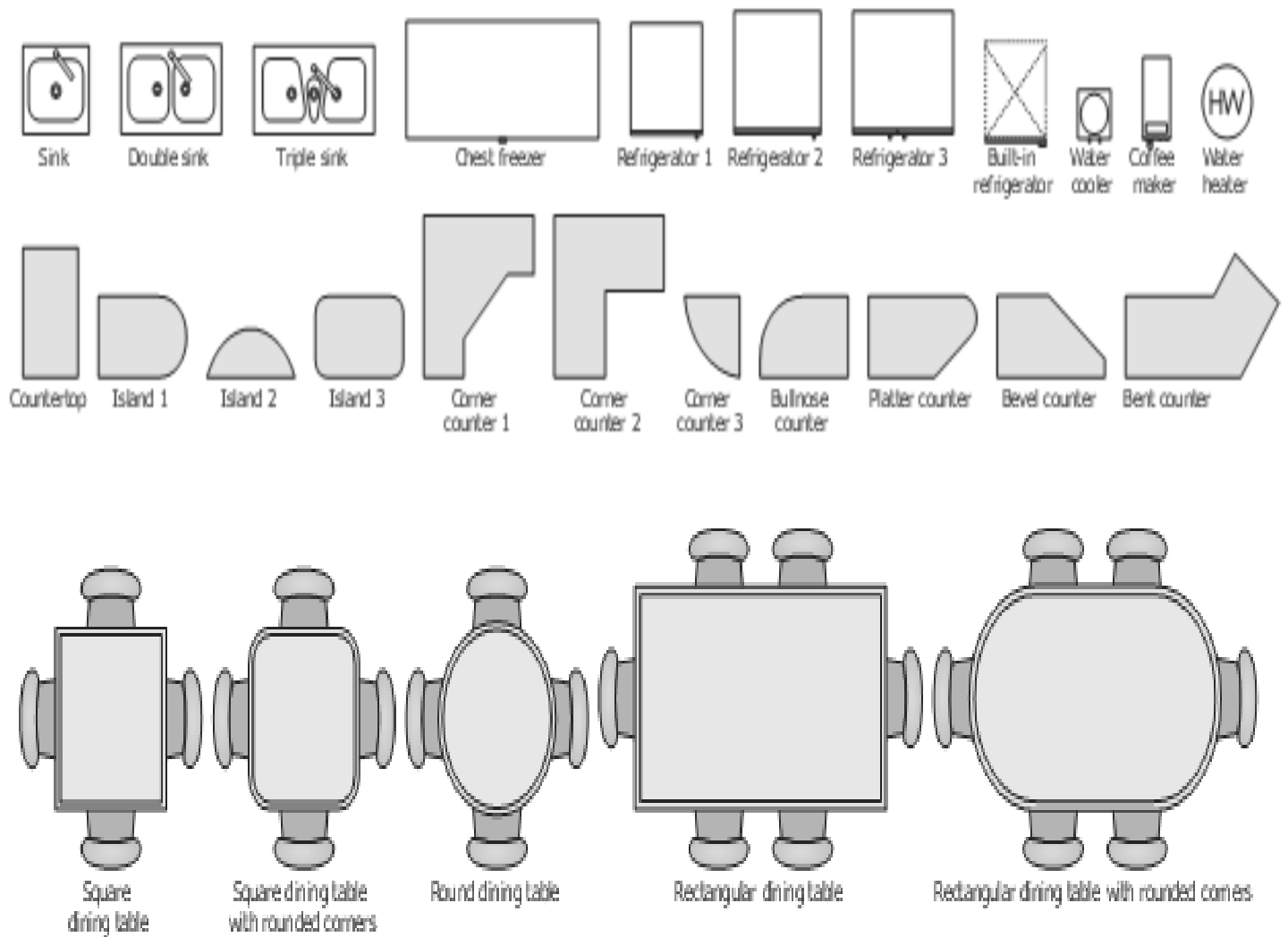
Kitchen Floor Plan Symbols

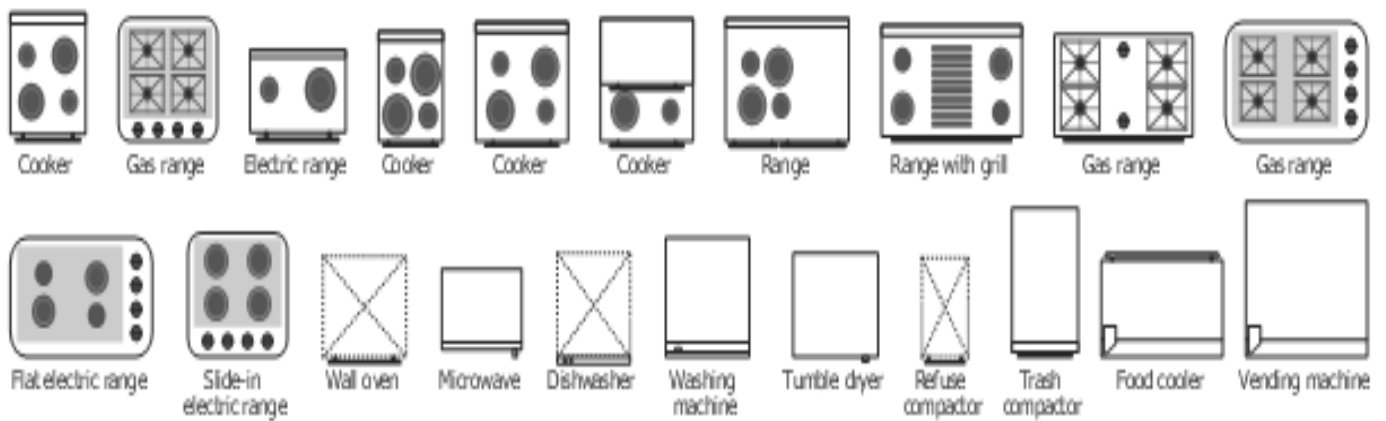
Even you're not an architect you can still design your own kitchen layouts, especially when some minor renovation is just needed, before you sit down and begin planning your kitchen design layout, inspiration aspects of your kitchen that you truly love as well as areas that you want to improve. Ask all members of the family to contribute their ideas. It may be also be helpful to ask a few close friends or family members for their thoughts on your kitchen. You want everyone who visits your family to be comfortable and feel welcome, so getting some opinion from your guests' viewpoint can be helpful. You can sketch a few ideas you have in mind for your layout on your own. Another option is to look in a few home improvement magazines or books, search in a reliable internet source or watch YouTube for great ideas.





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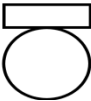
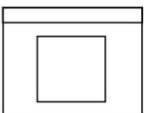
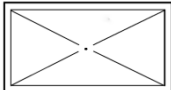
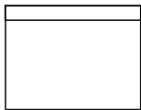
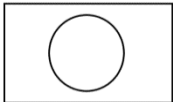

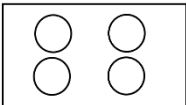





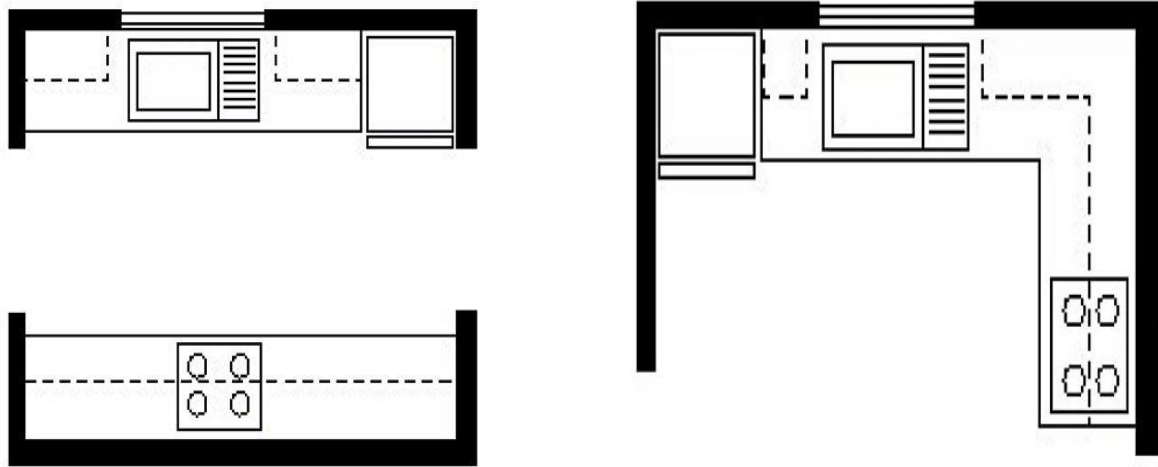
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wCw&q=basic+kitchen+floor+plans+and+symbols&oq=basic+kitchen+floor+plans+and+symbols&gs_l=img.3...62805.74163..74393...3.0..0.351.6242.0j35j3j2.....0.....1..gws-wiz-img.....0i19j0i8i30i19.NRVAHYYPbw#imgrc=mFDZqsgnHXWVqM

