Kentucky Career and Technical Education
Curriculum Alignment Resource

Learning that works for Kentucky

Food and Nutrition

Project Launched October 2011
# KENTUCKY CAREER PATHWAY/PROGRAM OF STUDY TEMPLATE

**COLLEGE/UNIVERSITY:** Sullivan University  
**CLUSTER:** Human Services  
**HIGH SCHOOL (S):**  
**PATHWAY:** Culinary Arts / Hospitality Management  
**PROGRAM:** Family & Consumer Sciences - Culinary & Food Services

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## REQUIRED COURSES

### Year 13
- Applied Culinary Mathematics
- English Comp 1 and Computer Applications
- Basic Culinary Theory and Basic Culinary
- Purchasing and Food Service Sanitation
- Basic Nutrition
- International Cuisine and Advanced
- Information Literacy and Spanish for Baking Science and Baking 1 Lab

## RECOMMENDED ELECTIVE COURSES

### Year 14
- Public Speaking
- English Comp 2
- Garde Manger Theory and Lab
- Food and Beverage Control
- Culinary Arts in Dining Service
- International Cuisine and Advanced
- Wines and Spirits and Hospitality
- Restaurant Practicum
- A.S. Culinary Arts

### Year 15
- Human Resource in the Hospitality Management
- Principles of Hospitality Management
- Quality Service Management
- International Travel and Tourism
- Human Resource Leadership
- Analysis of Management systems
- Computer Applications and Gastronomic
- 300 or 400 level elective hrs. "12"

### Year 16
- Marketing Hospitality and Hospitality
- Marketing Management and Research
- Strategic Planning/Legal and Ethical
- Industrial Relations
- Compensation Management
- Records Management
- Electives
- Electives
- B.S. Hospitality Management
FOODS & NUTRITION

Course Description:

This course is designed to assist students in making critical decisions about food, which contributes to health and well-being. Laboratory instruction is included as an application process. Practical problems addressed relate to attitudes toward food, nutrition facts, special health concerns and diets, management of food resources, preparation skills, food safety, sanitation and careers in nutrition and food service. Leadership development will be provided through the Family, Career and Community Leaders of America.

Grade Level: 10-12
Credits: 0.5 – 1.0

Technical Content / Process

Students will:

1. determine how changes in technology have increased food choices.
2. identify physical, social, cultural and economic influences and trends related to food choices.
3. explain how digestion turns food into usable nutrients (digestion, absorption, metabolism).
4. propose a balanced meal plan using the Dietary Guidelines for Healthy Living/Myplate.gov
5. examine how personal food choice affects nutrition, personal wellness and maintaining a healthy weight.
6. research various eating disorders and identify sources of help.
7. demonstrate and/or practice basic cooking methods to prepare a variety of foods.
8. identify and use basic kitchen equipment and tools.
9. managing a safe, effective and productive lab while utilizing teamwork.
10. practice measuring techniques for liquid and dry ingredients.
11. change yield of recipe.
12. inspect food labels for nutrition and food additives.
13. recognize the value of following a shopping plan for food.
14. calculate the difference in cost and identify variances in nutrition among semi-prepared, fully prepared convenience meals, fast food or other quick service meals, and home prepared foods.
15. calculate unit price, using comparison shopping methods, compare labels to create a meal plan based on cost and personal nutrition needs.
16. examine and select convenience foods according to time saved, the cost and the quality.
17. identify and practice various types of food presentation techniques.
18. practice dining etiquette and table set up when eating at a restaurant or in the home.
19. demonstrate waste disposal and recycling methods.
20. demonstrate proper safety, sanitation, storage and preparation techniques in handling food from purchase, preparation, cooking, cooling, to reheating.
21. categorize careers in nutrition/food service according to skill required and type of job.
22. assess employment opportunities and preparation requirements.
23. demonstrate employability and social skills relevant to the career cluster.
24. demonstrate safe, sanitary work habits required by the field.
25. demonstrate written, verbal and non-verbal communication skills.
26. demonstrate and practice knowledge of food service safety and sanitation procedures and the factors that contribute to food borne illnesses.
27. apply time management skills.
28. apply math, science and communication skills within technical content.
29. demonstrate employability and social skills relevant to the career cluster.
30. utilize activities of the Family, Career and Community Leaders of America student organization as an integral component of course content and leadership development.

