**Minnesota Department of Education**

**Academic Standards Course Framework**

**Fundamentals of Food Preparation**

*Fundamentals of Food Preparation* is an introductory course valuable for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers related to nutrition, food, and wellness. This is a nutrition class that introduces students to only the basics of food preparation so they can become self-sufficient in accessing healthy and nutritious foods. Major course topics include nutrition principles and applications; influences on nutrition and wellness; food preparation, safety, and sanitation; and science, technology, and careers in nutrition and wellness. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of nutrition, food, and wellness. Food preparation experiences are a required component. Direct, concrete mathematics and language arts proficiencies will be applied. This course is the first in a sequence of courses that provide a foundation for continuing and post-secondary education in all career areas related to nutrition, food, and wellness.

*Fundamentals of Food Preparation* is recommended for all students regardless of their career cluster or pathway, in order to build basic culinary arts and hospitality knowledge and skills. It is especially appropriate for students with an interest in careers related to Hospitality, Tourism, and Culinary Arts. Students are able to explore the food industry and examine their own career goals in light of their findings. Laboratory experiences that emphasize industry practices and develop basic skills are required components of this course.

**Recommended:** 9-12

**Career and Technical Student Organizations (CTSOs)**

Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education programs. They enhance the knowledge and skills students learn in a course by allowing a student to participate in a unique program of career and leadership development. Students should be encouraged to participate in FCCLA (Family, Career and Community Leaders of America), the CTSO for this area.

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| C:\Users\Deborah Larson\Pictures\food.jpg**FCCLA Student Leadership Opportunities**Services STAR Event- Culinary ArtsSkill Event- Culinary Food Art Skill Event- Knife SkillsSkill Event- Culinary Math ChallengeSTAR Event Applied Math for Culinary Management STAR Event Food Innovations MN STAR Event Just Like Rachel Ray Food Demo MN STAR Event Cold Sandwich Preparation STAR Event- Illustrated Talk**See the addendum: Minnesota and National Family, Career and Community Leaders of America (FCCLA) COMPETITIVE EVENTS** |

**21st Century Skills should be an integral part of all courses being taught. These soft skills are the foundation for all Career and Technical Education.**

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**Critical Thinking and Reasoning:** *Thinking Deeply, Thinking Differently*

**Information Literacy:** *Untangling the Web*

**Collaboration:** *Working Together, Learning Together*

**Self-Direction:** *Own Your Learning*

**Invention:** *Creating Solutions*

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| C:\Users\Deborah Larson\Pictures\food.jpg **Possible Course Titles** Cooking Basics  Foods 1 Foods Basics Food and You Introduction to Foods |

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|  **STEM/STEAM Connections**Food ChemistryFood EngineeringFood, Health and NutritionFood MicrobiologyFood Processing and Packaging Food Product Development Food Safety and DefenseC:\Users\Deborah Larson\Pictures\food.jpg Food Sensory Policy and Regulations Sustainability |

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| C:\Users\Deborah Larson\Pictures\food.jpg**Career Pathways****Career Field**: Agriculture, Food, and Natural Resources> **Career Cluster: >**Agriculture, Food, and Natural Resources> **Career Pathways:** Food Products and Processing Systems**Career Field**: Business, Management, and Administration>**Career Cluster**: Hospitality and Tourism>**Career Pathways:** Lodging, Restaurants and Food/Beverage Services, Travel and Tourism **Career Field**: Health Science Technology>**Career Cluster**: Health Science>**Career Pathways:**  Biotechnology Research and Development, Diagnostic Services, Support Services, Health Informatics, Therapeutic Services |

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| **Key**FACS=Family and Consumer SciencesMFFP= Minnesota Fundamentals of Food PreparationSTEM=Science, Technology, Engineering, and MathSTEAM=Science, Technology, Engineering, Art, & MathFCCLA=Family, Career, and Community Leaders of AmericaNCTM-National Council of Teachers of Mathematics (National Math Standards) |

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| **Topic: Safety and Sanitation****Minnesota Frameworks:** 1.0 Demonstrate kitchen safety procedures and sanitation practices.**National Standard Correlation:** 8.2 Demonstrate food safety and sanitation procedures.9.2 Apply risk management procedures to food safety, food testing, and sanitation. STEM/STEAM Standard: 9.4.4.2 Personal and community health can be affected by the environment, body functions and human behavior. (i.e. wellness is impacted by our food handling techniques when preparing food) |
| National Standard Correlation  | MinnesotaFramework/Standard | Benchmarks/Competencies |
| 8.2.1 | MFFP 1.1 | Identify common food borne pathogens and the effects on individuals, including methods of prevention. |
| 8.2.7 | MFFP 1.2 | Demonstrate safe food handling and prevention techniques that prevent cross-contamination. |
| 8.2.6 | MFFP 1.3 | Utilize the four steps of food safety skills: clean, separate, chill and cook for both raw and prepared foods. |
| 8.3.1 | MFFP 1.4 | Apply kitchen safety procedures while using kitchen appliances & equipment to minimize accidents and maintain a safe environment. |