SAMPLE KITCHEN BASIC SYMBOLS

Free Standing Sink		Fridge	
Toilet		Washer	
Shower		Dryer	
Cabinet with Sink		Cabinet	
Stove		Hot Water Heater	

SAMPLE KITCHEN LAYOUT AND SYMBOLS



<https://www.realliving.com.ph/home-improvement/decorating/6-basic-kitchen-layouts>

Definition of Terms

Work Centers – focused around major appliances – refrigerator-freezer, range, or sink. These centers make possible an orderly flow of activities connected with food storage, preparation, cooking serving, and clean-up.

Workflow – where work is done most efficiently when it flows in a natural progression, either from left to right or right to left.

Work Simplification – means doing the job in the easiest, simplest and quickest way.

Workstation – simply means a specific work area where a particular kind of food is produced, or a specific job is done.

Work Triangle – an imaginary line drawn from each of the three primary workstations in the kitchen and avoid traffic flow problems.

LO2 UNDERSTANDING THE BASIC KITCHEN LAYOUTS

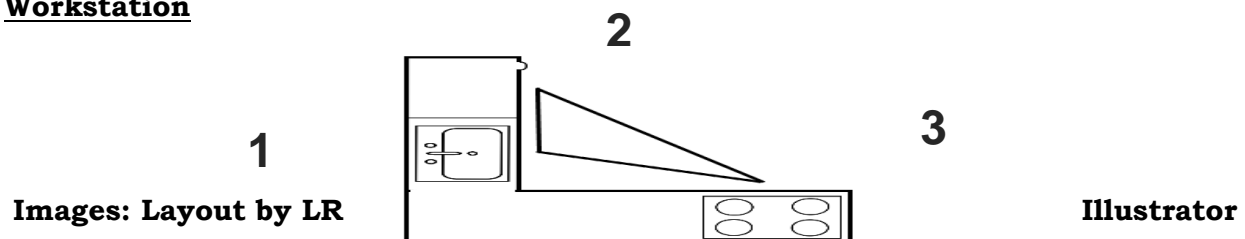
Are you familiar with the different kitchen layouts? If not, then this is the best time for you to understand and know the different kinds of kitchen layouts. Understanding the basic principles of kitchen layout will help you to make and understand the design procedure. One of the most basic layout principles is the work triangle. The **work triangle** is an imaginary line drawn from each of the three primary workstations in the kitchen - the food storage, preparation/cooking, and clean-up stations. By sketching these lines, you can assess the distance required to move to and from each area and thus determine how well the

traffic will flow. To help avoid traffic flow problems, work triangles should have a perimeter that measures less than 26 feet.

The three primary kitchen workstations which create the work triangle are:

- 1. The food storage station** - Your refrigerator and pantry are the major items here. Cabinetry like lazy Susan or swing-out pantry units adds function and convenience. Options like wine racks, spice racks, and roll-out trays help to organize your groceries.
- 2. The preparation/cooking station** - Your range, oven, microwave, and smaller appliances are found in this area. Counter space is important in this section. Conserve space by moving appliances off the counter with appliance garage cabinets and space-saving ideas like towel rods and pot lid racks.
- 3. The clean-up station** - Everyone's least favorite activity is one of the kitchen's most important - clean-up. This area is home to the sink, waste disposal, and dishwasher. Cabinetry for this station is designed to organize with the trash bin cabinet and rollout tray baskets for storage convenience.

Workstation



DETERMINING YOUR KITCHEN'S LAYOUT

The kitchen is one of the most active work areas of the home, it is important to select the right layout to complement your lifestyle and taste.

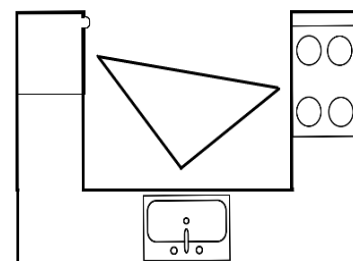
There are five primary kitchen layout shapes - the U-Shaped, L-Shaped, Island, G-Shaped and Corridor/Gallery- Single Wall shapes.

After learning about the work triangle in the section "Understanding Basic Kitchen Layout," you will now see how the work triangle functions in each layout and the advantages each layout offers

1. The U-Shaped Kitchen –

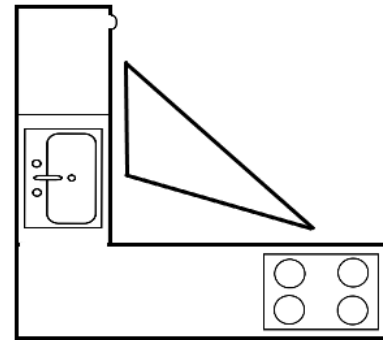
Named for the "U" shape it resembles, this kitchen is popular in large and small homes alike.

- Perfect for families who use their kitchens a great deal
- Provides plenty of counter space
- Efficient Work triangle
- Can convert one cabinet leg into a breakfast bar



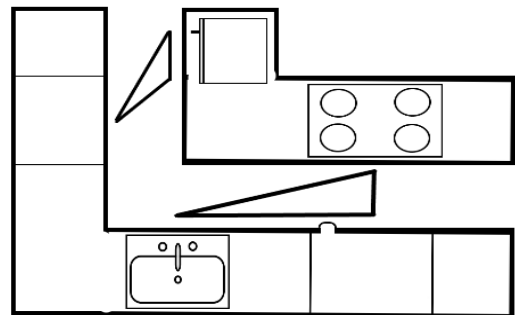
2. The **L-Shaped Kitchen** - This kitchen shape is one of the most flexible and most popular, providing a compact triangle.

- Very flexible layout design
- Major appliances can be placed in a variety of areas
- Work areas are close to each other
Can easily convert to a U-Shape with a cabinet leg addition



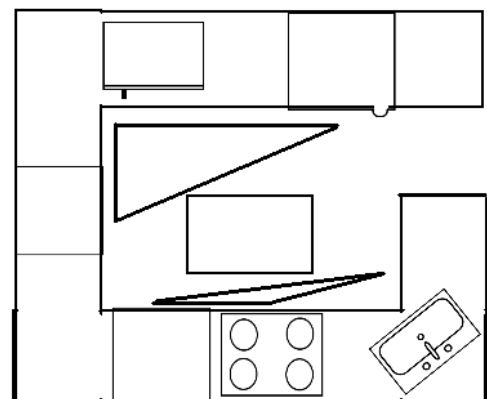
Images: Layout by LR Illustrator

The **Island Option**-Islands are extremely popular in homes today and are most often seen in L-Shaped kitchens. Islands can not only keep work areas traffic-free, but also create a wealth of extra counter and storage space. An island can be an indispensable food preparation station or act as a butcher block area. The island is also an ideal place to add an extra sink or an island grill.