Connections

- National Standards for Family and Consumer Sciences
- Partnership for 21st Century Skills
- Kentucky Academic Standards
- Standards for Mathematics and English/Language Arts
- Kentucky Occupational Skills Standards Assessment (KOSSA) Standards
1. Students will determine how changes in technology have increased food choices.
2. Students will identify physical, social, cultural and economic influences and trends related to food choices.

Technical Content

1. Students will apply math, science and communication skills within technical content.

National Standards

9.3.1 - Analyze nutrient requirements across the life span addressing the diversity of people, culture, and religions.

KY Academic Standards (Big Idea)

Cultures and Societies - Social Studies
Culture is the way of life shared by a group of people, including their ideas and traditions. Cultures reflect the values and beliefs of groups in different ways (e.g., art, music, literature, religion); however, there are universals (e.g., food, clothing, shelter, communication) connecting all cultures. Culture influences viewpoints, rules and institutions in a global society. Students should understand that people form cultural groups throughout the United States and the World, and that issues and challenges unite and divide them.

Safety and Ethical/Social Issues - Technology
Students understand safe and ethical/social issues related to technology. Students practice and engage in safe, responsible and ethical use of technology. Students develop positive attitudes toward technology use that supports lifelong learning, collaboration, personal pursuits and productivity.

Personal Wellness (Health Education) - Practical Living
Wellness is maximum well-being or total health. Personal wellness is a combination of physical, mental, emotional, spiritual and social well-being. It involves making behavioral choices and decisions each day that promote an individual’s physical well-being, the prevention of illnesses and diseases and the ability to remain, physically, mentally, spiritually, socially and emotionally healthy.

English/Language Arts Standards

CC.9-10.W.10 Range of Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Technical Literacy Standards

Reading / 11-12 / #4 – Determine the meaning of symbols, key terms, and other domain-specific words/phrases as they are used in specific scientific and technical context.
Reading / 11-12 / #7 - Integrate and evaluate multiple sources of information presented in diverse formats and media in order to address a question or solve a problem.
Reading / 11-12 / #8 – Evaluate the hypothesis, data, analysis, and conclusions in a science or technical text.
Reading / 11-12 / #10 – By the end of grade 12, read and comprehend science/technical texts in the grades 11-CCR text complexity band independently and proficiently.
Writing / 11-12 / #1 - Write arguments based on discipline-specific content.
Writing / 11-12 / #4 – Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
Writing / 11-12 / #7 – Conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
Writing / 11-12 / #9 – Draw evidence from informational texts to support analysis, reflection, and research.
21st Century Skills and Knowledge
Global Awareness
Financial, Economic, Business and Entrepreneurial Literacy
ICT (Information, Communications, and Technology) Literacy
Social and Cross-Cultural Skills

KOSSA Standards
3002.AA.1 Utilize effective verbal and non-verbal communication skills
3002.AA.2 Participate in conversation, discussion, and group presentations
3002.AA.3 Communicate and follow directions/procedures
3002.AB.1 Locate and interpret written information
3002.AB.3 Identifies relevant details, facts, and specifications
3002.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
3002.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
3002.AC.2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation
3002.AC.3 Implement effective decision-making skills
3002.AF.1 Recognize the potential risks associated with Internet use
3002.OJ.1 Conduct nutritional screening
3002.OJ.2 Use nutritional information in care planning
3002.OJ.3 Utilize a selective menu
3002.OJ.4 Select appropriate nourishment based on nutritional needs
3002.OJ.5 Instruct individuals on nutrition for health maintenance and disease prevention
3002.OK.1 Utilize various factors that affect food preferences in the marketing of food
3002.OM.2 Compare the impact of psychological, cultural, and social influences on food choices and other nutrition practices

