Culinary Arts 1

UNIT 1: Safety and Sanitation

(2 Weeks and Applied Throughout Course)

ESSENTIAL QUESTION	BIG IDEAS
How do we keep people and food safe in the kitchen?	Students will: • Identify foodborne illness sources, symptoms, and preventions. • Understand and apply best practices to ensure food safety and sanitation. • Recognize allergens and cross-contact prevention methods.

GUIDING QUESTIONS

- **Content**
  - What does FIFO stand for and how is it applied in the culinary arts?
  - What are the six most common food borne pathogens, their sources, and their associated symptoms?
  - What is the temperature danger zone?
  - How long can food be in the temperature danger zone?
  - What are the most common food allergens?
  - What are the three categories of contaminants in food and examples of each?
  - What is FAT-TOM?

- **Process**
  - What is the proper method for washing dishes, surfaces, and hands to prevent cross-contamination and cross-contact?
  - What is the proper protocol for wearing and disposing of gloves?
  - How are internal temperatures of food measured to prevent foodborne illness?
  - How are ingredients stored to ensure food safety and prevent cross-contamination?

- **Reflective**
  - How is food monitored through the flow of food (purchasing, receiving, storage, preparation, cooking, holding, serving, cooling, storage, reheating) to keep food safe?
  - How are foodborne illnesses and cross-contact prevented in the kitchen?
  - How do you demonstrate proper food handling procedures to best ensure food safety and sanitation?

FOCUS STANDARDS

- **Benchmark 1.0: Demonstrate industry-based food safety and sanitation procedures.**
    - 1.1: Demonstrate industry standard hand washing and professional standards for personal hygiene including the proper use of gloves (example: Use of gloves with ready to eat foods).
    - 1.2: Identify the Big 6 (Norovirus, Nontyphoidal Salmonella Typhi, E. coli, Shigella, and Hepatitis A) sources, symptoms and prevention measures.
    - 1.3: Demonstrate an understanding of the importance of food safety and sanitation to include: how foods become unsafe, controlling time and temperature, preventing cross contamination, cleaning and sanitizing, shipping and receiving, and how to safely prepare food for others.
    - 1.6: Identify common food allergens and common symptoms (common allergens: milk/dairy, eggs/egg products, fish/shellfish, wheat/gluten, soy/soy products, and peanuts/tree nuts).
- **Benchmark 2.0: Demonstrate correct use and maintenance of food production equipment and tools.**
    - 2.2: Identify and demonstrate procedures for cleaning, sanitizing, and storage of equipment and food contact surfaces.

SUPPORTING RESOURCES

ServSafe

Culinary Arts 1

UNIT 2: Basic Culinary Skills & Equipment

(1 week and applied throughout course)

ESSENTIAL QUESTION	BIG IDEAS
What are the necessary skills when preparing food?	Students will: • Apply effective mise en place skills and measuring techniques. • Understand proper use, operation, and application of basic culinary equipment. • Demonstrate proper knife handling.

GUIDING QUESTIONS

- **Content**
  - What is Mise En Place?
  - How do you properly measure different types of ingredients?
  - What is the proper way to read a recipe?
  - What are the different knife cuts (chop, mince, brunoise, small dice, julienne, batonnet, etc.)?
  - What are common culinary tools and equipment?

- **Process**
  - How do you properly prepare and set up for a culinary lab?
  - How are kitchen math skills, such as measurement conversions, applied?
  - How can proper knife safety, knife skills, and knife cuts be demonstrated?
  - What are the uses of common culinary tools and equipment?

- **Reflective**
  - How do you identify factors of a high quality recipe?
  - Why is mise en place important in recipe preparation?
  - Why is accurately measuring ingredients important when preparing food?
  - Why is it important to use the correct tool for the correct job?
  - How do you determine the appropriate equipment to use in a recipe?

FOCUS STANDARDS

- **Benchmark 2.0: Demonstrate correct use and maintenance of food production equipment and tools.**
    - 2.1: Operate tools and equipment following safety procedures and OSHA age restrictions and requirements.
- **Benchmark 3.0: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**
    - 3.1: Apply effective mise en place practices.
    - 3.2: Prioritize tasks to be completed.
    - 3.5: Demonstrate professional skills in safe handling of knives, tools, and equipment.
    - 3.8: Demonstrate knowledge of proper scaling and measurement techniques.
- **Benchmark 5.0: Perform mathematical functions in food related applications.**
    - 5.1: Demonstrate basic conversions of measurements (oz in a gallon, etc.).

