West Virginia CTE

# Baking and Pastry 1

**Identification, Classification, and Properties of Ingredients**

1 **Identify, compare, and contrast ingredients and their sources.** 1024.1

1 Identify different types of flours, sweeteners, and fats. 1024.1.1

2 Explain gluten and its importance in the bakeshop. 1024.1.2

3 Identify a variety of fruits. 1024.1.3

4 Describe the function of bakeshop ingredients. 1024.1.4

5 Investigate the various sources from which each ingredient can be obtained, considering options such as local markets, specialty stores, or online suppliers. 1024.1.5

6 Assess the freshness and quality of ingredients available from different sources, considering factors like seasonality and regional variations. 1024.1.6

7 Compare different brands or suppliers for each ingredient, taking into account reputation, reviews, and any specific characteristics that may impact the recipe. 1024.1.7

8 Compare the prices of ingredients across different sources and determine their availability based on location and season. 1024.1.8

9 Investigate the sustainability practices of suppliers, especially for ingredients like dairy, eggs, and flour, to align with ethical and environmental considerations. 1024.1.9

10 Compare the nutritional content of different ingredient options, especially if health considerations are a factor. 1024.1.10

11 Compare the flavor profiles of different ingredient sources, especially for items like vanilla extract or spices, to choose the one that complements the overall recipe. 1024.1.11

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2 **Explain the strengthening or weakening effect of ingredients in the production of doughs and batters.** 1024.2

1 List the primary ingredients used in the production of doughs and batters. 1024.2.1

2 Explain how gluten, a protein formed from wheat flour, contributes to the structure and strength of doughs. 1024.2.2

3 Differentiate between types of flour (all-purpose, bread, cake, etc.) and their impact on gluten development and overall dough strength. 1024.2.3

4 Explore the role of liquids, like water or milk, in adjusting the hydration level of the dough and influencing its consistency and strength. 1024.2.4

Skip to main content

5 Discuss the effects of leavening agents (yeast, baking powder, baking soda) on dough expansion and the resulting texture. 1024.2.5

6 Explain how fats (butter, oil, shortening) contribute to tenderness, flavor, and the weakening of gluten in doughs. 1024.2.6

7 Examine the role of sugar in doughs, including its ability to weaken gluten, enhance flavor, and influence browning during baking. 1024.2.7

8 Explain how salt affects the fermentation process, enhances flavor, and strengthens gluten structure in doughs. 1024.2.8

9 Discuss the role of eggs in providing structure, moisture, and leavening to doughs and batters. 1024.2.9

10 Explore the chemical interactions between ingredients, such as the Maillard reaction and caramelization, and their impact on dough strength and flavor. 1024.2.10

11 Discuss the role of enzymes in certain ingredients (e.g., malt, enzymes in flour) and their effect on dough fermentation and strength. 1024.2.11

12 Explore how mixing techniques, such as kneading or folding, influence gluten development and dough strength. 1024.2.12

13 Explain the importance of resting and proofing times in allowing dough to relax, rise, and develop structure. 1024.2.13

14 Discuss the impact of temperature on ingredient interactions, fermentation rates, and the overall strength or weakness of doughs. 1024.2.14

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**3 Select specific ingredients and/or substitutions appropriate to method and desired product outcome.** 1024.3

1 Identify the key ingredients crucial to the method and the desired outcome of a recipe. 1024.3.1

2 Consider the flavor profile desired for the product and select ingredients that contribute to the intended taste. 1024.3.2

3 Assess the desired texture and structure of the final product and choose ingredients accordingly. 1024.3.3

4 Identify potential substitutions for specific ingredients, especially if certain items are unavailable or if dietary considerations require alternatives. 1024.3.4

5 Choose fats and oils that align with the desired richness and moisture level of the final product. 1024.3.5

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**4 Identify and describe physical, chemical, and biological leaveners.** 1024.4

1 List the different leavening agents used in baking, including physical, chemical, and biological options. 1024.4.1

2 Explain the functions of leavening agents in doughs and batters, focusing on how they contribute to the rising and texture of the final product. 1024.4.2

Skip to main content

Explain how chemical leavening agents, such as baking powder and baking soda, release carbon dioxide gas to leaven doughs. 1024.4.3

4 Discuss biological leaveners, particularly yeast, and describe how yeast ferments sugars to produce carbon dioxide, leading to dough expansion. 1024.4.4

5 Describe physical leaveners, such as steam or air, and how they contribute to the lightness and texture of baked goods. 1024.4.5

6 Explain the biological leavening process, emphasizing how yeast metabolizes sugars to produce carbon dioxide and alcohol. 1024.4.6

7 Discuss sourdough starters and other naturally fermented mixtures as examples of biological leaveners, emphasizing the role of lactic acid bacteria in fermentation. 1024.4.7

8 Discuss the advantages and disadvantages of each type of leavener in terms of flavor, texture, and application. 1024.4.8

9 Discuss how the pH of ingredients can influence the effectiveness of certain leavening agents. 1024.4.9

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**5 Identify herbs, spices, and flavor extracts.** 1024.5

1 List the herbs and spices commonly used in culinary applications. 1024.5.1

2 Differentiate between fresh and dried versions of herbs and spices, understanding the flavor nuances and appropriate uses for each. 1024.5.2

3 Compile a list of flavor extracts commonly used in cooking and baking, such as vanilla, almond, mint, and citrus extracts. 1024.5.3