Learning Targets - [Click here to view Sample Learner Activities]
Describe what influences the foods that one chooses to eat.
Analyze the four reasons why people eat food (social, emotional, physical, cultural).
Describe food customs in the U.S. and regional cuisine.
This course is designed to assist students in making critical decisions about food, which contributes to health and well-being. Laboratory instruction is included as an application process. Practical problems addressed relate to attitudes toward food, nutrition facts, special health concerns and diets, management of food resources, preparation skills, food safety, sanitation and careers in nutrition and food service. Leadership development will be provided through the Family, Career and Community Leaders of America.

Recommended: FACS Life Skills

Click here for Additional Resources

Technical Content

9. Students will managing a safe, effective and productive lab while utilizing teamwork.
19. Students will demonstrate waste disposal and recycling methods.
20. Students will demonstrate proper safety, sanitation, storage and preparation techniques in handling food from purchase, preparation, cooking, cooling, to reheating.
24. Students will demonstrate safe, sanitary work habits required by the field.
26. Students will demonstrate and practice knowledge of food service safety and sanitation procedures and the factors that contribute to food borne illnesses.
28. Students will apply math, science and communication skills within technical content.

National Standards

8.2.1 - Identify characteristics of major food borne pathogens, their role in causing illness, foods involved in outbreaks, and methods of prevention.
8.2.2 - Employ food service management safety/sanitation program procedures, including CPR and first aid.
8.2.3 - Use knowledge of systems for documenting, investigating, reporting, and preventing food borne illness.
8.2.4 - Use the Hazard Analysis Critical Control Point (HACCP) and crisis management principles and procedures during food handling processes to minimize the risks of food borne illness.
8.2.5 - Practice good personal hygiene/health procedures, including dental health and weight management, and report symptoms of illness.
8.2.6 - Demonstrate proper purchasing, receiving, storage, and handling of both raw and prepared foods.
8.2.8 - Analyze current types of cleaning materials and sanitizers for proper uses and safety hazards.
8.3.3 - Demonstrate procedures for cleaning and sanitizing equipment, serving dishes, glassware, and utensils to meet industry standards and OSHA requirements.
8.5.4 - Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of variety of foods.
9.2.1 - Analyze factors that contribute to food borne illness.
9.2.4 - Use the Hazard Analysis Critical Control Point (HACCP) during all food handling processes to minimize the risks of food borne illness.
9.2.5 - Demonstrate practices and procedures that assure personal and workplace health and hygiene.
9.2.6 - Demonstrate standard procedures for receiving and storage of raw and prepared foods.
9.2.9 - Demonstrate waste disposal and recycling methods.
9.5.4 - Maintain test kitchen/ laboratory and related equipment and supplies.

KY Academic Standards (Big Idea)

Safety (Health Education) - Practical Living
Accidents are a major cause of injury and death to children and adolescents. Unintentional injuries involving a motor vehicle, falls, drowning, fires, firearms and poisons can occur at home, school and work. Safe behavior protects a person from danger and lessens the effects of harmful situations.

Safety and Ethical/Social Issues - Technology
Students understand safe and ethical/social issues related to technology. Students practice and engage in safe, responsible and ethical use of technology. Students develop positive attitudes toward technology use that supports lifelong learning, collaboration, personal pursuits and productivity.
English/Language Arts Standards

CC.9-10.L.4 Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9–10 reading and content, choosing flexibly from a range of strategies.

CC.11-12.L.4 Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, choosing flexibly from a range of strategies.

CC.9-10.W.10 Range of Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CC.11-12.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Technical Literacy Standards

Reading / 11-12 / #2 – Determine central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

Reading / 11-12 / #3 – Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Reading / 11-12 / #4 – Determine the meaning of symbols, key terms, and other domain-specific words/phrases as they are used in specific scientific and technical context.

