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# **RQF LEVEL 3**

FBOVS301 FOOD AND BEVERAGE OPERATIONS

Vegetable and Starch Dishes

**TRAINEE MANUAL** 





## **VEGETABLE AND STARCH DISHES**





2023

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#### FOREWORD

Welcome to the world of Technical and Vocational Education and Training (TVET) in the hospitality and tourism sector. In an era of constant evolution and growing demand for skilled professionals, the importance of specialized training cannot be overstated. As the global hospitality and tourism industry continues to flourish, the need for competent individuals equipped with relevant knowledge and practical skills has become crucial. This collection of TVET training manuals serves as a comprehensive resource for those seeking to embark on a fulfilling career or further their expertise within the hospitality and tourism sector. Developed with meticulous attention to detail and in collaboration with industry experts, these manuals offer a wealth of knowledge, practical insights, and hands-on training exercises.

The manuals cover a wide range of topics, ranging from essential foundational concepts to specialized areas within the industry. Whether you are interested in hotel management, culinary arts, event planning, travel and tourism, or any other facet of this vibrant sector, you will find invaluable guidance within these pages. At the heart of the TVET approach is the belief that learning should be both practical and relevant. These manuals have been carefully crafted to ensure that they reflect the real-world challenges and requirements of the hospitality and tourism industry. They are designed to empower learners with the skills, competencies, and confidence needed to excel in their chosen field.

Furthermore, the manuals adopt a learner-centered approach, encouraging active participation, critical thinking, and problem-solving. Throughout each module, learners are encouraged to engage in practical exercises, case studies, and interactive activities that simulate real-world scenarios. This hands-on approach allows learners to apply theoretical concepts and develop the necessary skills that are highly sought after in the industry.

We understand that education is a lifelong journey, and these manuals have been designed to cater to learners at various stages of their professional development. Whether you are a student taking your first steps in the industry, a working professional seeking to enhance your skills, or an instructor guiding aspiring individuals, you will find the manuals to be a valuable asset.

I would like to express my sincere appreciation to the authors, industry experts, and educators who have contributed to the creation of these TVET training manuals. Their dedication and expertise have ensured that the manuals are of the highest quality and relevance.

I encourage you to embrace the opportunities presented within these pages, to explore the dynamic world of hospitality and tourism, and to unlock your potential in this exciting industry. By investing in your education and acquiring the skills offered in these manuals, you are taking a significant step towards a rewarding and successful career.

Best wishes on your journey of discovery and growth in the hospitality and tourism sector.

Dipl.-Ing. Paul UMUKUNZI

**Director General/ RTB** 

Rwanda TVET Board (RTB) would like to recognize all parties who contributed actively to the preparation of the Trainer's and Trainee's manuals for this Food and Beverage Operations Level3 TVET Curriculum.

We wish to extend our thanks to various organizations such as the European Union through UBUKERARUGENDO IMBERE Project for the valuable financial and technical support throughout the project. We would also wish to acknowledge the Food and Beverage Operations experts for their huge contribution in this project, as well as French Press Ltd and its entire production team that technically conducted the whole assignment.



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### ACRONYMS

CBT: Competence Based Training CBA: Competence Based Assessment CIA: Culinary Institute of America TCS: Temperature Control for Safety <sup>0</sup>F: Degree Fahrenheit <sup>0</sup>C: Degree Celsius USDA: United States Department of Agriculture RTB: Rwanda TVET Board Welcome to the training manual for the hospitality and tourism sector in the trade of food and beverage operations. This manual, titled "Vegetable and starch dishes," is designed to provide comprehensive training for trainees pursuing TVET level 3 in food and beverage operations.

The manual is structured into three units that focus on different aspects of preparing vegetable and starch dishes. These units include selecting tools and equipment, selecting ingredients, cooking and presenting vegetable and starch dishes.

This manual is designed to be an interactive learning experience, comprising discovery activities that encourage learners to explore and discover concepts, problem-solving activities that require learners to think critically and come up with solutions, guided practice activities that provide step-by-step instructions, and application activities that enable trainees to apply their newly acquired knowledge in real-life situations.

Additionally, this manual incorporates assessment activities that provide learners with feedback on their progress and help them identify areas where they need to improve.

By the end of this manual, trainees will have gained a comprehensive understanding of the essential duties and responsibilities required for preparing and presenting vegetable and starch dishes and be equipped with the necessary skills to perform these duties effectively. Let's get started!

### Units:

Unit 1: Preparing Vegetables

- **Unit 2: Cooking Vegetables**
- Unit 3: Preparing Starches
- **Unit 4: Cooking Starches**

Module summary:

This module describes knowledge, skills and attitudes required to prepare vegetable, starch and pasta dishes. At the end of this module learner will be able to perform the preliminary preparations of vegetable and starch. Apply their cooking methods and their presentation tips.

### **UNIT 1: PREPARING VEGETABLES**

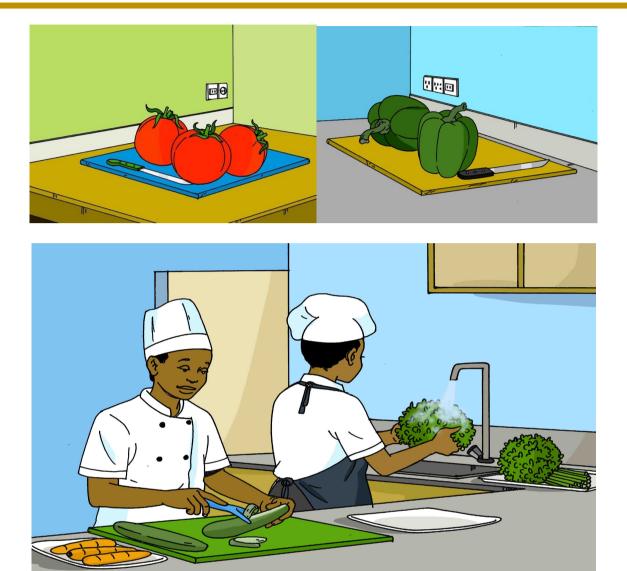


Figure 1: Mise en place of vegetables (Preparing vegetables)

### Unit summary:

This unit describes knowledge, skills and attitudes required to prepare vegetables. At the end of this unit trainee will be able to select vegetables and tools for vegetable preparation as per recipe perform the preliminary preparations of vegetables such as washing, peeling, cutting and blanching.

#### Self-Assessment: unit 1

- Look at the illustration above. Discuss about what is happening or what you see on the illustration. What do you think this learning unit will be about? What topics might be covered?
- 2. Fill in the self-assessment below.

There are no right or wrong ways to answer this survey. It is for your own use during this course. The trainer will read a skill that is listed in the left column. Think about yourself: do you think you can do this? How well? Read the statements across the top. Put a check in column that best represents your situation.

At the end of this unit, we'll take this survey again.

My experience Knowledge, skills and attitudes	I do not have any experience in doing this.	l know a little about this.	I have some experience in doing this.	l have a lot of experience with this.	I am confident in my ability to do this.
Categorize vegetables					
Describe types of vegetables					
Identify vegetable recipes					
Washing vegetables					
Trimming vegetables					
Peeling vegetables					
Cutting vegetables					
Blanching vegetables					

### **Key Competencies:**

Knowle	edge	Skills		Attitu	des
1.	Identify vegetables	1.	Select vegetables	1.	Demonstrate
	and quality signs				consistency when
					selecting
2.	Identify tools for	2.	Select tools for	2.	Consider quality signs
	vegetable		vegetable		while selecting
	preparation		preparation		
3.	Identify vegetable	3.	Perform Vegetable	3.	Demonstrate uniformity
	preliminary		preliminary		when cutting
	preparations		preparations		







Observe the picture above and answer the following questions:

- 1. What have you observed on that picture?
- 2. What are the varieties of vegetables do you know?
- 3. What does that person use to perform his/her task?
- 4. What do you think this unit is all about?

## **Topic 1.1: Selecting tools for preparing vegetables**



Task: In your group, discuss about tools and equipment used for vegetables preparation.

- 1. What are they?
- 2. How the status of vegetable preparation tools should be?
- 3. How do you select tools used for vegetable preparation?

Key Facts					
<ul> <li>Selection of preparation tools for vegetables</li> <li>✓ Tools used for vegetables preparation and their use.</li> </ul>					
ΤοοΙ	Image	Function			
Bowl		A bowl is a round container typically used for holding or preparing food or any liquid.			
Colander		A bowl with holes to allow liquids to pass through. Used for separating solid materials from liquids			

Cutlery		Cutlery comprises knives, forks, and spoons; we use them to cut our food into tiny pieces to make it easier to eat them
Cutting board		A cutting board is a flat piece of plastic used for chopping, slicing, and dicing vegetables, fruit, and other food.
Deep fryer		A deep fryer is an electric cooking device that, by immersing foods in hot oil, gets fried until it's crispy
Garlic crusher		The Garlic Crusher crushes garlic with no effort at all
Knife	000	A knife is used for slicing, chopping, filleting, and many other types of cutting jobs.

Grater	A grater is a kitchen utensil used for grating and shredding vegetables and other food into fine chunks
Gas stove	The stove in which combustion takes the place of which heat is used for cooking food
Oven	Usually used for baking or roasting and provides a mechanism to control the temperature
Pan	When it comes to kitchenware, a pan is a must-have. You can cook almost anything in a pan, from an omelet to a pancake
Plate	A plate is a plane dish, commonly circular, used in dining service.

Pressure cooker		The pressure cooker, a sealed pot in which food can be cooked instantly under steam pressure, will save you time and money
Refrigerator		A refrigerator is a kitchen appliance used to store food and drinks at low temperatures, typically between 2 and 8 °C (35.6 and 46.4 °F) below the ambient temperature. Refrigerators are widely used in households, restaurants, hotels, hospitals, laboratories, supermarkets
Spatula		The Spatula is a kitchen utensil with a wide, flat, usually slotted surface that turns or flips foods during cooking
Timer	$ \begin{array}{c}       55 \\       50 \\       45 \\       35 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       35 \\       30 \\       30 \\       30 \\       35 \\       30 \\    $	A timer is a device that can be used to measure time for different amounts.

Tongs		Tongs are used for picking up and holding objects that are too hot to handle		
Wok		A wok is a versatile round- bottomed cooking vessel used in Chinese cuisine to quickly cook food over high heat. Woks are used chiefly for stir-frying but can also be used to steam and deep fry.		
Wooden spoon	0	A wooden spoon is a utensil commonly used for mixing and stirring substances together.		
Sauce Pan With Lid		used for heating and cooking food in liquid,		
<ul> <li>Identifying the conditions/ status of vegetable preparation tools</li> <li>Before setting out to use knives, consider the type of knife you will need for</li> </ul>				
your task. Available in a wide variety of shapes and sizes, kitchen knives can meet a huge variety of needs, and the extent of knives needed depends on				

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your cooking style and habits.

A good basic knife kit would include:

- An all-purpose utility knife (13cm / 5 inches) used for a range of foods; often a choice for the first knife as it can do many things.
- A chef's knife (20-23cm / 7.8–9 inches) used for chopping, dicing, mincing, and cutting.
- A vegetable or paring knife (8cm / 3") used for peeling, cutting, and trimming small items of food that you hold in the hand (such as trimming small potatoes).
- A bread knife (serrated) used for bread, cake, fruit, and tomatoes.
- A cleaver used for a smaller version for chopping herbs, etc.
- Sharpening steel, knife-honing stone, or electric honer.

#### Material

Stainless chromium molybdenum-vanadium steel has been the hallmark of good knives. This special knife steel guarantees absolute sharpness and satisfies the highest hygienic requirements.

#### Sharpness

Every knife is expected to be sharp right from the start. But only a good knife remains sharp.

#### Handle

Cutting is easier when the knife lies firmly in the hand. An ergonomically shaped handle made of high-quality plastic prevents dangerous slipping and hand fatigue.

#### Cleanliness of tools

Clean your kitchen utensils in hot water with an antibacterial detergent.

When sanitizing kitchen tools and equipment, use either boiling water or a solution of bleach and water.

Store your tools in a regularly cleaned plastic or metal box to keep the germs away.

#### Quality

The appliances should be made of genuine commercial-grade materials that will provide an extended service life. Be sure to inspect the commercial kitchen tools for any physical or functional flaws.

• Selection factors for vegetable preparation tools.

A good selection of tools contributes to the success of vegetable preparation process.

From a health perspective, stainless steel kitchen utensils are also more stable than aluminum kitchen utensils, which is more conducive to human health.

This selection may be a challenge. However, the following things may be considered when choosing tools:

- Task to be performed
- The status of the tool
- High Quality
- Consider those capable of handling the rigours of daily use.
- Take into account the dimensions of the tool.

