



RQF LEVEL 4



FBOBP401

FOOD AND BEVERAGE OPERATIONS

Bakery and Pastry Products

TRAINEE'S MANUAL

August 2024



BAKERY AND PASTRY PRODUCTS



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LIST OF ABBREVIATIONS AND ACRONYMS

CBET:	Competence Base Education and Training
PPE:	Personal Protective Equipment
RQF:	Rwanda Qualification Framework
RS:	Rwandan Standard
RSB:	Rwanda Standards Board
RTB:	Rwanda TVET Board
TVET:	Technical and Vocational Education and Training

INTRODUCTION

This trainee's manual encompasses all necessary skills, knowledge and attitudes required to **Prepare Bakery and Pastry products**. Students undertaking this module shall be exposed to practical activities that will develop and nurture their competences. The writing process of this training manual embraced competency-based education and training (CBET) philosophy by providing practical opportunities reflecting real life situations.

The trainee's manual is subdivided into units, each unit has got various topics. You will start with a self-assessment exercise to help you rate yourself on the level of skills, knowledge and attitudes about the unit.

A discovery activity is followed to help you discover what you already know about the unit.

After these activities, you will learn more about the topics by doing different activities by reading the required knowledge, techniques, steps, procedures and other requirements under the key facts section, you may also get assistance from the trainer. The activities in this training manual are prepared such that they give opportunities to students to work individually and in groups.

After going through all activities, you shall undertake progressive assessments known as formative and finally conclude with your self-reflection to identify your strengths, weaknesses and areas for improvement.

Do not forget to read the point to remember the section which provides the overall key points and takeaways of the unit.

Module Units:

Unit 1: Prepare Bakery products

Unit 2: Prepare Pastry products

Unit 3: Present Pastry products

UNIT 1: PREPARE BAKERY PRODUCTS



Unit summary

This unit provides you with the knowledge, skills and attitudes required to prepare bakery products. It covers the preparation of tools, equipment and ingredients, preparation of bread dough, baking bread dough, presentation of bakery product and storing bakery products.

Self-Assessment: Unit 1

1. Referring to the unit illustrations above discuss the following:
 - a. What do the illustrations show?
 - b. What is the difference between the different images in the illustration?
 - c. What do you think this unit is about based on the illustration?
2. Fill in and complete the self-assessment table below to assess your level of knowledge, skills and attitudes under this unit.
 - a. There is no right or wrong way to answer this assessment. It is for your own reference and self-reflection on the knowledge, skills and attitudes acquisition during the learning process.
 - b. Think about yourself: do you think you have the knowledge, skills or attitudes to Do the task? How well?
 - c. Read the statements across the top. Put a check in a column that best represents Your level of knowledge, skills and attitudes.
 - d. At the end of this unit, you will assess yourself again.

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Identify various types of tools and equipment used for bakery products preparation					
Describe different methods of maintaining tools and equipment used for bakery production					

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Identify ingredients by appearance, texture, smell, and taste.					
Describe the process of preparing ingredients for bakery product					
Select appropriate tools and equipment for specific baking tasks.					
Troubleshoot tools and equipment used for bakery product					
Measure ingredients using measuring cups, spoons, scales					
Prepare dough for various bakery products as per recipe					
Bake various bakery products as per recipe					
Apply presentation techniques for various bakery products					

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Apply storage techniques for various bakery products					
Attention to detail and precision in handling tools, equipment for Bakery products					
Comply with safety precautions at the workplace					
Attention to details to ensure consistency and quality of ingredients for bakery products					
Demonstrate team work while working with others					
Comply with national and international standards related to preparing ingredients for Bakery product					



Key Competencies:

Knowledge	Skills	Attitudes
1. Identify various types of tools and equipment used for bakery products preparation	1. Select appropriate tools and equipment for specific baking tasks.	1. Attention to detail and precision in handling tools, equipment for Bakery products
2. Identify ingredients by appearance, texture, smell, and taste.	2. Troubleshoot tools and equipment used for bakery product	2. Comply with safety precautions at the workplace
3. Describe the process of preparing ingredients for bakery product	3. Measure ingredients	3. Attention to details to ensure consistency and quality of ingredients for bakery products
4. Describe different methods of maintaining tools and equipment used for bakery production	4. Cut ingredients	4. Demonstrate endurance in preparing ingredients for Bakery product
	5. Prepare dough for various bakery products as per recipe	5. Comply with national and international standards related to preparing ingredients for Bakery product
	6. Apply baking techniques	
	7. Apply presentation techniques for various bakery products	
	8. Cool bread	
	9. Apply storage techniques for various bakery products	
	10. Pack bakery products	
	11. Cut bakery products	



Discovery activity:



Task 1:

1. Referring to your experience in preparing bakery products, read and answer the following questions:
 - a. Describe the tools and equipment for preparing bakery products
 - b. Describe the maintenance activities for tools and equipment for preparing bakery products
 - c. Describe the ingredients for preparing bakery products
 - d. Describe the steps of preparing ingredients for bakery products
 - e. Describe the steps for preparing dough ingredients
 - f. Describe the steps for preparing dough
 - g. Describe the different bakery product types
 - h. Describe the baking procedure for bread dough
 - i. Describe the different types of bread storage
 - j. What are tools and equipment are used in the presentation of bakery products.
 - k. Describe the different techniques for the presentation of bakery products

Topic 1.1: Preparation of tools, equipment and ingredients for bakery products



Activity 1: Problem Solving



Task 2:



1. After completing her TVET Certificate V, Tania got an employment opportunity in one of the best hotels in Rwanda in the foods and beverage department. Her duties include preparing bakery and pastry products. The hotel is expecting to receive a group of guests and among their menu is a variety of bakery products. Tania has never prepared bakery products for such a large group of people before; she comes to you for advice.
 - a. What tools should Tania prepare for?
 - i. Measuring tools
 - ii. Mixing tools and equipment
 - iii. Baking tools and equipment
 - iv. Storing tools and equipment
 - v. Presentation tools
 - b. What equipment should the Tania prepare?
 - vi. Measuring tools
 - vii. Mixing tools and equipment
 - viii. Baking tools and equipment
 - ix. Storing tools and equipment
 - x. Presentation tools
 - c. What kind of ingredients should the Tania prepare?
 - d. How should Tania prepare the tools and equipment?
 - e. How should Tania prepare the ingredients?
 - f. How can Tania maintain the tools and equipment?

Key Facts 1.1 Preparation of tools, equipment and ingredients





- **Introduction to bakery products**





Bakery products include bread, rolls, cookies, pies, pastries and muffins, which are usually prepared from flour or meal derived from some form of grain and cooked by dry heat process, especially in some kind of oven.¹






- **Selection of tools and equipment**

Tools and equipment	Use of the tools and equipment	
Protective clothing		To protect the body from burns from hot temperature, hot liquids, cuts and injuries caused by electrical hazards. Closed shoes to protect feet from slipping, falling objects, or spills.
Face Mask		protects the nose and mouth from air contamination, dust and smoke.



¹ <https://www.slideshare.net/slideshow/bakery-products/8677292>



Hairnets or Caps		<p>To prevent hair from falling into the food during preparation.</p>
Gloves		<p>Disposable gloves are often used to prevent direct contact between hands and food. They come in different colors</p>
Heat-resistant Gloves		<p>For handling hot trays, pans, or equipment.</p>
Arm Guards		<p>To protect against cuts or burns during baking or handling hot items.</p>



Category of tools and equipment	Name	Use of the tools and equipment
Baking Tools:		
	Baking Sheets	Flat trays used for baking cookies, pastries, and other baked goods.
	Baking Pans	Various pans of different shapes and sizes used for baking cakes, muffins, and bread.
	Silicone Baking Mats	Non-stick mats placed on baking sheets to prevent sticking.
	Cooling Racks	Metal racks used to cool baked goods evenly after they come out of the oven
Measuring Tools:		
	Measuring Cups and Spoons	Used for precise measurement of dry and liquid ingredients.




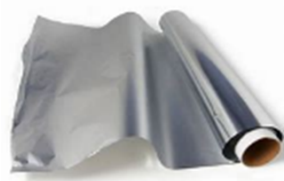
Category of tools and equipment	Name	Use of the tools and equipment
	Kitchen Scales	Used for weighing ingredients accurately, especially in professional bakeries.
Shaping Tools:		
	Cookie Cutters	Metal or plastic shapes used to cut cookie dough into various shapes.
	Rolling Pins	Used for rolling out dough to a desired thickness.
Proofer 	Proofing machine	A proofer is a special box in which the ideal conditions for fermenting yeast dough can be created. The box maintains a preset warm temperature and humidity level appropriate to the specific dough.
Cutting and Slicing Tools:		
	Bread Knives	Serrated knives used for slicing bread and cakes.



Category of tools and equipment	Name	Use of the tools and equipment
	Pastry Wheels	Sharp wheels used for cutting and decorating pastry dough.
	Bench Scrapers	Flat tools used for dividing dough and cleaning work surfaces.
Decorating Tools:		
	Icing Spatulas	Flat spatulas used for spreading icing and frosting on cakes.
	Piping Bags and Nozzles	Used for intricate icing designs and decorating cakes and pastries.

Category of tools and equipment	Name	Use of the tools and equipment
	Decorating Brushes	Small brushes used for applying glazes and edible decorations.
Oven and Temperature Control Tools:		
	Oven	<p>An oven is a kitchen appliance used for baking, roasting, and broiling food.</p> <p>Conventional Oven: This is a standard oven found in most kitchens. It uses heating elements at the top and bottom to cook food. Basic temperature control and typically lacks advanced features. Ideal for general baking and roasting.</p> <p>Convection Oven: Similar to a conventional oven but includes a fan and an additional heating element that circulate hot air throughout the oven. Even cooking and browning, faster cooking times, and better heat distribution. Useful for baking multiple trays of cookies or roasting meats.</p>

Category of tools and equipment	Name	Use of the tools and equipment
		<p>Double Oven: This type features two separate oven compartments, allowing you to cook at different temperatures simultaneously. Ideal for preparing multiple dishes at once, especially during holidays or large gatherings.</p>
	Thermometers	<p>An oven thermometer is a small, often metal device that helps you ensure your oven is at the correct temperature</p> <p>Key Features:</p> <ul style="list-style-type: none"> • Accuracy: Provides precise temperature readings. • Range: Typically measures temperatures from around 100°F to 600°F (or 50°C to 300°C). • Design: Can be analog (with a dial) or digital (with an electronic display). • Placement: Can be hung from a rack or placed on a shelf within the oven.
	Timers	<p>An oven timer is a tool used to count down the cooking time and alert you when your food is ready. Timers can be built into the oven itself or be separate devices. Key Features:</p> <ul style="list-style-type: none"> • Countdown Function: Allows you to set a specific cooking time. • Alerts: Provides audible or visual signals when time is up.

Category of tools and equipment	Name	Use of the tools and equipment
		<ul style="list-style-type: none"> • Multiple Timers: Some models offer multiple countdowns for different dishes. • Digital or Mechanical: Can be digital (with a screen and buttons) or mechanical (with a dial).
Storage and Preservation Tools:		
 	Bread Box	<p>A bread box is a container designed specifically for storing bread. It often has ventilation holes to prevent moisture buildup while keeping the bread covered from air exposure. Keeps bread at room temperature and helps maintain its crust and texture. Made from materials like wood, metal, or ceramic.</p>
	Bread Bags	<p>Specially designed bags for storing bread, often made from plastic or cloth.</p> <p>Plastic bread bags help keep bread fresh by retaining moisture, while cloth bags allow</p>

Category of tools and equipment	Name	Use of the tools and equipment
		<p>for a bit more airflow, preventing the bread from becoming too soggy. Some bags are lined with a thin layer of plastic.</p>
 	<p>Eco friendly Wrap</p>	<p>These bread bags are made of paper. Safe, light weight, easy to use. Perfect for take-out orders in fresh pastries and bakeries.</p>
	<p>Aluminum Foil</p>	<p>A type of thin, flexible metal foil used to wrap bread. Good for preventing freezer burn when storing bread in the freezer. It helps to keep bread fresh and retain its flavor.</p>

Category of tools and equipment	Name	Use of the tools and equipment
	Freezer Bags	Heavy-duty plastic bags designed for freezer use. Prevents freezer burn and helps maintain the bread's quality when frozen. Often come with a zip closure for a tight seal.
	Bread Storage Containers	Airtight containers made from plastic or glass designed for bread storage. Helps keep bread fresh by preventing exposure to air and moisture. Ideal for bread that will be consumed within a few days.

- **Basic maintenance of tools and equipment**

Maintenance is activity that is carried out to preserve a machine, tool and equipment, in order to enable its continued use and function above a minimum acceptable level of performance without untimely replacement or major repair activities.

- ✓ **Purpose of maintenance**

- ✚ It helps in maintaining and increasing the operational efficiency of tools and equipment
- ✚ Maintenance activities may be conducted before the breakdown (preventive maintenance) or after breakdown (curative maintenance).

- ✓ **Maintenance techniques**

- ✚ Cleaning the tools regularly is essential to their proper functioning. Lubrication: Lubricating tools & equipment helps them to perform better and reduces wear and tear of components.
- ✚ Calibration/lubrication of tools and equipment or parts of these before and after use.

- ✚ Regularly inspect your tools and equipment for signs of damage and faulty functioning.
- ✚ Storing tools and equipment properly is of prime importance. Although they are designed for rough use, it is important to store them properly.

- **Preparation of bakery products ingredients**



Bakery products are appreciated for their aroma, taste, and texture, all of which are heavily influenced by the quality and preparation of their ingredients.

Steps in preparing common bakery ingredients are:

- ✓ **Basic guidelines in measuring ingredients**

Accuracy in measurement of ingredients in baking is a very critical aspect in ensuring success. The following are guidelines in measuring ingredients.

- ✚ **Read and understand your recipe:** before identifying the measuring procedure to perform, it is essential to carefully read and analyze the recipe.
- ✚ **Use the appropriate measuring tool:** to avoid too much process of measurement, use the appropriate measuring tool for the ingredients.
- ✚ **Avoid spillage of ingredients when measuring:** be careful when using measuring tools and equipment. Handle the tools, equipment, and ingredients properly.

- ✓ **Types of ingredients and its characteristics**



Wheat Flour

- **Whole wheat flour** retains the wheat germ, and is used to replace a portion of all-purpose flour in a recipe to boost the nutritional profile.
- **Whole grain flour** also retains the entire kernel of grains such as wheat, oats, rye, millet, quinoa, barley, or a combination of other grains
- **Bread flour** contains more protein, and therefore more gluten, and is ideal for baking chewy yeast breads.
- **Cake flour** is lower in protein and gluten than all-purpose flour, and is chemically treated and finely ground to produce cakes with a lighter texture.
- **Pastry flour** is a medium-protein flour that's ideal for tender pie crusts.

Sugar

Granulated Sugar Regular white sugar also called table sugar. Caster sugar has finer granules while sanding sugar has coarser granules than regular white sugar.



Finer granulations are better for mixing dough and batters because they dissolve relatively quicker. Sanding sugar is good for sprinkles on top of cakes and cookies and for syrups.

Must be kept in a plastic sealed container and stored in a dry place.

- **Brown Sugar** (raw brown, light brown, medium brown the darker color has more impurities, it contains small amount of glucose and fructose. Contains a little amount of molasses and the natural fibers of the sugar cane

✚ Leaveners yeast, baking powder, baking soda



- **Baking soda** is an alkaline chemical leavener (sodium bicarbonate) that works when you combine it with acid and heat. Acidic ingredients that activate baking soda include fermented dairy products like buttermilk, sour cream, and yogurt; molasses, brown sugar, cocoa powder (not Dutch-processed), citrus juice, vinegar
- **Baking powder** is baking soda ready-mixed with a powdered acid and cornstarch. When you see "double-acting" on the label, it means that the baking powder forms carbon dioxide bubbles when it's mixed into the batter or dough, and again when it's heated.
- **Yeast** is a biological leavener that works much more slowly than chemical leaveners because it takes time for yeast cells to naturally metabolize and create carbon dioxide.

Since **cake or compressed yeast** is alive, it produces a greater amount of leavening gas than dry or instant yeast, but it's also highly perishable.

Sourdough starters are live yeast colonies that give sourdough bread its distinctive flavor.