Reading / 11-12 / #6 – Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

Writing / 11-12 / #2 – Write informative/explanatory texts, including narration of historical events, scientific procedures/experiments, or technical processes.

Writing / 11-12 / #4 – Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.

Writing / 11-12 / #7 – Conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Writing / 11-12 / #9 – Draw evidence from informational texts to support analysis, reflection, and research.

21st Century Skills and Knowledge

Health Literacy

Environmental Literacy

ICT (Information, Communications, and Technology) Literacy

Initiative and Self-Direction

KOSSA Standards

3002.AC.1 Utilize critical-thinking skills to determine best options/outcomes (e.g., analyze reliable/unreliable sources of information, use previous experiences, implement crisis management, develop contingency planning)

3002.AC.2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation

3002.AC.3 Implement effective decision-making skills

3002.EN.1 Assume responsibility for safety of self and others

3002.EN.2 Follow safety guidelines in the workplace

3002.EN.3 Manage personal health and wellness

3002.OB.1 Determine pathogens found in food and their role in causing illness

3002.OB.4 Use Hazard Analysis Critical Control Point (HACCP) principles and procedures to minimize the risks of food-borne illness

3002.OB.6 Demonstrate proper receiving and storage of both raw and prepared foods

3002.OB.7 Demonstrate food handling and preparation techniques that prevent cross contamination between raw and ready-to-eat foods, between animal or fish sources, and other food products
Learning Targets

- Click here to view Sample Learner Activities

Analyze the symptoms, causes, and prevention of foodborne illnesses.
Demonstrate precaution steps taken in the foods lab to prevent accidents.
Evaluate refrigerator and freezer storage to demonstrate rotation and proper handling.
Recommend ways to safely preserve food in the home.
Distinguish the cooking and storage times for hot and cold foods.
Identify ways to prevent cross-contamination.
Summarize ways to cook, thaw, and serve foods safely.
Explain the characteristics of a work triangle.
Identify proper kitchen waste disposal and recycling.

3002.OB.10 Demonstrate waste disposal and recycling methods
3002.OB.11 Demonstrate ability to maintain necessary records to document time and temperature control, maintenance of equipment, and other elements of food preparation, storage, and presentation
3002.OC.1 Operate tools and equipment following procedures and OSHA requirements
3002.OC.2 Maintain tools and equipment following safety procedures and OSHA requirements
3002.OC.3 Demonstrate procedures for cleaning and sanitizing equipment
3002.OC.4 Examine efficiency of equipment purchases based on long-term business needs, specific regulations, and codes related to foods
3002.OC.5 Demonstrate procedures for storage of equipment and tools
3002.OC.6 Apply and use laboratory techniques safely
3002.OL.9 Utilize Food Code Points of time, temperature, date markings, cross contamination, hand washing, and personal hygiene as criteria for safe food preparation
3002.OP.1 Determine conditions and practices that promote safe food handling
3002.OP.2 Appraise safety and sanitation practices throughout the food chain
3002.OP.5 Monitor foodborne illness as a health issue for individuals and families
## Technical Content

7. Students will demonstrate and/or practice basic cooking methods to prepare a variety of foods
8. Students will identify and use basic kitchen equipment and tools.
10. Students will practice measuring techniques for liquid and dry ingredients.
11. Students will change yield of recipe.
17. Students will identify and practice various types of food presentation techniques.
18. Students will practice dining etiquette and table set up when eating at a restaurant or in the home.
27. Students will apply time management skills
28. Students will apply math, science and communication skills within technical content.

## National Standards

8.3.1 - Operate tools and equipment following safety procedures and OSHA requirements.
8.5.1 - Demonstrate professional skills in safe handling of knives, tools, and equipment.
8.5.2 - Demonstrate professional skill for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using
8.5.3 - Utilize weights and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
8.5.4 - Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of variety of foods.
8.5.12 - Demonstrate professional plating, garnishing, and food presentation techniques.
8.5.14 - Demonstrate cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
9.3.3 - Apply principles of food production to maximize nutrient retention in prepared foods.
9.3.5 - Analyze recipe/formula proportions and modifications for food production.
9.5.3 - Prepare food for presentation and assessment.
9.5.4 - Maintain test kitchen/ laboratory and related equipment and supplies.
9.6.4 - Create standardized recipes.
9.6.9 - Utilize Food Code Points of time, temperature, date markings, cross contamination, hand washing, and personal hygiene as criteria for safe food preparation.