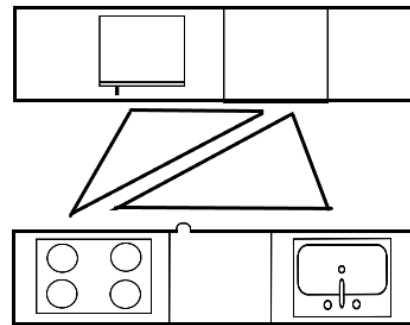
3. The **G-Shaped Kitchen** - Built very much like the U-Shaped with the addition of an elongated partial wall, the G-Shaped kitchen offers a great deal of space.

- Ideal for larger families needing extra storage space □ Plenty of counter and cabinet space
- Multiple cooks can function well in this layout
- Can convert one cabinet leg into a breakfast bar or entertaining area



4. **The Corridor/Galley Kitchen** - This style kitchen makes the most out of a smaller space.

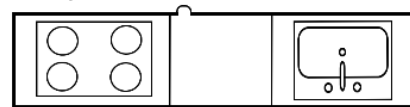
- Great for smaller kitchens
- Appliances are close to one another
- Easy for one cook to maneuver
- Can easily convert to a U-Shape by closing off one end



The **Single Wall/Pullman Kitchen** –

Designed for homes or apartments, the single wall kitchen offers a very open and airy feel.

- Ideal for apartments and smaller homes
- Works well with the open designs found in many contemporary homes
- Small moveable table can provide eating space
- Can be enhanced with the addition of an island Single Wall/Pullman:



Images: Layout by LR Illustrator



What I can do?

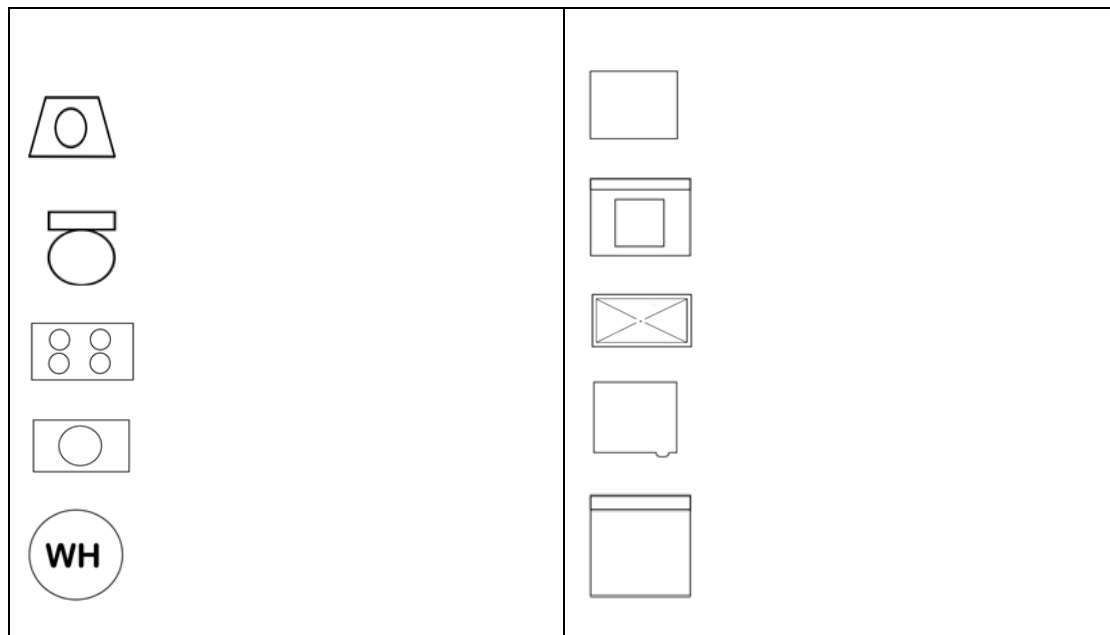
LO 1

SCORING CRITERIA	SCORE
Properly Demonstrated and interpreted 5 or more kitchen floor plans and symbols with no mistakes.	10
Properly Demonstrated and interpreted 5 or more kitchen floor plans and symbols with more than 2 mistakes	8
Properly Demonstrated and interpreted 3-4 kitchen floor plans and symbols with less than 2 mistakes.	6
Properly Demonstrated and interpreted 2-3 kitchen floor plans and symbols with more than one mistakes,	4
Demonstrated and interpreted 2 kitchen plan and symbols with one mistakes	2
Demonstrated and interpreted 1 kitchen plan and symbols	1

After having discussed the different kitchen floor plans and symbols, you are now ready to lay-out your own dream kitchen. Complete your sketch by placing the necessary symbols to show the different appliance, counters, areas and the direction of workflow. Use a separate sheet (long bond paper)

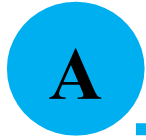
E *What else can I do?*

ACTIVITY1: Name the correct term of each kitchen symbols:



A *What I have learned?*

You are almost done in this module. I hope you learned a lot. Now it's time to show to your subject teacher the activity you are about to demonstrate to assess your knowledge and practical skill



What I can achieve?

LO2

Sketch Your Kitchen Layout

Take a picture with your present kitchen layout at home. Print or put it in a word document. Identify the kind of kitchen layout designed and answer the following questions below: (Put it in long bond paper)

- Type of Kitchen Layout at home: _____
- Do you think the kind of kitchen layout in your home is appropriate in your kitchen area and type of family size you have? Why?
- If you will be given a chance to change or remodel your kitchen layout, would you change it? What would be the type of kitchen layout you want to replace?

II. Additional (20 POINTS): Put your sketch below or at the back of your Activity LO2- Activity I. Sketch and remodel your kitchen layout following the given criteria.

SCORE	CRITERIA
10	Properly drawn and applied workflow in a standard and attractive manner and were able to defend why it is being remodeled.
7	Properly drawn and applied workflow in a usual and smart manner and were able to defend why it is being remodeled.
2	Drawn, but did not applied workflow and were not able to defend well why it is being remodeled

Assessment

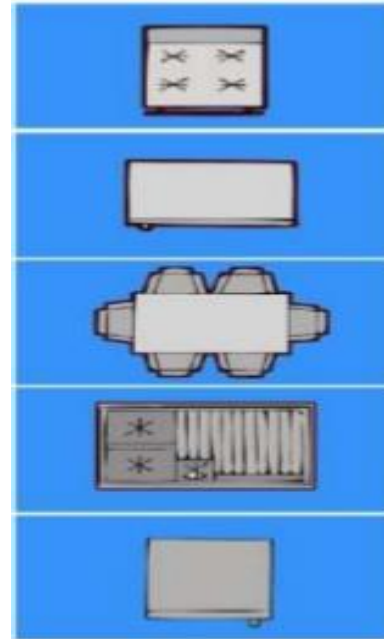
LO1

I. Match and make a line connecting from column A to column B

A.



B.



Retrieved: <https://www.slideshare.net/danguielquillo/kto12-tle-home-economics-1mcommercial-cooking>

LO2

Direction: I. Fill in the blanks with word or group of words that will make the statement complete.

1. Workstation simply means a _____, _____ and _____ where a particular kind of food is produced.
2. Type of kitchen which is most suitable for large families is _____.
3. An imaginary line drawn from each of the three primary workstations in the kitchen is _____.
4. The term that means doing the job in the easiest, simplest, and quickest way is _____.
5. Type of kitchen which is the most popular and compact is _____.

Module 5

I

What I need to know?

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

The module is divided into two lessons, namely:

- LO 1 Identify hazards and risk
- LO 2 Control hazards and risk

After going through this module, you are expected to:

1. follow occupational Health and Safety (OHS) procedures for controlling hazards/risks in workplace are consistently.
2. understand and deal with workplace accidents, fire and emergencies are followed in accordance with organization OHS policies
3. practice personal protective equipment (PPE) is correctly used in accordance with organization OHS procedures.
4. understanding the appropriate assistance provided in the event of a workplace emergency in accordance with established organization protocol



What is new?