✚ Fat

- **Butter:** Made out of fatty milk protein. It can be salted or unsalted
- Good source of Flavor and melting quality so these are good for pastries and cakes. contributes to tenderness, richness, and flavor. Fat also helps in creating a softer texture in baked goods.

Figure 1: Butters

- **Margarine:** made from hydrogenated vegetable or animal fats, with flavorings emulsifiers, coloring agents and other ingredients.

Bakers' margarine (bar margarine) is very similar in characteristic and function to butter. Pastry margarine (in containers) are tougher and more elastic and are used for dough or pastries. It works like butter and contributes to tenderness, richness, and flavor. Fat also helps in creating a softer texture in baked goods.

- **Oil:** Come from vegetables, nut or seed sources. It is liquid fat. It spreads too thoroughly and can shorten too much so it is not commonly used in cakes but in pie dough and some yeast breads.

It works like butter and contributes to tenderness, richness, and flavor. Fat also helps in creating a softer texture in baked goods.

✓ **Preparation of ingredient**

Sifting the flour before use can help aerate it and remove any lumps or foreign particles. While not always necessary, sifting can lead to a lighter and more uniform crumb in the finished bread.



✓ **Function and Use**

Best used in preparing yeast breads like whole wheat bread.



Activity 2: Guided Practice



Task 3:

1. Analyze the pictures below and respond to the questions asked.



- a. Mention the tools and equipment that you used in this practical and their function.
- b. Why is it important to maintain the tools and equipment identified in (1) above?
- c. Mention some of the strategies used to maintain tools and equipment used in bakery product making.
- d. Describe the basic ingredients used to prepare this bread dough.
- e. Explain the role of each ingredient in the bread dough.
- f. Outline the steps involved in preparing bread dough.



Activity 3: Application



Task 4:

1. Read the following scenario and use it to answer the questions that follow.

You and your classmate has been chosen to prepare the reunion party at your school. On the menu there are some bakery products such as salted sliced bread, sweet sandwich bread, ordinary bread will be served to the guests.

- a. Select the tools and equipment that you will need to make above bakery products
- b. Select and prepare the required ingredients for products
- c. Maintain tools and equipment after their use.

Topic 1.2: Preparation of bread dough



Activity 1: Problem Solving



Task 5:

Referring to the following scenario, perform the task given below.

1. Alimentation Chez Vincent has won a tender to produce baguette braid, slice bread and roll bread for IPRC Huye trainees during their introduction party. Imagine you are tasked to improve the consistency and rise of the bread dough. Despite following the recipe diligently, the dough often turns out dense and fails to rise properly.
 - a. How would you approach this problem?
 - b. What adjustments or experiments would you conduct to troubleshoot and enhance the quality of the bread dough?

Key Facts 1.2: Preparation of bread dough

- **Identification of types of bakery products**

Wheat flour has been a principal ingredient in the bakery processing industry for centuries, dating back to ancient civilizations like the Egyptians and Greeks.

The local abundance of wheat in many regions makes it a cost-effective choice for bakers, while its ease of processing into dough and batter ensures efficient production processes. Wheat flour is not only energy-efficient to produce but also offers reliability in achieving consistent quality in baked products, making it a cornerstone material for both traditional and modern bakeries alike.

- **Types of bakery products and their recipes**

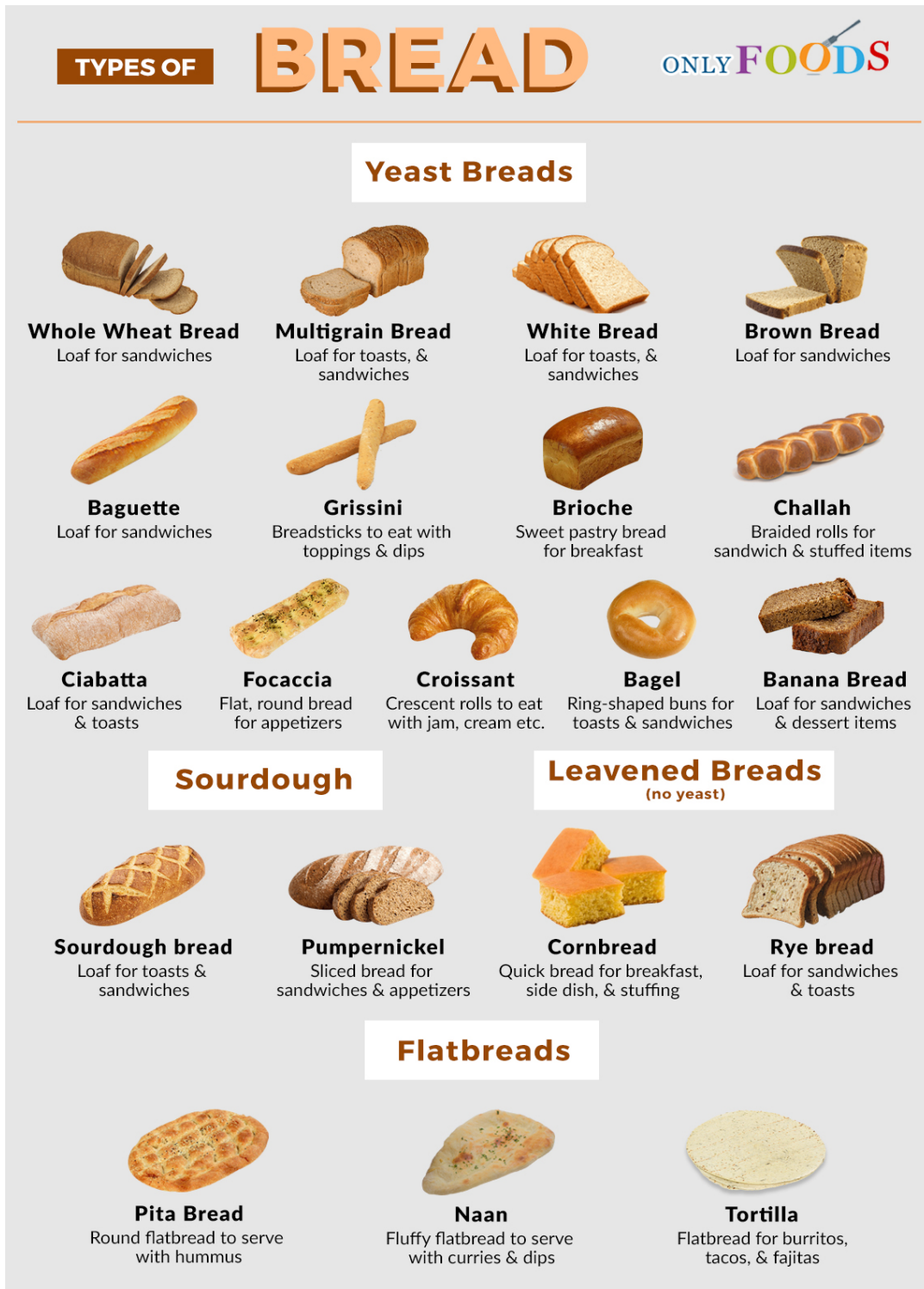


Figure 2: Types of breads

² <https://www.onlyfoods.net/types-of-breads.html>

Type of Bread Product	Description	Recipe for Bread
Baguette	A long, thin loaf of French bread with a crisp crust and soft interior.	3 1/2 cups (440g) all-purpose flour; 1 1/2 teaspoons salt; 1 teaspoon sugar; 1 packet (2 1/4 teaspoons) active dry yeast; 1 1/4 cups (300ml) warm water (110°F/45°C); 1 tablespoon olive oil (optional, for added richness)
Croissant	A croissant is a buttery, flaky pastry that originates from France. Its signature crescent shape is achieved through a process of layering dough and butter. The dough is rolled out, folded, and rolled out again several times to create thin layers, which results in its light, airy texture.	450g Milk; 30g Yeast fresh; 30g Sugar; 15g Salt; 80g Butter soft; 800g Bread flour; 450g Butter
White bread	White bread is a type of bread made from refined wheat flour that has had the bran and germ removed during processing, leaving mostly the starchy endosperm. This results in a soft, light texture and a mild flavor. The flour is typically bleached to achieve its white	3000grs Flour ;100grs Margarine ;100grs Honey;50grs Yeast;30grs Sugar;60grs Salt;1800grs Water (warm)

	color, although some white breads use unbleached flour.	
Brown bread	Brown bread is a type of bread made from whole grain flour, which retains more of the grain's natural nutrients and fiber compared to white bread. It typically has a denser texture and a slightly nutty, earthy flavor due to the inclusion of the bran and germ from the wheat.	3 cups whole wheat flour;1 cup all-purpose flour (you can use more whole wheat flour if you prefer a denser bread);2 tablespoons brown sugar or honey;1 packet (2 ¼ teaspoons) active dry yeast;1 ½ teaspoons salt; 1 ½ cups warm water (110°F/45°C); 2 tablespoons olive oil (or melted butter, if you prefer); optional: 1 tablespoon of flaxseeds or sunflower seeds for extra texture and nutrition
Whole meal bread	Whole meal bread, often called whole wheat bread, is a type of bread made from flour that includes the entire grain kernel: the bran, germ, and endosperm. This makes it richer in fiber, vitamins, and minerals compared to bread made from refined white flour, which only includes the endosperm.	2 cups (250g) whole meal flour;1 cup (125g) all-purpose flour (optional, for a lighter texture);1 ½ teaspoons salt;1 tablespoon sugar or honey (optional, for a touch of sweetness);2 teaspoons active dry yeast or instant yeast;1 ¼ cups (300ml) warm water (around 110°F or 45°C);2 tablespoons olive oil or melted butter (optional, for added richness)
Rye Bread	A type of bread made with flour from rye grain, often denser and	750g of Water, 45g of Yeast fresh, 500g of Rye flour; 450g of Bread flour; 30g Salt; 30g Shortening; 30g Molasses; 15g Caraway seed

	darker than bread made from wheat flour.	
Bread rolls	Bread rolls are small, typically round or oval-shaped pieces of bread. They're usually soft and tender on the inside with a slightly crisp or golden-brown crust on the outside. They can vary in size from mini rolls to larger ones that are more substantial.	1 1/2 cups warm water; 3/4 tablespoon instant yeast (or 1 tablespoon active dry yeast); 2 tablespoons granulated sugar or honey; 2 tablespoons canola oil, vegetable oil or other neutral-flavored oil (olive oil); 1 teaspoon salt; 3 1/2 to 4 cups all-purpose flour.
Gozette	Gozette is a character who appears in the world of "The Phantom of the Opera" musical. She is not one of the primary characters, but she plays a notable role as a member of the opera company.	500g (4 cups) all-purpose flour; 10g (2 tsp) salt; 10g (2 tsp) sugar; 10g (1 tbsp) active dry yeast or instant yeast; 300ml (1 1/4 cups) warm water (about 110°F or 45°C); 30g (2 tbsp) unsalted butter, softened; 1 egg (for egg wash); Optional: sesame seeds or poppy seeds for topping
Brioche	A French bread enriched with butter and eggs, giving it a rich and tender crumb, often used for pastries and desserts as well.	3 1/2 cups (440g) all-purpose flour; 1/2 cup (100g) granulated sugar; 1 packet (2 1/4 tsp) active dry yeast; 1 tsp salt; 4 large eggs; 1 cup (230g) unsalted butter, at room temperature; 1/4 cup (60ml) whole milk; 1 egg, for egg wash (optional)

Focaccia	<p>Is a delicious and versatile Italian flatbread known for its soft, airy texture and rich flavor. It has a golden-brown, crisp crust and a tender, chewy crumb. The dough is typically seasoned with olive oil, salt, and sometimes herbs like rosemary or thyme, giving it a distinctive savory taste.</p>	<p>2 cups (250g) all-purpose flour; 1 cup (240ml) warm water (110°F or 45°C); 2¼ teaspoons (1 packet) active dry yeast; ½ teaspoon sugar; 1 teaspoon salt; ¼ cup (60ml) extra-virgin olive oil (plus more for drizzling)</p>
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- **Steps in dough preparation**





These are the general steps for making various types of dough, such as bread, pizza dough, pastry dough. Specific recipes may have variations or additional steps depending on the desired outcome.

Step	Description
Ingredients gathering	Display all the ingredients needed for bread making – flour, yeast, water, salt, etc.
Mixing	Combine flour, water, yeast (if using), salt, and any other ingredients in a mixing bowl
Kneading	Knead the dough on a floured surface until it becomes smooth, elastic, and springs back when pressed.
Resting/Rising	Place the dough in a greased bowl, cover it with a cloth or plastic wrap, and let it rise until it doubles in size.
Punching Down	After the first rise, punch down the dough to release air bubbles and redistribute the yeast for a more even rise
Shaping	Shape the dough into the desired form, such as loaves, rolls, or braids, and place them on a baking sheet or in a pan.
Proofing (Fermentation)	Cover the shaped dough and let it rise again until it doubles in size.



3

Fermentation is a crucial process in bread making that transforms simple ingredients like flour, water, yeast, and salt into delicious, fluffy loaves with complex flavors and textures. This natural process involves the action of yeast and bacteria on the sugars present in the dough.

- **How fermentation works in bread making**

- ✓ **Yeast Activation:** Yeast is the microorganism responsible for fermentation in bread making. It is typically added to the dough in the form of dry granules or fresh yeast. When mixed with water and flour, yeast becomes active, feeding on the sugars in the flour and producing carbon dioxide gas and alcohol as byproducts.
- ✓ **Formation of Gluten:** As the dough is kneaded, gluten, a network of proteins, develops. This gluten network traps the carbon dioxide gas produced by the yeast, causing the dough to rise.
- ✓ **Leavening:** The carbon dioxide gas produced during fermentation causes the dough to expand, leading to leavening. This process creates air pockets in the dough, resulting in a light and airy texture in the finished bread.
- ✓ **Flavor Development:** Fermentation also plays a significant role in developing the flavor of the bread. As the yeast and bacteria metabolize the sugars in the dough, they produce various compounds that contribute to the bread's aroma and taste. These compounds include organic acids, alcohols, and other flavor-enhancing molecules.

³ <https://www.loc.gov/item/ncr001447/>

	<ul style="list-style-type: none"> ✓ Acidification: During fermentation, lactic acid bacteria may also be present in the dough. These bacteria produce lactic acid, which helps to acidify the dough. The acidity not only contributes to the flavor but also helps to strengthen the gluten network, resulting in better texture and volume in the final loaf. ✓ Extended Fermentation: Some bread recipes call for extended fermentation periods, where the dough is left to ferment for several hours or even overnight. This prolonged fermentation allows for more flavor development and enhances the bread's texture. Sourdough bread, for example, relies on a longer fermentation process driven by wild yeast and bacteria present in a sourdough starter.
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- The ideal consistency of bread dough is crucial for achieving proper rising and baking results. Descriptions are as flow:
 - ✓ **Texture:** The dough should be smooth, elastic, and slightly tacky to the touch. When you press your finger into the dough, it should spring back slowly.
 - ✓ **Hydration:** The dough should be adequately hydrated but not overly wet or dry. It should hold together well without being too sticky or too stiff.
 - ✓ **Gluten Development:** Gluten, the protein that gives bread its structure, should be well-developed through kneading. This results in a dough that can trap gas bubbles produced by the yeast, allowing the bread to rise properly.
 - ✓ **Stretchiness:** When you stretch a small piece of dough between your fingers, it should stretch into a thin, translucent membrane without tearing easily. This indicates proper gluten development.
 - ✓ **Consistency Throughout:** The consistency of the dough should be uniform throughout, with no dry patches or lumps. This ensures even rising and baking.
- **Types of dough in baking bread**

- ✓ **Lean dough:** this kind of dough is made of basic ingredients like flour, yeast, salt, with enough amount of sugar and shortening. Lean dough is usually made into Pan de sal, Pan Amerikano, French bread and other crusty bread varieties.
- ✓ **Rich dough:** this dough is still made of the basic ingredients flour, yeast, salt, sugar and shortening. But this dough uses more sugar and butter as shortening. It contains nuts, fruits, eggs and other additional ingredients that would make your dough mixture richer. This type of dough is used in making rolls, coffee cakes, and sweet bread varieties.



Activity 2: Guided Practice



Task 6:

1. Below are statements describing the different mixing techniques used in producing bakery products.
 - a. Choose the correct word/term from the box and write your answer in your test notebook.