The available space of your working area will dictate the size of tool you should consider. While it's advisable to choose kitchen tool according to your cooking needs

Safety of tools should be a priority

Example for knives non-slip texture material handles. This is because they make it easier to cut different food, even with wet hands.

To avoid getting burnt, choose tongs with long handles and a lock to stop the arms from opening. Ensure that you use cordless supplies whenever possible.

4 Your Kitchen tools Should be easy to maintain





In the kitchen workshop,

1. Select tools for vegetable preparation and explain the uses of each.





Read and perform the below task:

Visit a nearby hotel or restaurant kitchen and actively participate in the selection of tools for vegetable preparation. Afterward, write a report on the performance of that activity.

### **Topic 1.2: Selecting vegetables**





A customer at your school restaurant has ordered Buttered Carrots to accompany their meal. As a culinary arts trainee, you are requested to identify the ingredients to be used for this task.

- 1. What are the types of vegetables required for this dish?
- 2. What are the ingredients used in Buttered carrot preparation?
- 3. What factors to will you consider when selecting vegetables?

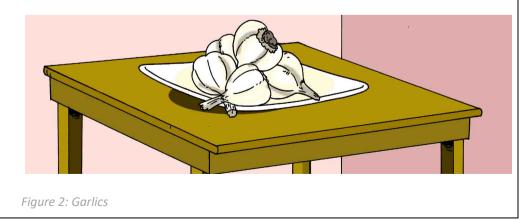
#### Key Facts (Indicative contents)

• Selection of vegetables

#### Classification of vegetables

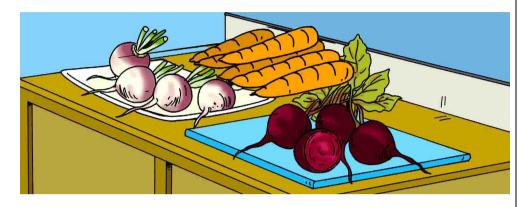
Vegetables are classified according to which part of the plant is eaten. Some vegetables fit into more than one category when several different parts of the plant are edible, e.g. both the roots and leaves of beetroot can be eaten. The following groups of vegetables are made according to these classifications:

o Bulbs



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Bulb vegetables are structured in the shape of a bulb, wherein all its nutrients are stored. These vegetables that are not eaten directly on their own, rather, they are used in food dishes to enhance the flavor of the food.

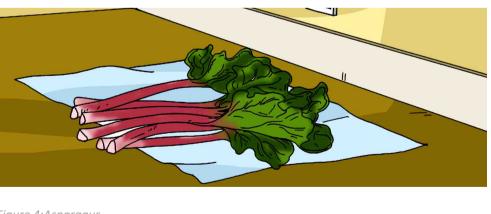


• Root and Tubers

#### Figure 3:Carrot, Radish, Beetroots

Root vegetables are those that are grown under the soil and possess nutrients that they gain from the soil. This can be a slightly confusing category because some bulb vegetables like garlic and ginger, and even some stem vegetables are considered to be root vegetables simply because they possess the characteristics of root vegetables.

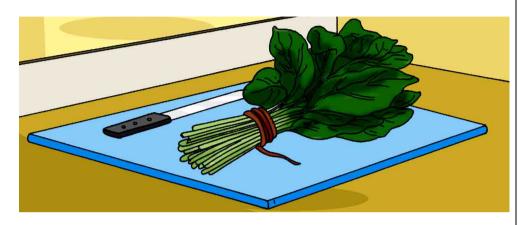
Root vegetables are a great source of proteins, carbohydrates, and are very low in fats.



o Stem

Figure 4:Asparagus

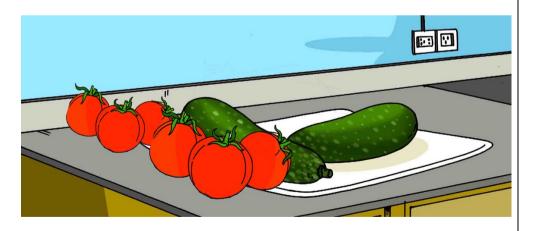
Stem vegetables are those that have shoots or stalks which can be consumed. These vegetables can be used to make a variety of dishes and are usually served with pasta, sandwiches, soups, etc. Along with being delicious, stem vegetables possess minerals, vitamins and antioxidants.



#### Figure 5: Spinach

Leaf vegetables are plant leaves eaten as vegetables. Sometimes they are accompanied by petioles and shoots.

Leaf vegetables contain potassium, iron, magnesium, calcium, folic acid and certain phyto-chemicals that are important for the proper functioning of the body.



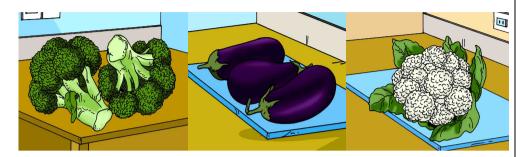
• Fruits

Picture 6: Tomato, Pumpkin.

Fruit vegetables are so called because botanically they fulfill the definition of fruits, but are used as vegetables by human beings. They are considered

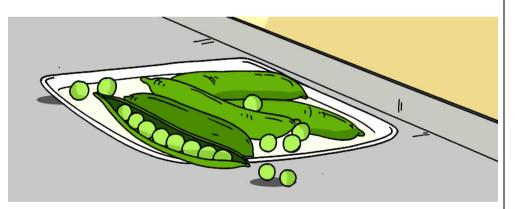
to be fruits because in the scientific sense of the term, fruits are those that carry the seeds of the plant.

• Flower



Picture7: Cauliflower, eggplant, Broccoli,

Flowering vegetables are so called because they have the shape of flowers. They are usually small in size and appear like many flower buds clustered together. Along with essential nutrients, flowering vegetables also bear some phyto-chemicals called as 'isothiocyanates' which help in preventing the production of cancerous cells. For this reason, these vegetables are called functional vegetables.



• Seeds

#### Picture 8: Peas

Also called Podded vegetables. They are cool season crop grown in many parts of the country. The podded vegetable may be used fresh, in salads, frozen, as a snack or canned, ready for those winter meals.

Podded vegetables are a rich source of proteins which help in providing the energy and strength required to carry out daily activities. They also contain potassium, folic acid, complex carbohydrates, magnesium, iron, fiber and zinc.

• Selection factors for vegetables

When selecting vegetables, the following factors have to be considered:

- ✓ The intended use.
- ✓ Buy in season.
- ✓ The available storage.
- ✓ High-quality vegetables.
- ✓ Firmness
- ✓ Color
- ✓ Crispness
- ✓ Lifespan: maximum storage period
- ✓ Size
- ✓ Freshness

The vegetable freshness may be checked by:

- Sight: Choose the brightest and liveliest colors out of the bunch. The color should be even with no dark spots or mold. The skins are not wrinkly and the leaves show no signs of wilting.
- ✓ Sniff: In general, fresh produce will smell fresh.
- Touch: The texture and firmness of the vegetables indicate the freshness.
   Some vegetables may feel firm, not rubbery such as zucchini and cucumbers.

Some vegetable recipes and their ingredients:

#### Vegetable Ratatouille

- 4 Aubergine
- Tomatoes
- 🔶 Oil
- Garlic
- Chopped parsley

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- Salt & pepper
- Onions

#### **Buttered carrots**

- Carrots
- 📥 Salt
- 🖊 Pepper
- 🖶 Butter
- Chopped persley

#### Bean goulash

- Red kidney beans/ haricots beans
- Chopped onions
- 📥 Oil
- Cruched garlic
- Paprika
- Red peppers
- Yellow peppers
- Sliced mushrooms
- 🕹 Tomato puree
- Vegetable stock
- 🖊 🛛 Bouquet garni
- Seasoning
- Potatoes
- Green pepper

#### Jardinière Vegetables

- 4 255g carrot batonnet
- 4 255g celery batonnet
- 4 255g white turnip batonnet
- 4 255g shelled green peas
- 4 255g fresh beans

- 113g butter
- Salt as needed
- Black pepper as needed
- 3g chopped parsley





After discussion on vegetable dishes ingredients, perform the task below:

The school canteen is hosting the school management team for lunch, where Jardinière vegetables will be served as an accompaniment to the main course. Under the guidance of your trainer, select the ingredients to be used in the preparation of that recipe within 5 minutes



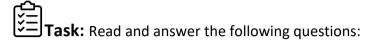


Read and perform the below task:

The school canteen is hosting the school management team for lunch, where Vegetable Ratatouille will be served as an accompaniment to the main course. Please select the ingredients to be used in the preparation of that recipe within 5 minutes.

### **Topic 3: Preliminary preparations of vegetables**

### Activity 1: Problem Solving



- 1. What is the importance of vegetables preliminary preparation?
- 2. List four preliminary preparations applied to vegetables?
- 3. How do you wash vegetables?
- 4. How do you trim and peel vegetables?
- 5. How do you cut vegetables?
- 6. How do you blanch vegetables

#### Key Facts (Indicative contents)

Preliminary preparations of vegetables.

Washing: By using running water or chemicals (Chlorine)

Wash all vegetables thoroughly

Scrub well unpeeled vegetables, like potatoes for baking

Wash green leafy vegetables in several changes of cold water

After washing, drain well and refrigerate lightly covered to prevent drying.

- Trimming: By removing the useless or unnecessary parts
- **Peeling**: By removing the vegetable skin. Never over peel
- Stuffing: Usually, a vacuum stuffer is employed, which removes oxygen, providing for better curing and concentrating the product going into the casing.
- **Rubbing**: This refers to the process of applying firm pressure to the surface of some vegetables, using a repeated back and forth motion.
- **Coating**: is a process that consists of applying a liquid or a powder into the surface of an edible product to convey new properties. Coating designates

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an operation as much as the result of it: the application of a layer and the layer itself.

#### Types of protective coating

Туре		Conter	nt	Us	ed for
1.	A l'anglaise	1.	Seasoned flour,	•	Fish cakes
	known as		egg-wash and	•	Croquette potatoes
	"pane"		breadcrumbs	•	Chicken
2.	A la	2.	Milk and	•	French fried onion rings
	francaise		seasoned flour		
3.	A l'orly	3.	Seasoned flour	•	Fish fillet,
			and fermented	•	Vegetables,
			yeast batter		

- ✓ Importance of coating food before deep-frying
  - Food can be cooked quickly and easily.
  - Coating food enables a wide variety to be cooked by this method.
  - Coated foods are quickly sealed, thus preventing the enclosed food becoming greasy.
  - Blanching or partial cooking enables certain foods to be held for cooking later, which helps during busy service and saves time.
  - Prevent the leaving of nutrients from the food into the oil
  - Limit excessive absorption of oil
  - Minimize breaking up of the food
  - Protects the surface of food from intense heat
  - Reduce a rapid penetration of heat (for a good cooking)

#### Preparation techniques for vegetables

**Drying** is a method of preserving food. The sun, the wind and a smoky fire were used to remove water from meats, vegetables. By definition, food dehydration is the process of removing water from food by circulating hot air through it, which prohibits the growth of enzymes and bacteria.

Before drying, place them in boiling water and then in cold water to crack the skin. This process is referred to as "checking" the product and will hasten the drying process.

Grinding: The ingredients have to be grinded as per recipe.

**Grating:** Use a micro plane or grater. You can pour off the liquid, rinse your carrots in water and you are then good to go.

**Soaking**: It helps in tenderising process but avoid to soak for too much long.

Do not soak vegetables for long periods to prevent flavor and nutrient loss.

Cabbage, broccoli, cauliflower may be soaked for 30 minutes in cold salted water to eliminate insects.

**Blanching** This refers to the process whereby the ingredients are covered with cold water and brought to a boil. As soon as the water comes to a boil, the impurities are skimmed from the surface and the murky water is drained.

It's not important to blanch vegetables before you cook them, unless you work in a restaurant or you're throwing a party. It stops the enzyme action that controls the color and flavor during storage. It also helps to decrease the drying time and cooking time at the other end because the tissue walls of the produce have been relaxed and moisture can escape and re-enter more easily. Boiling water blanching or steam blanching are both effective, but steam blanching is more time consuming. **Ripening**: To accelerate the ripening process, the product is put in a sealed paper bag. Additionally, placing the product in a warm spot can accelerate the process.

#### **Cutting vegetables**

- Importance of cutting vegetables:
  - Good Appearance of the plate:

The gustatory emotion starts from the head stimulated by what we see, then everything develops at the moment of tasting. Our senses communicate with each other: the shape, the color, the right consistency, the sound we hear when we bite and then we munch, the taste, the aroma, are all sensations that we can also find in a dish of only vegetables.