## KY Academic Standards (Big Idea)

**Nutrition (Health Education) - Practical Living**
Proper nutrition is critical to good health. To maintain a healthy weight, good dietary habits and physical activity are essential. Nutritious foods are necessary for growth, development and maintenance of healthy bodies.

**Research, Inquiry/Problem-Solving and Innovation - Technology**
Students understand the role of technology in research and experimentation. Students engage technology in developing solutions for solving problems in the real world. Students will use technology for original creation and innovation.

**Lifetime Physical Wellness (Physical Education) - Practical Living**
Lifetime wellness is health-focused. The health-related activities and content utilized are presented to help students become more responsible for their overall health status and to prepare each student to demonstrate knowledge and skills that promote physical activity throughout their lives. Physical education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being. Physical, mental, emotional and social health is strengthened by regular involvement in physical activities.
English/Language Arts Standards

CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CC.11-12.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

CC.9-10.W.10 Range of Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Technical Literacy Standards

Reading / 11-12 / #3 – Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Reading / 11-12 / #4 – Determine the meaning of symbols, key terms, and other domain-specific words/phrases as they are used in specific scientific and technical context.

Reading / 11-12 / #5 – Analyze how the text structures information or ideas into categories or hierarchies.

Reading / 11-12 / #6 – Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

Reading / 11-12 / #9 – Synthesize information from a range of sources into a coherent understanding of a process, resolving conflicting information when possible.

Writing / 11-12 / #2 – Write informative/explanatory texts, including narration of historical events, scientific procedures/experiments, or technical processes.

Writing / 11-12 / #6 – Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Writing / 11-12 / #9 – Draw evidence from informational texts to support analysis, reflection, and research.

Mathematics Standards

CC.9-12.A.CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.*

21st Century Skills and Knowledge

Global Awareness

Health Literacy

ICT (Information, Communications, and Technology) Literacy

Productivity and Accountability

KOSSA Standards

3002.AA.3 Communicate and follow directions/procedures
3002.AB.1 Locate and interpret written information
3002.AB.4 Record information accurately and completely
3002.AB.5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation
3002.AB.6 Demonstrate the ability to write clearly and concisely using industry specific terminology
3002.AD.1 Perform basic and higher level math operations (e.g., addition, subtraction, multiplication, division, decimals, fractions, units of conversion, averaging, percentage, proportion, ratios)
3002.AD.2 Solve problems using measurement skills (e.g., distance, weight, area, volume)
3002.AD.3 Make reasonable estimates
3002.EB.1 Abide by workplace policies and procedures
3002.EC.2 Use language and manners suitable for the workplace
3002.EC.3 Demonstrate polite and respectful behavior toward others
Learning Targets - Click here to view Sample Learner Activities

- Explain various basic cooking techniques.
- Demonstrate how to properly use various kitchen tools and equipment.
- Explain the difference in measuring dry ingredients versus liquid ingredients.
- List the six types of information that a recipe provides.
- Demonstrate how to change the yield of a recipe.
- Compare and contrast the various recipe formats.
- Model proper cutting and mixing techniques.
- Practice various types of food presentation techniques.
- Apply appropriate table manners in a variety of settings.
- Construct a proper table setting.