Creaming	Cutting-in	Stirring
Beating	Whipping	Sifting
Folding	Cut and Fold	

- b.1. Separating coarse particles in the ingredients by passing through a sieve.
- c.2. Rubbing one or two ingredients in a bowl with the tip of a wooden spoon or electric mixer.
- d.3. Mixing fat and flour using a pastry blender or two knives in a scissor- like manner.
- e.4. Working with two ingredients very gently to retain air in the mixture.
- f.5. Beating egg and creaming to fill with air and make them thick and fluffy.

2. Imagine you are about to prepare a batch of bread dough your class promo party. Here's your task:
 - a. List at least three key ingredients necessary for making bread dough, along with their roles in the dough-making process.
 - b. Outline the step-by-step procedure you would follow to mix and knead the dough effectively. Finally, identify one potential challenge you might encounter during the dough preparation process and propose a solution for overcoming it.
 - c. Prepare the dough for the above batch of bread.



Activity 3: Application



Task 7:

1. You are interviewing a professional baker who specializes in artisanal bread-making for a magazine article about the art and science of bread dough preparation.
2. Imagine you are about to prepare a batch of bread dough. Here's your task:
 - a. List at least three key ingredients necessary for making bread dough, along with their roles in the dough-making process.
 - b. Outline the step-by-step procedure you would follow to mix and knead the dough effectively.
 - c. Finally, identify one potential challenge you might encounter during the dough preparation process and propose a solution for overcoming it.
 - d. Prepare the doughs for various products.

Topic 1.3: Baking bread dough



Activity 1: Problem Solving



Task 8:

1. You have been working in the school staff canteen for two weeks and observed consistently issues with bread dough, particularly with its rise and texture. Sometimes the bread rises beautifully and has a perfect texture, while other times it falls flat or turns out dense and heavy.
 - a. What should be the cause of this issue?
 - b. How are you going to address this issue persists inconsistently.
 - c. Outline the step-by-step procedures for baking bread dough, from preparing the oven to removing the finished loaf.
 - d. How does the temperature of the oven affect the rise and texture of the bread?
 - e. How might the duration of baking impact the crust formation and overall moisture content of the loaf?

Key Facts 1.3: Baking bread dough

- **Introduction to baking**

Baking is one of the delicate culinary arts, which requires careful and precise measurements, ingredients, cooking temperatures, and techniques. Although the fine balancing act of baking is intimidating to some, any home cook can become a baker with the right ingredients and baking supplies, a bit patience, and reliable recipes.

- **Identification of baking procedures for bread dough**

- ✓ **Proofing:** After kneading the dough to develop gluten, let it rest in a warm, draft-free place until it doubles in size. This can take anywhere from 1 to 2 hours depending on the recipe and ambient temperature.

- ✓ **Preheating the Oven:** While the dough is proofing, preheat your oven to the temperature specified in your recipe. Usually, this is around 375°F to 450°F (190°C to 230°C) depending on the type of bread.
- ✓ **Slashing (Scoring):** Just before baking, use a sharp knife or a razor blade to make shallow slashes or cuts on the surface of the dough. This helps control the expansion of the bread during baking and adds decorative touches.
- ✓ **Baking:** Place the dough in the preheated oven and bake according to the recipe instructions. Baking times vary widely depending on the type and size of the loaf, but a general guideline is 20 to 30 minutes for smaller loaves and 30 to 45 minutes for larger ones. The bread is done when it's golden brown on top and sounds hollow when tapped on the bottom.
- ✓ **Cooling:** Once baked, remove the bread from the oven and let it cool on a wire rack for at least 30 minutes before slicing. This allows the internal moisture to redistribute and ensures a better texture.
- **General guidelines and principles in baking**
 - ✓ Be familiar with the kinds of flours and their specific uses.
 - ✓ The frequency and intensity of mixing flour with other ingredients differ from each product.
 - ✓ Ingredients combined in a product react differently at various temperatures.
 - ✓ The rate at which boiling temperature inside the product is reached depends on oven temperature, ingredients, size, and shapes of baking pans.
 - ✓ Baked products that are crisp or brittle require temperature higher than boiling point, while those that are soft and spongy, like breads, cakes, or muffins, do not require above boiling point temperature.
 - ✓ When the oven temperature is too high, crust is formed too fast, limiting its expansion, thus, producing a product that is cracked and lower in volume.
 - ✓ To start right, check all ingredients (with their prescribe kinds and amount), Baking procedure, tools, and equipment needed.
 - ✓ Do all preparation activities like measuring, sifting, greasing, peeling, paring, Mashing, chopping, thawing, etc. before mixing.
 - ✓ Follow carefully the procedures and techniques in correct measurements for

- ✓ Dry and liquid ingredients.
- ✓ Know how to execute properly the different processes involved in baking.
- ✓ Use the right size of baking pan needed for the recipe. Using the correct pan
- ✓ Gives your baked product a good size, good shape, and good contour.
- **Characteristics of a well-made bread**
 - ✓ Appears larger than its weight.
 - ✓ No cracks and bulges.
 - ✓ It has thin crust and has a golden-brown color outer surface.
 - ✓ It has fine even grain and smooth crumb.
 - ✓ It has a soft and elastic texture when eaten.
 - ✓ It does not crumble easily.
 - ✓ It often smells like milk, sugar and nuts.
 - ✓ Typical breads usually taste sweet or creamy, not sour.
- **Baking dough**









Carefully place the shaped dough onto a baking sheet or into a baking dish, making sure there's enough space between each piece for them to expand during baking.

Place the dough in the preheated oven and bake according to the recipe instructions. Keep an eye on the dough as it bakes to ensure it doesn't overcook or burn.

- ✓ **Checking for doneness:** To check if the dough is done baking, look for a golden-brown crust and listen for a hollow sound when you tap the bottom of the loaf. You can also use a food thermometer to check the internal temperature; for most bread, it should be around 190-200°F (88-93°C).
- ✓ **Baking conditions of Bakery products:** Baking conditions for bread can vary depending on the type of bread you're making, but here are some general guidelines:
 - ✓ **Temperature:** Preheat your oven to the appropriate temperature. Most bread recipes call for a high temperature, typically between 375°F to 450°F (190°C to 230°C), depending on the type of bread and its ingredients.
 - ✓ **Time:** The baking time can also vary widely, but most bread loaves will take around 20 to 40 minutes to bake. Smaller rolls or breadsticks might only need 10 to 20 minutes.
 - ✓ **Steam:** Many bakers use steam during the initial stages of baking to help develop a crispy crust. You can achieve this by placing a pan of hot water in the bottom of the oven or by spraying water into the oven just before you put the bread in.
 - ✓ **Placement:** Place the bread in the center of the oven to ensure even baking.
 - ✓ **Doneness:** Bread is typically done when it's golden brown and sounds hollow when tapped on the bottom. You can also use a thermometer to check the internal temperature, which should be around 190°F to 200°F (88°C to 93°C) for most bread.
 - ✓ **Cooling:** After baking, let the bread cool on a wire rack before slicing. This allows steam to escape and prevents the crust from becoming soggy.

Baking

-  **Preheating:** Preheat the oven to the specified temperature in your recipe. This ensures even baking and proper development of the bread's structure.
-  **Oven Environment:** Create the right environment for baking bread by ensuring adequate humidity. This can be achieved by placing a

	<p>pan of water in the oven or spritzing water onto the walls of the oven before placing the bread inside.</p> <ul style="list-style-type: none">  Baking Surface: Use a baking stone, baking sheet, or cast-iron skillet to provide a sturdy, evenly heated surface for your bread. Preheating the baking surface helps create a crisp bottom crust.  Scoring: Score the top of the dough just before placing it in the oven. This allows steam to escape and helps control the expansion of the loaf during baking, resulting in an attractive final shape.  Steam: Steam is essential for achieving a glossy, crisp crust. Some methods for introducing steam include spraying water into the oven, placing ice cubes in a preheated skillet, or using a dedicated bread oven with steam injection capabilities.  Baking Time: Follow the recommended baking time in your recipe, but be prepared to adjust based on oven variations. <p>A properly baked loaf should have a deep golden-brown crust and sound hollow when tapped on the bottom</p>	
Cooling	Allow the bread to cool on a wire rack for at least 30 minutes before slicing. This allows excess moisture to evaporate and ensures that the crumb sets properly.	



Activity 2: Guided Practice



Task 9:

1. Referring to the scenario of the staff canteen, bake some two types of breads of your choice and then for the in-house consistency of the product quality describe the following for them:
 - a. Outline the step-by-step procedures for baking bread dough, from preparing the oven to removing the finished loaf?
 - b. Explain the temperature of the oven usage for rise and texture of the bread
 - c. The duration of baking impacts the crust formation and overall moisture content of the loaf.



Activity 3: Application



Task 10:

1. You have been placed at Habib Resort hotel at Muhazi in pastry department. You are working there as a pastry chef; the hotel has got an order of outside catering for the presidential campaign's dinner at his residence. Prepare and bake the various bread dough prepared earlier for this event. Make a report describing
 - a. The steps you undergone to ensure the quality of the breads
 - b. The factors considered and the adjustments you made to achieve the quality products.

Topic 1.4 Presentation of bakery product



Activity 1: Problem Solving



Task 11:

1. Imagine you're working at a busy bakery where presentation is key to attracting customers. As part of the bakery team, you're tasked with brainstorming solutions to address this issue and improve the presentation of bakery products throughout the day.
 - a. Outline the presentation tools and equipment that you may need to make it happen.
 - b. What are the presentation techniques would you use to make your breads appeal to customers? And how?
 - c. What strategies will you to assess the quality of bread before presentation?

Key Facts 1.4: Presentation of bakery product

- **Identification of presentation tools and equipment⁴**

For presenting bakery products effectively, you'll want to consider a combination of tools and equipment that not only showcase your products attractively but also keep them fresh and appetizing.



✓ **Display Cases:**

Invest in glass display cases to showcase your baked goods. These could be countertop cases for smaller bakeries or larger refrigerated cases for bigger establishments. Ensure they are well-lit to highlight your products.

⁴https://www.amazon.com/s?k=image+of+Platters+and+Trays&crd=ZXQ84IV1YWC3&sprefix=image+of+platters+and+trays+%2Caps%2C736&ref=nb_sb_noss

✓ **Platters and Trays:**

Use platters and trays to arrange cookies, brownies, and other treats. Opt for different sizes and shapes to add visual interest.



- ✓ **Packaging Supplies:** Choose packaging supplies that not only protect your products but also enhance their presentation. This includes boxes, bags, ribbons, and stickers with your bakery's branding.
- ✓ **Labeling Equipment:** Ensure that each product is clearly labeled with its name, ingredients, and any allergen information. Label printers or pre-made labels can help with this.
- ✓ **Chalkboard or Signage:** Use chalkboards or signage to display your menu, daily specials, or any promotional offers. This adds a personal touch and helps customers make informed decisions.
- ✓ **Temperature Control Equipment:** Depending on your products, you may need equipment like heated display cases for items like warm pastries or refrigerated cases for items like cream-filled pastries.
- ✓ **Cutting and Serving Utensils:** Have a variety of cutting and serving utensils on hand, including cake slicers, pie servers, and tongs, to serve your products neatly and efficiently.











- **Application of bread presentation techniques**


Bread presentation techniques can elevate the dining experience and add visual appeal to dishes. Here are some creative applications:

- ✓ **Fanned Slices:** For loaf bread like baguettes or sourdough, slice the bread thinly but not all the way through, then fan out the slices slightly. This creates an elegant display that showcases the texture of the bread.
- ✓ **Artisan Bread Baskets:** Serve an assortment of freshly baked bread in a rustic basket lined with a clean cloth napkin. This creates a welcoming and homely atmosphere, perfect for family-style dining or casual gatherings.
- ✓ **Bread Platters:** Arrange different types of bread, such as baguettes, ciabatta, and focaccia, on a wooden or marble platter. Add small dishes of flavored olive oil, balsamic vinegar, or flavored butter for dipping.
- ✓ **Bread Boards:** Serve sliced bread on wooden cutting boards. Label each type of bread with a small chalkboard or wooden sign to inform diners about their choices. This adds a touch of charm and helps guests navigate their options.
- ✓ **Bread Bites:** Create bite-sized portions of bread by slicing baguettes or rolls into smaller pieces. Skewer them.


Presenting bakery products effectively involves a blend of visual appeal, scent, taste, and overall ambiance. Here are some tips to present bakery products in an enticing and attractive manner:


- ✚ **Visual Appeal:** Use attractive packaging: Invest in visually appealing packaging that reflects the quality and uniqueness of your bakery products.
- ✚ **Display variety:** Arrange your products neatly on display shelves or counters, showcasing a variety of options to attract customers.
- ✚ **Highlight specialties:** Feature your signature items prominently to draw attention and create a sense of exclusivity.

-  **Use colors and textures:** Incorporate a variety of colors and textures in your display to make it visually appealing. Consider using fresh fruits, edible flowers, or decorative toppings.
- ✓ **Freshness and Quality:**
 -  **Ensure freshness:** Regularly rotate your products to maintain freshness, and remove any items that are past their prime.
 -  **Emphasize quality:** Use high-quality ingredients and emphasize their freshness and premium nature in your presentation.
- ✓ **Scent:**
 -  **Use aromas to entice:** The aroma of freshly baked goods can be irresistible. Consider having an open kitchen or strategically placing warmers to enhance the scent of your bakery products.
- ✓ **Taste Testing:**
 -  **Offer samples:** Allow customers to sample your bakery products, especially your specialties, to encourage them to make a purchase.
- ✓ **Presentation:**
 -  **Arrange creatively:** Arrange your bakery products in an appealing manner, considering aesthetics and practicality. Use stands, trays, or baskets to elevate certain items and create visual interest.
 -  **Label clearly:** Clearly label each item with its name and price for easy identification.
 -  **Keep it clean:** Ensure that your display area is clean and well-maintained at all times.
- ✓ **Seasonal Themes:**
 -  **Embrace seasons:** Tailor your presentation to reflect seasonal themes or holidays. For example, decorate your display with seasonal colors or incorporate seasonal flavors into your products.
- ✓ **Engage Customers:**
 -  **Educate and interact:** Train your staff to be knowledgeable about your bakery products so they can engage with customers, answer questions, and make recommendations.

 **Social media presence:** Share visually appealing photos of your bakery products on social media platforms to attract potential customers and keep existing ones engaged.

✓ **Packaging:**

 **Offer convenient packaging:** Provide packaging options that are convenient for customers, such as boxes, bags, or individual wrapping.

 **Branding:** Use packaging as an opportunity to reinforce your bakery's branding and identity.



Activity 2: Guided Practice



Task 12:

1. Imagine you are setting up a bakery display for a morning brunch event. Your task is to arrange the following items on a large buffet table.
 - a. Present the below bakery products (freshly baked cinnamon rolls, assorted muffins in flavors such as blueberry, chocolate chip, and banana nut and Slices of homemade coffee cake topped with streusel crumbles)
 - b. Describe how you arranged these bakery items to create an enticing display that captures the essence of a cozy morning brunch.
 - c. Consider factors such as arrangement patterns, complementary flavors, and any decorative elements you would incorporate to enhance the presentation.



Activity 3: Application



Task 13:

1. You are a baker to showcase your bakery's signature items at a local food festival. Your booth will feature an assortment of bakery products, including croissants, slice bread, and cookies. As an expert in bakery products presentation
 - a. Identify the presentation tools and equipment you will need.
 - b. Apply presentation techniques,
 - c. Describe how you would design your booth to attract customers and highlight the unique qualities of each bakery item.
 - d. Consider factors such as booth layout, signage, display stands, and any special touches you would incorporate to create a memorable experience for festival attendees.

Topic 1.5 Storing bakery products



Activity 1: Problem Solving



Task 14:

1. Assume you own a small artisanal bakery that specializes in handmade artisan bread. Your bakery has been receiving rare reviews for the quality and flavor of your bread, but there have been challenges with maintaining consistency in freshness, especially during peak production times. Customers have occasionally complained about receiving bread that feels slightly stale, impacting their overall satisfaction with your products. You realize that optimizing your storage methods could be key to ensuring that every loaf of bread reaches your customers in perfect condition.
 - a. What are the types of packaging materials for your bakery products?
 - b. What considerations would you look at when selecting the packaging materials for your bakery products?
 - c. What are the storage techniques and tools would you use to keep your production?