Same cooking duration:

Cutting is important because surface area can affect the flavor of vegetables

The closer and more uniform your preparation is, the more likely you are to have every piece cooked to the same level, same amount of cooking liquid and same time.

#### ✓ Vegetable cutting guidelines

Cutting vegetables can be a time-consuming endeavor, but if armed with the knowledge on how to quickly break down certain veggies the right way, you can cut your prep time down by half and be cooking in no time.

**For cauliflower**: First, remove the cauliflower leaves with a sharp paring knife. Cut the cauliflower head into quarters and remove large stem pieces by cutting them out at an angle.

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#### For bell pepper:

Bell peppers can be cut in a variety of ways. Depending on your recipe, you may need strips or a dice. Begin by standing the bell pepper up and using your chef's knife to cut sides off of the pepper in four "sheets" or "cheeks. Turn the pepper on its side and cut off the bottom of the pepper. Trim additional white ribs off of the pepper pieces.

#### For onion

Start by cutting the top off of the onion and standing the onion up, cutting side down with root end in the air.

Use your knife to cut through the root of the onion creating two halves. Peel off and discard outer skin.

Place half of the onion flat on a cutting board.

#### Application of cutting techniques for vegetables

There are a few basic skills that making cooking every day that much simpler, like mise en place through vegetable cuts and knife skills.



#### **Classic vegetable cuts**



#### Julienne

Whatever fruit or vegetable you're working with, you'll want to peel and trim it. If you're working with a carrot, cut it in half so you have two equal lengths to work with. Then, trim off one end so that you have a secure base to work on. Next, cut off little blocks, before slicing those into little, even sticks otherwise known as julienne. The dimensions for julienne are roughly 3mm x 3mm x 5cm. As the name suggests, Julienne fine is an even finer version of the same cut (0.5mm × 1.5mm × 3-5 cm).

#### Jardiniere

Similar in shape to julienne, a jardinière cut is slightly bigger, however, they are roughly 5mm x 5mm x5cm (although, they can be slightly longer).

#### Batonnet

This cut sits between the Julienne and baton and usually measures about 5 cm in length and 1 cm width.

#### Baton

A much larger, thicker version of julienne and jardiniere cut, a baton usually measures about 1.5 x 5 cm.

	Large dice	Medium dice	Small dice	Brunoise	Brunoise(fine)				
			Macedoine						
Large Dice (Carré)									
	Large Dice Is Pretty Much What The Name Says – A Cubed Cut								
	Measuring 2 Cm Evenly All Round.								
Medium Dice (Par	mentier)								
	Medium Dice Is The Same Style Cut As Large Dice, Just Slightly								
	Smaller Around 1.5 Cm.								
Small Dice (Maced	oine)								
	Macedoine	Is Also A Cube	Shape, But O	ne That Mea	sures About				
	5-6 Mm.								
Brunoise									
	A Small Dice	e Measuring 3	8 Mm.						
Brunoise Fine									
	An even fine	er dice measu	iring in at 1.5 i	mm.					

	Tourné Rondelle Obligue Paysonne Lozenge							
Tourné								
	A rather 70s cut, the tourné shape resembles a football and is usually thumb-length. This may sound simple enough, but the							
	cut always needs seven sides.							
Rondelle								
	As the name suggests, a rondelle cut is when the vegetable is							
	cut into circular rounds or disks.							
Oblique								
	Just as in French, this knife cut is cutting vegetables diagonally							
	into obliques.							
Paysanne								
	Paysanne refers to a thinly sliced cut and is often the same							
	shape as the vegetable, for example — a carrot might be cut							
	into thin round slices. Think of slicing vegetables on a mandolin							
	to help visualise how a paysanne cut would be.							
Lozenge								
	A diamond-shaped cut. This one requires a lot of symmetry.							

	Poris Jenne Chiffon od
Parisienne	
	Not technically a knife cut, as a Parisienne cut requires a
	Parisienne scoop, a small ice cream scoop shaped piece of
	equipment. There are varying sizes of scoop shapes.
Chiffonade	
	This is a great way of serving soft herbs (parsley, coriander,
	mint etc) as garnish. What you want to do is, take your herbs
	off the stems, so you're just left with the leaves. Then gather
	them and stack the leaves in a neat little pile, next, curl them
	up so that the pile is nice and tight, then very finely slice the
	leaves. You want to make sure that you're slicing, not chopping.
	It is like a thin ribbon.
Emincer	
	A very fine knife cut usually refers to the thin slices prepared
	when cutting onions.





The school canteen is hosting the school management team for lunch, where Vegetable Ratatouille will be served as an accompaniment to the main course. Under the guidance of your trainer, prepare the selected vegetables for the recipe within 10 minutes.





The school canteen is hosting the school management team for lunch, where Trio Buttered Vegetables will be served as an accompaniment to the main course. Perform preliminary vegetable preparations for the selected vegetables within 15 minutes.



In the kitchen, vegetables are classified according to the edible part of the plant:

Leaves, Tubers, Stems, flowers, seeds, roots, fruits and bulb.

The vegetable freshness has to be considered when selecting vegetables and it may be checked by:

- ✓ Sight: Choose the brightest and liveliest colors out of the bunch. The color should be even with no dark spots or mold. The skins are not wrinkly and the leaves show no signs of wilting.
- ✓ Sniff: In general, fresh produce will smell fresh.
- ✓ Touch: The texture and firmness of the vegetables indicate the freshness. Some vegetables may feel firm, not rubbery such as zucchini and cucumbers.

Safety of tools should be a priority

Vegetable cuts should be uniform to have the same cooking duration and good appearance.



- 1) Re-take the self-assessment you did at the beginning of the unit.
- 2) Fill in the table above and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.



## **Formative Assessment**

- XY Hotel, located in Ngoma District, Kibungo Sector, is hosting 12 guests for lunch. The menu includes Steamed Carrots, Trio Buttered Vegetables, and Boiled French Beans. However, the hotel is facing a problem of poor quality products due to a lack of a qualified cook. As a well-trained trainee in Food and Beverage Operations, you are tasked to:
  - ✓ List down all the required tools, equipment and ingredients to be used.
  - Explain which process you will undertake for the preliminary preparation of each recipe
  - ✓ Select the required ingredients
  - ✓ Perform the preliminary preparation of ingredients for these three recipes.

All necessary tools, equipment and materials are available in the school kitchen.

- Washing vegetables using running water or chemicals, such as chlorine, is necessary to ensure thorough cleanliness.
- 2. Green leafy vegetables should be washed in several changes of cold water.
- 3. After washing, it is advisable to drain the vegetables well and refrigerate them lightly covered to prevent drying.
- 4. Trimming involves removing useless or unnecessary parts from the vegetables.
- 5. Peeling refers to the process of removing the vegetable skin, and it is important not to over-peel.
- 6. Stuffing is a process that involves using a vacuum stuffer to remove oxygen, resulting in better curing and concentrated filling.
- 7. Rubbing vegetables entails applying firm pressure to their surface using a repeated back and forth motion.
- Coating is the process of applying a liquid or powder to the surface of an edible product to impart new properties.
- 9. A l'anglaise, a l'orly, and a la francaise are types of protective coatings used for different food items.
- 10. Coating food before deep-frying has several benefits, such as preventing excessive absorption of oil and minimizing the breakage of food.
- 11. Drying is a preservation method that involves removing water from food by circulating hot air, inhibiting enzyme and bacterial growth.
- 12. Blanching refers to the process of covering ingredients with cold water and bringing it to a boil, removing impurities and draining murky water.
- 13. Blanching vegetables is essential to control color and flavor during storage, decrease drying and cooking time, and facilitate moisture exchange.
- 14. Soaking can be used to tenderize vegetables, but it should not be done for too long to prevent flavor and nutrient loss.
- 15. Cutting vegetables with precision is crucial for achieving an appealing plate presentation and ensuring uniform cooking.
- 16. Different vegetable cutting techniques, such as julienne, batonnet, and large dice, serve specific purposes in culinary preparations.
- 17. Mise en place, vegetable cuts, and knife skills are fundamental skills that simplify everyday cooking.

- 18. Chiffonade is a cutting technique used to serve soft herbs, such as parsley or mint, as a garnish.
- 19. Emincer refers to the thin slices usually prepared when cutting onions.
- 20. Selection of vegetables is based on the classification of vegetables according to which part of the plant is eaten.
- 21. Bulb vegetables are used directly on their own to enhance the flavor of food/ False
- 22. Root vegetables are a great source of proteins, carbohydrates, and are very low in fats.
- 23. Stem vegetables possess minerals, vitamins, and antioxidants.
- 24. Leaf vegetables contain potassium, iron, magnesium, calcium, folic acid, and certain phyto-chemicals.
- 25. Fruit vegetables are called so because they carry the seeds of the plant.
- 26. Flowering vegetables are called functional vegetables due to the presence of isothiocyanates, which help prevent the production of cancerous cells.

## **UNIT 2: COOKING VEGETABLES**



Figure 6: Vegetables cooking

## Unit summary:

This unit describes knowledge, skills and attitudes required to cook vegetables. At the end of this unit trainee will be able to select vegetable dishes, to determine the health benefits of vegetable dishes, apply vegetables cooking guidelines and methods. The trainee will also be able to apply the holding and presentation guidelines for vegetable dishes.

### Self-Assessment: Unit 2

1. Fill in the self-assessment below.

There are no right or wrong ways to answer this survey. It is for your own use during this course. The trainer will read a skill that is listed in the left column. Think about yourself: do you think you can do this? How well? Read the statements across the top. Put a check in column that best represents your situation. At the end of this unit, we'll take this survey again.

My experience Knowledge, skills and attitudes	I do not have any experience in doing this.	I know a little about this.	I have some experience in doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Identify vegetable recipes					
Blanch vegetables					
Poach vegetables					
Boil vegetables					
Fry vegetables					
Roast vegetables					
Bake vegetables					
Grill vegetables					
Portion vegetable dishes					

My experience	I do not	I know a	I have	I have a lot	l am
Kasuladas skills and	have any	little	some	of	confident
Knowledge, skills and	experience	about	experience	experience	in my
attitudes	in doing	this.	in doing	with this.	ability to
	this.		this.		do this.
Hold vegetable dishes					
Plate vegetable dishes					
Garnish vegetable					
dishes					

# Key Competencies:

Know	ledge	Skills		Attitu	des
1.	Identify vegetables cooking methods	1.	Apply vegetables cooking methods	1.	Respect cooking duration for nutrients
2.	Determine the Selection factors for vegetable dishes	2.	Select vegetable dishes	2.	Consider hygiene while preparing vegetable dishes
3.	Identify the presentation guidelines and techniques for vegetable dishes	3.	Apply presentation guidelines and techniques for vegetable dishes	3.	Respect food safety while holding vegetable dishes







- 1. What have you observed on that picture?
- 2. What are the vegetables cooking methods?
- 3. What are the cooking techniques for vegetable dishes?
- 4. What are the health benefits of vegetable dishes?
- 5. How do you present vegetable dishes?
- 6. How do you hold vegetable dishes?

# Topic 2.1: Applying vegetables cooking methods



Activity 1: Problem Solving



- 1. In your group, after discussing about vegetable dishes preparation, holding and presentation in the previous activity, answer the following questions:
  - a. What are the factors to consider when selecting vegetable dishes?
  - b. When cooking vegetables, what are the guidelines to be applied.
  - c. What are the vegetable cooking techniques?
  - d. How do you hold and present vegetable dishes?
- 2. Share with the rest of the class your findings

**Key Facts** (Indicative contents)

- Applying vegetables cooking methods
  - ✓ Factors to consider when selecting a vegetable dish:
    - Main course

Main course should be taken into consideration when selecting vegetable dishes to complement the dish's flavor profile.

The most obvious way to choose a side dish is to look at your main dish (pasta, chicken, seared tofu) and choose something different. Think different, if your main dish has sweetish undertones, think about complementing it with a side dish with a tangy vinaigrette or lemony dressing that has a satisfying sourness that won't compete with the main dish.

### Firmness and color

Different textures capture your interest and make the experience of eating fun and stimulating. For example, if you're serving melt-in-the-mouth seven-hour roasted lamb on a bed of mashed potatoes, match it with green veggies just cooked until al dente or a crunchy and fresh salad

Beautiful, bright contrasting colours on a plate just look so much more appetizing than a bland, beige pool of food.

### 🖊 Nutritive value

A good rule of thumb is that two-thirds of your plate should include a protein, one-third a green vegetable and one-third a healthy carbohydrate. Balance Your Greens, Grains and Protein. It is also an effective way to ensure that you are offering diners a nutritious meal that offers a range of vitamins and minerals.