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UNIT 3: Culinary Methods

(1 week and applied throughout course)

ESSENTIAL QUESTION	BIG IDEAS
How are cooking and plating methods used to transform food?	Students will: • Describe the various heat transfer methods. • Apply various cooking methods. • Analyze plates according to principles and elements of design. • Understand flavor profiles and development.

GUIDING QUESTIONS

- **Content**
  - What are the heat transfer methods?
  - What are the different cooking methods?
  - What are herbs and spices?
  - What are marinades?
  - What are the principles and elements of design?

- **Process**
  - Which heat transfer methods are used in the various cooking methods?
  - How are herbs and spices used to improve the taste of food?
  - How do we plate and present food in ways that improve their appearance?

- **Reflective**
  - How do the different cooking methods affect the physical properties of food?
  - How do elements and principles of design work together in professional plating?
  - How do marinades and flavorings affect food flavor and texture?

FOCUS STANDARDS

- **Benchmark 3.0: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**
  - 3.6: Identify the heat transfer methods of conduction, convection, and/or radiation used during food production.
  - 3.7: Discuss and demonstrate where possible professional skill for a variety of dry heat, moist heat and combination cooking methods. Roasting, broiling, smoking, grilling, sauteing, pan

frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies).
    - 3.9: Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods.
    - 3.12: Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
    - 3.13: Prepare various salads, dressings, marinades, and spices using safe handling and professional preparation techniques.
    - 3.15: Demonstrate professional plating, garnishing, and food presentation techniques.
    - 3.17: Recognize cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
- **Benchmark 7.0: Enhance career readiness through practicing appropriate skills in the classroom and work like culinary situations.**
    - 7.1: Demonstrate appropriate communication skills (verbal, listening, writing).
    - 7.2: Understand and practice appropriate social skills, manners, and etiquette, including use of social media.
    - 7.3: Use leadership and teamwork skills in collaborating with others to accomplish food production goals and objectives.
    - 7.4: Solve problems using creativity, innovation and critical thinking skills independently and in teams.
    - 7.6: Understand and demonstrate employability skills (e.g. timeliness, responsibility, work ethic, cooperation, appropriate use of technology) according to industry standards.

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UNIT 4: Meats & Poultry

(2 weeks)

ESSENTIAL QUESTION	BIG IDEAS
What are the different methods for meat and poultry preparation?	Students will: • Identify the different wholesale and retail cuts of meat and poultry. • Understand purchasing, storage, and handling of meats and poultry. • Demonstrate the preparation techniques for the various types of meat and poultry.

GUIDING QUESTIONS

- **Content**
  - What are the minimum internal cooking temperatures for various types of meats and poultry?
  - What are the different parts of various animals and poultry?
  - What are safe storage techniques for meats and poultry?
  - What are the different grades of meat and poultry?
  - What is marbling, elastin, and collagen on beef?
  - What is a reputable supplier?
  - What is fabrication?

- **Process**
  - What are the different ways to prepare meats and poultry?
  - How can all parts of an animal be fabricated and used?
  - What affects the quality of meat and poultry?
  - What characteristics should you look for when purchasing meat and poultry?
  - What are the nutritional values of the different meat and poultry?
  - How can meat and poultry be tenderized?

- **Reflective**
  - Why are proper cooking techniques needed when preparing various cuts of meat?
  - How does fat content affect the cooking method of meat and poultry?
  - How does the cut of protein help to determine the cooking method and time of cooking?
  - How is the flavor of meat and poultry enhanced?