Key Facts 1.5: Storing bakery products

- **Packaging bakery products⁵**

- ✓ **Introduction to Packaging:**

Bread and baked products such as muffins, bagels, quick breads, waffles, pastries, cakes and cookies are safely stored on the counter or in the pantry. Storing in the refrigerator can increase shelf-life by 2-3 weeks by reducing spoilage issues such as mold growth. All of these baked goods can be safely frozen indefinitely, but will start to suffer quality issues such as changes to flavor and texture if held frozen for longer than 2-3 months (cookies 6-12 months).

In the bustling world of the bakery industry, packaging plays a pivotal role that extends far beyond just containing products. It serves as the frontline defender of

⁵ Robertson, Gordon L. Food Packaging: Principles and Practice. CRC Press, 2013.

freshness, a shield against damage during transportation, and a silent salesman, enticing customers with its visual appeal.

- **Importance of packaging in the bakery industry.**

- ✓ **Preservation of freshness:** Freshness is the holy grail in the bakery world. A delectable pastry or a warm loaf of bread loses its charm if it arrives at its destination stale or spoiled.
- ✓ **Protection during transportation:** The journey from oven to consumer can be treacherous, with bumps, jostles, and temperature fluctuations posing threats to delicate bakery items.
- ✓ **Attracting customers through visual appeal:** In the competitive landscape of the bakery industry, first impressions matter.
- ✓ **Significance of choosing appropriate packaging materials:** Selecting the right packaging materials is akin to choosing the perfect ingredient for a recipe; it can make or break the final product. Beyond aesthetics, packaging materials must possess functional properties that align with the unique requirements of bakery products. Factors such as moisture resistance, breathability, and insulation capabilities are crucial considerations. Moreover, adherence to regulatory standards regarding food safety and environmental sustainability is paramount. Opting for eco-friendly materials like recyclable cardboard or compostable films not only ensures compliance but also resonates with environmentally conscious consumers, enhancing brand reputation and loyalty.

- **Packaging Techniques**

Packaging techniques in the bakery industry are crucial for maintaining the quality, freshness, and appeal of bakery products.

- ✓ **A variety of techniques can be used for baked goods:**
 - ✚ **Simple plastic packaging:** typically consists of a low density polyethylene (LDPE), oriented polypropylene (OPP) or polyethylene terephthalate (PET).
 - ✚ **Vacuum packaging:** Removal of air from the packaging before closing, suitable only for pita bread and pizza bases.

- + **Modified Atmosphere Packaging (MAP):** Substitution of oxygen content in packaging with an inert gas or combination of gases such as carbon dioxide (CO₂) and nitrogen (N₂)

✓ **Parameters**

Maintaining adequate quality in packaged foods requires serious consideration to many parameters mainly:

- + **Temperature:** May enhance or reduce microbial growth.
 - + **Relative humidity:** Driving force of moisture exchange between the product and the surrounding environment.
 - + **Packaging material:** The properties of the material like oxygen permeability can affect the stability of baked goods.
 - + **Nature of baked goods:** The water content and water activity affect microbial growth, taste and other sensory properties. Some baked goods are more prone to certain microbial growth than others. Fat content can cause rancidity development.
- ✓ **Types of the bread packaging process:** Just as different types of packaging suit different needs and products, the packaging process of bread affects your ability to meet hygiene and throughput goals.
- + **Manual packaging:** If you only manage a small baking operation, you might be able to simply package your products by hand. This is significantly cheaper and more flexible than bread packaging equipment and doesn't require much floor space.
 - + **Semi-mechanized packaging:** This type of bread packaging process introduces machinery to manual packaging. For example, you might have a bread bagging machine that packages your bread automatically before you seal the bag by hand.
 - + **Automated packaging:** Completely automating the packaging process of your bread allows you to achieve the highest possible speeds, throughput, and hygiene standards.

✓ **Food Safety Regulations in Bakery products**

✚ **Temperature Control:**⁶ Many food safety regulations mandate specific temperature ranges for storing bakery products to prevent bacterial growth and maintain product quality. For example, the FDA's Food Code recommends storing perishable bakery items, such as cream-filled pastries or custard pies, at or below 41°F (5°C) to inhibit the growth of harmful bacteria.

✚ **Hygiene and Sanitation:**⁷ Regulations often require that storage areas for bakery products be kept clean, sanitized, and free from potential contaminants. This includes regular cleaning of storage equipment, such as refrigerators, freezers, and shelves, to prevent cross-contamination and maintain a hygienic environment.

✚ **Labeling and Dating:**⁸ Food safety guidelines often mandate proper labeling and dating of bakery products to facilitate proper inventory management and ensure freshness. This includes labeling products with information such as the production date, expiration date, and storage instructions. For instance, the USDA's Food Safety and Inspection Service (FSIS) requires that all perishable bakery items be labeled with a "sell-by" or "use-by" date to inform consumers about the product's freshness and safety.

- **Storing bakery products**

- ✓ **Key Factors in Storage**

There are several critical factors we need to consider when storing bakery products:

✚ **Temperature:** Maintaining the right temperature is crucial to preserving freshness and preventing spoilage.

✚ **Humidity:** Too much moisture can make baked goods soggy, while too little can lead to dryness.

✚ **Air Exposure:** Oxygen is both a friend and a foe. It helps with freshness initially but can lead to staleness over time.

⁶ <https://www.fda.gov/food/fda-food-code/food-code-2017>

⁷ <https://www.fda.gov/food/buy-store-serve-safe-food/food-safety-home>

⁸ <https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/food-labeling/food-product-dating/food-product-dating>

✚ **Contamination:** We must protect our products from contaminants like dust, pests, and other food items that may affect their quality.

- **Types of bread storage**

- ✓ **Dry storage:** Dry storage refers to storing bread at room temperature in a cool, dry place.

✚ **Ideal conditions:** Bread should be stored in airtight containers or plastic bags to prevent it from drying out too quickly. It's best to keep it away from heat and direct sunlight, as these can accelerate staling.

✚ **Recommended for:** bread that will be consumed within a few days. It's suitable for most types of bread, including sliced bread, rolls, and artisan loaves.

- ✓ **Refrigeration:** refrigeration involves storing bread in the refrigerator, typically in its original packaging or a sealed plastic bag.

Recommended for: Bread that won't be consumed within a few days and needs to be kept for longer periods. This includes homemade bread, as well as bread with no preservatives.

- ✓ **Freezing:** Freezing bread involves placing it in the freezer to extend its shelf life for several months.

✚ **Ideal conditions:** Bread should be tightly wrapped in plastic wrap or stored in a freezer-safe bag to prevent freezer burn and maintain freshness.

✚ **Recommended for:** Bread that you want to keep for a longer time. It's especially useful for bulk purchases or homemade loaves that you won't consume immediately.

- **Storage Techniques⁹**

- ✓ **Cooling Before Storage:** Allow bakery products to cool completely before storing them. Storing warm baked goods can create condensation, leading to sogginess and mold growth.

- ✓ **Air-Tight Containers:** Store bakery items like bread, cookies, and pastries in air-tight containers or resealable bags to prevent them from becoming stale or absorbing odors from other foods.

⁹ FDA Food Storage and Shelf Life Information

- ✓ **Room Temperature Storage:** Some bakery products like bread, muffins, and cakes can be stored at room temperature for a few days, especially if they contain preservatives. Keep them in a cool, dry place away from direct sunlight and heat sources.
- ✓ **Refrigeration:** While some bakery items can be stored at room temperature, others benefit from refrigeration. Cream-filled pastries, cheesecakes, and cream pies should be refrigerated to prevent spoilage. However, be aware that refrigeration can accelerate staling in some types of bread.
- ✓ **Freezing:** Many bakery items can be frozen for longer-term storage. Wrap them tightly in plastic wrap or aluminum foil, then place them in freezer-safe bags or containers. Thaw frozen bakery products at room temperature or in the refrigerator for best results.
- ✓ **Separation:** When storing different types of bakery products together, try to keep them separated to prevent flavors from mingling. For example, store strongly flavored items like garlic bread away from delicate pastries.
- ✓ **Moisture Control:** Moisture can cause bakery products to become soggy or moldy. Use moisture-absorbing packets or desiccants in storage containers to maintain dryness.
- ✓ **Labeling and Date-Marking:** Label containers with the contents and date of storage to keep track of freshness. This helps you use older items first and ensures you know what's in each container.
- ✓ **Avoid Overpacking:** Don't overcrowd storage containers, as this can lead to squashing and deformation of delicate bakery items.
- ✓ **Frequent Rotation:** If you regularly bake or buy bakery products, practice FIFO (First In, First Out) rotation to ensure that older items are used before newer ones. This helps prevent waste and ensures that you're always consuming the freshest products.

FIFO (First In, First Out) is a crucial principle in bakery product storage for several reasons:

- ✓ **Maintaining Freshness:** Bakery products are often perishable and have a limited shelf life due to their ingredients and lack of preservatives. FIFO ensures that older products are used or sold first, reducing the risk of products becoming stale or spoiled.
- ✓ **Quality Control:** Freshness directly impacts the quality of bakery products. FIFO helps in delivering products to customers when they are at their best, ensuring customer satisfaction and repeat business.
- ✓ **Inventory Management:** By following FIFO, bakery owners and managers can effectively manage their inventory. It helps in tracking product expiration dates and minimizing waste by identifying and using products before they expire.
- ✓ **Minimizing Losses:** Bakery products, especially those without preservatives, can quickly lose their appeal and market value if stored for too long. FIFO reduces the likelihood of having unsold, expired products that must be discarded, thus minimizing financial losses.
- ✓ **Food Safety:** FIFO contributes to food safety practices by reducing the risk of selling expired or compromised products to consumers. It ensures that products are sold within their safe consumption period, adhering to food safety regulations and standards.
- ✓ **Customer Satisfaction:** Customers expect fresh bakery products. FIFO helps meet these expectations by ensuring that the products they receive are of the highest quality and taste.

Storing bakery products effectively involves addressing several common challenges to maintain freshness, quality, and safety. Here are some of these challenges and ways to mitigate them:

- ✓ **Moisture Control:**
 - 🚩 **Challenge:** Many bakery products, such as bread and cakes, can become soggy or stale due to excessive moisture.

✚ **Mitigation:** Use moisture-resistant packaging such as sealed plastic bags or airtight containers. Additionally, ensure that products are completely cooled before packaging to prevent condensation.

✓ **Staling:**

✚ **Challenge:** Bakery items like bread and pastries can become stale quickly when exposed to air.

✚ **Mitigation:** Store bread and pastries in airtight containers or plastic bags to minimize exposure to air. For bread, consider using bread boxes designed to maintain optimal humidity levels.

✓ **Mold Growth:**

✚ **Challenge:** High moisture levels or improper storage conditions can lead to mold growth on bakery products.

✚ **Mitigation:** Keep bakery items in a cool, dry place. Ensure that storage containers are clean and dry before use. Avoid storing different types of bakery products together if their storage requirements differ significantly.

✓ **Texture Preservation:**

✚ **Challenge:** Some bakery products can lose their desired texture over time if not stored properly.

✚ **Mitigation:** Store soft and delicate items like cakes and muffins in containers that prevent crushing or flattening. For crispy items like cookies, use containers with airtight seals to maintain crispness.

✓ **Flavor Retention:**

✚ **Challenge:** Bakery products can absorb odors from other foods or lose their own flavors over time.

🔧 **Mitigation:** Store bakery products away from strong-smelling foods. Use odor-resistant packaging or wraps to preserve the original flavors.

✓ **Freezer Burn (for frozen products):**

🔧 **Challenge:** Freezer burn can affect the texture and taste of frozen bakery products.

🔧 **Mitigation:** Wrap bakery items tightly in freezer-safe packaging, such as plastic wrap followed by aluminum foil or freezer bags. Ensure all air is removed from the packaging to prevent freezer burn.

✓ **Shelf-life management:**

🔧 **Challenge:** Different bakery products have varying shelf lives and storage requirements.

🔧 **Mitigation:** Label products with the date of production and use the first-in, first-out (FIFO) method to ensure older products are used or sold first. Monitor inventory regularly to prevent products from expiring.



Activity 2: Guided Practice



Task 15:

1. You are running bakery corner at the school staff canteen and need to storage a large order of breads to a client several sectors away for tomorrow morning.
 - a. What packaging materials and storage techniques would you use to ensure the cupcakes arrive in perfect condition?
 - b. Discuss the importance of FIFO (First In, First Out) in bakery product storage
 - c. If a customer complains that their bread became dry within a day of purchase, what factors might have contributed to this issue, and how could it have been prevented through proper packaging and storage?
 - d. At last storage the breads for tomorrow's delivery.



Activity 3: Application



Task 16:

1. Assume you have set up breads on the morning brunch event, afterwards you had leftovers.
2. You requested to store breads safely.
3. Make a report by answering the following questions:
 - a. Why is proper packaging important for bakery products?
 - b. What factors should you consider when choosing packaging materials for different types of bakery items (e.g., bread, cakes, cookies)?
 - c. Describe the steps involved in packaging a freshly baked loaf of bread to ensure it stays fresh and appealing for customers.
 - d. How did you select the storage for the breads and why?

1. Match list of bakery ingredients to their specific roles

1. Flour	a. Acts as a leavening agent by fermenting sugars in the dough, producing carbon dioxide gas which causes the dough to rise. This process is crucial for bread and other yeast-leavened products.
2. Yeast	b. Provides structure through the formation of gluten when mixed with water. Gluten gives elasticity and strength to dough and contributes to the texture of baked goods.
3. Butter or shortening	c. Enhances flavor, controls yeast activity (inhibits over-rising), and strengthens gluten structure. It also acts as a preservative and improves texture.
4. Eggs	d. Provides moisture to hydrate dry ingredients and activate gluten formation. Milk also adds flavor, fat, and richness to baked goods.
5. Milk or Water	e. Contributes to structure, texture, and richness. Eggs act as emulsifiers, helping to blend ingredients together and providing moisture.
6. Salt	f. Sweetens baked goods, enhances flavor, and contributes to browning. Sugar also tenderizes by weakening gluten formation and helps retain moisture.
7. Sugar	g. Adds fat to the dough or batter, which contributes to tenderness, richness, and flavor. Fat also helps in creating a softer texture in baked goods.

2. Read and answer the below questions
 - a. Describe the steps involved in bread making
 - b. Identify baking procedures and conditions for bread dough
 - c. Enumerate 4 characteristics of a well-made bread
3. Packaging process questions
 - a. Give 3 packaging techniques that can be used for baked goods
 - b. List any 4 parameters to consider while you packaging bakery products
4. Storage conditions questions
 - a. Outline 3 types of bread storage
 - b. Describe 4 storage techniques of bakery products



Points to Remember

- Tools: Ensure all tools (mixing bowls, measuring cups, utensils) are clean and dry before use to prevent contamination
- Equipment: Familiarize yourself with the correct operation of equipment (mixer, oven) to ensure efficient and safe use
- Ingredients: Measure ingredients accurately using calibrated measuring tools to maintain consistency in the dough
- Mixing: Combine ingredients evenly to distribute yeast and develop gluten for proper dough structure
- Kneading: Proper kneading helps develop gluten and improve dough elasticity. Avoid over-kneading, which can toughen the dough
- Proofing: Allow sufficient time for dough to rise, maintaining ideal temperature and humidity to facilitate fermentation
- Oven Preparation: Preheat the oven to the correct temperature to ensure even baking
- Baking Process: Monitor baking time and adjust as needed based on oven performance and product size. Rotate pans if necessary for uniform baking
- Cooling: Allow bread to cool on a wire rack to prevent moisture buildup and maintain texture

- Packaging: Package bread attractively in suitable containers or bags to maintain freshness and appeal to customers
- Temperature: Store bakery products in a cool, dry place to extend shelf life and preserve quality
- Hygiene: Maintain cleanliness throughout the entire process to ensure food safety



Self-Reflection

1. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.