LO1

In cooking we are not only give importance to the food we cook. Cooking is an activity that needs proper guidance and extra care for the safety of the food we prepare and the safety to our self as a cook. Applying health safety and security procedures in the workplace is an obligation. Hazards/risk in their corresponding indicators was identified to minimize or eliminate risk to co-workers, workplace, environment and Contingency measures during workplace accident, fire and other emergencies are recognized and established in accordance with organization procedures.

LO2

We can control hazards and risk as possible as we could in our workplace. We can control this kind of situation if we follow standards and apply safety practices in our workplace. Effective controls protect workers from workplace hazards; help avoid injuries, illnesses, and incidents; minimize or eliminate safety and health risks; and help employers provide workers with safe and healthful working conditions

L.O 1.1

Occupational health and safety

Occupational Health and Safety (OHS) is a planned system of working to prevent illness and injury where you work by recognizing and identifying hazards and risks. Health and safety procedure is the responsibility of all persons in the cooking service industries. You must identify the hazards where you are working and evaluate and control how dangerous they are. Eliminate the hazard or modify the risk that it presents. An occupational health and safety management system should follow the following elements:

Commonly Encountered Maintenance Problems in Commercial Kitchens

The commercial kitchens are the production units of any organizations whether it is a Hotel, Restaurant, Banquet or any other business outlet like Fast Food, or road side eateries. These kitchens consist of mostly white powder coated metallic false ceilings stainless steel kitchen equipment's and kota stone flooring. In some kitchen, we may find aluminum sheet false ceiling. The light fittings are recessed in false ceiling and have Perspex cover over the fluorescent tubes to avoid any glass breakage falling in food items. The kitchen equipment are operated with electricity, LPG, Coal and water.

Electrical Hazards

Workers in kitchen are exposed to shocks and electrical hazards from:

- Worn electric cords or improperly used or damaged extension cords
- Improperly wired or ungrounded outlets
 - Faulty equipment and wiring
 - Damaged receptacles and connectors
 - Wet clean-up processes

Unsafe work practices



Retrieved:<https://ktvq.com/sponsored/yellowstone-valley-electric/2019/05/06/safety-starts-with-you-tips-for-spotting-potential-electrical-hazards-in-your-home/>

https://www.google.com/search?q=electrical+hazards&safe=active&source=lnms&tbm=isch&sa=X&ved=0ahUKEwip5tnSr9LiAhXJurwKHULmAz8Q_AUIECgB&biw=1366&bih=625#imgsrc=MeaAQeSWganVmM:

(a) Electrically operated kitchen equipment:

- Tripping of miniature circuit breakers because of wrong selection in terms of capacity, short circuiting etc.
- Overloading of circuit by using high rated kitchen equipment in less rated M.C.B.
- Failure of insulation of P.V.C. wires due to overheating of circuit or continuous use of Electrical Equipment.
- Short circuiting of air heaters being used in hot cases and service counters for continuously long hour's usage.
- Burning of immersion heaters of *Bain Marie* when sufficient water quality is not available in the *Bain Marie*.
- Short-circuiting of electrical wiring by putting water on electrical switches while cleaning the kitchen during night hours by unskilled worker.
- Damaging the immersion heaters of tea/coffee boilers and milk boilers by not monitoring the quantity of water in tea boiler and that of milk in milk boiler.

(b) LPG Operated Kitchen Equipment:

- The cooking ranges are operated on LPG and if LPG supply is not maintained properly, it may cause the problem of fire in kitchen.
- Smoke created by continuous use of LPG in commercial kitchen.

- The hoods over the ranges should have filters to control oil and grease, otherwise the smoke carried along with oil and grease shall cause problems of fire in exhaust chimney.
- The LPG operated equipment have burners which needs to be cleaned regularly to avoid mishap.
- The oil, grease used in cooking and production of food items to be handled properly otherwise spillage over LPG operated equipment can cause problem of fire.

(c) Water Operated Kitchen Equipment:

Dish washing machines needs electricity and water both. As the water mixes with chemicals used for cleaning the plates, glasses, etc. the water and chemicals create mishaps and hazards. The electrical operated kitchen equipment are hot case, Bain Marie Service Counter, Refrigerators, Coffee Machine, Tea-Coffee Dispensers, Deep Freezers and Masala Grinders etc.

The equipment like cooking ranges, Chinese Cooking Range, Griddle Plate, Oven and Bakery Oven are operated on LPG. The tandoors in kitchen are operated with coal. The dishwasher sink, counter sink and bain marie etc. need cold water and hot water for their use. We face many problems in these commercial kitchens in a day to day use.

Apply health, safety and security procedures in the workplace

Running a business in a cafeteria or a big food service establishment is a demanding job. Consider the following responsibilities if you are a worker or an owner of such business.

- Protecting your property from fire;
- Protecting your property from natural hazards;
- Protecting your property from crime;
- Protecting your staff and visitors from accidents;
- Legislation that may affect your business.

Most kitchen fires occur in kitchen ranges, boilers or deep-fat fryers and can often be traced back to poor cleaning regimes.

A. Protecting Property from Fire

- ✓ Ensure that cooking ranges, boilers and deep-fat fryers are fitted with thermostats or emergency cutoff valves to turn off the fuel supply should a fire break out.
- ✓ Ensure that filters are removed and de-greased frequently to prevent a buildup of greasy deposits.

This should be done weekly but you may need to consider more frequent cleaning if the equipment issued for long periods on a daily basis.

- ✓ Store all combustible materials away from buildings or perimeter fencing – preferably inside locked waste bins or lidded skips. Ensure they are emptied regularly. If no suitable outside location is available, use a secure internal storage area.
- ✓ Be vigilant when you open and close the premises each day – look for signs of potential trouble e.g. graffiti or damage to fences – remove graffiti and repair any damage immediately to deter further damage occurring.

Electrical faults

Prevention of faults is the answer here and this can be achieved by:

- ✓ Frequent visual inspections of all portable electrical items and fixed electrical wiring.
- ✓ Regular maintenance of these items by an authorized agency or licensed electrician may be recorded and monitored.

Smoking

- ✓ Ideally smoking should be prohibited throughout the premises (including yards and open areas) and notices to that effect prominently displayed.
- ✓ Ensure smoking is restricted to a designated area that is kept free of combustible items such as paper, curtains, and flammable liquids.
- ✓ Provide metal lidded bins for the disposal of ashtray contents and ensure they are emptied safely every day. Do not dispose of them with other combustible waste.
- ✓

B. Protecting establishment from natural hazards.

Flood

- ✓ Firstly, check with the local authority whether property is in a flood risk area. If it is then you should:
 1. Prepare a flood plan for your business detailing the actions you will need to take to minimize damage and disruption.
 2. Practice putting the plan into action so that you and your staff will be sure it works and have experience of what to do.

Water Escape

- ✓ Get dripping taps repaired as they can cause damages.
- ✓ Ensure pipes are properly lagged using suitable insulation material.
- ✓ If your premises are likely to be unoccupied for a longer period e.g. over Christmas and New Year, turn the water off at the stopcock and drain the system if possible.

Storm Damage

Making sure your premises are in a good state of repair, it will minimize the chance of storm damage

- ✓ Check the building regularly (walls, roof and any outbuildings) and ensure any problems you find are repaired promptly.
- ✓ Check at least once a year that roof gutters, down-pipes and drainage gulley's are clear and unobstructed and kept free of leaves and vegetation.

C. Protecting property from crime

Burglary

Thieves frequently see catering businesses as an easy target, and it is wise to ensure that you have a good level of security at your premises.

- ✓ Locks on external doors should carry standards and high-quality materials. All accessible opening windows should be fitted with key-operated locks – but protect secluded windows and roof-lights with steel bars, grilles, or shutters.
- ✓ Consider fitting shopfronts with grilles or shutters to deter smash and grab raiders
- ✓ Given time, almost any physical security can be overcome, consider fitting an Intruder Alarm system which will act as a deterrent and limit the time an intruder will have on your premises. Any alarm system should be fitted and maintained.
- ✓ Closed Circuit Television (CCTV) can help determine and capture evidence of robbery. Any system should be fitted and maintained by an installer registered with a nationally recognized installation body such as - NSI (National Security Inspectorate) and SSAIB (Security Systems and Alarms Inspection Board).
- ✓ When your premises are closed, lock away portable electronic equipment e.g. laptop computers in a secure cabinet. Consider fitting access control locks on entrance doors to prevent intimidation or robbery

Theft of money

NOTE: Keeping cash on the premises overnight increases the chance of a break in:

- ✓ Keep as little cash on the premises as possible and keep it out of public view
- ✓ Where possible, cash should not be left on the premises outside business hours.
- ✓ Empty the cash register over-night and leave the drawer open as this often deters thieves.