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| **Topic: Principles of Food Preparation****Minnesota Frameworks:** 2.0Distinguish various components necessary within food preparation.**National Standard Correlation:** 8.5Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.**STEM/STEAM Standard:** [9P.1.3.4](http://www.scimathmn.org/stemtc/9p134) Physical and mathematical models are used to describe physical systemsBenchmark: 9.3.1.3 Units, Measurement & Conversions=Understand that quantities associated with physical measurements must be assigned units; apply such units correctly in expressions, equations and problem solutions that involve measurements; and convert between measurement systems. Benchmark: 9.3.1.5 Estimates & Accuracy-Make reasonable estimates and judgments about the accuracy of values resulting from calculations involving measurements.**Numbers and Operations NCTM**A.   Understand numbers, ways of representing numbers, relationships among numbers, and number systems B.   Understand meanings of operations and how they relate to one another  C.  Compute fluently and make reasonable estimates**Measurement NCTM**A.  Understand measurable attributes of objects and the units, systems, and processes of measurement  B.  Apply appropriate techniques, tools, and formulas to determine measurements |
| National Standard Correlation  | MinnesotaFramework/Standard | Benchmarks/Competencies |
| 8.3.6  | MFFP 2.1 | Identify a variety of types of equipment and utensils necessary for food preparation, cooking and baking food; including small and large appliances. |
| 8.5.3 | MFFP 2.2 | Comprehend proper measuring equipment, techniques, abbreviations, and equivalents. |
|  | MFFP 2.3 | Determine correct math operations to complete correct measurement equivalents for recipes and food preparation. |
|  | MFFP 2.4 | Interpret cooking and food preparation terms to prepare recipes successfully. |
|  | MFFP 2.5 | Analyze various recipe formats to effectively prepare food products |
|  | MFFP 2.6 | Demonstrate teamwork, communication, and time management when planning and completing a lab. |

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| **Topic: Cooking Methods****Minnesota Frameworks:** 3.0 Produce a variety of food products utilizing numerous cooking methods and techniques while understanding the functions of ingredients.**National Standard Correlation:** 8.5 Demonstrate professional food preparation food methods and techniques for all menu categories to produce a variety of food products that meet customer needs. **STEM/STEAM Standard:** 9.1.2.1 Engineering is a way of addressing human needs by applying science concepts and mathematical techniques to develop new products, tools, processes and systems.( i.e. emulsions, leaven agents, temperate, chemical reactions) |
| National Standard Correlation  | MinnesotaFramework/Standard | Benchmarks/Competencies |
| 8.5.2  | MFFP3.1 | Demonstrate an understanding of food preparation methods which may include baking, blanching, boiling, braising, broiling, frying, grilling, microwaving, pan frying, poaching, roasting, sautéing, simmering, steaming, stewing. |
|  | MFFP3.2 | Analyze the functions of ingredients used in a variety of cooking methods and their effect on a food product. |

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| **Topic: Meal Planning, Planning and Presentation****Minnesota Frameworks:** 4.0Demonstrate how to prepare a meal from planning to presentation. **National Standards Correlation:** 8.4 Demonstrate menu planning principles and techniques based on standardized recipes to meet customer needs.8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs**STEM/STEAM:** 9.1.2.2 Engineering design is an analytical and creative process of devising a solution to meet a need or solve a specific problem. (i.e. planning a meal for person with a specific dietary need such as vegetarian, diabetic, gluten free.) |
| National Standard Correlation  | MinnesotaFramework/Standard | Benchmarks/Competencies |
| 8.4.7 | MFFP4.1 | Prepare a meal following a recipe(s) using proper measuring techniques, application of terminology, and utilization of appropriate utensils and equipment. |
| 8.5.4 | MFFP4.2 | Demonstrate efficiency through organization and time management skills in preparing a meal. |
| 8.5.12 | MFFP4.3 | Demonstrate plating, garnishing, and food presentation techniques. |
|  | MFFP4.4 | Understand current USDA guidelines for portion control and maintaining a healthy lifestyle.  |
| 8.4.7 | MfFP4.1.5 | Compare products based on price and quality of product to meet a variety of dietary and/or consumer needs.  |

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| **Topic: Careers****Minnesota Frameworks:** 5.1Analyze career clusters and pathways in the food production and service industry.**National Standards Correlation:** 8.1 Analyze career paths within the food production and food services industries.**STEM/STEAM Standard:** |
| National Standard Correlation  | MinnesotaFramework/Standard | Benchmarks/Competencies |
| 8.1.1 | MFFP5.1.1 | Identify the roles, duties and functions of individuals involved in food production and service industry careers. |
| 8.1.3 | MFFP5.1.2 | Summarize the education or training requirements for career paths in food production and service industry including opportunities. |