My experience	I don't have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Identify various types of tools and equipment used for bakery products preparation					
Describe different methods of maintaining tools and equipment used for bakery production					
Identify ingredients by appearance, texture, smell, and taste.					
Describe the process of preparing ingredients for bakery product					

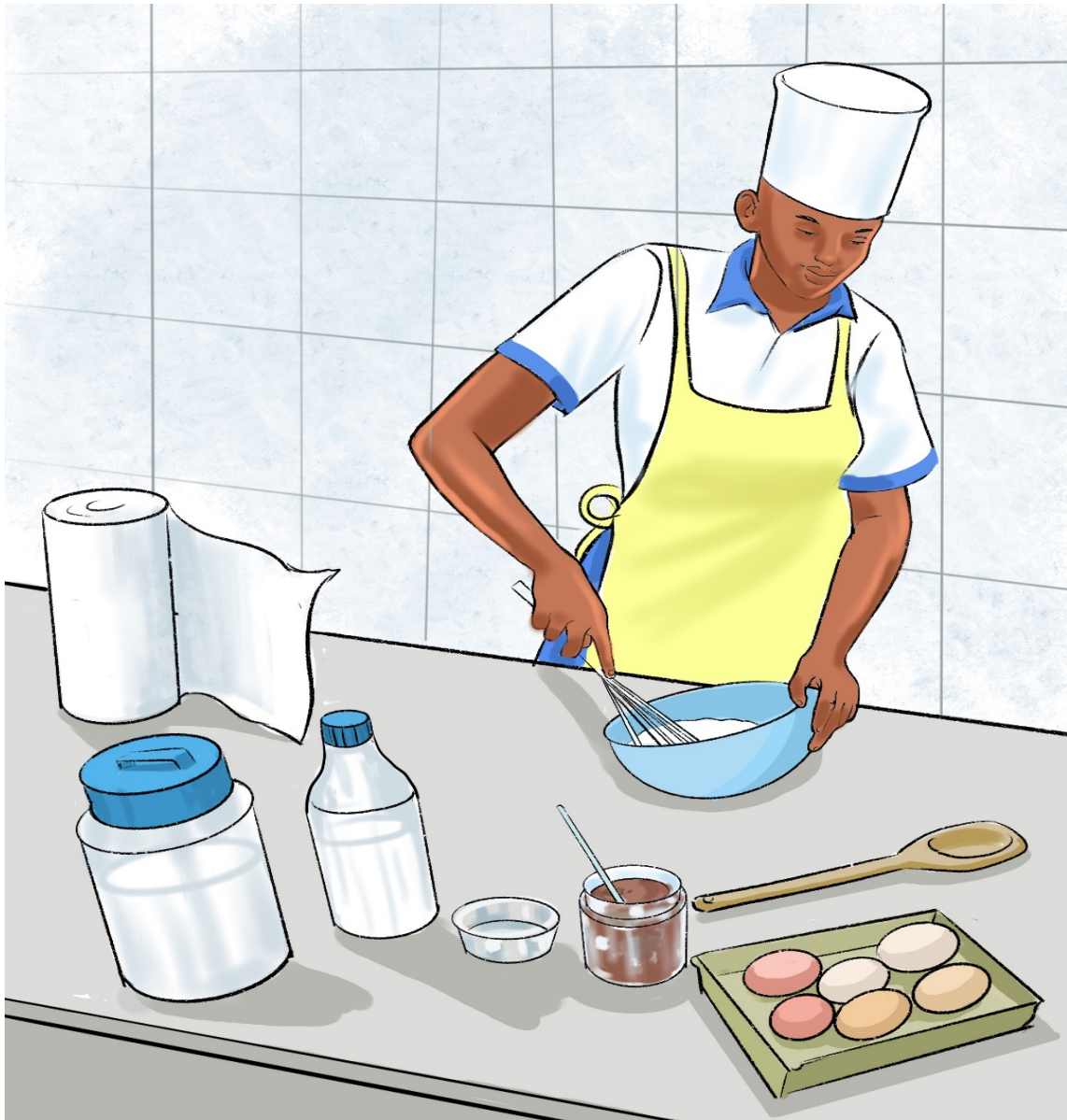
My experience	I don't have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Select appropriate tools and equipment for specific baking tasks.					
Troubleshoot tools and equipment used for bakery product					
Measure ingredients using measuring cups, spoons, scales					
Prepare dough for various bakery products as per recipe					
Bake various bakery products as per recipe					
Apply presentation techniques for various bakery products					
Apply storage techniques for various bakery products					
Attention to detail and precision in handling tools, equipment for Bakery products					

My experience	I don't have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Comply with safety precautions at the workplace					
Attention to details to ensure consistency and quality of ingredients for bakery products					
Demonstrate team work while working with others					
Comply with national and international standards related to preparing ingredients for Bakery product					

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.
3.	3.	3.

UNIT 2: PREPARE PASTRY PRODUCTS



Unit summary

This unit provides you with the knowledge, skills and attitudes required to prepare pastry products required to prepare bakery and pastry products. It covers the preparation of pastry products ingredients and cooking pastry products.

Self-Assessment: Unit 2

1. Referring to the unit illustrations above discuss the following:
 - a. What do the illustrations show?
 - b. What do you think this unit is about based on the illustration?
2. Fill in and complete the self-assessment table below to assess your level of knowledge, skills and attitudes under this unit.
 - a. There is no right or wrong way to answer this assessment. It is for your own Reference and self-reflection on the knowledge, skills and attitudes acquisition During the learning process.
 - b. Think about yourself: do you think you have the knowledge, skills or attitudes to Do the task? How well?
 - c. Read the statements across the top. Put a check in a column that best represents Your level of knowledge, skills and attitudes.
 - d. At the end of this unit, you will assess yourself again.

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Identify pastry products					
Select tools and equipment					
Describe Basic maintenance of tools and equipment					
Describe ingredients for pastry products					
Describe Pastry dishes/recipes					

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Apply pastry preparation steps					
Apply pastry cooking methods					



Key Competencies:

Knowledge	Skills	Attitudes
1. Identify various types of tools and equipment used for pastry products	1. Select appropriate pastry tools and equipment for specific tasks.	1. Attention to detail and precision in handling tools, equipment for pastry products
2. Describe different methods of maintaining tools and equipment used for pastry Product	2. Identify ingredients by appearance, texture, smell, and taste.	2. Comply with safety precautions at the workplace
3. Identify ingredients for pastry products	3. Measure ingredients using measuring cups, spoons, scales	3. Attention to details to ensure consistency and quality of ingredients for pastry products
4. Describe the process of preparing ingredients for pastries		4. Demonstrate team work while working with others

Knowledge	Skills	Attitudes
5.		5. Demonstrate endurance in preparing ingredients for pastry product
		6. Comply with national and international standards related to preparing ingredients for pastry product



Discovery activity:



Task 17:

1. Referring to your experience in preparing pastry products, read and answer the following questions:
 - a. Describe the tools and equipment for preparing pastry products
 - b. Describe the maintenance activities for tools and equipment for preparing pastry products
 - c. Describe the ingredients for preparing pastry products
 - d. Describe different pastry dishes/recipes
 - e. Describe the steps for preparing pastries
 - f. Describe the different cooking methods for pastry products

Topic 2.1: Preparation of pastry products ingredients



Activity 1: Problem Solving



Task 19:

1. Read and answer the questions that follow:
 - a. Describe different types of pastry products
 - b. Describe tools and equipment used to prepare pastries
 - c. Describe basic maintenance for tools and equipment used to prepare pastries
 - d. Describe ingredients used to prepare pastry products.
 - e. What are criteria do we use to select ingredients for pastries?

Key Facts 2.1: Preparation of pastry products ingredients

- **Identification of pastry products**

Pastry products refer to a wide range of baked goods that are made primarily from flour, fat, and water. These products can vary greatly in texture, flavor, and appearance based on the ingredients used and the techniques employed in their preparation.




Type of Pastry Product	Description	Recipe
Puff Pastry	Known for its light and flaky texture, puff pastry is made by layering thin sheets of dough with butter or another fat, then repeatedly folding and rolling the dough to create multiple layers. It's used in both sweet and savory dishes	2 1/2 cups (315 grams) all-purpose flour; 1/2 teaspoon salt; 1 cup (230 grams) unsalted butter, cold and cut into small cubes; 1 cup (240 ml) cold water; 1 tablespoon lemon juice (optional, helps with dough elasticity)

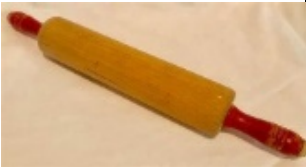




	such as croissants, palmier, and vol-au-vents.	
Ordinary Cakes	An ordinary cake is a sweet, baked dessert that comes in various shapes, sizes, and flavors. Typically, it consists of a combination of flour, sugar, eggs, and butter or oil, along with baking powder or baking soda to help it rise. The batter is often flavored with vanilla or chocolate, but it can also be infused with fruits, nuts, or spices.	1 ½ cups (190 g) all-purpose flour; 1 cup (200 g) granulated sugar; ½ cup (115 g) unsalted butter, softened; 2 large eggs; ½ cup (120 ml) whole milk; 2 tsp baking powder; ¼ tsp salt
Choux Pastry	Choux pastry is unique in that it's cooked twice—once on the stovetop and again in the oven—to create a light, hollow interior. It's used to make various desserts such as cream puffs, éclairs, and profiteroles.	1 cup (240 ml) water; 1/2 cup (115 g) unsalted butter; 1/4 teaspoon salt; 1 cup (125 g) all-purpose flour; 4 large eggs
Doughnut	A doughnut, also spelled "donut," is a type of fried dough confection or dessert food. It comes in various shapes, but the most common is the ring shape, often with a hole in the center. Doughnuts can also be filled with sweet or	1 cup whole milk, warmed; 2 ¼ teaspoons active dry yeast (1 packet); ¼ cup granulated sugar; 2 large eggs; 4 tablespoons unsalted butter, softened; ½ teaspoon salt; 4 cups all-purpose flour






	savory fillings like jelly, custard, or cream.	
Sweet Pastry	Sweet pastry dough typically contains sugar and is used for desserts like fruit tarts, pies, and tartlets. It can be made with various fats, such as butter or shortening, to achieve different textures and flavors	1 sheet of puff pastry (thawed if frozen); 1/4 cup granulated sugar; 1 tablespoon ground cinnamon; 1 egg (beaten, for egg wash); Optional: a drizzle of icing or glaze (for extra sweetness)
Cookies	Cookies are a type of baked treat that are usually sweet and can come in a variety of flavors and textures. Typically made from ingredients such as flour, sugar, butter, and eggs, cookies are often enhanced with add-ins like chocolate chips, nuts, dried fruits, or spices.	1 cup (2 sticks) unsalted butter, softened; 1 cup granulated sugar; 1 cup packed brown sugar (light or dark); 2 large eggs; 1 teaspoon vanilla extract; 3 cups all-purpose flour; 1 teaspoon baking soda; 1/2 teaspoon baking powder; 1/2 teaspoon salt; 1 1/2 cups semi-sweet chocolate chips
Danish Pastry	Danish pastry dough is similar to puff pastry but typically contains yeast, which gives it a slightly lighter texture. It's often shaped into intricate pastries filled with fruit, cream cheese, or almond paste, such as danishes or bear claws	1 cup (240 ml) whole milk; 1/4 cup (50 g) granulated sugar; 1 packet (2 1/4 tsp) active dry yeast; 4 cups (480 g) all-purpose flour; 1/2 tsp salt; 1 cup (230 g) unsalted butter, chilled and cut into small pieces; 1 large egg

Beigne	It sounds like you might be referring to "Begne," but without additional context, it's a bit unclear what specifically you're asking about. If you're referring to a character, place, or concept named "Begne,	cups all-purpose flour;1/4 cup sugar;1 tablespoon baking powder;1/2 teaspoon salt;2 large eggs;1/2 cup milk;1/4 cup water;1 teaspoon vanilla extract (optional); Vegetable oil for frying (enough to fill your pan about 2 inches deep)
Pies	Pies are versatile pastries consisting of a crust filled with sweet or savory ingredients. Fruit pies, such as apple or cherry pie, typically feature a double-crust or lattice top, while custard-based pies like pumpkin or pecan have a single crust. Savory pies, like traditional meat pies or pot pies, often have a pastry crust on top and bottom.	2 ½ cups all-purpose flour;1 cup (2 sticks) unsalted butter, chilled and cut into small pieces; ¼ cup granulated sugar; 1 tsp salt; 6-8 tbsp ice water
Tarts	Tarts are similar to pies but typically have a shallower crust and are often served open-faced. They can be sweet or savory and are filled with ingredients such as fruits, custards, ganache, or savory mixtures like quiches	1 1/2 cups (190 g) all-purpose flour;1/2 cup (115 g) unsalted butter, cold and cubed;1/4 cup (50 g) granulated sugar;1 large egg yolk; 1-2 tablespoons cold water (as needed).




Cakes	While cakes are not typically considered traditional pastries, they often share similar ingredients and techniques. Layer cakes, sponge cakes, and pound cakes are examples of baked goods that may fall under the pastry umbrella, especially when considering their preparation methods and final textures.	1 ½ cups (190g) all-purpose flour; 1 cup (200g) granulated sugar; ½ cup (115g) unsalted butter, softened; ½ cup (120ml) milk; 2 large eggs; 2 teaspoons baking powder; 1 teaspoon vanilla extract; ¼ teaspoon salt
Swiss roll	A Swiss roll is a type of sponge cake that is rolled up with a filling. It typically consists of a light, airy sponge cake that is baked in a flat sheet, spread with a layer of filling (such as jam, cream, or chocolate), and then carefully rolled into a log shape. The outer layer is often dusted with powdered sugar or covered with a layer of icing or ganache.	4 large eggs; 1 cup (200g) granulated sugar; 1 teaspoon vanilla extract; 1 cup (120g) all-purpose flour; 1/2 teaspoon baking powder; 1/4 teaspoon salt
Biscuits and Scones	Biscuits and scones are quick breads made with a combination of flour, fat, leavening agents, and liquid. Biscuits are light and flaky,	2 cups all-purpose flour; 1 tablespoon baking powder; 1/2 teaspoon baking soda; 1/2 teaspoon salt; 1/4 cup (1/2 stick) unsalted butter, cold and cut into

	often served as a side dish or breakfast item, while scones are slightly sweeter and may contain additional ingredients like fruits or chocolate chips.	small pieces;3/4 cup buttermilk (you can substitute with milk if needed, but buttermilk makes them fluffier)
Cinnamon Rolls	Cinnamon rolls consist of a yeast-raised dough rolled out, spread with a mixture of cinnamon, sugar, and butter, then rolled up and sliced before baking. They're typically topped with a sweet glaze or frosting once baked.	1 cup warm milk (110°F or 45°C);1/4 cup granulated sugar;2 1/4 teaspoons (1 packet) active dry yeast;1/2 cup unsalted butter, melted;1 large egg; 4 cups all-purpose flour;1/2 teaspoon salt
<ul style="list-style-type: none"> • Selection of tools and equipment 		
Category of tools and equipment	Tools and equipment	Use of the tools and equipment
	Stand mixer	Mixing dough, batters, and other ingredients efficiently
	Hand mixer	Mixing smaller batches or lighter ingredients by hand
	Dough mixer	Kneading and mixing large batches of dough

Rolling and Shaping 	Rolling pin	Rolling out dough to desired thickness
	Pastry wheel	Cutting or trimming pastry dough
	Cookie cutters	Shaping cookies or cutting out decorative shapes
	Dough sheeter	Rolling out large quantities of dough evenly and consistently
	Baking Oven	Baking various pastry products at controlled temperatures
	Baking sheets	Providing a surface for baking cookies, pastries, etc.