3002.EC.5 Demonstrate pride in work
3002.OE.1 Demonstrate skills in knife, tool, and equipment handling
3002.OE.2 Demonstrate a variety of cooking methods: roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, woking, convection, microwaving, and other emerging technologies
3002.OE.5 Prepare various meats, seafood, and poultry
3002.OE.6 Prepare various stocks, soups, and sauces
3002.OE.7 Prepare various fruits, vegetables, starches, and farinaceous items
3002.OE.8 Prepare various salads, dressings, and spices
3002.OE.9 Prepare sandwiches, canapés, and appetizers
3002.OE.10 Prepare baked goods and desserts
3002.OE.11 Prepare breakfast meats, eggs, cereals, and batter products
3002.OE.12 Demonstrate food presentation techniques
3002.OE.13 Prepare various meats, seafood, and poultry
3002.OE.14 Prepare various stocks, soups, and sauces
3002.OE.15 Prepare various fruits, vegetables, starches, and farinaceous items
3002.OE.16 Prepare various salads, dressings, and spices
3002.OE.17 Prepare various sandwiches, canapés, and appetizers
3002.OE.18 Prepare baked goods and desserts
3002.OE.19 Prepare breakfast meats, eggs, cereals, and batter products
3002.OE.20 Demonstrate food presentation techniques
3002.OI.3 Prepare food for presentation and assessment
3002.OL.3 Utilize weights and measures to demonstrate proper scaling and measurement technique
Technical Content

3. Students will explain how digestion turns food into usable nutrients (digestion, absorption, metabolism).
4. Students will propose a balanced meal plan using the Dietary Guidelines for Healthy Living/Myplate.gov.
5. Students will examine how personal food choice affects nutrition, personal wellness and maintaining a healthy weight.
6. Students will research various eating disorders and identify sources of help.
12. Students will inspect food labels for nutrition and food additives.
28. Students will apply math, science and communication skills within technical content.

National Standards

8.2.5 - Practice good personal hygiene/health procedures, including dental health and weight management, and report symptoms of illness.
8.5.14 - Demonstrate cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
9.3.1 - Analyze nutrient requirements across the life span addressing the diversity of people, culture, and religions.
9.3.2 - Analyze nutritional data.
9.3.6 - Critique the selection of foods to promote a healthy lifestyle.
9.4.1 - Analyze nutritional needs of individuals.

KY Academic Standards (Big Idea)

Nutrition (Health Education) - Practical Living
Proper nutrition is critical to good health. To maintain a healthy weight, good dietary habits and physical activity are essential. Nutritious foods are necessary for growth, development and maintenance of healthy bodies.

Personal Wellness (Health Education) - Practical Living
Wellness is maximum well-being or total health. Personal wellness is a combination of physical, mental, emotional, spiritual and social well-being. It involves making behavioral choices and decisions each day that promote an individual’s physical well-being, the prevention of illnesses and diseases and the ability to remain, physically, mentally, spiritually, socially and emotionally healthy.

Lifetime Physical Wellness (Physical Education) - Practical Living
Lifetime wellness is health-focused. The health-related activities and content utilized are presented to help students become more responsible for their overall health status and to prepare each student to demonstrate knowledge and skills that promote physical activity throughout their lives. Physical education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being. Physical, mental, emotional and social health is strengthened by regular involvement in physical activities.

English/Language Arts Standards

CC.9-10.R.I.8 Integration of Knowledge and Ideas: Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
CC.11-12.W.10 Range of Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CC.11-12.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
Technical Literacy Standards
Reading / 11-12 / #2 – Determine central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
Reading / 11-12 / #3 – Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
Reading / 11-12 / #4 – Determine the meaning of symbols, key terms, and other domain-specific words/phrases as they are used in specific scientific and technical context.
Reading / 11-12 / #7 - Integrate and evaluate multiple sources of information presented in diverse formats and media in order to address a question or solve a problem.
Reading / 11-12 / #8 – Evaluate the hypothesis, data, analysis, and conclusions in a science or technical text.
Writing / 11-12 / #1 – Write arguments based on discipline-specific content.
Writing / 11-12 / #4 – Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
Writing / 11-12 / #7 – Conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Mathematics Standards
CC.9-12.F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*
CC.9-12.S.IC.6 Evaluate reports based on data.*