D. Protecting your staff and visitors from accidents. “Prevention is better (and cheaper) than cure”.

➤ Slips, Trips and Falls

The most common type of workplace accident, these can be easily and cheaply prevented in most cases and will often bring other benefits.

- ✓ Keeping the premises clean, tidy, congestion-free and well-lit will go a long way to preventing most of this type of accident.
- ✓ Clear up spillage promptly and post warning notices.
- ✓ Repair or replace damaged floor coverings immediately – especially on stairways and areas where the public have access.
- ✓ Keep a clearly marked first-aid kit available at all times.

Electricity

Electricity can and does kill and the law insists that your electrical installation must be safe.

- ✓ Ensure electrical equipment is only used for the purpose for which it was designed.
- ✓ Use a qualified electrician for electrical installation work and for regular testing of portable electrical items to ensure they are in good working order.

Fire safety

Carrying out a fire risk assessment is a legal requirement for all businesses (even one person operations); this helps prevent fires and ensures swift evacuation of the premises by employees and the public in the event of a fire.

- ✓ Ensure you have clearly sign and unobstructed escape routes and that your staff are aware of the evacuation procedure. Arrange regular practices to reinforce this.
- ✓ Ensure that you make a specific member of your staff responsible for customers' and visitors' safety in the event of an emergency evacuation of the premises.

Preventing injuries caused by manual lifting of heavy items is also the subject of regulations and solutions to this problem can easily be achieved.

- ✓ If loads must be manually lifted, ensure they are carried by at least two people and that training in lifting techniques is provided.
- ✓ Provide mechanical equipment e.g. trolleys to assist staff in unloading and moving deliveries. In addition, ensure deliveries are as close as possible to the location where they will be stored or used.

E. Accident reporting and investigation

Make sure that all accidents and incidents are recorded and investigated as lessons can be learned to prevent them in future. As long as the recording method is accessible and secure it will be accepted – computer records are fine.

F. Legislations that may affect business

We have mentioned some areas where legislation may affect your business - Fire Safety, Food Hygiene and Electricity. There may be other regulations from other regulatory board like Food and Drug Administration (FDA) particularly on manufacturing, packaging and storing food. Be aware and knowledgeable

Definitions and Terms

Bacteria – a simple, single celled microorganism.

Electroshock - caused by touching exposed electrical wire or a piece of electrical equipment which is not grounded properly.

Force Majeure- a calamity caused by nature e.g. storm, flood, earthquake

Grounded – means that the electrical conductor is connected to the ground, which becomes part of the electrical circuit

Hazard – a situation that could be dangerous to people in the workplace

Microorganisms –are living cells so small that they can only be seen in a microscope. They are commonly found to contaminate food – bacteria, molds, and yeast.

Molds – also a microorganism, that has “furry” growth often found on spoiled food.

Sanitation – the science and practice of maintaining clean and healthy conditions of food production so that the food served to customers cannot make him ill.

Toxin – a poisonous substance that makes you sick

LO2 Control hazards and risk

OHS Policies and Procedures are a major part of protecting the safety, health and welfare of people engaged in work or employment. Having a clear set of OHS Policies and Procedures will make it clear to all concerned where the guidelines and boundaries are in relation to the operation of the business

Effective controls protect workers from workplace hazards; help avoid injuries, illnesses, and incidents; minimize or eliminate safety and health risks; and help employers provide workers with safe and healthful working conditions. The processes described in this section will help employers prevent and control hazards identified in the previous section.

To effectively control and prevent hazards, employers should:

- Involve workers, who often have the best understanding of the conditions that create hazards and insights into how they can be controlled.
- Identify and evaluate options for controlling hazards, using a "hierarchy of controls."
- Use a hazard control plan to guide the selection and implementation of controls, and implement controls according to the plan.
- Develop plans with measures to protect workers during emergencies and non-routine activities.
- Evaluate the effectiveness of existing controls to determine whether they continue to provide protection, or whether different controls may be more effective. Review new technologies for their potential to be more protective, more reliable, or less costly.

Remember the following:

- ✓ **Use** caution when working around hot oil.
- ✓ **Get** trained in the proper use and maintenance of your deep fryer.
- ✓ **Observe** all safety procedures and wear all protective equipment provided for your use while preparing hot items
- ✓ **Use** gloves and scrapers and other cleaning tools with handles provided by your employer.
- ✓ **Use** the correct grease level and cooking temperatures for your deep fryer.
- ✓ **Keep** stove surfaces clean to prevent grease flare-ups
- ✓ **Avoid** reaching over or climbing on top of fryers and other hot surfaces. Clean vents when oil is cool.
- ✓ **Keep** floor surfaces clean and dry to prevent slipping or falling onto hot surfaces. Wear slip-resistant shoes. Floors should be cleaned often with grease-cutting solutions.
- ✓ **Do not** work closely to hot fryers when the floor is wet.
- ✓ **Do not** spill water or ice into oil. Do not store employee drinks by deep fryers. They could be easily bumped into the hot oil and cause a flare-up.
- ✓ **Do not** overfill or pour excessive amounts of frozen fries into deep fryer at one time. Overfilling causes excessive splashing and bubbling over of hot oil.
- ✓ **Do not** pour excess ice from fry packages into the fryer.
- ✓ **Do not** overheat the oil; use only manufacturers recommended cooking temperatures.
- ✓ **Do not** move or strain hot oil containers; wait until the oil is cool!
- ✓ **Do not** store oil on floors by grill area. Someone could slip and fall into the oil.
- ✓ **Extinguish** hot oil/grease fires by using a class K fire extinguisher.

UNDERSTANDING HAZARD AND RISK

HAZARD	RISK
WATER	Using /drinking water from a unsafe source of container
WORKPLACE	Wet floor
COOKING ACTIVITY	Not wearing complete Personal Protective Equipment

EXAMPLE OF KITCHEN HAZARDS

1. Rinsing Raw Meat and Poultry.- Dean Clever, PhD, an Institute of Food Technologists spokesperson on food and kitchen safety, says the USDA has backed off the idea that meat and poultry should be washed or rinsed—in fact, the organization’s website says there’s no need to do so. —Sometimes you may buy a chicken, and it has salmonella. If you cook it thoroughly, it will kill it, I Clever says. —” Washing it might spread the salmonella around.”

2. A Greasy Range Hood and Filter- Captain Peggy Harrell of the Plano Fire Department in Texas says grease that has accumulated under your range hood and on the filter is —just the kind of thing that can start a grease fire.Keep the underside of your hood clean, and follow the manufacturer’s guidelines for changing the filter regularly.

3. Radon Gas- Radon is a radioactive gas generated in rock soil that causes lung cancer—and sometimes collects in homes. The EPA says that radon is often found in water (people using wells rather than municipal water systems are at a higher risk), and is released when the water is agitated, as when washing dishes. The New York Times also recently investigated radon emission from granite countertops and cited studies that found some levels to be unsafe. The gas is not detectable by sight, smell, or taste, so the EPA suggests testing for it. Hardware stores sell inexpensive kits you can use to check the radon levels in your home.

4. No Fire Extinguisher-Do you have a fire extinguisher near your kitchen? Captain Harrell says you should (she even suggests that you give extinguishers as housewarming gifts). Look for an extinguisher that works on class A (ordinary combustibles), B (flammable liquids), and C (electrical fires), often called a multipurpose dry chemical extinguisher.