	Cooling racks	Allowing baked goods to cool evenly and prevent moisture buildup
Decorating and Finishing 	Piping bags and tips	Decorating pastries with frosting, icing, or fillings
	Pastry brushes	Applying egg wash, glazes, or melted butter to pastries
	Sprinkles and toppings	Adding decorative elements and textures to finished pastries
	Fondant tools	Shaping and decorating pastries with fondant

	Stencils and cutters	Creating intricate designs or patterns on pastries
Measurement and Accuracy 	Measuring cups and spoons	Accurately measuring ingredients for recipes
	Kitchen scale	Weighing ingredients for precise measurements
	Oven Thermometer	Monitoring temperatures for proofing dough or baking
Storage 	Pastry storage containers	Storing dry ingredients like flour, sugar, and spices

		Rolling pin holder	Organizing and storing rolling pins
		Pastry Shelving units	Storing equipment, tools, and ingredients
		Label maker	Clearly labeling ingredients and products for easy reference
<ul style="list-style-type: none"> • Basic maintenance of tools and equipment <ul style="list-style-type: none"> ✓ Cleaning: Cleaning the tools regularly is essential to their proper functioning. Lubrication: Lubricating tools & equipment helps them to perform better and reduces wear and tear of components. ✓ Regular inspection: Regularly inspect your tools and equipment for signs of damage and faulty functioning. ✓ Careful storing: Storing tools and equipment properly is of prime importance. Although they are designed for rough use, it is important to store them properly. ✓ Working in appropriate workshop: It protects tools and equipment from weather conditions. • Selection of ingredients for pastry products Table summarizing the description of common ingredients used in pastry products. 			
No	Ingredient	Description	Role
1.	Flour	Main ingredient providing structure. Can be all-purpose, cake flour (lower protein content for delicate pastries), or pastry flour (slightly higher protein content for flaky pastries).	Provides structure and bulk; contains gluten for elasticity

2.	Butter	Adds flavor, richness, and flakiness. Can be substituted with margarine or shortening for different textures.	Adds richness and flavor; contributes to texture
3.	Sugar	Sweetens pastries, enhances browning, and helps with texture and moisture retention. Types include granulated, powdered, brown, and specialty sugars like honey or maple syrup.	Sweetens; aids in browning and caramelization
4.	Eggs	Bind ingredients together, add moisture, richness, and help with leavening. Can be whole eggs, yolks, or whites depending on the recipe.	Adds structure, color, flavor, and richness
5.	Milk/Cream	Adds moisture, richness, and tenderness. Whole milk, skim milk, or heavy cream can be used depending on desired texture and flavor.	Adds moisture, flavor, and tenderness
6.	Baking Powder/Soda	Leavening agents that create rise in pastries. Baking powder is a combination of baking soda and acid, activated by liquid and heat. Baking soda requires an acidic ingredient to activate.	Reacts to produce carbon dioxide, causing dough to rise
7.	Salt	Mineral compound, Used in small amounts to balance sweetness and other flavors.	Enhances flavor; regulates yeast activity and gluten
8.	Vanilla Extract	Extract from vanilla beans. Can be substituted with other extracts like almond or citrus depending on the desired flavor profile.	Adds flavor and aroma to pastries.
9.	Chocolate	Can be in the form of chips, chunks, or melted for coating or filling. Dark, milk, or white	Adds flavor and texture to pastries.

		chocolate can be used depending on the recipe.	
10	Fruits/Nuts	Can be fresh, dried, or candied depending on the recipe. Common choices include berries, apples, almonds, and pecans.	Provide flavor, texture, and visual appeal.
11	Yeast	Microorganism (fungus), Activated by warm liquid and feeds on sugars for fermentation, creating carbon dioxide gas for rising.	Leavens dough by producing carbon dioxide through fermentation
12	Shortening	Solid fat used for flakiness in pastries like pie crusts. Can be vegetable-based or animal-based (lard). Often used as a butter substitute for specific textures.	Tenderizes dough; adds flakiness
This table covers some of the most common ingredients used in pastry making and their primary functions. Keep in mind that specific recipes may call for additional ingredients or variations in quantities depending on the desired outcome.			



Activity 2: Guided Practice



Task 19:

Assume you are working in a bakery corner at the school staff canteen that specializes in crafting a variety of pastries, from delicate éclairs to flaky croissants. Your competition edge is using high-quality ingredients and maintaining precise processes to ensure consistent and delicious pastries every time. Today is a busy day for the bakery and you are requested to

1. Prepare the ingredients for the menu of the day: croissants, vanilla cake and pies.
 - a. select tools and equipment to prepare the above products
 - b. Carry out the basic maintenance of tools and equipment
 - c. Select the required ingredients
 - d. Prepare the selected ingredients
2. For any pastry of your choice.
 - a. Prepare tools

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- b. Prepare equipment

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- c. Describe the main ingredients used for the pastry preparation

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- d. Maintain the tools and equipment used in preparation of the pastry.

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Activity 3: Application



Task 20:

1. Your school is planning a provincial delegation visit tomorrow and has requested the staff canteen to prepare some delicacies for its estimated guests. The canteen chef has proposed to prepare choux and sort crust pastries, and requested you to prepare the ingredients for these products.
2. Make a report describing the following:
 - a. Materials needed
 - b. Process of preparing each ingredient for each product
 - c. The basic maintenance for tools and equipment before and after use.

Topic 2.2: Cooking pastry products



Activity 1: Problem Solving



Task 21:

1. During a baking session, you notice that some of the pastry products, such as tarts and pies, are not baked evenly. Some are undercooked in the center while others have overly browned crusts. Your task is to identify potential causes for these uneven baking results and propose solutions to ensure consistent and well-cooked pastry products.
 - a. What factors could be contributing to the uneven baking of pastry products? Consider aspects related to oven temperature, baking time, positioning in the oven, and type of baking vessel.
 - b. Describe pastry dishes/recipes
 - c. Apply pastry preparation steps
 - d. Apply of pastry cooking methods

Key Facts 2.2: Cooking pastry products

- **Pastry dishes/recipes**

Selecting the perfect pastry recipe involves several thoughtful steps to ensure you achieve the desired outcome.

- **Step 1: Define Your Desired Outcome**

- ✓ **Type of Pastry:** Decide what type of pastry you want to make (e.g., puff pastry, shortcrust pastry, choux pastry, etc.).
- ✓ **End Use:** Consider what the pastry will be used for (e.g., pies, tarts, eclairs, etc.).
- ✓ **Texture and Flavor:** Determine the texture (flaky, crumbly, tender) and flavor profile (sweet, savory) you're aiming for.

- **Step 2: Research and Gather Recipes**

- ✓ **Sources:** Look for recipes from trusted culinary sources such as reputable cooking websites, cookbooks by well-known chefs, or food blogs with good reviews.

- ✓ **Compare Recipes:** Gather at least 3-4 different recipes for the type of pastry you want to make. This allows you to compare ingredients, techniques, and potential variations.
- **Step 3: Analyze Recipes**
 - ✓ **Ingredients:** Compare the ingredients listed in each recipe. Note any variations or unique additions that might affect flavor or texture.
 - ✓ **Techniques:** Pay attention to the methods and techniques used in each recipe. Consider your own skill level and the equipment you have available.
 - ✓ **Reviews and Comments:** Check online reviews and comments on the recipes to see if other bakers have had success or encountered challenges with specific recipes.
- **Step 4: Consider Your Skills and Equipment**
 - ✓ **Skill Level:** Choose a recipe that matches your skill level. For beginners, simpler recipes with detailed instructions might be more suitable.
 - ✓ **Equipment:** Ensure you have the necessary equipment specified in the recipe (e.g., stand mixer, food processor, pastry blender) or be prepared with alternatives.
- **Step 5: Make a Test Batch**
 - ✓ **Scale Down:** If possible, scale down the recipe for a test batch to minimize waste in case adjustments are needed.
 - ✓ **Follow Instructions:** Carefully follow the recipe instructions step-by-step, measuring ingredients accurately.
 - ✓ **Evaluate:** After baking, evaluate the pastry based on taste, texture, appearance, and ease of preparation.
- **Step 6: Adjust and Fine-Tune**
 - ✓ **Note Changes:** Keep notes on any adjustments you made during preparation or baking.
 - ✓ **Compare with Expectations:** Compare the test batch with your initial expectations and decide if any changes are necessary.

- ✓ **Repeat** if Needed: If the first batch doesn't meet expectations, don't hesitate to try another recipe from your initial selection or make further adjustments.

- **Step 7: Finalize Your Recipe**

- ✓ **Document:** Once you've found a recipe that works well and meets your expectations, document it with any modifications or personal notes for future reference.
- ✓ **Share and Enjoy:** Share your perfect pastry recipe with friends or family and enjoy the fruits of your baking efforts!

Pastry Dish	Recipe ratio	Method used	Process of making
Shortcrust Pastry	3 parts flour: 2 parts fat: 1 part liquid	Rubbing method	1.Mix flour and fat until crumbly 2.Add liquid gradually, mixing until dough forms 3.Chill dough. 4. Roll out and use as needed.
Puff Pastry	1 part flour: 1 part butter: 1 part water (roughly)	Laminating method	1.Cut cold butter into flour. 2.Add water gradually, mixing until dough forms. Roll out dough into rectangle. 3.Fold dough into thirds, then chill. 4. Repeat folding and chilling several times. 5.Roll out and use as needed.

Choux Pastry	1 part water: 1 part butter: 1 part flour: 2 parts eggs	Boiling and Mixing method	<ol style="list-style-type: none"> 1. Boil water and butter. 2. Add flour and stir until dough forms. 3. Let cool slightly, then beat in eggs. 4. Pipe or shape dough as desired. 5. Bake until puffed and golden.
Phyllo Dough	2 parts flour: 1 part water: pinch of salt	Kneading and Rolling method	<ol style="list-style-type: none"> 1. Mix flour, water, and salt to form dough. 2. Knead until smooth and elastic. 3. Divide into small balls and let rest. 4. Roll out each ball into thin sheets. 5. Stack sheets with melted butter between layers. 6. Use as needed for various pastry recipes.
Sponge Cake	1 part flour: 1 part sugar: 1 part eggs (by weight)	Beating and Folding method	<ol style="list-style-type: none"> 1. Beat eggs and sugar until pale and fluffy. 2. Fold in sifted flour gradually. 3. Pour batter into prepared pan.

			<p>4. Bake until golden and springy to the touch.</p> <p>5. Cool before serving or decorating.</p>
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- **Pastry preparation steps**

General outline of the steps involved in preparing pastry:

- ✓ **Gathering Ingredients:** Collect all the ingredients required for the pastry recipe. This usually includes flour, butter, water (or other liquids), salt, and sometimes sugar or other flavorings depending on the type of pastry being made.
- ✓ **Measuring Ingredients:** Accurately measure out the ingredients according to the recipe. Precision is important in pastry making to ensure the right texture and consistency.
- ✓ **Making the Dough:** In a large mixing bowl, combine the dry ingredients (flour, salt, sugar if using) and then cut in the fat (usually butter) until the mixture resembles coarse crumbs. Then gradually add liquid (usually cold water) until the dough comes together. Avoid overmixing to prevent toughness.
- ✓ **Resting the Dough:** Wrap the dough in plastic wrap and let it rest in the refrigerator for at least 30 minutes to relax the gluten and firm up the fat. This makes the dough easier to roll out and helps prevent shrinkage during baking.
- ✓ **Rolling Out the Dough:** On a lightly floured surface, roll out the chilled dough to the desired thickness using a rolling pin. The thickness will depend on the type of pastry being made and the recipe instructions.
- ✓ **Shaping the Pastry:** Once rolled out, the pastry can be shaped according to the recipe. This might involve lining a pie dish, cutting out shapes for cookies, or forming into a tart shell.
- ✓ **Pre-baking (Blind Baking):** Some pastry recipes require pre-baking the crust before adding the filling. This is called blind baking and helps ensure a crisp, fully cooked crust, especially for fillings that don't need much baking time.

- ✓ **Adding Fillings (if applicable):** If making a filled pastry, add the filling to the pre-baked or unbaked crust according to the recipe instructions. This could be sweet or savory depending on the type of pastry.
- ✓ **Baking:** Place the pastry in a preheated oven and bake according to the recipe instructions until golden brown and cooked through. Baking times and temperatures vary depending on the type of pastry and its size.
- ✓ **Cooling:** Allow the pastry to cool slightly before serving. This gives it time to set and ensures a better texture.

These are the basic steps involved in making pastry, but keep in mind that specific recipes may have additional or slightly different steps depending on the type of pastry being made.

- **Pastry cooking methods**

- ✓ **Baking:**

- ✚ Baking is a precise method that relies on controlled heat to cook the pastry evenly.
 - ✚ Different pastries may require different baking temperatures and times. For example, delicate pastries like puff pastry or phyllo dough require high heat for a short time to puff up and become flaky, while dense pastries like pound cake benefit from lower heat for a longer time to cook through without burning.
 - ✚ Baking can be done in various types of ovens, including conventional ovens, convection ovens (which circulate hot air for faster and more even cooking), and even specialized ovens like deck ovens or brick ovens, each imparting its own characteristics to the pastry

- ✓ **Frying:**

- ✚ Frying pastries involves submerging them in hot oil. The high temperature of the oil quickly cooks the exterior of the pastry, creating a crispy crust while retaining moisture inside.

- ✚ Depending on the recipe, frying can be done in shallow oil (shallow frying) or deep oil (deep frying). Deep frying provides more uniform cooking and a crisper texture.

- ✚ It's important to maintain the oil at the right temperature to prevent the pastry from becoming greasy or absorbing too much oil.

✓ **Steaming:**

- ✚ Steaming is a gentle cooking method that preserves the moisture content of the pastry, resulting in soft and tender textures.

- ✚ It's commonly used for pastries like Chinese buns (baozi), dumplings (dim sum), and some types of cakes (such as steamed sponge cake).

- ✚ Steaming can be done in specialized steamers or improvised setups, such as using a steaming basket over boiling water on the stovetop.

✓ **Boiling:**

- ✚ Boiling pastries, particularly bread items like bagels and pretzels, involves briefly cooking them in boiling water before baking.

- ✚ This process gelatinizes the outer layer of the pastry, giving it a chewy texture, and helps the toppings adhere better.

- ✚ After boiling, the pastries are typically baked to further develop flavor and texture.

✓ **Grilling:**

- ✚ Grilling adds a unique smoky flavor to pastries and can create appealing grill marks.

- ✚ Pastries like flatbreads, pizza, and even some dessert items like fruit can be cooked on a grill.

- ✚ Grilling is typically done over direct heat, either on gas or charcoal grills, and requires careful monitoring to prevent burning.

✓ **Microwaving:**

- ✚ Microwaving is a convenient method for quickly cooking individual portions of pastries.
- ✚ Pastries suitable for microwaving are usually small and cook rapidly, such as mug cakes, microwaveable turnovers, or certain types of steamed desserts.
- ✚ Microwaving requires careful timing to ensure even cooking without overcooking or drying out the pastry. Each cooking method offers its own set of advantages and challenges, allowing for a diverse range of pastries to suit different tastes and occasions. Experimenting with different methods can lead to exciting culinary creations!



Activity 2: Guided Practice



Task 22:

1. You are planning to prepare croissants, explain to the interns' team how you are going to proceed by responding to the questions below
 - a. Describe how you would prepare the croissant dough for proofing, including any necessary shaping or rolling steps.
 - b. Discuss the ideal conditions for proofing croissant dough, such as temperature and humidity levels. How would you adjust these conditions if your kitchen environment differs (e.g., warmer or cooler than optimal)?
 - c. Specify the duration required for proofing croissant dough to achieve the desired rise and texture. What visual cues or tests would you use to determine when the dough is sufficiently proofed?

- d. Imagine the dough is not rising as expected during proofing. Outline potential reasons for this issue and propose corrective actions you would take to salvage the dough.
 - e. Once proofed, detail the next steps in preparing the croissants for baking, including any final shaping or brushing with egg wash.
 - f. Briefly outline the baking process for croissants, including oven temperature and baking time, to achieve a golden-brown crust and light, flaky interior.
2. Cook the croissants
 3. Cook the short crust pastry
 4. Cook the choux pastry



Activity 3: Application



Task 14:

You are conducting a professional internship at Vizion 2020 hotel nearby your school, the hotel is preparing for a prestigious culinary event and the theme of the year is ‘mouthwatering pastries’. You have been tasked to prepare a range of pastry products for the event.

Before starting cooking, note down in advance the following:

1. In detail the steps you would take to select the perfect pastry recipe, including considerations for flavor, texture, and presentation.
2. The precise techniques you would employ in preparing the pastry, from mixing and rolling to shaping and baking.
3. How would you apply various pastry cooking methods, such as blind baking, poaching, or laminating, to elevate the final dish? Consider factors like temperature control, timing, and ingredient ratios in your response."