21st Century Skills and Knowledge
Health Literacy
ICT (Information, Communications, and Technology) Literacy
Productivity and Accountability

KOSSA Standards
3002.AA.2 Participate in conversation, discussion, and group presentations
3002.EN.1 Assume responsibility for safety of self and others
3002.EN.3 Manage personal health and wellness
3002.OM.1 Examine physical, emotional, social, psychological, and spiritual components of individual and family wellness
3002.OM.2 Compare the impact of psychological, cultural, and social influences on food choices and other nutrition practices
3002.OM.3 Examine the governmental, economic, and technological influences on food choices and practices
3002.OM.4 Investigate the impact of global/local events and conditions on food choices and practices
3002.OM.5 Examine legislation and regulations related to nutrition and wellness issues
3002.ON.1 Assess the effect of nutrients on health, appearance, and peak performance
3002.ON.2 Research the relationship of nutrition and wellness to individual and family health throughout the life span
3002.ON.3 Assess the impact of food and diet fads, food addictions, and eating disorders on wellness
3002.ON.4 Appraise sources of food and nutrition information, including food labels, related to health and wellness
3002.OL.1 Build menus to customer/client preferences
3002.OO.1 Apply various dietary guidelines in planning to meet nutrition and wellness needs
3002.OO.2 Design strategies that meet the health, nutrition, and requirements of individuals and families with special needs
3002.OO.3 Demonstrate ability to select, store, prepare, and serve nutritious and aesthetically pleasing foods
3002.OQ.12 Describe the immune system, the digestive system, selected diseases, and the cause of weight gain/loss
Learning Targets
- List and analyze the six essential nutrients.
- Explain the Dietary Guidelines for Americans.
- Create a healthy meal plan based upon gender, age, height, weight, and activity level.
- Identify the various food groups and evaluate how foods are characterized.
- Evaluate a person's diet in relationship to MyPlate.gov.
- Analyze information found on a nutrition label.
- Justify a food's nutritional value, based on the food label.
- Examine the process of digestion.
- Identify eating disorders and explain their symptoms, causes, and solutions.
- Discuss reasons for and causes of the overweight epidemic.
13. Students will recognize the value of following a shopping plan for food.
14. Students will calculate the difference in cost and identify variances in nutrition among semi-prepared, fully prepared convenience meals, fast food or other quick service meals, and home prepared foods.
15. Students will calculate unit price, using comparison shopping methods, compare labels to create a meal plan based on cost and personal nutrition needs.
16. Students will examine and select convenience foods according to time saved, the cost and the quality.
18. Students will apply math, science and communication skills within technical content.

National Standards

8.5.13 - Examine the applicability of convenience food items.
9.3.4 - Assess the influence of socioeconomic and psychological factors on food and nutrition and behavior.
9.5.1 - Analyze various factors that affect food preferences in the marketing of food.
9.6.7 - Implement procedures that provide cost effective products.

KY Academic Standards (Big Idea)

Consumer Decisions - Vocational Studies
Individual and families need to make consumer decisions due to the numerous products/services on the market, multiple advertising techniques, and the need to make responsible financial management decisions. Accessing and assessing consumer information, comparing and evaluating products and services, provides basis for making effective consumer decisions. Consumer decisions influence the use of resources and the impact they have on the community and environment.
Nutrition (Health Education) - Practical Living
Proper nutrition is critical to good health. To maintain a healthy weight, good dietary habits and physical activity are essential. Nutritious foods are necessary for growth, development and maintenance of healthy bodies.
Personal Wellness (Health Education) - Practical Living
Wellness is maximum well-being or total health. Personal wellness is a combination of physical, mental, emotional, spiritual and social well-being. It involves making behavioral choices and decisions each day that promote an individual’s physical well-being, the prevention of illnesses and diseases and the ability to remain, physically, mentally, spiritually, socially and emotionally healthy.