FOCUS STANDARDS

- **Benchmark 3.0: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**
    - 3.3: Demonstrate effective time management.
    - 3.9: Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods.
    - 3.10: Prepare various meats, seafood, poultry and eggs using safe handling and professional preparation techniques.
    - 3.13: Prepare various salads, dressings, marinades, and spices using safe handling and professional preparation techniques.
    - 3.15: Demonstrate professional plating, garnishing, and food presentation techniques.
    - 3.17: Recognize cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
- **Benchmark 7.0: Enhance career readiness through practicing appropriate skills in the classroom and work like culinary situations.**
    - 7.1: Demonstrate appropriate communication skills (verbal, listening, writing).
    - 7.2: Understand and practice appropriate social skills, manners, and etiquette, including use of social media.
    - 7.3: Use leadership and teamwork skills in collaborating with others to accomplish food production goals and objectives.
    - 7.4: Solve problems using creativity, innovation and critical thinking skills independently and in teams.
    - 7.6: Understand and demonstrate employability skills (e.g. timeliness, responsibility, work ethic, cooperation, appropriate use of technology) according to industry standards.

Culinary Arts 1

UNIT 5: Stocks & Soups

(2 weeks)

ESSENTIAL QUESTION	BIG IDEAS
How are the various stocks and soups prepared?	Students will: • Identify the characteristics of stocks. • Prepare a variety of soups. • Demonstrate the preparation techniques for the various types of stocks and soups.

GUIDING QUESTIONS

- **Content**
  - What are the four essential parts of a stock?
  - What is the difference between a clear soup and a thick soup?
  - What is the percentage of ingredients in a mirepoix for a stock?
  - What are the different aromatics used in stock (bouquet garni, sachet d'epices)?
  - What is the difference between a pureed and cream soup?

- **Process**
  - What are the different ways that bones can be prepared for stocks?
  - How do you degrease a stock?
  - How are the different types of stocks prepared and how can they be utilized?
  - How are soups thickened?
  - What are the nutritional benefits of stocks and soups?

- **Reflective**
  - What are various ways soups can be thickened if thinner than desired?
  - How can scraps in the kitchen be utilized to prepare a variety of stocks?
  - How can the flavor of stocks and soups be enhanced?

FOCUS STANDARDS

- **Benchmark 3.0: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**
  - 3.3: Demonstrate effective time management.
  - 3.9: Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling,

reheating, and holding of a variety of foods.
    - 3.11: Prepare various stocks, soups, and sauces using safe handling and professional preparation techniques.
    - 3.13: Prepare various salads, dressings, marinades, and spices using safe handling and professional preparation techniques.
    - 3.15: Demonstrate professional plating, garnishing, and food presentation techniques.
    - 3.17: Recognize cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
- **Benchmark 7.0: Enhance career readiness through practicing appropriate skills in the classroom and work like culinary situations.**
    - 7.1: Demonstrate appropriate communication skills (verbal, listening, writing).
    - 7.2: Understand and practice appropriate social skills, manners, and etiquette, including use of social media.
    - 7.3: Use leadership and teamwork skills in collaborating with others to accomplish food production goals and objectives.
    - 7.4: Solve problems using creativity, innovation and critical thinking skills independently and in teams.
    - 7.6: Understand and demonstrate employability skills (e.g. timeliness, responsibility, work ethic, cooperation, appropriate use of technology) according to industry standards.

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UNIT 6: Fruits & Vegetables

(2 weeks)

ESSENTIAL QUESTION	BIG IDEAS
How are various fruits and vegetables prepared?	Students will: • Identify the different types of fruits and vegetables. • Describe purchasing, preparing, storing, and grading of fruits and vegetables. • Prepare a variety of fruit and vegetable dishes. • Demonstrate knife cuts with a variety of fruits and vegetables.

GUIDING QUESTIONS

- **Content**
  - What are the different types of fruits and vegetables?
  - What are the different grades of fruits and vegetables?
  - What is organic?
  - What is enzymatic browning?
  - What is fruit maceration?
  - What is solanine?
  - How should fruits and vegetables be washed?

- **Process**
  - What characteristics should you look for when purchasing fruits and vegetables?
  - How can ethylene gas affect the ripening of fruits and vegetables?
  - How should different vegetables and fruits be prepared before using them in a recipe?
  - How does the starch content of potatoes affect the cooking method?
  - How can fruits and vegetables be prepared in different ways (hot vs. cold, etc.)?
  - How do you know when fruit and vegetables are done cooking?
  - How do you properly store different fruits and vegetables?
  - What is the process for cutting specific fruits and vegetables (garlic, onion, peppers, etc.)?