### ✓ Health benefits of vegetable dishes

🖊 Fight inflammation

They are rich in antioxidants and phytochemicals to help your body fend off inflammation.

### Improve Blood Pressure

Eating more potassium-rich foods can help reduce the damage of a high-sodium diet. Vegetables, like beets and spinach, deliver potassium (amongst other nutrients) and the fiber from vegetables also helps your heart.

### 👃 Up your fiber

Fiber is great for your heart and gut, but also can keep you full and reduce your risk of developing diabetes. All vegetables have fiber, so choose a variety to get your fill.

#### Help your eyes

If you want to protect your eyes, eat more vegetables Lutein and zeaxanthin are two carotenoids that help reduce the risk of age-related macular degeneration (AMD). You'll find them and other eye-protecting carotenoids in basil, corn, red peppers, spinach and broccoli.

∔ Improve your skin

**You** can help take care of your skin by eating some vegetables, tomatoes deliver lycopene, which can actually help protect your skin from sunburn Kale and avocados can help keep your skin more elastic. Many vegetables, like cucumbers and celery, also have a high-water content to help you meet your hydration goals for glowing skin.

Reduce risk of heart disease

Vegetables give you potassium and fiber, two nutrients that are good for your heart. Adding lots of veggies to your diet can also help you keep your weight in a healthy range, which takes some pressure off your heart.

Benefit for blood sugar

Whether you have diabetes or not, vegetables are low in calories and high in fiber and nutrients, so they can help fill you up and can minimize blood sugar spikes during meals.

### Reduce risk of cancer

No diet choice is guaranteed to keep your cancer free, but vegetables are full of cancer-fighting nutrients and antioxidants that may reduce your risk of certain types of cancers.

### 🖊 🛛 Keep your brain young

If you want to keep your brain sharp, including vegetables in your diet is the way to go. Vegetables, especially leafy greens, are part of the MIND Diet, which was designed by researchers to help reduce your risk of Alzheimer's disease and dementia. The antioxidants and folate they deliver are key nutrients for your brain.

Improve your immune health

Vitamin C is a key nutrient that's found in lots of vegetables.

### ✓ Guidelines for vegetables cooking

- Keep fresh vegetables cold at all times
- Do not remove from shipping containers unless needed within 24 hours.
- Sort, trim, wash, drain well and refrigerate in covered containers.
- 🖶 Wash all vegetables
- Soak vegetables, such as cauliflower, broccoli, cabbage and Brussels sprouts, 30 minutes in cold water containing a tablespoon of salt per gallon to loosen soil and remove insects.
- Do not leave greens in water for more than 6 to 7 minutes.
- To cut vegetables, use a stainless-steel knife to prevent discoloration. Pare or peel and cut as recipe directs.
- If greens are to be held, drain excess water from pans
- 👃 Do not overcook.
- Cook as close to the service time as possible.
- Keeping them in a hot counter or bain-marie continues to cook them.
- If vegetables must be cooked in advance, slightly under-cook them, cool rapidly in cold water, drain, and refrigerate, then reheat at the service time.
- For uniform doneness, cut into uniform sizes before cooking.

### ✓ Doneness:

A vegetable is said to be done when it has reached the desired degree of tenderness. This stage varies from vegetable to vegetable. -Some such as eggplant (brinjal / aubergine) and pumpkin are considered properly cooked when they are quite soft. -Most vegetables, however, are best cooked very briefly (firm to the bite). At this stage of tenderness, they not only have the most pleasing texture, but they retain the maximum taste, color, flavor and nutrients.

### 🗸 Time

### Remember that not all vegetables cook at the same time.

While a majority of commonly used vegetables can be cooked in at least 5 minutes or less (string beans, carrots, broccoli, cauliflower, peas, and asparagus), take note of the ones that need a little more time.

Sweet potatoes, potatoes, beets, and squash need more than 15 minutes to cook through, depending on how big or small they are chopped. They key is to check in every once in a while: use a knife or fork to poke your vegetables to check for doneness. Vegetables are ready when they are soft but still have a firm crunch or bite to them.

### Temperature

You should cook vegetables at a temperature of at least 135 degrees Fahrenheit. This will help to ensure that the vegetables are cooked properly and will also help to kill any bacteria that may be present.

### • Application of procedures for vegetable cooking methods

### ✓ Dry heat cooking

This refers to any cooking technique where the heat is transferred to the food item without using extra moisture. This method typically involves high temperatures—300 F or hotter.

The following dry heat cooking methods are commonly applied in vegetable cooking:

 Sautéing and Pan-Frying

Sautéing requires a hot pan before cooking. When sautéing, it's important to heat the pan for a minute, then add a small amount of fat (such as oil) and let it heat up before adding ingredients to the pan.

Pan-frying closely resembles sautéing, but pan-frying uses slightly more fat and a slightly lower temperature than sautéing. This makes it a good method for cooking larger pieces of meat that need longer to cook. Meat that is pan-fried is sometimes finished in the oven to cook through.

### 📥 Roasting

It describes a method of cooking an item by enveloping it in hot, dry air. This typically happens inside an oven and at temperatures of at least 300 F.

### Broiling and Grilling

Broiling is another dry heat cooking method that relies on heat being conducted through the air. Because air is a relatively poor conductor of heat, broiling, and grilling require the food to be quite close to the heat source, which in this case is likely to be an open flame.

### 👃 Deep Frying

Deep frying involves submerging the food in hot, liquid fat, Deep frying requires keeping the oil at temperatures between 325 F and 400 F. Hotter than that and the oil may start to smoke, and if it's any cooler, it starts to seep into the food and make it greasy.

### Moist heat cooking

This refers to the cooking methods using liquid or steam to transfer heat to food. Three popular techniques are braising, steaming, and poaching. Each technique uses liquid or vaporized heat to gently cook food and soften connective tissue.

### 📥 Boiling

Boiling is cooking foods in a liquid (water, bouillon, stock, milk) at boiling point. Boiling is a method of cooking foods by just immersing them in water at 100 °C and maintaining water at the temperature till food is tender.

### 📥 Stewing

Stewing is a long and slow cooking method where food is cut into pieces and cooked in the minimum amount of liquid, water, stock or sauce. The food and the cooking liquid are served together.

#### Steaming:

It is a method of cooking food in steam generated vigorously from boiling water in a pan. The food to be steamed is placed in a container and is not in direct contact with the water or liquid.

### Pressure cooking:

When steam under pressure is used, the method is known as pressure cooking and the equipment used is the pressure cooker. In this method the temperature of boiling water can be raised above 100 °C.

### • Application of cooking techniques

### ✓ Blanching and refreshing

- Blanching: Food is dipped in boiling water for 5 seconds to 2 minutes depending on the texture of the food.
  - Bring water to a rolling boil in a large pot. Use a pot large enough for the vegetable to float in the water.
  - ✤ Add the vegetable to the boiling water.
  - ✤ Add 1 tsp. olive oil to the vegetable in the water.
  - Boil the vegetable until it is almost, but not quite done.
  - Drain the vegetable in a colander.
- Refreshing
  - drain the cooked pasta in a colander.
  - place the colander into a bigger bowl filled halfway with ice water.
  - lift the colander out of the ice water,
  - drain, and it's ready to use.
- Simmering: is a cooking method more gentle than boiling. It refers to cooking food in liquid (or cooking just the liquid itself) at a temperature slightly below boiling point. It can be trickier compared to boiling because it requires careful regulation of temperature so that the surface of the liquid shimmers, with a bubble coming up every few seconds.
- Searing (or pan searing) is a technique used in grilling, baking, braising, roasting, sautéing, etc., in which the surface of the food is cooked at high temperature until a browned crust forms.

Some popular vegetable recipes and their cooking procedures

Ratatouille preparation procedure

- Clean the vegetable.
- Remove the skin using a peeler.
- Cut into 3mm slices
- Concasse the tomatoes
- Place the oil in a thick-bottomed pan. Add the onions.

- Cover with a lid and allow to cook gently 5-7minutes
- 4 Add the garlic, aubergine sliced.
- 📥 Season.
- Allow to cook gently for 4-5minutes.
- Mix in the parsely correct the seasoning and serve.

### **Buttered carrots**

- Peel and wash the carrots
- Cut into even pieces.
- Place in a pan with a little salt a pinch of sugar and butter. Cover with the water
- Cover with a buttered pepper & allow to boil.
- When the water are completely evaporated check if there are cooked.
- Remove from the heat.
- Serve spinkled with chopped parsley.

### Bean goulash

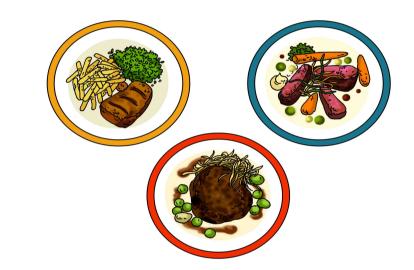
- Soak beans for 24hours in cold water.
- Drain, place into a saucepan,
- Cover with cold water.
- Bring to the boil. Simmer until tender.
- Heat oil in a pan, sweat onion and without colour.
- 📥 🛛 Add paprika
- Cut the pepper into 1cm dices and add them to the mixture
- Add the buttom mushroom and cook for 2minutes.
- Add the tomato puree, vegetable stock and the bouquet garni.
- Bring to the boil.
- Remove bouquet garni, add drained cooked beans
- Correct the seasoning and stir.
- Garnish with cooked potatoes and chopped parsley.
- 4

### Jardiniere Vegetables

- Blanch the vegetables separately in boiling salted water, drain.
- Heat butter in a sauté pan over medium heat
- Toss or stir until the vegetables are evenly coated with butter and very hot
- Add parsley, pepper, salt and serve immediately

### • Presentation of vegetable dishes

- ✓ Presentation guidelines for vegetable dishes
  - Platting:



### Figure 7: Food presentation

- Select the right plate
- Never overload the plate
- Use colours contrast
- Consider the texture
- Consider the right portion sizes
- Use edible garnishes

#### Garnishing

- Selecting a Garnish
- Make all inedible garnishes easily identifiable and removable
- Decide whether to use strong flavors or bland ones.
- Vary the color and texture.

- Arrange the garnish on the dish
- ✤ Keep the temperature in mind.
- Use edible garnishes whenever possible
- Portioning

The portion size for servicing of vegetables may vary based on different factors such as type of vegetable, establishment standard, type of service.

However, the following portion sizes serve as references: 1 cup (150g) cooked or canned legumes/beans such as lentils, chick peas or split peas.

30g nuts, seeds, peanut or almond butter or tahini or other nut or seed paste.

✓ Application of presentation techniques

Side dish: Vegetable dishes may be served as a side dish to complete a main course.

Puree: Some vegetables are served as purees

Crudity: Other vegetables are served uncooked, raw. In that case we take about crudities.

### • Holding vegetable dishes

Description of holding vegetable dishes

A proper vegetable dishes holding refers to the act of keeping food out of the temperature danger zone (41 to 135 degrees Fahrenheit). The danger zone refers to the temperature range in which bacteria growth occurs most rapidly on food.

Serve Safe states that 4 hours is the maximum length of time ready-to-eat foods can stay in the temperature danger zone. The longer food sits in the temperature danger zone, the greater the risk that bacteria will grow on the food. After the 4-hour limit, foods must be thrown away. Within the 4-hour time limit, foods can be consumed, reheated, or chilled to bring them back to food safe temperatures.

✓ Benefits of proper holding of vegetable dishes

Safety benefits:

Prevent Cross contamination and other foodborne illness as time temperature abuse is a common source of foodborne illness. Foods may become timetemperature abused in three ways:

- Foods are not held or stored at food safe temperatures
- Food is not cooked or reheated to the temperature required to eliminate possible pathogens
- Hot food is not cooled properly before being placed in cold storage
- Health benefits:

Having Good heath by consuming nutritious food because poor vegetable dishes holding leads to loss of nutrients in the food.