5. Dirty Sponges. Sponges- harbor disease-causing bacteria and spread those bacteria around kitchens. A study by microbiologist Carlos Enriquez at the University of Arizona found salmonella in about 15 percent of the sponges examined. Dean Cliver says that research shows that microwaving sponges for about one minute sterilizes them. But, he says, —There’s a caveat: The sponges should be wet. It never occurred to me that someone might microwave the sponge when it is dry. I A dry sponge can catch fire in a microwave.

6. Carbon Monoxide (CO)-CO is another invisible, odorless gas that could be hanging around in your kitchen. The EPA says at moderate levels it causes headaches, dizziness, nausea, and fainting—and at high levels it can be fatal. The gas is emitted anytime combustion appliances (such as gas stoves) are used, but dangerous levels occur only when these appliances are misused or misadjusted. To be safe, the EPA suggests that you have your gas range and oven inspected annually by a professional; never use a gas oven to heat your home; and never burn charcoal indoors. You can pick up CO test kits and alarms/detectors at hardware stores.

7. Mold- The EPA-Mold exposure can cause allergies, asthma, and other respiratory problems. Mold grows in areas where moisture accumulates, such as near leaky plumbing (check under your kitchen sink). The organization says that water damaged areas should be dried —within 24 to 48 hours to prevent mold growth. If you have a mold problem, the agency recommends decreasing indoor humidity by fixing leaks, using dehumidifiers, and turning on exhaust fans whenever cooking or using the dishwasher.

8. Overloaded Circuits- The U.S. Fire Administration says that in urban areas, faulty wiring accounts for 33 percent of residential fires; many avoidable electrical fires are caused by overloaded circuits. Older apartments often have few outlets, so tenants use extension cords or power strips. But this isn't safe, according to the FEMA publication Residential Building Electrical Fires. Because heat-producing cooking appliances use a lot of power, you should be particularly careful where you plug them in.

9. Bad Storage Habits in the Refrigerator. —The fridge is one place we ought to be paying attention, I says Dean Cliver. —Don't put drippy raw stuff over the salad bar. The USDA Food Safety and Inspection Service suggests placing raw meat, seafood, and poultry in sealed containers or plastic bags to prevent their juices from contaminating other foods.

10. Leaving High Heat Unattended-Peggy Harrell says that the most important thing you can do to be safe in the kitchen is to stay close when using high heat on the stovetop. If you must answer the door or the phone, she suggests keeping a spoon or a potholder in your hand so you have a visual reminder to get back in the kitchen immediately.

11. Stove and Oven Hazards- Whether your stove is gas or electric, it can pose a safety risk for every member of the household. Many people have burned their hands on a hot stove or as a result of reaching into an oven without a proper oven mitt. The risk of burns, however, is not the only reason that stoves can be dangerous:

- Drop-in stoves can tip over if not properly secured, particularly if someone leans on the door when it is open. To prevent this type of kitchen hazard, verify that your stove is properly secured.
- Pans not safe for direct heat can shatter if placed directly on a hot cook top after being removed from the oven. Always use trivets beneath pans when you remove them from the oven, regardless of what surface they are being placed on.
- Leaving stove burners on under empty pots and pans can be a fire hazard. Verify that the stovetop is turned off when food is finished cooking.
- Pots and pans filled with hot food can easily be knocked off if the handles are not situated properly. Always turn handles so they are facing away from the front edge of the stove.
- Failure to properly clean out the oven can cause fires while cooking. Clean the oven regularly, and never leave an oven unattended while in use.

12. Garbage Disposals - Garbage disposals are common in many homes and using them improperly can result in injury.

- Make sure that every member of the household fully understands how to operate the disposal safely.
- Never place your hand or fingers in the drain while the disposal is running.
- Never flip the switch while poking around in the drain

13. Small Appliances - Most kitchens house a variety of small appliances, including blenders, mixers, rice cooker, electric oven, microwave etc. Here are a few tips to keep in mind:

- Keep all small appliance cords away from the edges of the countertop to avoid catching a cord and knocking the appliance off the counter.
- Keep small appliances and their power cords away from the sink or other water sources while in use to avoid a shock hazard.
- Never reach into appliances like mixers and blenders while they're running.
- Keep the crock pot away from the edge of the counter so children can't accidentally touch it and get burned by the hot outer housing.

14. Kitchen Tools- Most kitchens house has a variety of small kitchen tools, including can opener, grater, strainer scissor etc. Here are a few tips to keep in mind:

- Keep all kitchen tools in a proper dry place.
- Always clean the kitchen tools before and after used. Pot it dry before keeping in the storage cabinet.
- Always check kitchen tools appearance before using to avoid infections and bacterial contamination.
- Always handle and used kitchen tools with care and according to its proper usag

15. Knives - Are among the most common kitchen hazards, particularly if they are not stored properly.

- Store your sharpest knives separate from the utensil drawer, either in a knife block or case.
- Keep the knife block out of reach of children, and put it in a safe place where it won't get knocked over.
- When storing knives in blocks, be sure that the handles are positioned so that they can be gripped easily.
- Place the blade of the knife in the block with the sharp side pointing up. This will help preserve the edges, as well as make it easy for household members to know what to expect when pulling out a knife.
- Knife cases should be firmly sealed so there's no risk of knives accidentally being exposed.
-

16. Household Chemicals

Many people store their chemical products, such as cleaning supplies and insecticides, in the kitchen. The most common storage spot for these types of products is underneath the sink. This places the products within easy reach of children, and even pets, if cabinet doors are not properly closed. Many of these products are harmful or fatal if ingested, and can also cause burns, skin irritation, and other problems. Install safety locks on the doors of the cabinet where any potentially dangerous chemicals might be stored.

- Store bleach and ammonia in separate areas because they can produce a dangerous reaction if they come in contact with one another.
- Keep the number for poison control posted on your refrigerator or inside a cabinet door in case you need help in a hurry

(Retrieve from k12 DEPED-TLE Module)

Be Aware of Kitchen Hazards

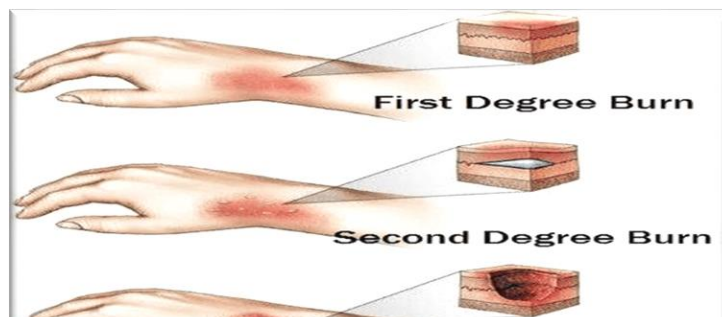
It is a good idea to periodically review how your kitchen is set up so you can make sure that everything is positioned and secured in a safe manner. It's also important to keep a fully charged fire extinguisher and first aid kit handy in the event of a worst case scenario. When you are aware of the most common kitchen hazards, it's possible to take steps to prevent unnecessary injuries and accidents from occurring

FIRST AID IN KITCHEN WORKPLACE

The kitchen is the heart of the home, and for good reason. However, it's important to remember that the kitchen can be dangerous if proper precautions are not taken. Hot surfaces, boiling pots, sharp knives, and slick, slippery floors can cause a great deal of harm, particularly to those not used to working in and around kitchen equipment.

While we must always be mindful of our safety, accidents can and do happen. Understanding the severity of your injury, your treatment options, and whether it's time to head to urgent care or the ER is important. Here are some guidelines for treating cooking and basic kitchen injuries.