Formative Assessment

1. Choose the correct answer for each question.
 - a. Which type of flour is commonly used for making puff pastry due to its low protein content?
 - A. All-purpose flour
 - B. Bread flour
 - C. Cake flour
 - D. Pastry flour
 - b. Which of the following is a common leavening agent used in pastry?
 - A. Baking powder
 - B. Cornstarch
 - C. Gelatin
 - D. Vinegar
 - c. What type of fat is typically used in making shortcrust pastry for a flaky texture?
 - A. Butter
 - B. Margarine
 - C. Olive oil
 - D. Vegetable shortening
 - d. The method of cutting solid fat into flour to create a crumbly texture is known as:
 - A. Creaming
 - B. Folding
 - C. Rubbing in
 - D. Whisking
 - e. Choux pastry is characterized by its preparation method involving:
 - A. Boiling water and flour
 - B. Folding butter into flour
 - C. Melting sugar in water
 - D. Mixing yeast with flour

2. Write brief answers to the following questions.

- a. Describe the difference between shortcrust pastry and puff pastry in terms of their textures.
- b. Name two common mixing methods used in pastry making and briefly explain when each method is typically used.
- c. List three common types of pastry dough and provide an example of a pastry product made with each type.



Points to Remember

Preparing pastry products involves several key points to ensure success. The Important Points to Remember:

- **Ingredients:** Use high-quality ingredients. This includes flour (typically all-purpose or pastry flour), fats (butter, shortening, or margarine), sugar, salt, and liquids (water, milk, eggs). The ratios and quality of these ingredients greatly affect the texture and flavor of your pastries
- **Measurements:** Accurate measuring is crucial in baking. Use measuring cups and spoons for dry ingredients and a liquid measuring cup for liquids. Follow the recipe closely to maintain proper ratios.
- **Mixing Technique:** Depending on the type of pastry (e.g., puff pastry, shortcrust pastry), the mixing technique varies. For example, puff pastry requires layering fat and dough, while shortcrust pastry benefits from minimal mixing to prevent gluten development.
- **Baking or Cooking Temperature and Time:** Follow the recipe instructions for baking or Cooking temperature and time. This ensures that the pastry cooks through evenly without becoming too dark or undercooked
- **Practice and Patience:** Pastry-making can be a skill that improves with practice. Don't be discouraged by initial failures; learn from them and adjust techniques as needed.



Self-Reflection

1. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience of doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Identify pastry products					
Select tools and equipment					
Describe Basic maintenance of tools and equipment					
Describe ingredients for pastry products					
Describe Pastry dishes/recipes					
Apply pastry preparation steps					
Apply pastry cooking methods					

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.
3.	3.	3.

UNIT 3: PRESENT PASTRY PRODUCTS



Unit summary

This unit provides you with the knowledge, skills and attitudes required to present pastry products. Required to prepare bakery and pastery products. It covers the decoration of pastry products and the presentation of pastry products.

Self-Assessment: Unit 3

1. Referring to the unit illustrations above discuss the following:
 - a. What do the illustrations show?
 - b. What do you think this unit is about based on the illustration?
2. Fill in and complete the self-assessment table below to assess your level of knowledge, skills and attitudes under this unit.
 - a. There is no right or wrong way to answer this assessment. It is for your own reference and self-reflection on the knowledge, skills and attitudes acquisition during the learning process.
 - b. Think about yourself: do you think you have the knowledge, skills or attitudes to do the task? How well?
 - c. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.
 - d. At the end of this unit, you will assess yourself again.

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Select presentation tools					
Describe Preparation technics of ingredients for decoration of Pastry					
Identify decoration techniques for pastry products					

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Describe Presentation types such as portioning, plating, garnishing, holding of pastry products					
Describe Presentation procedures for Pastry products					
Portion pastry products					
Plate pastry products					
Garnishing pastry products					
Hold pastry products					



Key Competencies:

Knowledge	Skills	Attitudes
1. Select presentation tools	1. Select appropriate tools and equipment for specific pastry products	1. Attention to detail and precision in handling tools, equipment for pastry products
2. Describe Preparation techniques of ingredients for decoration of Pastry	2. Measure ingredients using measuring cups, spoons, scales	2. Attention to details to ensure consistency and quality of ingredients for pastry products
3. Identify decoration techniques for pastry products	3. Decorating and Plating for pastry product	3. Comply with safety precautions at the workplace
4. Describe Presentation types such as portioning, plating, garnishing, holding of pastry products	4. Portion and serving dishes in an attractive and appealing manner	4. Demonstrate team work while working with others
5. Describe Presentation procedures for Pastry products	5. Plate pastry products	5. Passion for Pastry
	6. Garnish pastry products	
	7. Hold pastry products	



Discovery activity:



Task 24:

1. Describe the tools and equipment for decorating pastry products
2. Describe the ingredients for decoration of pastry products
3. Apply decoration techniques for pastry products
4. Describe Presentation types for pastry products
5. Describe presentation procedures for pastry products

Topic 3.1: Decorating pastry products



Activity 1: Problem Solving



Task 25:

Match each decorating challenge with a suitable solution

Decorating challenge	Suitable solution
Your frosting is too runny and not holding its shape on the cake.	Pipe royal icing onto a silicone mat, let it dry, then carefully peel off and apply to the cake.
You need to create intricate lace designs on a cake but don't have a lace mold.	Add more powdered sugar gradually until desired consistency is achieved.
You want to create a glossy finish on your pastries, but you're out of edible glaze.	Thin it with a little hot cream or milk until it reaches a spreadable consistency.
Your chocolate ganache is too thick and difficult to spread smoothly.	Brush warmed apricot jam or honey diluted with water over the pastries.
You need to create perfectly even layers in a multi-tiered cake.	Use a cake leveler or a long serrated knife to trim the tops of the cakes to the same

Key Facts 3.1: Decorating pastry products

- **Introduction**

Decorating pastry products is an art form that blends creativity with precision, transforming delicious treats into visually stunning creations. Whether you're adorning a simple cupcake or crafting an elaborate wedding cake, mastering the art of pastry decoration requires skill, patience, and a keen eye for detail.

At its core, pastry decoration enhances not only the aesthetic appeal but also the overall sensory experience of the dessert. It involves a wide array of techniques and

tools, from piping intricate designs with buttercream or royal icing to delicately molding fondant into intricate shapes and figures.



Decorating pastry products is not just about adding visual appeal but also enhancing the overall sensory experience of enjoying desserts. Here are some aspects to consider when decorating pastry products:

- ✓ **Aesthetics:** The visual presentation of pastries can significantly impact their appeal. Use of colors, shapes, and textures can create an inviting and appetizing display. For example, vibrant fruits, edible flowers, or carefully crafted chocolate garnishes can make pastries look more appealing.
- ✓ **Techniques:** There are various techniques used in pastry decoration, such as piping with icing or ganache, chocolate tempering for delicate decorations, and sugar work

like caramelizing or blowing sugar to create intricate designs. Each technique requires skill and precision to achieve desired results.

✓ **Flavor Enhancement:** Decoration can also contribute to the flavor profile of pastries. For instance, a sprinkle of citrus zest, a dusting of cocoa powder, or a drizzle of flavored syrup can complement the main flavors of the pastry, enhancing the overall taste experience.

✓ **Balance and Harmony:** When decorating pastries, it's essential to consider balance and harmony in design. This includes understanding color theory (using complementary or contrasting colors), ensuring decorations are proportionate to the size of the pastry, and maintaining a cohesive theme if serving multiple pastries together.

✓ **Seasonality and Theme:** Pastries can be decorated according to the season or theme of an event. For example, during Christmas, pastries might be adorned with festive motifs like snowflakes or holly berries, whereas in spring, fresh flowers and light pastel colors could be used.

✓ **Creativity and Innovation:** Pastry decoration offers room for creativity and innovation. Chefs and bakers often experiment with new techniques or adapt traditional methods to create unique and memorable designs that set their pastries apart.

✓ **Practical Considerations:** Beyond aesthetics, decorators must consider practical aspects such as shelf life (avoiding decorations that wilt or melt quickly), transportation (ensuring decorations remain intact during delivery), and dietary restrictions (using allergen-free decorations where necessary).

✓ **Customer Experience:** Finally, decorating pastries is about creating a delightful customer experience. Well-decorated pastries not only look appealing but also make the dining experience more enjoyable and memorable, encouraging repeat visits and positive word-of-mouth.





- **Selection of presentation tools for decorating pastry product**

Selecting presentation tools for decorating can greatly enhance the visual appeal and effectiveness of your presentation.




✓ **Purpose and Audience Consideration:**

- ✚ Understand the purpose of your presentation (e.g., sales pitch, educational seminar, project proposal).
- ✚ Consider your audience's expectations and preferences regarding visual style and presentation format.

These tools collectively enable pastry chefs and bakers to create visually appealing and professionally finished desserts.

Tool	Description	Function	Image ¹⁰
Piping Bag	A cone-shaped bag usually made of plastic or cloth for holding icing or creams.	Allows for precise application of frosting, icing, or creams onto pastries.	
Piping Tips	Metal or plastic nozzles that attach to piping bags to create different designs.	Shapes icing or cream into various patterns such as stars, shells, or rosettes.	
Offset Spatula	A long, narrow spatula with a bent handle for spreading frosting or ganache.	Smooths and spreads frosting evenly over cakes or pastries.	
Pastry Brushes	Small brushes with bristles made of natural or synthetic materials.	Used to apply egg wash, glazes, or melted butter onto pastries for shine.	

¹⁰https://www.google.com/search?q=Fondant+Smoothers+image&sca_esv=ef2c4b0a2da52218&rlz=1C1CHBF_enRW1105RW1105&sxsrf=ADLYWIJ

Decorating Combs	Plastic or metal combs with various textures for creating patterns on icing.	Creates textured designs on the surface of frosted cakes or desserts.		
Fondant Smoothers	Flat tools usually made of plastic for smoothing out rolled fondant on cakes.	Ensures fondant covers cakes smoothly and without wrinkles.		
Stencils	Plastic or metal sheets with cut-out designs used for applying powdered sugar.	Adds intricate patterns or images onto pastries or cakes.		

- **Preparation of ingredients for decoration of pastry product**

Table listing common ingredients used for decorating pastry products, along with their descriptions and functions:

Ingredient	Description	Function
Fondant	Smooth, pliable icing made from sugar, water, and gelatin	Covers cakes with a smooth finish; shapes into decorations
Royal Icing	Mixture of powdered sugar, egg whites, and lemon juice	Hardens when dry; used for intricate designs and piping
Buttercream	Mixture of butter, powdered sugar, and flavorings	Spreadable frosting for cakes; pipes well for decorations
Marzipan	Sweetened almond paste	Moldable into shapes; covers cakes or forms decorations

Chocolate Ganache	Mixture of chocolate and cream	Smooth glaze or frosting; can be poured or piped
Fresh Fruit	Various fruits such as berries, kiwi, or citrus slices	Adds natural color, flavor, and texture to pastry
Edible Flowers	Small flowers like pansies, roses, or violets	Decorative element; adds color and elegance
Sprinkles	Small colored sugar shapes or metallic balls	Adds texture and color contrast to frosting or icing
Nuts	Chopped or sliced almonds, pecans, or walnuts	Adds crunch and flavor; decorates cake sides or tops
Glitter Dust	Edible shimmer in powder form	Adds sparkle and shine; used sparingly for accents

- **Applying decoration techniques for pastry products**

Decorating pastry products involves various techniques that enhance their visual appeal and sometimes their flavor. The following are some common decoration techniques used in pastry:

- ✓ **Icing and Frosting:**

- 🌈 **Buttercream:** A smooth and creamy icing made from butter, sugar, and flavorings, often used for frosting cakes and piping decorations.

- 🌈 **Royal Icing:** A hard, glossy icing made from egg whites and powdered sugar, used for intricate piping and detailed decorations.

- 🌈 **Glazes:** Thin, shiny coatings applied to pastries for a glossy finish, often made with sugar, water, and sometimes flavorings or colors.

- ✓ **Piping:**

- ✚ Using a piping bag and various tips to create intricate designs, borders, and writing on pastries.

- ✚ Techniques include rosettes, shells, stars, and lacework.

✓ **Chocolate Work:**

- ✚ **Tempered Chocolate:** Melted chocolate that has been carefully cooled to specific temperatures, ensuring a glossy finish and snap when set.

- ✚ **Chocolate Curls and Shavings:** Created by scraping a knife or peeler across a block of chocolate, used for garnishing.

- ✚ **Chocolate Ganache:** A smooth mixture of chocolate and cream, used for fillings, frostings, and drizzles.

✓ **Fondant:**

- ✚ A smooth, pliable icing made from sugar, water, and glucose or glycerin, rolled out and draped over cakes for a flawless finish.

- ✚ Can be molded and shaped into various decorations like flowers, ribbons, and figurines.

✓ **Marzipan:**

- ✚ A sweet almond paste used similarly to fondant for covering cakes and creating edible decorations.

- ✚ Can be colored and molded into intricate shapes.

✓ **Fresh Fruit and Nuts:**

- ✚ Whole or sliced fruits, berries, and nuts used to enhance the appearance and flavor of pastries.

- ✚ Often used on tarts, cakes, and pastries with cream fillings.

✓ **Powdered Sugar and Cocoa Powder:**

- ✚ Dusting pastries with powdered sugar or cocoa powder through a sieve to create decorative patterns or add a finishing touch.

✓ **Edible Gold and Silver Leaf:**

- ✚ Delicate, edible metal leaf used to add a luxurious finish to pastries and chocolates.
- ✚ Applied carefully with a brush to create elegant accents.

Every pastry chef should have some cake decorating techniques tucked beside their bench scraper and spatula. This holds true whether you want to spend your life creating seven-tier cake masterpieces, are just getting good at making cupcakes for your customers.

With creativity in hand and these seven basic techniques in your toolbelt, you'll be able to make your cake sketches come to life.

✓ **Spatula Icing**

Just like a room requires a good coat of paint before its decor can shine, the first step to a beautiful cake is a flawless coat of icing. While the pros make icing a cake



look easy, you'll need the proper tools and some practice to master this technique. A pastry spatula is the easiest way to apply icing, no matter if you're aiming for a smooth coating or textured finish.

✓ **Piping**

If you work in cake decorating, you won't be able to escape piping. Everything from elegant tiered wedding cakes to playful birthday sheet cakes rely on this classic technique.



Before you begin piping, you'll need to fill a pastry bag with icing and choose the proper tip. Since piping tips come in a variety of shapes and sizes, make sure you pick the one that will allow you to complete your desired design.

- ✚ Multiple piping techniques including fine lines, roses, and stars.

While some cake decorators use their pastry bag like a paintbrush and let their creativity shine, there are some fundamental piping techniques most pastry chefs should have in their repertoire.

- Stars are made using a star tip and a single squeeze of the pastry bag. Use multi-colored stars as stand-alone decorations or combine them to create textured tops or borders.
- Dots are created much like stars, but with a round rather than star tip.
- Rosettes add a floral-inspired element with a limited amount of work.
- Shells are the foundation of one of the most popular cake borders, but they can also be used to cover a cake with a subtle texture.
- Zig-Zags are just like what they sound like. You can use them to create borders, cover sides, or fill in shapes.
- ✓ **Fondant Work:** Fondant, a rollable icing, is another tool that should be in any cake decorator's toolbox. Once you get the hang of working with this flexible yet stable material, you'll be able to add new styles to your cake decorating skills.

Pastry arts professionals at the very least should practice covering a cake in fondant to create a smooth and elegant appearance. Once you've perfected covering a cake, you can then explore adding designs and texture to the fondant.



Seamless and crack-free fondant application.

Along with fully coating cakes, you should eventually be able to use fondant to create shapes and structures. These include everything from simple polka dots to intricate flowers. If you're looking to create extravagant cakes such as those found on shows like *Ace of Cakes* and *Cake Boss*, continue to sharpen your fondant skills.

- ✓ **Hand Painting:** Once you're comfortable with fondant, it's time to add some flair to your cakes with hand painting. As the term suggests, hand painting involves using edible pigments to paint designs on a fondant canvas. Decorators can use this technique to create simple shapes like dots and lines or complete scenes that rival the works of Vincent van Gogh.

This technique may involve free-handing a design or using a template or stencils to help guide your work.

- ✓ **Sugar Work:** While sugar work is a more advanced technique, it helps cake decorators stand out from the crowd.

Much like artists using molten glass to create bowls and sculptures, sugar work involves crafting melted sugar into exquisite shapes and forms. Once you become comfortable with this technique, you'll be able to adorn cakes with sugary swirls and sweet sculptures.

- ✓ **Mirror Glaze:** If fondant and buttercream icing are the equivalent of a matte paint, then a mirror glaze is akin to a high-gloss finish. This technique involves combining



gelatin, sugar, and other ingredients until they reach the perfect temperature. At this point, the satiny mixture is poured over a chilled cake.