- Collection of holding tools and equipment
  - Hot holding tools and equipment

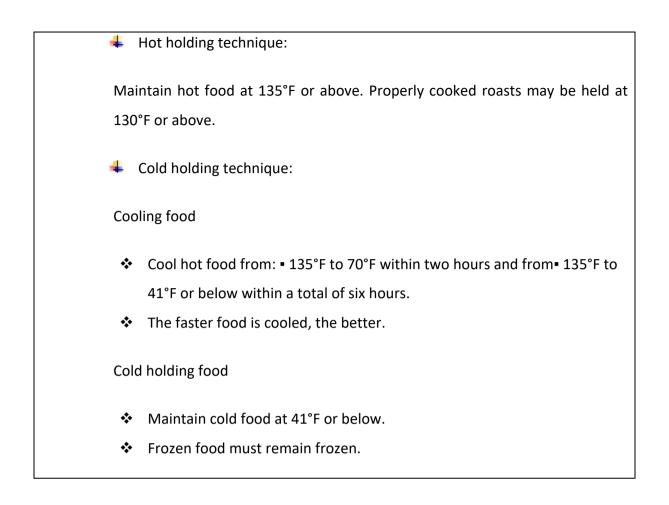
The following are common tools and equipment used to hold vegetables hot at 135°F or above:

Bowls, Inserts, platters, Bain maries, food warmers

Cold holding tools and equipment

The following are common tools and equipment used to hold vegetables cold at 41°F or below: Freezers, refrigerators, ice bath...

✓ Holding techniques for vegetable dishes







Read and perform the below task:

The school canteen is hosting the school management team for lunch, where Trio Buttered Vegetables will be served as an accompaniment to the main course. Under the guidance of your trainer, prepare this dish within 30 minutes.



# Activity 3: Application



Go to the school kitchen workshop, and perform the following task:

The school canteen is hosting the school management team for lunch, where Bean Goulash will be served as an accompaniment to the main course. You are requested to cook this dish within 30 minutes.

# **Topic 2.2: Presenting vegetable dishes**

## **Activity 1: Problem Solving**

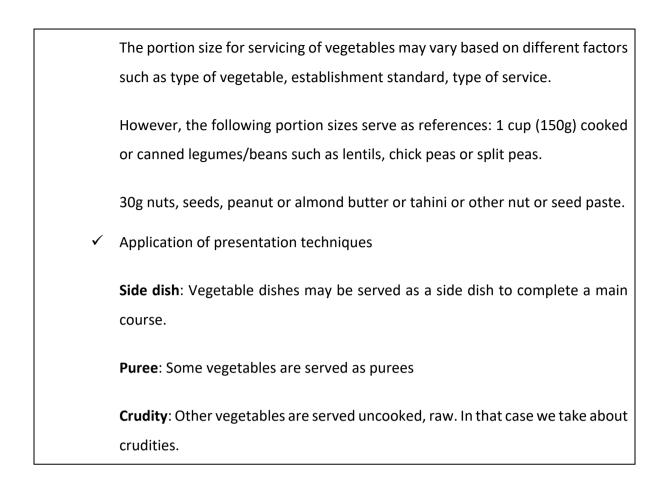


- 1. In your group, after discussing about vegetable dishes preparation, holding and presentation in the previous activity, answer the following questions:
  - a. What are the vegetable dishes presentation guidelines?
  - b. What are the vegetable dishes presentation techniques?

### Key Facts (Indicative contents)

### • Presentation of vegetable dishes

- ✓ Presentation guidelines for vegetable dishes
  - 4 Platting:
    - Select the right plate
    - Never overload the plate
    - Use colours contrast
    - Consider the texture
    - Consider the right portion sizes
    - Use edible garnishes
  - Garnishing
    - Selecting a Garnish
    - Make all inedible garnishes easily identifiable and removable
    - Decide whether to use strong flavors or bland ones.
    - Vary the color and texture.
    - Arrange the garnish on the dish
    - Keep the temperature in mind.
      - Use edible garnishes whenever possible
  - Portioning







The school canteen is hosting the school management team for lunch, where Trio Buttered Vegetables will be served as an accompaniment to the main course. Under the guidance of your trainer, perform the presentation of this dish within 10 minutes.



# Activity 3: Application



In the kitchen workshop, read and perform the following task:

The school canteen is receiving the school management team for lunch where Bean goulash will be served as accompaniment to the main course. You are requested to present this dish within 10 minutes.

# Topic 2.3: Holding vegetable dishes

Activity 1: Problem Solving



- 1. In your group, after discussing about vegetable dishes preparation, holding and presentation in the previous activity, answer the following questions:
  - a. How to hold vegetable dishes?
  - b. What are the vegetable dishes holding tools and equipment?
  - c. What are the benefits of proper holding of vegetable dishes?
  - d. What are the holding techniques of vegetable dishes?

Key Facts (Indicative contents)

### Holding vegetable dishes

✓ Description of holding vegetable dishes

A proper vegetable dishes holding refers to the act of keeping food out of the temperature danger zone (41 to 135 degrees Fahrenheit). The danger zone refers to the temperature range in which bacteria growth occurs most rapidly on food.

ServSafe states that 4 hours is the maximum length of time ready-to-eat foods can stay in the temperature danger zone. The longer food sits in the temperature danger zone, the greater the risk that bacteria will grow on the food. After the 4-hour limit, foods must be thrown away. Within the 4-hour time limit, foods can be consumed, reheated, or chilled to bring them back to food safe temperatures.

$\checkmark$	Bei	nefits o	of proper holding of vegetable dishes			
	Safety benefits: Prevent Cross contamination and other foodborn					
		as tim	ne temperature abuse is a common source of foodborne illness.			
		Foods	s may become time-temperature abused in three ways:			
		*	Foods are not held or stored at food safe temperatures			
		*	Food is not cooked or reheated to the temperature required to			
			eliminate possible pathogens			
		*	Hot food is not cooled properly before being placed in cold storag			
	4	Healt	h benefits: Having Good heath by consuming nutritious food			
		becau	use poor vegetable dishes holding leads to loss of nutrients in the			
		food.				
$\checkmark$	Col	lection	of holding tools and equipment			
	4	Hot h	olding tools and equipment			
The f	ollo	wing ar	e common tools and equipment used to hold vegetables hot at 135			
or ab	ove	:				
Bowl	s, In	serts, p	platters, Bain maries, food warmers			
	4	Cold I	nolding tools and equipment			
The f	ollo	wing ar	re common tools and equipment used to hold vegetables cold at 41			
or be	elow	: Freez	ers, refrigerators, ice bath			
✓	Но	lding te	echniques for vegetable dishes			
	4	Hot h	olding technique: Maintain hot food at 135°F or above. Properly			
		cooke	ed roasts may be held at 130°F or above.			
	4	Cold I	nolding technique:			
Cooli	ing f	ood • C	cool hot food from: • 135°F to 70°F within two hours and from• 135			
			wwithin a total of six hours - The factor food is cooled, the bett			
	l°F c	or belov	w within a total of six hours. • The faster food is cooled, the bette			
to 41			w within a total of six hours. • The faster food is cooled, the bette od • Maintain cold food at 41°F or below. • Frozen food must rema			





The school canteen is receiving the school management team for lunch where Trio buttered vegetables will be served as accompaniment to the main course. Under the guidance of your trainer perform the holding process of this dish within 10 minutes.





In the kitchen workshop, read and perform the following task:

The school canteen is receiving the school management team for lunch where Bean goulash will be served as accompaniment to the main course. You are requested to perform the holding process of this dish within 10 minutes.



### Do not overcook vegetables.

Cook in a minimum amount of boiling liquid.

Cook as close to the service time as possible.

Keeping them in a hot counter or bain-marie continues to cook them.

If vegetables must be cooked in advance, slightly under-cook them, cool rapidly in cold water, drain, and refrigerate, then reheat at the service time.

For uniform doneness, cut into uniform sizes before cooking.

Always hold hot dishes hot and cold dishes cold.

Serve vegetables on a right plate, in right portion and with right garnish.



- 1) Re-take the self-assessment you did at the beginning of the unit.
- 2) Fill in the table below and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.



# **Formative Assessment**

XY Hotel, located in Ngoma District, Kibungo Sector, is hosting 12 guests for lunch. The menu includes Steamed Carrots, Trio Buttered Vegetables, and Boiled French Beans. However, this hotel is facing a problem of poor-quality products due to a lack of a qualified cook. As a welltrained trainee in Food and Beverage Operations, you are tasked to prepare and present the above dishes within 45 minutes.

All necessary tools, equipment and materials are available in the kitchen store.

## **UNIT 3: PREPARING STARCHES**



Figure 8: Starch dishes preparation

### Unit summary:

This unit describes knowledge, skills and attitudes required to prepare starch dishes. At the end of this unit trainee will be able to identify the types of starch, select the starch dishes ingredients to select tools and equipment used for starch dishes and to perform the preliminary preparations of starch dishes ingredients such as washing, peeling, cutting and soaking.

### Self-Assessment: unit

- Look at the illustration above. Discuss about what is happening or what you see on the illustration. What do you think this learning unit will be about? What topics might be covered?
- 2. Fill in the self-assessment below.

There are no right or wrong ways to answer this survey. It is for your own use during this course. The trainer will read a skill that is listed in the left column. Think about yourself: do you think you can do this? How well? Read the statements across the top. Put a check in column that best represents your situation. At the end of this unit, we'll take this survey again.

My experience	l do not	I know	I have	I have a lot	l am
	have any	a little	some	of	confident
Knowledge, skills and	experience	about	experience	experience	in my
attitudes	in doing	this.	in doing	with this.	ability to
	this.		this.		do this.
	uns.		uns.		uo tilis.
Describe starch					
Identify the types of					
starches					
Identify starch dishes					
ingredients					
Identify tools for starch					
dishes preparation					

My experience Knowledge, skills and attitudes	I do not have any experience in doing this.	l know a little about this.	I have some experience in doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Washing starch dishes ingredients					
Trimming starch dishes ingredients					
Peeling starch dishes ingredients					
Stuffing starch dishes ingredients					
Rubbing starch dishes ingredients					
Cutting starch dishes ingredients					
Coating starch dishes ingredients					
Mixing starch dishes ingredients					

## **Key Competencies:**

Knowledge		Skills		Attitudes		
1.	Identify the types of	1.	Selection of types of	1.	Demonstrate time	
	starch		starch		management	
2.	Identify tools and	2.	Selection of tools	2.	Maintain safety	
	equipment for starch		and equipment for		while selecting tools	
	dishes preparation		starch dishes		and equipment	
			preparation			
3.	Determine the	3.	Application of	3.	Maintain hygiene	
	preliminary		preliminary		during the	
	preparations of		preparations of		preliminary	
	starch ingredients		starch ingredients		preparation.	



## **Discovery activity**





Read and answer the following questions:

- 1. What have you observed on that picture?
- 2. What does that person use to perform his/her task?
- 3. What are the types of starches?
- 4. What are the required preliminary preparations for starch dishes?
- 5. How to perform the preliminary preparations of starch dishes ingredients?

## **Topic 3.1: Selecting types of starches**

Activity 1: Problem Solving



In your group, discuss about starches.

- 1. What is starch?
- 2. What are the types of starches?
- 3. What are the health benefits of starches?

#### Key Facts (Indicative contents)

## Select ingredients for starches

✓ Description of starches

In cookery starch dish is any food containing a large amount of starch, such as rice, cereals, pasta, bread and potatoes.

Starch refers to white, tasteless, solid carbohydrate, occurring in the form of minute granules in the seeds, tubers, and other parts of plants, and forming an important constituent of rice, corn, wheat, beans, potatoes, and many other vegetable foods.

- Health benefits of starches
  - Nutritive value

We should eat some starchy foods every day as part of a healthy, balanced diet. Starchy foods are a good source of energy and the main source of a range of nutrients in our diet. As well as starch, they contain fibre, calcium, iron and B vitamins. Fibre is the name given to a range of substances found in the cell walls of vegetables, fruits, pulses and cereal grains.

Fibre that cannot be digested helps other food and waste products to move through the gut.

Potato skins, wholegrain bread and breakfast cereals, brown rice, and wholewheat pasta are all good sources of this kind of fibre.

Eating starchy foods may help increase satiety, which is the feeling of being full, after eating.

Fibre can help keep your bowels healthy and can help you feel full, which means you're less likely to eat too much.

### Body function

### Starch fits into one of three groups:

- Rapidly digestible starch (RDS): This form of starch exists in cooked foods, such as potatoes and bread. The body rapidly converts it to glucose.
- Slowly digestible starch (SDS): This starch has a complex structure, meaning that the body breaks it down slowly. It exists in cereal grains.
- Resistant starch (RS): The body cannot easily digest this form of starch, and it can pass through the digestive system untouched, similar to dietary fiber. It may support healthy intestinal microflora.

Collection of types of starches

Cereals and grains:

Cereal products are made from grains. Wholegrain cereals can contribute to our daily intake of iron, fiber, B vitamins and protein. Higher-fiber options can also provide a slow release of energy.

Wheat, oats, barley, rye, couscous, corn and rice are commonly available cereals that can be eaten as wholegrains. Rice and grains, such as couscous and bulgur wheat, can be eaten hot or cold, and in salads.