INJURIES	TREATMENT
Burns Burns are usually sustained from grease popping, boiling water, or other hot substances. Maintaining a low flame or heat source, standing back from hot liquids, and using splatter screens are excellent solutions for reducing the risk of burns.	Treating BURNS Burns sustained from a hot surface or boiling water is best treated initially by placing the burn under cool tap water for at least 15 seconds. If there is any question about the severity of the burn or there are open blisters or wounds, cover the area with a clean dry cloth. See a medical provider as soon as possible. Burns from hot grease or sticky substances, such as caramelized sugar, are usually more painful, as they tend to stick to the skin. If the burn is severe and you intend to be evaluated by a medical professional, do not put any ointment on the burned area so that your clinician can properly assess the burn. Do not put ice or butter on the burned area as these measures do not help and may actually damage the skin tissue



<p>Cuts</p> <p>Hands are the most likely place to sustain a cut. Where on the hand you are cut depends on the treatment. The tips of the fingers and tops of the knuckles are less likely to sustain long-term injury; palms and fingers with deep cuts can have long-term issues</p>	<p>Treating Cuts</p> <p>First examine the depth of the cut and where it occurred. If the cut is not too deep and not in a sensitive area of your hand – such as the knuckles or fingertips – wash the cut with antibacterial cleanser, followed by mild soap and water. Next, apply antibacterial ointment, such as Neosporin, with a clean bandage that does not stick to the cut.</p> <p>If the cut is deep, bleeding profusely, or in a sensitive area, cover the wound with gauze or a clean towel and apply pressure with your palm, then seek medical assistance immediately.</p>
<p>Eye Injuries</p> <p>Eye injuries are also injuries to be mindful of, as they are more common for people who work around ingredients, such as peppers. A quick swipe of the hand can expose the eye to capsaicin, an oil found in chili peppers. This can cause irritation and infection. If your eye becomes irritated, have someone take you to the emergency room.</p> <p>Safety glasses and gloves can be used while cooking to reduce the risk of eye injuries or an accidental wipe across the eye.</p>	<p>Treat Eye Injuries</p> <p>If your eye become irritated while cooking, flush your eye thoroughly with water. Have someone drive you to the emergency room to check for possible infection and to quell further irritation.</p>



D

What I know?

Directions: Identify the type of hazard/accident in the workplace. Write your answers on a separate sheet. Write letters only.

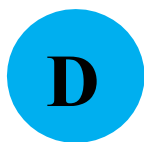
- A. Protecting your property from fire;
 - B. Protecting your property from natural hazards;
 - C. Protecting your property from crime;
 - D. Protecting your staff and visitors from accidents;
 - E. Accident reporting and investigation
-
1. Fire Extinguisher is present at home.
 2. Installing CCTV camera at home.
 3. Always unplugged electric appliance when not in use.
 4. Keep off toys on the floor.
 5. Always lock the gate.
 6. Turn off LPG when not in used.
 7. Put signage in workplace if floor is wet.
 8. Label the damage equipment to avoid electrocution.
 9. Only licensed electrical engineers should check and inspect electrical installations and wirings.
 10. It's better not to use Electric fan for straight whole day.
 11. Establishment should have fire exit.
 12. A food establishment should be in a free-flood area and should have flood plans.
 13. Clear up spillage promptly and post warning notices.
 14. Keeping the area clean, tidy, congestion-free and well-lit will go a long way to preventing most of this type of accident.
 15. Always put emergency hotline guide near your landline phone.

D

What is in?

You are almost done in this module. I hope you learned a lot. Now it's time to show to your subject teacher the activity you are about to demonstrate to assess your knowledge and practical skills.

Now to complete this module you can now answer the post-test. (Please be guided with your subject teacher for this assessment.)



What is it?

Now let us test your knowledge in answering questions. Below are sets of questions where you can tell your ideas regarding our topic?





- ❖ How can you prevent hazardous incident in your own workplace?
- ❖ As student how can you help minimize or prevent hazardous activities in your own workplace?
- ❖ In what way as a student, you can help prevent and protect yourself from hazards and risk?
- ❖ Can you give sample practices we should practice to control hazards and risk in our workplace?

Rating	Description
5	The answer is complete, brief yet accurate, and free from any spelling or grammatical errors.
4	The answer is brief, mostly accurate, and with few spelling or grammatical errors.
3	The answer is wordy but quite accurate and with few spelling or grammatical errors.
2	The answer is too wordy but quite accurate and with some spelling or grammatical errors.
1	The answer is irrelevant with some grammatical and spelling errors.

E What is more?

LO4

Directions: Identify the following images used in controlling hazards and risk

1. Mask	 <p>A.</p> <p>https://www.ontimesupplies.com/solutions/choosing-best-disposable-gloves-food-prep</p>
2. Gloves	 <p>B.</p> <p>https://www.google.com/search?safe=active&biw=1366&bih=576&tbn=isch&sa=1&ei=-MH3XNHFKsnmwQPoz6G4Dw&q=kitchen+mask&oeq=kitchen+mask&gs_l=img.3..019101813011910151301191018130119.20967.25686..25955..4.0..0.153.1980.0j14.....0....1..gws-wiz-img.C9_SICCCcLhM#imgsrc=lgza6l8s7xIIM:</p>
3. Hair Net/cap/bonnet	 <p>C.</p> <p>https://www.google.com/search?safe=active&biw=1366&bih=576&tbn=isch&sa=1&ei=-FML3XlvrBlmsoAS1lovACw&q=apron&oeq=apron&gs_l=img.3..0191010.79101.80576..80999...0.0..0.183.781.0j5.....0....1..gws-wiz-img.m-UTzfL69qo#imgsrc=LeSfoYpNmCKggM:</p>
4. Apron	 <p>D.</p> <p>https://www.google.com/search?safe=active&biw=1366&bih=576&tbn=isch&sa=1&ei=-Z8L3XLy4lKeFr7wPufqU-Ac&q=kitchen+hairnet&oeq=kitchen+hairnet&gs_l=img.3..0191.101423.106495..107124...0.0..0.192.2261.0j15.....0....1..gws-wiz-img.....0151301191018130119.vScJtC5gflE#imgsrc=UBeAhPJU4BXJUM:</p>
5. Safety Shoes	 <p>E.</p> <p>https://www.google.com/search?safe=active&biw=1366&bih=576&tbn=isch&sa=1&ei=1ML3XJ3_IKL LmAW3haaoBQ&q=kitchen+safety+shoes&oeq=kitchen+safetya115QOV CtrTRM:</p>



What I can do?

LO1

OCCUPATIONAL HEALTH AND SAFETY

Directions: “Create a Comics Strips”- Think and create your own scenario or story in connection with the lesson. Applying occupational health and safety in different situations or possible situations that we can encounter in our kitchen workplace and the things we need to do in case of such emergencies.

SCORING RUBRICS

	Excellent (5)	Good(4)	Satisfactory(3)	Needs Improvements(1)
Showing occupational health and safety practices	Showed occupational health and safety clearly	Showed most occupational health and safety	Showed some occupational health	None of the directions were followed
Use of Creativity (Drawing)	Used of own idea and imagination	Used of own ideas most of the time	Used some imagination	Do not used own ideas or imagination
Showing realistic Situations	Showed a very realistic situation	Showed most of realistic situations	Showed realistic situations	Do not showed realistic situations
Clear scripted lines	Made very clear scripted lines	Made almost clear scripted lines	Made some scripted lines	Do not made clear lines scripts
Very presentable and attracted to read	Presented very attracted output and appealing to read	Presented almost attracted output and most likable to read	Presented some attracted output	Do not present attracted output and nasty to read

LO2

APPLICATION

I. Observe activity in the school cafeteria or in your own kitchen.

With the lessons learned from the previous module, do the following:

1. Identify work hazards that can lead to injuries in the school kitchen and adjacent areas.
2. List consequences of work hazards of not taking action
3. Provide solutions to work hazards identified.
 - Use this template for clear presentation of your output.
 - Submit your work to your teacher for proper evaluation

Hazard/s	Consequence	Solution

Rating	Description
5	The answer is complete, brief yet accurate, and free from any spelling or grammatical errors.
4	The answer is brief, mostly accurate, and with few spelling or grammatical errors.
3	The answer is wordy but quite accurate and with few spelling or grammatical errors.
2	The answer is too wordy but quite accurate and with some spelling or grammatical errors.
1	The answer is irrelevant with some grammatical and spelling errors.



What else can I do?

Memorize the short poem below. Record and send the video through your teacher's social\media class account.