- **Reflective**
  - How do cooking methods affect the specific properties (nutritional value, color, texture, flavor, etc.) of fruits or vegetables?
  - Why are particular cooking methods chosen for certain vegetables?
  - How can knife skills and plating be used in conjunction with fruits and vegetables to make an

appealing plate?

FOCUS STANDARDS

- **Benchmark 3.0: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**
    - 3.3: Demonstrate effective time management.
    - 3.9: Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods.
    - 3.12: Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
    - 3.13: Prepare various salads, dressings, marinades, and spices using safe handling and professional preparation techniques.
    - 3.15: Demonstrate professional plating, garnishing, and food presentation techniques.
    - 3.17: Recognize cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
- **Benchmark 7.0: Enhance career readiness through practicing appropriate skills in the classroom and work like culinary situations.**
    - 7.1: Demonstrate appropriate communication skills (verbal, listening, writing).
    - 7.2: Understand and practice appropriate social skills, manners, and etiquette, including use of social media.
    - 7.3: Use leadership and teamwork skills in collaborating with others to accomplish food production goals and objectives.
    - 7.4: Solve problems using creativity, innovation and critical thinking skills independently and in teams.
    - 7.6: Understand and demonstrate employability skills (e.g. timeliness, responsibility, work ethic, cooperation, appropriate use of technology) according to industry standards.

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UNIT 7: Pasta, Grains, & Legumes

(2 weeks)

ESSENTIAL QUESTION	BIG IDEAS
How are various pasta, grains, and legumes prepared?	Students will: • Identify the different types of pasta, grains, and legumes. • Describe purchasing, preparing, and storing of pasta, grains, and legumes. • Prepare a variety of pasta, grains, and legume dishes.

GUIDING QUESTIONS

- **Content**
  - What are legumes?
  - What are the different kinds of grains?
  - What are the different shapes of pasta?
  - What are the parts of a grain?
  - What are enriched and fortified grains?
  - What is the difference between whole grains and refined grain?
  - What is the difference between fresh pasta and dried pasta?
  - What is oven-ready pasta?
  - What is al dente?

- **Process**
  - What is the process for making fresh pasta dough?
  - What are the different methods of cooking rice (absorption method, rice pilaf method, risotto method)?
  - How can the flavor and nutrition of grains be enhanced (using broth, stock, seasoning, etc)?
  - How do you cook various grains and legumes?
  - What is the difference between cooking dried and fresh pasta?
  - How are dried pasta, grains, and legumes stored?
  - How is fresh pasta stored?

- **Reflective**
    - Why is soaking legumes necessary?
    - How do cooking methods affect the specific properties (nutritional value, color, texture, flavor, etc. of grains and legumes?
    - How can plating and presentation techniques be used with pasta, grains, and legumes?

FOCUS STANDARDS

- **Benchmark 3.0: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**
    - 3.3: Demonstrate effective time management.
    - 3.9: Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods.
    - 3.12: Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
    - 3.13: Prepare various salads, dressings, marinades, and spices using safe handling and professional preparation techniques.
    - 3.15: Demonstrate professional plating, garnishing, and food presentation techniques.
    - 3.17: Recognize cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
- **Benchmark 7.0: Enhance career readiness through practicing appropriate skills in the classroom and work like culinary situations.**
    - 7.1: Demonstrate appropriate communication skills (verbal, listening, writing).
    - 7.2: Understand and practice appropriate social skills, manners, and etiquette, including use of social media.
    - 7.3: Use leadership and teamwork skills in collaborating with others to accomplish food production goals and objectives.
    - 7.4: Solve problems using creativity, innovation and critical thinking skills independently and in teams.
    - 7.6: Understand and demonstrate employability skills (e.g. timeliness, responsibility, work ethic, cooperation, appropriate use of technology) according to industry standards.

Culinary Arts 1

UNIT 8: Dairy & Eggs

(2 weeks)

ESSENTIAL QUESTION	BIG IDEAS
How are eggs and dairy foods prepared?	Students will: • Define the various dairy products. • Investigate the various functions of eggs. • Prepare eggs in a variety of ways.