Figure 8: Pastas

#### 🖶 Roots:

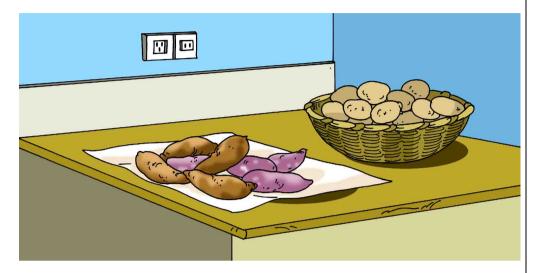
Potatoes are a great choice of starchy food and a good source of energy, fibre, B vitamins and potassium. We also get a lot of our vitamin C from potatoes.

Potatoes are a healthy choice when boiled, baked, mashed or roasted with only a small amount of fat or oil and no added salt.

French fries and other chips cooked in oil or served with salt are not a healthy choice.

Leave potato skins on where possible, to keep more of the fibre and vitamins. For example, eat the skin when you have boiled or baked potatoes.

If you boil potatoes, some nutrients will leak out into the water, especially if you have peeled them. To stop this happening, only use enough water to cover them and cook them only for as long as they need Storing potatoes in a cool, dark and dry place or in the fridge will help stop them sprouting. Do not eat any green, damaged or sprouting bits of potatoes, as these can contain toxins that can be harmful.

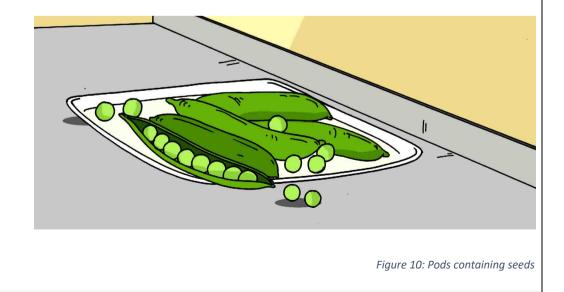


*Figure 9: Sweet potatoes and Irish potatoes* 

Pods, Seeds and Nuts:

Remember that vegetables can be classified into two main types based on their starch content. Starchy vegetables include potato, corn, peas, beans and lentils that are enveloped in pods

Pods play a key role in encapsulating the developing seeds and protecting them from pests and pathogens.



A seed is a mature fertilized ovule of a plant which consists of three parts:

- embryo where the new plant forms if subject to the right conditions
- endosperm - a food store
- seed coat a protective covering.

To confuse matters, a nut can also be a seed. But a seed by definition is not a nut.

The botanical definition of a nut in its simplest form is a seed contained in a hard shell which doesn't naturally open to release the seed when it matures.

The culinary definition of a nut is much simpler and incorporates a whole range of edible plant parts. It's often considered to be any edible kernel surrounded by a shell.

The following nuts can also be considered as seeds: almonds, Brazil nuts, cashews, macadamias, pecans, pistachios, pine nuts, walnuts.

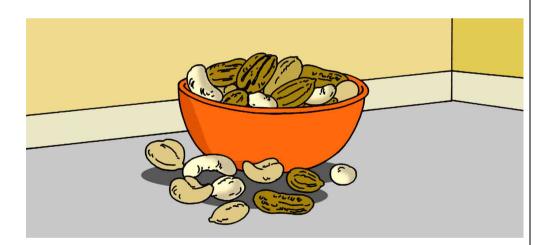
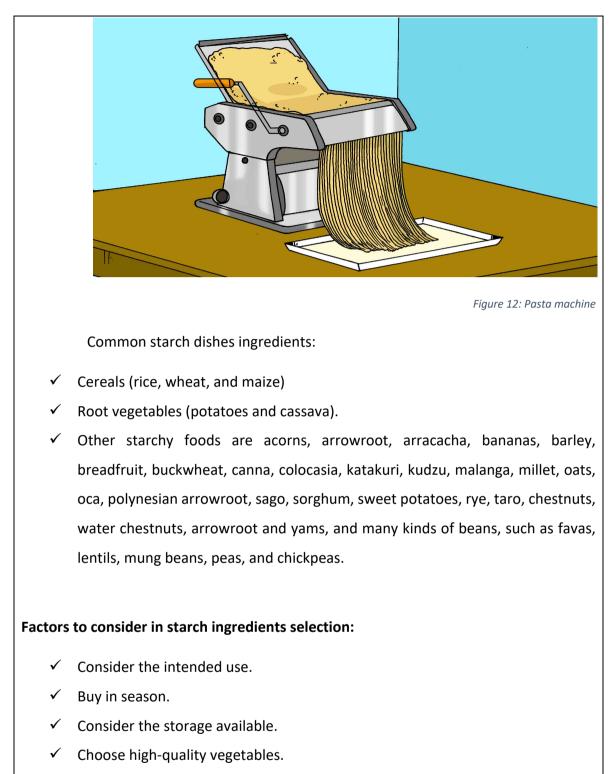


Figure 11: Nuts

#### 🗕 Pasta

It consists of dough made from durum wheat and water and contains iron and B vitamins. Dried pasta can be stored in a cupboard and typically has a long shelf life, while fresh pasta will need to be refrigerated and has a shorter lifespan.



- ✓ Firmness
- ✓ Color
- ✓ Crispness
- Popular starch dishes and their ingredients

- ✓ PILAU RICE
  - 👃 1onion, 2tbs pilau masala
  - ↓ ¼ kg beef, cubed, ½ kg rice
  - 4 tomatoes, 2 crushed garlic,
  - 4 1 tin tomato paste
- ✓ Plain boiled potatoes/pommes Nature
- ✓ Potatoes, Salt
- ✓ Parsley potatoes /pommes persillées
  - Potatoes,
  - Parsley,
  - 📥 Salt,
  - Butter
- ✓ Mashed potatoes /pommes purée

Potatoes , Salt, Butter, Milk

✓ Duchess potatoes/ pommes duchesse

Potatoes, Salt, Butter, Egg yolk

✓ Croquette potatoes /pommes croquettes.

Potatoes, Salt, Butter, Egg yolk, Oil

Bread crumbs

✓ Noodles

- </u> Flour
- 📥 Salt
- Olive or other vegetable oil
- Egg and egg yolk.
- ✓ Ravioli
  - Flour (200g)
  - 🖊 Salt
  - Olive oil (35ml)
  - Water (105ml)

- Lasagne (200g)
- 📥 Oil (1tbsp)
- 🜲 🛛 Bacon (50g)
- Chopped onion (100g)
- Chopped carrot (50g)
- Chopped celery (50g)
- Minced beef (200g)
- Mashed tomatoes (50g)
- Thickened stock
- 🖊 Garlic
- 🕹 Salt, pepper.
- 🖶 Marjoram
- Sliced mushrooms
- Bechamel sauce.
- Grated parmesan or other cheese.
- ✓ Spaghetti bolognaise.
  - 👃 🛛 Butter or oil 25g
  - Chopped onion 50g
  - Garlic (chopped)(1)
  - Minced beef (400g)
  - Thickened stock (125ml)
  - Mashed tomatoes (1tbsp)
  - Marjoram or oregano (1/8 tbsp)
  - Diced mushrooms (100g)
  - Salt, millpepper.
  - Spaghetti (100g)and mixed herbs (5g)
- ✓ Penne Arrabiata:
  - 4 1/3 cup extra-virgin olive oil
  - 1 brown onion, finely chopped
  - 4 1 garlic clove, crushed

- 4 2 small red chillies, chopped (see note)
- 4 800g can diced tomatoes
- 1/2 cup Massel vegetable liquid stock
- 1/2 cup small basil leaves
- 400g penne rigate
- 2 tsp caster sugar





As we are hosting guests for lunch in our school canteen, under the guidance of your trainer, select the ingredients to be used in Parsley potatoes preparation.





Read and perform the below task

Visit a nearest hotel or restaurant kitchen and participate to the selection of ingredients for Spaghetti bolognaise and Pilau rice preparation then write a report on the performance of that activity.

## **Topic 3.2: Selecting tools for starch dishes preparation.**

## Activity 1: Problem Solving



In your group, discuss about tools used for starch dishes preparation.

- 1. What are the tools and equipment used for starch dishes preparation?
- 2. What are the preparation tools and equipment for starch dishes?
- 3. What are the cooking tools and equipment for starch dishes?

Key Facts (Indicative contents)

Tools and equipment used for starch dishes preparation and their use.
 They can be classified into two categories: preparation tools and equipment and cooking tools and equipment.

Preparation tools and equipment are those used when performing the preliminary preparations. Cooking tools and equipment are those involved when applying the cooking methods and techniques.



Above: 1) Colander, 2), 6) and 7) Various aluminium pans, 3) Bain-marie pan, 4) Sugar boiler, 5) Tin-lined copper saucepan, 8) Milk pan, 9) Double boiler, 10) Stainless steel pan, 11) Wire basket, 12) Perforated spoon, 13) Skimmer, 14) Ladle, 15) Wire scoop (pea ladle).



Figure 13: starch dishes preparation tools



Figure 14: Pasta machine

1) and 2) Perforated spoons for draining food.

3) and 4) Metal spoons for portioning or serving. 5) Measuring jug -essential for accuracy.

6) *Sieve* -removing lumps in flours or liquids, draining foods and puréeing soups and sauces.

7) Salt box -useful in a busy kitchen, where a small dispenser might easily get knocked over.

8) *Grater* with different sizes of serrated holes, the larger ones for hard vegetables like raw carrots, the smaller for finer jobs like grating lemon zest.

9) *Ramekin* made of ovenproof china, used for cooking and serving individual dishes like creme brulee.

10) Soufflédish, made from ovenproof china (various sizes are available).

11) *Funnel*-: for pouring liquids into jars and other containers with small openings.

12) *Sur le plat* dish -for cooking "*oeufs sur le plat*" (eggs baked in the oven or sometimes cooked on top of the stove.

13) Oval pie dish -for cooking and serving sweet and savoury pies. Round dishes are generally used for sweet pies.

14) Fish slice -for handling small solid or semi-solid food items (not just fish).

15) Sauce ladle, with a lip for accurate pouring.

16) Spider -for scooping food out of a deep fat fryer or vegetables out of boiling water.

17) Poultry secateurs for cutting through (tender) bones/ joints.

18) Egg slice, fitted with fine wires to produce undamaged, whole slices.

19) Cocotte dish used for "*oeuf en cocotte*" (an egg dish that is baked in the oven).

20) Large spoon made of heat-resistant, durable plastic. This is better than a wooden spoon, which might absorb and transfer food flavours and bacteria. Plastic spoons are best for stirring food in aluminium saucepans (metal spoons can cause discoloration).

21) Ladle -for handling liquids, testing pouring consistency, skimming impurities and fats off soups, sauces, stocks, stews and so forth.

22) Perforated ladle for handling small foods or finely cut items that need to be lifted clear of the cooking liquid.

23) Balloon whisk for beating air into cream or egg whites, or for thoroughly blending two or more liquids.

24) Colander: for draining foods, e.g. pasta that has been boiled or salad vegetables after washing.

25) This type of stainless steel bowl is available in a wide range of sizes and is useful for mixing and storing food.

26) Wooden mushroom -for pounding purees, crushing brittle foods like peppercorns and forcing semi-liquids through sieves (using a liquidiser is easier!).

27) Conicalstrainer: -for removing solids/lumps from liquids.

28) Small measuring/weighing scales. Scales are essential in any recipe where the success of the dish depends on accurate weighing of

ingredients.

29) Masher for pureeing cooked potatoes, turnips, and apples.

30) *Corer* for removing the centre (including the pips) from apples, pears and similar fruit.

31) Round scoop (*parisienne* cutter) for cutting balls out of melons, potatoes, carrots, etc. Different sizes and oval shapes also available.

32) Peeler -for removing skin from vegetables and hard fruit like pears.

33) Zester: -for removing the thin outer skin (not the pith) from lemons and other citrus fruits.

34) Kitchen scissors for general-purpose use.

35) Chopper with double blades (some have 3 or 4 blades) for chopping parsley (using a rocking action).

36) Mandolin for slicing (one blade produces a plain cut, he other a serrated cut).

37) Chopping board holder: colour-coded and labelled to indicate where particular boards should be kept, and what they should be used for.

38), 39) and 40) Colour-coded boards, blue for raw fish, white for dairy products and the thicker, turnip-coloured, board for chopping vegetables. Red boards (not shown) are for raw meats





With guidance of your trainer, select tools and equipment used for mashed potatoes dish preparation.



## (S) Activity 3: Application



Visit a nearest hotel or restaurant kitchen and participate in the selection of tools and equipment used for Ravioli preparation then write a report on the performance of that activity.