A mirror glaze can produce the marbled colors seen on the cake above as well as solid hues.



Activity 2: Guided Practice



Task 26:

1. Match each decorating challenge with the appropriate solution:
 - a. Your royal icing is too thin and not holding its shape for intricate designs.
 - A. Add sifted powdered sugar gradually until desired consistency is achieved.
 - B. Refrigerate the icing to thicken it.
 - C. Microwave the icing briefly to evaporate excess moisture.
 - a. Your marzipan is too sticky and difficult to work with.
 - A. Dust your hands and work surface with powdered sugar or cornstarch.
 - B. Knead in more almond meal or powdered sugar to absorb excess moisture.
 - C. Microwave the marzipan briefly to firm it up.
 - b. You need to create perfectly smooth edges on a cake covered with fondant.
 - A. Use a fondant smoother to gently press and smooth the fondant.
 - B. Trim the edges with a sharp knife and rub gently with a damp cloth.
 - C. Refrigerate the cake briefly to firm up the fondant.
 - c. Your whipped cream frosting is melting and losing its shape in a warm environment.
 - A. Chill your mixing bowl and beaters before whipping the cream.
 - B. Add a stabilizer like gelatin or powdered sugar to the whipped cream.
 - C. Transfer the cake to a cooler location or refrigerate briefly.
 - d. You need to create intricate chocolate decorations, but your chocolate is seizing.
 - A. Stir in a small amount of vegetable oil or clarified butter to smooth out the chocolate.
 - B. Microwave the chocolate at low power and stir until smooth.
 - C. Add more cocoa powder to absorb excess moisture in the chocolate.
2. Referring to the pastries prepared in the previous session, decorate two pastry products of your choice with appropriate decorations.



Activity 3: Application



Task 27:

1. Imagine you are tasked with creating a themed display of decorated pastries for a local community event, such as a summer fair or a charity fundraiser. Your goal is to decorate and attract attendees and showcase your pastry decoration skills effectively.
 - a. **Theme Selection:** Choose a suitable theme for your pastry display. Consider the event's purpose and audience. Describe the theme and explain why you think it will resonate with the attendees.
 - b. **Pastry Selection:** Decide on three types of pastries you will decorate for this display. Include at least one classic pastry and one innovative or themed pastry. Justify your choices based on their visual appeal and popularity with the target audience.
 - c. **Decoration Techniques:** Outline the specific decoration techniques you will use for each type of pastry. Consider factors like color coordination, use of edible embellishments (e.g., fondant, edible glitter), and any special tools or skills required.
 - d. **Presentation Strategy:** Describe how you plan to arrange and present your decorated pastries at the event. Include details on the display layout, height variations, and any additional props or signage you might use to enhance the presentation.
 - e. **Evaluation Criteria:** Develop criteria to evaluate the success of your pastry display at the event. Consider factors such as creativity, execution of decoration techniques, attendee engagement, and overall impact on the event's atmosphere.

Topic 3.2: Presentation of pastry products



Activity 1: Problem Solving



Task 28:

1. Read carefully and answer to the question
 - a. Explain different types of presentation techniques
 - b. Preparation of ingredients for decoration of pastry product
 - c. Describe portioning technique
 - d. Describe plating technique
 - e. Describe garnishing technique
 - f. Describe holding technique

Key Facts 3.2: Presentation of pastry products

- **Presentation types (portioning, plating, garnishing and holding)**

When it comes to food presentation in culinary arts, various techniques are used to make dishes not only taste great but also look appealing. We can talk about possible type:

- ✓ **Portioning:** Portioning refers to the way food is divided or separated into individual servings. This is crucial for ensuring each plate looks balanced and appetizing. Here are some key points about portioning:
 - ✚ **Uniformity:** Portion sizes should be consistent across all plates to maintain visual harmony.
 - ✚ **Balance:** Each portion should contain a proportional number of different components (protein, starch, vegetables, etc.).
 - ✚ **Accuracy:** Chefs use tools like portion scoops, measuring cups, or scales to ensure exact portion sizes

- **Importance:** Portioning maintains cost efficiency by controlling food wastage. It ensures customer satisfaction by providing consistent servings. Helps in standardizing recipes and controlling food costs in commercial settings.
- ✓ **Plating:** Plating involves arranging and placing food on the plate in an aesthetically pleasing manner. This can greatly enhance the visual appeal of a dish. Key considerations for plating include:
 - ✚ **Composition:** Arranging different elements of the dish to create balance, contrast, and visual interest.
 - ✚ **Colors:** Using a variety of colors to make the dish more vibrant and attractive.
 - ✚ **Space:** Leaving enough space on the plate to avoid overcrowding and allow each component to stand out.
 - **Importance:** enhances the dining experience by making food visually appealing. Reflects the creativity and skill of the chef or cook. Influences perception of taste and quality before the first bite.
- ✓ **Garnishing:** Garnishing involves adding decorative elements to the plate to enhance its visual appeal. Garnishes can be both edible and non-edible and serve to complement the flavors and presentation. Common garnishing techniques include:
 - ✚ **Edible Garnishes:** Fresh herbs, microgreens, citrus zest, or edible flowers.
 - ✚ **Non-edible Garnishes:** Sauces drizzled in artistic patterns, powdered spices for dusting, or decorative items like small sculptures (though these are typically more for artistic display rather than consumption).
 - **Importance:** elevates the presentation of the dish, making it more attractive. Provides additional flavor and texture dimensions. Can indicate the type of cuisine or highlight specific ingredients.
- ✓ **Holding:** Holding refers to the techniques and equipment used to keep food at the correct temperature and maintain its quality until it is served. This is crucial in professional kitchens to ensure that dishes are presented to guests at optimal conditions. Techniques for holding include:

- ✚ **Hot Holding:** Using warming trays, heat lamps, or steam tables to keep hot foods at safe serving temperatures without overcooking.
- ✚ **Cold Holding:** Refrigeration or ice baths to keep cold foods chilled until serving.
- ✚ **Timing:** Ensuring that food is held for the minimum time necessary to maintain quality, especially for delicate items like seafood or desserts.
 - **Importance:** Ensures that food is served at the optimal temperature for enjoyment. Helps in managing workflow during busy service periods. Prevents foodborne illnesses by maintaining safe holding temperatures.Each of these presentation types plays a vital role in creating an enjoyable dining experience by appealing to both the eyes and the palate. Chefs often combine these techniques creatively to showcase their culinary skills and enhance the overall dining experience for guests.

- **Presentation procedures for Pastry products**

Presenting pastry products involves several key procedures to ensure they are appealing and appetizing to customers. The essential presentation procedures for pastry products are:

- ✓ **Quality Assurance:** ensure that all pastry products are freshly baked and meet high-quality standards in terms of taste, texture, and appearance.
- ✓ **Display Arrangement:** arrange pastries neatly and attractively on display trays or shelves. Group similar items together for easy selection.
- ✓ **Use of Containers or Platters:** place individual pastries on decorative platters or in appropriate containers that enhance their visual appeal.
- ✓ **Labeling:** use clear labels for each type of pastry, indicating the name, ingredients (especially allergens), and price per unit or weight.
- ✓ **Decorative Elements:** add garnishes such as powdered sugar, cocoa dust, sliced fruits, or edible flowers to enhance the visual appeal of pastries.
- ✓ **Variety and Assortment:** offer a variety of pastry types, flavors, and sizes to cater to different tastes and preferences.

- ✓ **Temperature Control:** ensure that temperature-sensitive pastries (like those with creams or custards) are stored and displayed at the appropriate temperature to maintain freshness and texture.
- ✓ **Lighting and Visibility:** ensure that the display area is well-lit to highlight the colors and textures of the pastries effectively.
- ✓ **Hygiene and Cleanliness:** maintain cleanliness in the display area and ensure that pastries are handled with clean utensils and gloves to prevent contamination.
- ✓ **Sample and Tasting Opportunities:** offer samples or tasting opportunities to customers to encourage them to try new pastries or flavors.
- ✓ **Seasonal Themes and Decor:** Decorate the display area according to seasonal themes or holidays to attract attention and create a festive atmosphere.
- ✓ **Promotional Signage:** Use attractive signage or displays to highlight special offers, promotions, or new pastry products.

By following these presentation procedures, pastry products can be effectively showcased to attract customers and enhance their overall dining or shopping experience.

- **Instructions for Assembling and Garnishing a Pastry Plate**

- ✓ **Objective:** To apply the principles of pastry presentation including portioning, plating, garnishing, and holding.
- ✓ **Materials Needed:**
 - ✚ Prepared pastry components (e.g., cakes, tarts, pastries)
 - ✚ Assorted garnishes (e.g., fresh fruits, edible flowers, chocolate decorations)
 - ✚ Sauces or coulis (optional)
 - ✚ Serving plates or platters
 - ✚ Pastry tools (if needed for garnishing, such as piping bags, spatulas)
- ✓ **Procedure:**
 - ✚ Preparation:

- Ensure all pastry components and garnishes are prepared and ready to use.
- Have serving plates or platters ready for assembling the pastry plates.

Assembly:

- Select a serving plate or platter that complements the pastry components.
- Place each pastry component strategically on the plate, considering visual balance and presentation principles learned (e.g., placing taller items towards the back, creating layers of textures).

Portioning:

- Ensure each pastry component is portioned appropriately for individual servings. For example, slice cakes or tarts into portions before placing them on the plate.

Plating:

- Arrange the pastry components neatly on the plate. Pay attention to spacing and presentation flow.
- Use garnishes sparingly to enhance visual appeal without overwhelming the plate.

Garnishing: Select and apply garnishes according to the principles learned. For example:

- Use fresh fruits or berries to add color and freshness.
- Sprinkle edible flower petals or microgreens for a decorative touch.
- Drizzle sauces or coulis around the plate to add flavor and visual interest.



Presentation:

- Ensure the final presentation is clean, attractive, and reflects the principles of balance and harmony.
- Check that the garnishes complement the flavors and textures of the pastry components.



Quality Check: Review the assembled pastry plate to ensure everything meets the standards of portioning, plating, garnishing, and presentation procedures learned during training.



Final Touches:

- Make any final adjustments or additions to enhance the visual appeal of the pastry plate.
- Clean any smudges or spills on the plate edges for a polished presentation.



Review and Feedback:

- After assembling and garnishing the pastry plate, review the presentation with a trainer or supervisor.
- Receive feedback on the application of principles and techniques, and note areas for improvement.



Reflection:

- Reflect on the experience and consider how to apply the principles of pastry presentation in future preparations.
- Discuss any challenges faced and strategies used to overcome them.



Activity 2: Guided Practice



Task 29:

1. Complete the following sentences using the words provided
 - a. To create intricate decorations for pastry products, begin by _____.
 - A. Mixing the dough thoroughly
 - B. Chilling the pastry in the refrigerator
 - C. Preparing the piping bags with appropriate tips
 - D. Assembling all necessary ingredients
 - b. Before piping decorations onto pastries, it's essential to ensure that the icing or frosting consistency is _____.
 - A. Thick and stiff
 - B. Thin and runny
 - C. Warm and gooey
 - D. Cold and solid
 - c. When making chocolate decorations for pastries, it's crucial to _____ before piping to ensure smooth and consistent lines.
 - A. Melt the chocolate using a microwave
 - B. Temper the chocolate properly
 - C. Add water to thin out the chocolate
 - D. Chill the chocolate in the freezer
 - d. Before dusting powdered sugar over pastries for decoration, ensure that the pastries are _____.
 - A. Completely cooled
 - B. Still warm from the oven
 - C. Coated with a layer of icing
 - D. Arranged neatly on a serving platter
 - e. Before applying fondant decorations on cakes, ensure that the cake surface is _____ to prevent the fondant from sticking.

- A. Dusted with powdered sugar
 - B. Brushed with water
 - C. Coated with melted chocolate
 - D. Chilled in the refrigerator
2. Refer to the pastries decorated in the previous session, present two pastry products of your choice with appropriate presentation techniques.



Activity 3: Application



Task 30:

1. You are tasked with decorating for a new line of gourmet pastries at a high-end bakery. Your goal is to create decorations that not only enhance the visual appeal of the pastries but also complement their flavors and textures.
 - a. Materials and Techniques: Propose 3 specific materials and techniques you would use to create the decorations. For example, would you use fondant, royal icing, chocolate, or a combination? How would you incorporate techniques like piping, molding, or painting to achieve desired textures and visual effects?
 - b. Design Concept: Develop a concept for the decorations that aligns with the overall theme of the bakery and the specific pastries being produced. Consider factors such as color palette, shapes, and styles that would appeal to the target demographic.
 - c. Presentation: Describe how you would present your decoration ideas to the bakery owners or pastry chefs. What visual aids or samples would you prepare to showcase your designs effectively and persuade decision-makers to choose your decorations?

Formative Assessment


1. Tool Identification Worksheet

Instructions to Trainees:

- Walk around the table with the tools.
- Match the name of each tool in the "Tool Name" column with brief description of the use or function of each tool in the "Brief Description" column. The correct correspondent letter should be written in provided space.
- Use the example descriptions provided (such as those in the previous response) as a reference.

Letter	Tool Name	Brief Description
.....	Piping Bag with Tips	a. Used for piping frosting or decorative elements onto pastries.
.....	Offset Spatula	b. Helps create precise designs or patterns with powdered sugar or cocoa.
.....	Pastry Brush	c. Used to smooth and shape fondant on cakes and pastries.
.....	Stencils	d. Ideal for smoothing and spreading icing or ganache evenly on cakes.
.....	Fondant Smoother	e. Used to apply glazes, egg washes, or edible paints onto pastries.

2. Circle the letter corresponding to the right answer

 Which of the following garnishes is commonly used to decorate pastries?

- Fresh vegetables
- Edible flowers
- Raw meat
- None of the above

✚ What is the purpose of applying powdered sugar or cocoa powder to pastries?

- a. Adds flavor
- b. Enhances visual appeal
- c. Makes pastries more nutritious
- d. All of the above

3. Describe any 3 essential presentation procedures for pastry products



Points to Remember

- Visual Appeal: Ensure pastries are visually appealing and enticing to customers.
- Quality Ingredients: Use high-quality ingredients to enhance flavor and texture.
- Balance and Composition: Arrange pastries in a balanced and aesthetically pleasing manner.
- Color Harmony: Use a complementary color scheme to enhance the visual appeal.
- Garnishes and Accents: Use garnishes and accents to add texture and interest without overwhelming the pastry.
- Cleanliness and Neatness: Maintain cleanliness and neatness in the presentation area and on the plate.
- Portion Size: Ensure portion sizes are consistent and appropriate for the pastry type.
- Theme and Seasonality: Reflect seasonal themes or special occasions in the presentation where applicable.
- Temperature: Serve pastries at the appropriate temperature to optimize taste and texture.
- Plating Techniques: Use various plating techniques such as stacking, layering, or intricate designs to enhance presentation.



Self-Reflection

1. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Select presentation tools					
Describe Preparation technics of ingredients for decoration of Pastry					
Identify decoration techniques for pastry products					
Describe Presentation types such as portioning, plating, garnishing, holding of pastry products					
Describe Presentation procedures for Pastry products					
Portion pastry products					
Plate pastry products					
Garnishing pastry products					
Hold pastry products					

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.
3.	3.	3.



Summative assessment

Integrated/Summative assessment (For specific module)

Integrated situation

Ubwiza hotel located in Kamonyi District is hosting 10 delegates from CAF (Confederation of African Football). They have ordered soup with garlic toast as accompaniment and Cinnamon cake as dessert. The hotel does not have a pastry cook, and you are appointed to work as pastry cook. You are tasked to prepare garlic toast and cinnamon cake within **5 hours**.

All equipment, material tools and Consumables are available in Ubwiza hotel kitchen.

Resources

Tools	Measuring tools, Mixing tools, cooking tools, Presentation tools,
Equipment	Dough Mixer, Oven, Cookers, Proofer, Refrigerator, working tables, Projectors, Toaster, Computer, Storing shelves,
Materials/ Consumables	Flour, Yeasts, Seasonings, Spices and Herbs, Milk and milk products, Vegetables, Meat and meat products, Eggs, Fats, Plastic wrap, Aluminium foil, baking sheet, Detergents, wipers, cleaning towels, paper rolls, sanitizers, Seeds, Flipcharts, Mark pens, Chalks, Fruits, Vegetables

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