4 Explain the concentration levels of flavor extracts and how they may impact the overall flavor intensity of a dish or baked good. 1024.5.4

5 Explore combinations of flavor extracts that complement each other, providing a balanced flavor profile. 1024.5.5

6 Differentiate between whole and ground versions of spices, considering factors like shelf life, potency, and ease of incorporation into recipes. 1024.5.6

7 Explore recommended culinary pairings for herbs and spices, discovering which combinations work well together to enhance flavors. 1024.5.7

8 Demonstrate herb and spice blends, understanding how different combinations can elevate the taste of dishes. 1024.5.8

9 Consider incorporating flavor enhancers such as extracts, spices, or herbs to elevate the overall taste of the product. 1024.5.9

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**Baking Preparation (Mise en Place)**

**6 Demonstrate mise en place by planning assignment inventory of ingredients, equipment, and tools.** 1024.6

1 Compile a comprehensive list of ingredients, equipment and tools needed for a specific recipe. 1024.6.1

2 Recognize various measurement systems and techniques for measuring ingredients accurately. 1024.6.2

Explain the importance of weighing ingredients. 1024.6.3

Skip to main content

4 Organize and arrange the ingredients, equipment, and tools in a systematic manner to facilitate efficient workflow. 1024.6.4

**7 Break down assignments into tasks.** 1024.7

1 Determine the logical order in which tasks should be performed, considering baking and resting times. 1024.7.1

2 Estimate the time required for each task to create a realistic timeline for completion. 1024.7.2

3 Identify critical steps that may require more attention or specific timing. 1024.7.3

4 Evaluate opportunities for multitasking without compromising the quality of each component. 1024.7.4

5 Be flexible and adapt the plan if unexpected challenges or changes arise during the baking process. 1024.7.5

**8 Utilize convenience products if and when necessary, preparing a sequenced and prioritized timeline.** 1024.8

1 Determine which convenience products, such as pre-made dough or ready-to-use fillings, are suitable for the baking or pastry task. 1024.8.1

2 Evaluate the quality of the chosen convenience products to ensure they meet the desired standards. 1024.8.2

3 Align the use of convenience products with critical stages in the baking or pastry preparation. 1024.8.3

## Basic Baking

**9 Read and prepare standardized recipes/formulas and menus.** 1024.9

1 Identify key ingredients and their quantities in a recipe. 1024.9.1

2 Demonstrate cooking techniques and methods specified in the recipe. 1024.9.2

3 Determine serving sizes and portion control. 1024.9.3

4 Plan menus based on dietary requirements and preferences. 1024.9.4

5 Create balanced and cohesive menus for different occasions. 1024.9.5

6 Consider nutritional content and allergen information when planning menus. 1024.9.6

**10 Define terms related to baking methods, processes, and techniques.** 1024.10

1 Define terms related to baking ingredients (e.g., leavening agents, flour types). 1024.10.1

2 Define terms related to baking techniques (e.g., folding, creaming). 1024.10.2

**11 Describe, compare, and contrast yeast and laminate dough types and related methods and processes.** 1024.11

1 Explain the characteristics of yeast dough. 1024.11.1

2 Outline the steps involved in working with yeast dough. 1024.11.2

Skip to main content

3 Compare different types of yeast dough (e.g., bread dough, pizza dough). 1024.11.3

4 Explain the characteristics of laminate dough. 1024.11.4

5 Outline the steps involved in working with laminate dough. 1024.11.5

6 Compare different types of laminate dough (e.g., puff pastry, croissant dough). 1024.11.6

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**12 Describe, compare, and contrast quick breads, including muffin and biscuit dough types and related methods and processes.** 1024.12

1 Explain the characteristics of quick breads. 1024.12.1

2 Outline the steps involved in making quick breads. 1024.12.2

3 Compare different types of quick breads (e.g., banana bread, zucchini bread). 1024.12.3

4 Explain the characteristics of muffin and biscuit dough. 1024.12.4

5 Outline the steps involved in making muffins and biscuits. 1024.12.5

6 Compare different types of muffins and biscuit dough. 1024.12.6

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**13 Describe, compare, and contrast creaming and two-stage methods as they relate to cakes, cookies, quick breads, brownies, and short dough.** 1024.13

1 Explain the creaming method and its application in baking. 1024.13.1

2 Identify baked goods that use the creaming method (e.g., cakes, cookies). 1024.13.2

3 Explain the two-stage method and its application in baking. 1024.13.3

4 Identify baked goods that use the two-stage method (e.g., muffins, brownies). 1024.13.4

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**14 Describe proper gluten development in relationship to product outcomes.** 1024.14

1 Describe the role of gluten in baking. 1024.14.1

2 Explain how gluten development affects the texture and structure of baked goods. 1024.14.2

3 Identify methods to control gluten development. 1024.14.3

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**15 Relate cooking times and temperatures to methods, products, and ingredients.** 1024.15

1 Explain the relationship between cooking times and temperatures. 1024.15.1

2 Adjust cooking times and temperatures based on specific methods, products, and ingredients. 1024.15.2

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**Indicate order for adding ingredients given various methods.** 1024.16

Skip to main content

1 Identify the proper order for adding ingredients in different baking methods. 1024.16.1

2 Explain how the order of ingredient addition can affect the final product. 1024.16.2