# Topic 3.3: Preliminary preparations of starch dishes ingredients





Read and answer the below questions:

Starch dishes have been ordered by customers of your restaurant, as a culinary arts trainee you are requested to perform their preliminary preparation.

- 1. What are the preliminary preparations for starch dishes ingredients?
- 2. How do you wash starchy vegetables?
- 3. How do you perform the stuffing technique?
- 4. How do you peel potatoes?

Key Facts (Indicative contents)

• Performing preliminary preparations for starches

- ✓ Description of preliminary preparation for starches
  - Washing: process of removing the impurities using running water or chemicals(Chlorine)
  - Peeling it's a removal of the starch skin
  - Trimming by removing the useless part.
  - Rubbing This refers to the process of applying firm pressure to the surface of some vegetables,
  - Coating is a process that consists of applying a liquid or a powder into the surface of an edible product to convey new properties.
  - Stuffing: process of inserting a stuff, that is an edible item, in another food item.
  - Cutting: refers to the process of putting food items into small pieces.

	4	Mixing: is the process of combining together different ingredients.				
$\checkmark$	<ul> <li>Application of preliminary preparation techniques for starches</li> </ul>					
	4	Washing: By using running water or chemicals(Chlorine)				
	0	Wash all starchy vegetables thoroughly				
	0	Scrub well unpeeled vegetables, like potatoes for baking				
	0	Wash starch ingredients in several changes of cold water				
	0	After washing, drain well and refrigerate lightly covered to prevent drying.				
	4	Peeling: By removing the starch skin. Never over peel. Leave potato				
		skins on where possible.				
	4	Trimming: By removing the useless or unnecessary parts				
	4	Rubbing: This refers to the process of applying firm pressure to the				
		surface of some vegetables, using a repeated back and forth motion.				
	4	Coatingis a process that consists of applying a liquid or a powder into				
		the surface of an edible product to convey new				
		properties. Coating designates an operation as much as the result of it:				
		the application of a layer and the layer itself.				
	4	Stuffing Usually, a vacuum stuffer is employed, which removes oxygen,				
		providing for better curing and concentrating the product going into				
		the casing.				
	4	Cutting: The selected cuts should be uniform leading to a good				
		appearance and uniformity of doneness.				
	4	Mixing: ingredients have to be systematically mixed according to the				
		recipe.				





The school canteen is receiving the school management team for Lunch where parsley potatoes and pilau rice will be served as per the menu. Under the guidance of your trainer perform the preliminary preparations of the ingredients to be used in the preparation of those recipes within 10 minutes.





The school canteen is receiving the school management team for lunch where Tagliatelle with tomato sauce and Croquette potatoes will be served as per menu. You are requested to perform the preliminary preparations of the ingredients to be used in the preparation of those recipes within 15 minutes.

Perform the preliminary preparation of ingredients for these recipes.

All necessary tools, equipment and materials are available in the school kitchen.



Starch is a carbohydrate and a natural component of most plants, including fruits, vegetables, and grains. Starchy foods are an essential part of a balanced diet, as they provide energy, fiber, and a sense of fullness.

The body breaks down starch molecules into glucose, which is the body's primary fuel source. The brain, in particular, requires a considerable amount of glucose each day.

Starchy foods are safe for most individuals and present no risks or side effects. However, it is important that people with diabetes or CSID carefully consider their starch intake.



- 1) Re-take the self-assessment you did at the beginning of the unit.
- 2) Fill in the table below and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.



## **Formative Assessment**

K&G Hotel located in Kicukiro district, Gatenga sector is hosting 15 guests for a dinner where Mashed potatoes, ravioli and Steamed sweet potatoes have to be served. However, this Hotel is facing a problem of poor quality products due to lack of qualified cook. As a well-trained trainee you are tasked to select and perform the preliminary preparation of the ingredients to use in the preparation of the above dishes within 20 minutes.

All necessary tools, equipment and materials are available in the store.

## **UNIT 4: COOKING STARCHES**

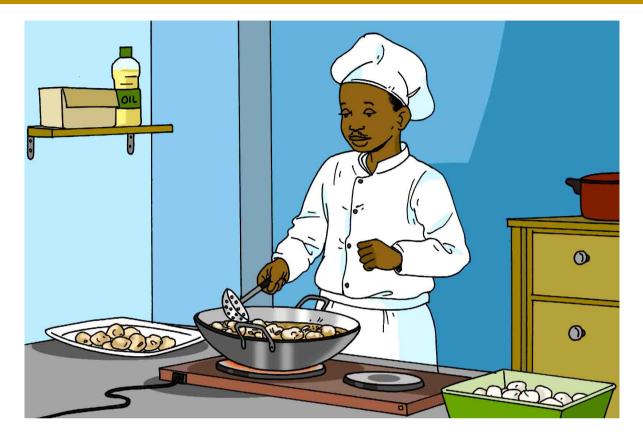


Figure 15:Cooking starch dishes

## Unit summary:

This unit describes knowledge, skills and attitudes required to cook starch dishes. At the end of this unit trainee will be able to apply starch dishes cooking guidelines and methods, to apply starch dishes presentation guidelines and procedures.

## Self-Assessment: unit 1

- Look at the illustration above. Discuss about what is happening or what you see on the illustration. What do you think this learning unit will be about? What topics might be covered?
- 2. Fill in the self-assessment below.

There are no right or wrong ways to answer this survey. It is for your own use during this course. The trainer will read a skill that is listed in the left column. Think about yourself: do you think you can do this? How well? Read the statements across the top. Put a check in column that best represents your situation. At the end of this unit, we'll take this survey again.

My experience Knowledge, skills and attitudes	I do not have any experience in doing this.	l know a little about this.	I have some experience in doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Describe starch dishes cooking guidelines					
Boil starchy food					
Blanch starchy food					
Fry starchy food					
bake starchy food					
steam starchy food					
Plate starchy food					
Portion starchy food					
Garnish starchy food					

## **Key Competencies:**

Knowledge		Skills		Attitudes	
1.	Identify starch dishes	1.	apply starch dishes	1.	Maintain Hygiene while
	cooking guidelines		cooking guidelines		cooking
2.	Identify starch dishes	2.	apply starch dishes	2.	Consider retention of
	cooking methods		cooking methods		nutrients
3.	Identify starch dishes	3.	apply starch dishes	3.	Respect safety standards
	presentation		presentation		while presenting
	guidelines		guidelines		







- 1. What have you observed on that picture?
- 2. What are the starch dishes cooking guidelines?
- 3. How do you cook starch dishes?
- 4. How do you present starch dishes?

## Topic 4.1: Applying starch dishes Cooking methods.

Activity 1: Problem Solving



Starch dishes have been ordered by customers of your restaurant, as a culinary arts trainee you are requested to cook them.

- 1. When cooking starch dishes, what are the guidelines to be applied?
- 2. What are the cooking methods applied for starch dishes?

Key Facts (Indicative contents)

## • Applying cooking methods for starches

- ✓ Factors to consider when selecting a starch
  - Consider the intended use.
  - Here and the season.
  - Consider the storage available.
  - Choose high-quality vegetables.
  - Firmness
  - 🖊 Color
  - Crispness
  - Freshness

✓ Cooking guidelines for starches

- Keep fresh starch cold at all times
- Sort, wash, drain well, trim, peel and cut as per recipe.
- Do not overcook.
- Cook as close to the service time as possible.
- **4** Keeping them in a hot counter or bain-marie continues to cook them.

- If starch must be cooked in advance, slightly under-cook them, cool rapidly in cold water, drain, and refrigerate, then reheat at the service time.
- For uniform doneness, cut into uniform sizes before cooking.

## • Cooking methods for starches

✓ Dry heat cooking

This refers to any cooking technique where the heat is transferred to the food item without using extra moisture. This method typically involves high temperatures—300 F or hotter.

The following dry heat cooking methods are commonly applied in vegetable cooking:

 Sautéing and Pan-Frying

Sautéing requires a hot pan before cooking. When sautéing, it's important to heat the pan for a minute, then add a small amount of fat (such as oil) and let it heat up before adding ingredients to the pan.

Pan-frying closely resembles sautéing, but pan-frying uses slightly more fat and a slightly lower temperature than sautéing. This makes it a good method for cooking larger pieces of meat that need longer to cook. Meat that is pan-fried is sometimes finished in the oven to cook through.

👃 Baking

It describes a method of cooking an item by enveloping it in hot, dry air. This typically happens inside an oven and at temperatures of at least 300 F. Preheat oven to 180°C (160°C fan). Bake until potatoes are easily pierced with a fork, 1 hour to 1 hour 30 minutes.

## Broiling and Grilling

Broiling is another dry heat cooking method that relies on heat being conducted through the air. Because air is a relatively poor conductor of heat, broiling, and grilling require the food to be quite close to the heat source, which in this case is likely to be an open flame.

## 🜲 Deep Frying

Deep frying involves submerging the food in hot, liquid fat, Deep frying requires keeping the oil at temperatures between 325 F and 400 F. Hotter than that and the oil may start to smoke, and if it's any cooler, it starts to seep into the food and make it greasy.

✓ Moist heat cooking

This refers to the cooking methods using liquid or steam to transfer heat to food. Three popular techniques are braising, steaming, and poaching. Each technique uses liquid or vaporized heat to gently cook food and soften connective tissue.

\rm Boiling

Boiling is cooking foods in a liquid (water, bouillon, stock, milk) at boiling point. Boiling is a method of cooking foods by just immersing them in water at 100 °C and maintaining water at the temperature till food is tender.

 Stewing

Stewing is a long and slow cooking method where food is cut into pieces and cooked in the minimum amount of liquid, water, stock or sauce. The food and the cooking liquid are served together.

> Steaming:

It is a method of cooking food in steam generated vigorously from boiling water in a pan. The food to be steamed is placed in a container and is not in direct contact with the water or liquid.

Pressure cooking:

When steam under pressure is used, the method is known as pressure cooking and the equipment used is the pressure cooker. In this method the temperature of boiling water can be raised above 100 °C.

Blanching: Peel and cut your starch into the desired size.

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 Poaching

- Use stock, wine, and aromatics to make a well-flavored poaching liquid.
- Keep an eye on the cooking liquid bubbles should just barely break the surface.
- Poach foods in a wide, shallow pot loosely covered with parchment.

#### • Popular starch dishes

- ✓ Duchess potatoes/ pommes duchesse
  - Wash, peel and rewash the potatoes. Cut to an even size
  - Cook in lightly salted water.
  - Drain off the water,
  - Pass by using a special potato masher or a medium sieve
  - Place the potatoes in a clean pan.
  - Add 1 egg yolk per ½ kg and mix.
  - Add 25g butter or margarine per ½ kg. Correct the seasoning.
  - Place in a piping bag (2cm) diameter and 5cm high
  - Place on greased baking sheet.
  - Place in a hot oven at 230c for 2-3minutes.
  - Remove from the oven and brush with egg wash.
  - Brown in a hot oven or under the salamander.
- ✓ Penne Arabiata
  - Heat oil in a large saucepan over medium heat. Add onion, garlic and chillies. Cook, stirring often, for 6 to 7 minutes or until onion is soft. Add tomatoes, stock and 1/4 cup basil leaves. Bring to a gentle boil. Reduce heat to medium-low and simmer, uncovered, for 15 minutes.
  - Meanwhile, cook pasta in a large saucepan of boiling, salted water following packet directions, until tender. Drain pasta and return to pan.
  - Stir sugar into tomato sauce. Season with salt and pepper. Spoon sauce over pasta. Toss to combine. Cover and set aside for 5 minutes (this allows pasta to absorb sauce).
  - Sprinkle with remaining basil. Spoon into serving bowls and serve.

✓ Spaghe	tti with tomato sauce.
4	Put spaghetti into a saucepan containing boiling salted, water. Allow to
	boil gently.
4	Stir occasionally with a wooden spoon. Cook for approximately 12-
	15minutes
4	Drain well in a colander. Return to a clean, dry pan.
4	Mix in the butter and add the tomato sauce. Correct the seasoning.
4	Add the tomato, leaves of fresh basil mashed.
4	Serve with grated cheese.
✓ Gnocch	i piemontaise (potato)
4	Bake or boil potatoes in their jackets.
4	Remove from skins and mash with a fork or pass through a sieve.
4	Mix with flour, egg, butter and seasoning while hot.
4	Mould into balls the size of a walnut.
4	Dust well with flour and flatten slightly with a fork.
4	Poach in gently boiling water until they rise to the surface. Drain
	carefully.
4	Dress in a buttered earthenware dish, cover with tomato or any other
	pasta sauce.
4	Spinkle with grated cheese and brown under the salamander and serve.
✓ Noodle	S
4	Sieve the flour and salt. Make a well
4	Add oil and eggs. Mix well.
4	Knead well until smooth. Leave to rest.
4	Roll out to a thin rectangle.
4	Cut into ½ cm. Leave to dry.
✓ Ravioli	
4	Sieve the flour and salt. Make a well. Add the liquid.
4	Knead to a smooth dough. Rest for at least 30minutes in cool place.