GUIDING QUESTIONS

- **Content**
  - What is dairy?
  - What is homogenization?
  - What is pasteurization?
  - What are the different grades and sizes of eggs?
  - What are the different parts of the egg?
  - What are the different types of dairy liquids (types of milk, buttermilk, etc.)?

- **Process**
  - What are the different functions of eggs?
  - What is the difference between skim, 1%, 2%, and whole milk?
  - What are some dairy alternatives to use in place of milk?
  - What are some alternatives to use in place of eggs?
  - What cooking methods can be applied to eggs?
  - What substitutes can you use for buttermilk?
  - What is the difference between various yogurts?
  - What are the procedures for preparing eggs (scrambled, hard-boiled, omelet, poached, over-easy, etc.)?
  - What are proper receiving and storage techniques for eggs and dairy products?
  - What are the nutritional values of eggs and different dairy products?

- **Reflective**
    - How do the fat differences in dairy products affect the use and outcome in recipes?
    - How do cooking methods affect the specific properties (nutritional value, color, texture, flavor, etc.) of dairy and eggs?
    - How can plating and presentation techniques be used with dairy and eggs?

FOCUS STANDARDS

- **Benchmark 3.0: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**
    - 3.3: Demonstrate effective time management.
    - 3.9: Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods.
    - 3.12: Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
    - 3.13: Prepare various salads, dressings, marinades, and spices using safe handling and professional preparation techniques.
    - 3.15: Demonstrate professional plating, garnishing, and food presentation techniques.
    - 3.17: Recognize cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
- **Benchmark 7.0: Enhance career readiness through practicing appropriate skills in the classroom and work like culinary situations.**
    - 7.1: Demonstrate appropriate communication skills (verbal, listening, writing).
    - 7.2: Understand and practice appropriate social skills, manners, and etiquette, including use of social media.
    - 7.3: Use leadership and teamwork skills in collaborating with others to accomplish food production goals and objectives.
    - 7.4: Solve problems using creativity, innovation and critical thinking skills independently and in teams.
    - 7.6: Understand and demonstrate employability skills (e.g. timeliness, responsibility, work ethic, cooperation, appropriate use of technology) according to industry standards.

Culinary Arts 1

UNIT 9: Menu Management

(2 weeks)

ESSENTIAL QUESTION	BIG IDEAS
How are menus developed and designed?	Students will: • Identify characteristics of menus. • Utilize principles and elements of design to create a menu design.. • Understand the process for creating a business plan. • Apply principles of recipe yield, food cost, and business math to menu planning. • Create balanced menus that take into account nutrition, portion sizes, flavor, and textures.

GUIDING QUESTIONS

- **Content**
  - What is a standardized recipe?
  - What is a recipe yield?
  - What is a menu?
  - What are the parts of a menu?
  - What are the elements of a business plan?

- **Process**
  - What are the principles of menu planning?
  - How do you change the yield of a recipe?
  - How do you calculate the selling price of menu items?
  - How are the different sections of a business plan important to a culinary entity?
  - What are truth-in-menu guidelines (nutritional value, menu descriptions, quality, quantity, brand, freshness, cooking technique, etc.)?
  - How can a menu description be used to inform and entice the consumer?
  - How can the design and layout of a menu improve the profitability of a culinary venture?

- **Reflective**
    - Why is a standardized recipe essential in a food service establishment?
    - How can different dietary needs influence menu planning?
    - Why is a business plan important to have before trying to start a new culinary venture?

FOCUS STANDARDS

- **Benchmark 4.0: Apply menu management and production principles.**
    - 4.1: Describe the types of menus used by various food service establishments.
    - 4.3: Demonstrate meal appeal factors including temperature, texture, color, flavor, shape, and size.
- **Benchmark 5.0: Perform mathematical functions in food related applications.**
    - 5.3: Demonstrate the process of recipe yield adjustments for small and large quantities based on operational needs.
    - 5.4: Identify how food cost is determined.
- **Benchmark 6.0: Analyze restaurant management and business techniques.**
    - 6.5: Understand the process for creating and implementing a business plan for a restaurant or food production business (i.e. food truck, food mixes, innovative foods, etc.).