Lab Rules

By: Maria Robina D. Enriquez

It's time, it's time!
It's Cookery time
I see to it my PPE are complete
Apron, mask and hairnet are all set

I will use the lab with care
Handle tools and equipment in mind, I must bear
I will always think of my safety first
Never play around at the workplace and don't mess!

Clean as you go, I always apply
We help each other's chores, to make our kitchen fine!
Let's work and cook happily and make our output done on time.

TOTAL PERFORMANCE	10
CLEAR PRONOUNCIATION	10
MASTERY OF CONTENT	10



What I have learned?

LO1 Directions: Put in the empty box

A. The real possible hazards and

B. Risk situations we always encounter and

Next Column: For possible Intervention

Type of Hazards accident in workplace	Real life situations	Possible Intervention
A. Protecting your property from fire;	Example: A. Damage LPG hose and gauge. B. In can be a reason for explosion	<i>Check and replace for a new one</i>
B. Protecting your property from natural hazards;	A. B.	
C. Protecting your property from crime;	A. B.	
D. Protecting your staff and visitors from accidents	A. B.	
E. Legislation that may affect your business.	A. B.	

LO2

Directions: Enumerate at least five (5) ways on how to control hazards and risks in the kitchen.

- 1.
- 2.
- 3
- 4.
- 5.

Note: Words may differ, and answers can be considered for as long as the idea is correct



What I can achieve?

ACTIVITY1:

Poster Making Activity

Instruction:

1. **Draw posters** about safety and hygiene practices in the workplace.

ACTIVITY2:

1. **Make slogans** in an activity sheet about safety and hygiene practices in the workplace.

Make and Submit your output through: (Choose only one)

OPTION 1.

- Use long size bond paper.
- Submit your output to your teacher for proper evaluation, together with your other printed/hard Copies activity.

OPTION 2.

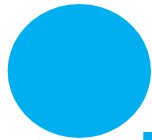
- Make your layout through different software app(MS Word, Paint or Photoshop)
- Send your files to your teacher's social media class account.

CRITERIA IN POSTER MAKING

Relevance of the theme	5
Originality	5
Visual Impact	5
Creativity	5

CRITERIA IN SLOGAN MAKING

Relevance of the theme	5
Originality	5
Creativity	5
Impact Presentation	5



Answer Key

Module 1:

<p>What I Know</p> <p>I. 1. A 2. A 3. D 4. C 5. A II. 1. OVEN 2. SOUP LADLE 3. GRATER 4. COLANDER 5. FUNNEL</p>	<p>What's More</p> <p>The result of this is hands- performance. Rubrics will be used to evaluate the learner.</p>	<p>Assessment</p> <p><i>Used for mixing:</i></p> <ul style="list-style-type: none">• Blender• Wooden spoon• Whisk <p><i>Used for measuring:</i></p> <ul style="list-style-type: none">• Measuring cups• Kitchen scale <p><i>Used for cooking:</i></p> <ul style="list-style-type: none">• Frying pan• Steamer• Sauce pan <p><i>Used for serving:</i></p> <ul style="list-style-type: none">• Two-tined fork• Ladle <p><i>Used for cutting:</i></p> <ul style="list-style-type: none">• Butcher knife• Peeler <p><i>Use/Function</i></p> <p>1. Refrigerator – for chilling of food to prevent food spoilage easily</p> <p>2. Measuring spoons – for measuring small amount of dry and wet ingredients</p> <p>3. Double boiler – to melt chocolates and to keep gravy or sauce warm</p> <p>4. Stove – for cooking or heating food</p> <p>5. Sieve – to strain unwanted elements from the food ingredient</p>
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Module 2:

<p>What I Know</p> <p>I. 1. TRUE 2. TRUE 3. TRUE 4. FALSE 5. FALSE 6. FALSE 7. TRUE 8. FALSE 9. TRUE 10. FALSE</p> <p>II. 1. Temperature and contact Time 2. 170°F 3. drain and air-dry 4. abrasive cleaner 5. acid cleaner</p>	<p>What's More</p> <p>The result of this is hands- performance. Rubrics will be used to evaluate the learner.</p> <p>1. Sanitizing 2. AGREE 3. Sanitize 4. AGREE 5. Air-dry 6. AGREE 7. affects 8. AGREE 9. solvent 10. AGREE</p> <p>II. A.5 B.1 C.4 D.2 E.3</p>	<p>Assessment</p>
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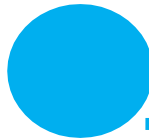
Module 3:

<p>What I know?</p> <p>I. 1. Tablespoon 2. Teaspoon 3. Grams 4. Ounce 5. Kilo</p>	<p>What I can do?</p> <p>L.O2.1</p>	<p>Assessment IV.</p>	<table><tr><td>Item</td><td>Unit Cost</td><td>Total Cost</td><td>Peso Mark-up</td><td>Selling Price per Serving</td></tr><tr><td>2kilos of chicken</td><td>160.00/kilo</td><td>320.00</td><td></td><td></td></tr><tr><td>2head of garlic</td><td>50/kilo</td><td>5.00</td><td></td><td></td></tr><tr><td>2Tbsp soy sauce</td><td>17.00/bottle</td><td>1.00</td><td></td><td></td></tr><tr><td>1 tsp group black pepper</td><td>1.00/small pack</td><td>2.00</td><td></td><td></td></tr><tr><td>1/2 cup Vinegar</td><td>15.00/bottle</td><td>3.75</td><td></td><td></td></tr><tr><td>2 Tbsp Cooking Oil</td><td>135.00/1000ml</td><td>4.00</td><td></td><td></td></tr><tr><td>TOTAL</td><td>APPROX.68Tbsp/1000ml</td><td>335.75</td><td>167.80</td><td>25.50</td></tr></table>	Item	Unit Cost	Total Cost	Peso Mark-up	Selling Price per Serving	2kilos of chicken	160.00/kilo	320.00			2head of garlic	50/kilo	5.00			2Tbsp soy sauce	17.00/bottle	1.00			1 tsp group black pepper	1.00/small pack	2.00			1/2 cup Vinegar	15.00/bottle	3.75			2 Tbsp Cooking Oil	135.00/1000ml	4.00			TOTAL	APPROX.68Tbsp/1000ml	335.75	167.80	25.50
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<p>What I know?</p> <p>I. 1. Tablespoon 2. Teaspoon 3. Grams 4. Ounce 5. Kilo</p>	<p>What I can do?</p> <p>L.O2.1</p>	<p>Assessment IV.</p>	<p>III.</p> <p>1. 1cup- 1 tablespoon lemon juice or vinegar plus enough milk to measure 1 cup; let stand for 5minutes. Or 1 cup plain yogurt</p> <p>2. 1 cup -tomato sauce, 1/4 cup brown sugar, 2 tablespoons vinegar, 1/4 teaspoon cinnamon, dash of ground cloves and dash of allspice</p> <p>3. 1 tablespoon- 2 tablespoons all- purpose flour</p> <p>4. 1 cup - 1 cup minus 2 tablespoon (7/8 cup) all</p>	<p>Assessment</p> <p>I. 1. 128 Tbsp 2. 240 ml 3. 250 g 4. 1 kilo 5. 1 cup</p> <p>II. 1. A 2. B 3. A 4. B 5. D</p>

<p>LO2</p> <p>Directions: Enumerate at least five (5) ways on how to control hazards and risks in the kitchen.</p> <p>1.</p> <p>2.</p> <p>3</p> <p>4.</p> <p>5.</p> <p>Note: Words may differ, and answers can be considered for as long as the idea is correct</p>

<p>1. A</p> <p>2. C</p> <p>3. A</p> <p>4. D</p> <p>5. C</p> <p>6. A</p> <p>7. D</p> <p>8. D</p> <p>9. E</p> <p>10. A</p> <p>11. E</p> <p>12. B</p> <p>13. B</p> <p>14. D</p> <p>15. B</p>	<p>(Teacher will check the possible correct real-life situations)</p>
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Reference

Module 1:

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