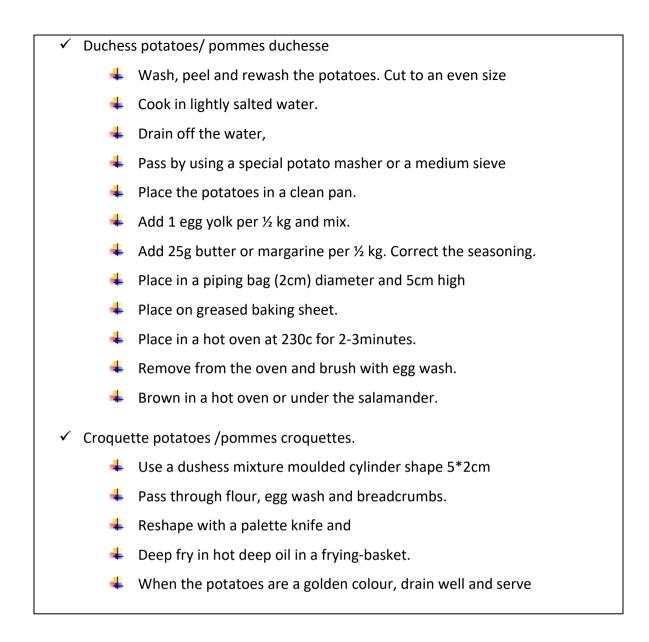
4 Roll out to a very thin 30cm.

- Cut in half and eggwash.
- Place the stuffing in a piping bag with a large plain tube.
- Pipe out in small pieces
- Carefully cover with the other half of the paste,
- Mark each with the back of a plain cutter.
- Cut in between each line of filling.
- Separate on a well-floured tray
- Poach in gently boiling salted water (10minutes)
- Remove from the water.
- Spinkle with 50g grated cheese.
- Brown under the salamander and serve.

#### ✓ Cannelloni

- Use the same ingredients as for ravioli dough.
- Roll out the paste as for ravioli.
- Cut into squares approximately 6cm\*6cm
- Cook in gently boiling salted water (10minutes. Refresh in cold water.
- Drain well and lay out singly on the table. Pipe out the filling a cross each.
- Roll up like a sausage roll. Place in a greased earthenware dish.
- Add 250ml tomato sauce or thickened stock.
- Spinkle with 25-50g grated cheese.
- Brown slowly under the salamander or in the oven. Serve.
- ✓ Plain boiling rice
  - Pick and wash the long-grain rice. Add to plently of boing salted water.
  - Stir to the boil and simmer gently untir tender, for approximately 12-15minutes.
  - Wash well under running water, drain and place on a sieve and cover with a cloth.
  - Place on a tray in a moderate oven or in the hot plate until hot.
  - Serve in a vegetable dish separately.

✓ Pilau rice					
4	Boil the meat in onions, salt and crushed garlic, set aside				
4	Stir fry onions and garlic				
4	Saute tomato paste, fresh tomatoes and pau masala to develop the				
	flavuor				
4	Mix in the beef, salt then add hot water and well washed rice				
4	Allow the rice to cook over gentle heat				
✓ Braised	d or pilaff rice				
4	Place 25g butter in a small saucepan. Add the onion.				
4	Cook gently without colouring for 2-3minutes. Add the rice.				
4	Cook gently without colouring for 2-3 minutes.				
4	Add twice the amount of stock to rice.				
4	Season, cover with a buttered paper, bring to the boil				
4	Place in a hot oven (230-250c) for approximately 15minutes until cooked.				
4	Remove immediately into a cool sauteuse				
4	Carefully mix in the remaining butter with a two pronged fork.				
4	Correct the seasoning and serve.				
✓ Parsley	v potatoes /pommes persillées				
4	Prepare and cook the potatoes as for plain boiled.				
4	Brush with melted butter and spinkle with chopped parsley.				
✓ Mashe	d potatoes /pommes purée				
4	Wash, peel and rewash the potatoes. Cut to an even size				
4	Cook in lightly salted water or steam.				
4	Drain off the water, cover and return to a low heat to dry out the				
	potatoes.				
4	Pass through a medium sieve or a special potato masher.				
4	Return the potatoes to a clean pan.				
4	Add 25g butter per ½ kg and mix in with a wooden spoon.				
4	Gradually add warm milk 30ml stirring continuously.				
4	Correct the seasoning and serve.				







The school canteen is receiving the school management team for Lunch where mashed potatoes, ravioli and Pilaf rice will be served as per the menu. Under the guidance of your trainer prepare those recipes within 45 minutes.



# **Activity 3: Application**



The school canteen is receiving the school management team for dinner where Spaghetti with tomato sauce, Croquette potatoes and Pilau rice will be served as per menu. You are requested to prepare those recipes within 50 minutes.

## **Topic 4.2: Presenting starch dishes**

Activity 1: Problem Solving



Starch dishes have been ordered by customers of your restaurant, as a culinary arts trainee you are requested to present them to the guests.

- a. What is starch dishes presentation?
- b. What are the guidelines for presenting starch dishes?
- c. What are the procedures for presenting starch dishes?

Key facts (Indicative content)

## • Presentation of starches

✓ Description of starch dishes presentation

When we eat, we first start by eating with our eyes.

Chefs tactfully arrange ingredients to curate flavor and textural complexity, and their creative plating techniques stimulate appetites before the first bite.

While there are no fixed food presentation rules, there are several important concepts to keep in mind as you arrange your meals:

- Remember your plate is your canvas.
- Arrange food items using the rule of thirds.
- Entice the eyes with visual stimulants.
- Use the sauce as paint for your plate.

Garnish to enhance both appearance and flavor

Presentation guidelines for starch dishes

These are the 5 essential elements needed to produce food art properly.

#### Create a framework

Begin by drawing out or making sketches so that you can visualize the plate. Use objects, pictures, and even sculptures as inspiration

♣ Keep it simple

Select one ingredient to focus on and use space to simplify the presentation. Clutter distracts from the main elements of your dish and might make it confusing for the diners to figure out what to focus on.

🖊 🛛 Balance the dish

Play with colors, shapes, and textures but make sure not to overwhelm your diners. Your presentation techniques should provide an aesthetically appealing meal without overpowering its flavor and function.

Get the right portion size

Ensure that there are the right amount of ingredients and that the plate complements the dish – not too big or small. Put together the right proportion of protein, carbohydrates, and vegetables to create a nutritionally balanced meal.

Highlight the key ingredient

Do not forget to allow the main ingredient to stand out, but also pay equal attention to other elements on the plate, such as garnishes, sauces, and even the chinaware used.

Using the clock analogy, arrange individual food items in the following manner:

- Main: Place your main ingredient between the 3 to 9 o'clock position.
- Starch: One of the best food presentation techniques is remembering to place the starches between 9 to 11 o'clock.
- Vegetables: Lastly, use the 11 o'clock to 3 o'clock position as a guideline to position your veggies.

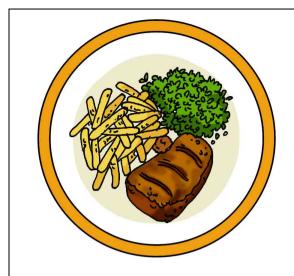


Figure 16: Starch dishes presentation

Starch dishes presentation procedures

Conceptualize plating as an art form: you are the artist; the plate is your canvas, and the food is your medium. Master the following plating procedures:

Plate Presentation Techniques

Selecting the right plate for your meal is the first step in the food presentation process. Factors to consider in plate selection:

- Plate Size Your plate should be big enough to make your food stand out and petite enough to prevent your portions from appearing small.
- Light vs Dark Plates White plates are popular because they offer a neutral background for brightly colored foods. Dark plates lend beautifully to light-colored dishes, such as a whitefish or creamy polenta.
- Plate Color A plate's color can stimulate or reduce appetites. Red increases the appetite, so serving appetizers on red plates keeps customers interested in ordering large entrees and desserts. Professional platers consider blue dinnerware unappetizing because there are few naturally occurring blue foods.

Restaurant Style - If you operate a fine dining establishment, classic China dinnerware pairs well with traditional plating styles. A trendy gastropub should invest in unique plates with unconventional shapes that facilitate maximum plating creativity.

Food Arrangement Techniques



Figure 17: Technique of food presentation

How you arrange your food determines your meal's aesthetic tone, structural integrity, and flavor dispersion. Here are a few of the most important food arrangement techniques:

- The Rule of Thirds When applied to cooking, the rule of thirds prescribes placing the focal point of your dish on either the left or right side of the plate, rather than the center. Use white space by thinking of the rim as your frame and highlight your plate's focal point(s).
- View Your Plate as a Clock As you place your ingredients, picture the face of a clock. From the diner's point of view, your protein should be between 3 and 9, your starch/carbohydrate from 9 to 12, and your vegetable from 12 to 3.

- Do not Overcrowd Your Plate Keep your design simple by focusing on one ingredient (usually the protein). Having a focal point helps you arrange your accompanying items to complement your standout item.
- Moist Ingredients First Plate moist ingredients first and prevent them from running by topping them with other foods.
- Mix Textures Contrasting a smooth vegetable puree with crunchy onion straws or topping a steak with crumbled blue cheese yields appealing texture combinations that are classic in high-end cuisine.

Visual Plating Techniques



Figure 18: Plating technique

Maximizing the visual elements of your meal is a key plating technique. While your arrangement develops around your protein, manipulating the colors and sizes of the other elements on your plate enhances your focal point and creates a gourmet presentation.

- Serve Odd Quantities If you're serving small foods like shrimp, scallops, or bite-sized appetizers, always give guests odd quantities.
- Color Diversity Colorful dishes build the expectation of a flavorfully complex meal before your patrons take their first bite. Add green vegetables or brightly colored fruits that contrast with your focal point.
- Add Height to Your Plate Stimulate your guests' eyes by building height.

#### Sauce Plating Techniques

Think of your squeeze bottle or spoon as a paintbrush, and your sauce as a medium. Once you're done adding your sauce, make sure you wipe down the edge of your plate with a towel, so no drippings distract from your presentation.

Garnishing Techniques



Figure 19: Garnishing technique

Modern garnishes pair thoughtfully with the meal to create flavor bites. Follow these garnishing techniques and guidelines to master the last step of food presentation.

- Edible Garnishes As you finish plating, remember that garnishes should always be edible and enhance the dish.
- Intentional Placement Never heap garnishes in one corner of the plate.
   Instead, disperse them thoughtfully to add color or texture.
- Less Is More Never clutter your plate for the sake of a garnish

**Garnishes to Avoid** - Avoid using unappetizing garnishes like raw herbs, large chunks of citrus, and anything with a strong odor. Also, avoid garnishes that take a long time to apply.



## Activity 2: Guided Practice



The school canteen is receiving the school management team for lunch where mashed potatoes, ravioli and Pilaf rice will be served as main course. We are requested to present these starch dishes to the guests within 10 minutes.





The school canteen is receiving the school management team for breakfast where Spaghetti with tomato sauce, Croquette potatoes and Pilau rice will be served as per menu. You are requested to present those recipes within 10 minutes.



## Points to Remember

Cooking guidelines for starches

Keep fresh starch cold at all times

Sort, wash, drain well, trim, peel and cut as per recipe.

Do not overcook.

Cook as close to the service time as possible.

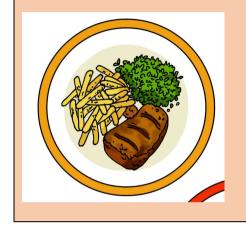
Cooking methods:

The following are common cooking methods applied in starch dishes preparation: Boiling, steaming, frying, grilling, baking.

#### Food presentation

When we eat, we first start by eating with our eyes.

Your food presentation techniques should provide an aesthetically appealing meal without overpowering its flavor and function.





- 1) Re-take the self-assessment you did at the beginning of the unit.
- 2) Fill in the table below and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.



## **Formative Assessment**

XY restaurant located in Nyarugenge district, Muhima sector is hosting 20 guests for lunch where Vegetable Lasagna, Duchess potatoes and braised rice have to be served. However, this restaurant is facing a problem of poor-quality products due to lack of qualified cook. As a well-trained trainee you are tasked to prepare and present the above dishes within 60 minutes.

All necessary tools, equipment and materials are available in the store



February, 2023