English/Language Arts Standards

CC.9-10.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
CC.9-10.W.10 Range of Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
CC.11-12.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
Technical Literacy Standards
Reading / 11-12 / #4 – Determine the meaning of symbols, key terms, and other domain-specific words/phrases as they are used in specific scientific and technical context.
Reading / 11-12 / #7 - Integrate and evaluate multiple sources of information presented in diverse formats and media in order to address a question or solve a problem.
Reading / 11-12 / #8 – Evaluate the hypothesis, data, analysis, and conclusions in a science or technical text.
Writing / 11-12 / #4 – Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
Writing / 11-12 / #9 – Draw evidence from informational texts to support analysis, reflection, and research.

Mathematics Standards
CC.9-12.A.CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.*
CC.9-12.N.Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.*

21st Century Skills and Knowledge
Global Awareness
Financial, Economic, Business and Entrepreneurial Literacy
ICT (Information, Communications, and Technology) Literacy

KOSSA Standards
3002.AD.1 Perform basic and higher level math operations (e.g., addition, subtraction, multiplication, division, decimals, fractions, units of conversion, averaging, percentage, proportion, ratios)
3002.AD.3 Make reasonable estimates
3002.AD.4 Use tables, graphs, diagrams, and charts to obtain or convey information
3002.AD.5 Use deductive reasoning and problem-solving in mathematics
3002.AE.2 Identify the components of a budget and how one is created
3002.AE.5 Demonstrate ability to meet financial obligations
3002.ED.3 Work within budgetary constraints
3002.EL.2 Demonstrate commitment to learning as a life-long process and recognize learning opportunities
3002.OF.1 Apply principles of purchasing and receiving in food service operations
3002.OE.13 Examine the applicability of convenience food items
3002.OL.1 Build menus to customer/client preferences
3002.OI.2 Appraise and interpret nutritional data
3002.OI.5 Critique the selection of foods to promote a healthy lifestyle
3002.OJ.2 Use nutritional information in care planning
3002.OJ.3 Utilize a selective menu
3002.OJ.4 Select appropriate nourishment based on nutritional needs
3002.OJ.5 Instruct individuals on nutrition for health maintenance and disease prevention
3002.OO.1 Apply various dietary guidelines in planning to meet nutrition and wellness needs
3002.OO.2 Design strategies that meet the health, nutrition, and requirements of individuals and families with special needs
3002.OO.3 Demonstrate ability to select, store, prepare, and serve nutritious and aesthetically pleasing foods
3002.OM.1 Examine physical, emotional, social, psychological, and spiritual components of individual and family wellness
Learning Targets

Demonstrate how to calculate unit pricing when shopping for food.
Explain how to plan your shopping to be an effective consumer.
Identify various ways to shop and choose foods that are cost effective.
Explain how to make wise decisions related to food choices.
Discuss choices of food consumption, managing from home preparation to dining out.
Evaluate nutritional and cost variances among semi-prepared / fully-prepared convenience meals and home-prepared meals.
Foods and Nutrition

This course is designed to assist students in making critical decisions about food, which contributes to health and well-being. Laboratory instruction is included as an application process. Practical problems addressed relate to attitudes toward food, nutrition facts, special health concerns and diets, management of food resources, preparation skills, food safety, sanitation and careers in nutrition and food service. Leadership development will be provided through the Family, Career and Community Leaders of America.

Prerequisites
- Recommended: FACS Life Skills

Click here for Additional Resources

Unit Title
Food Preparation

Technical Content
7. Students will demonstrate and/or practice basic cooking methods to prepare a variety of foods.
8. Students will identify and use basic kitchen equipment and tools.
9. Students will manage a safe, effective and productive lab while utilizing teamwork.
10. Students will practice measuring techniques for liquid and dry ingredients.
11. Students will identify and practice various types of food presentation techniques.
12. Students will demonstrate proper safety, sanitation, storage and preparation techniques in handling food from purchase, preparation, cooking, cooling, to reheating.
13. Students will demonstrate safe, sanitary work habits required by the field.

National Standards
- 8.5.5 - Prepare various meats, seafood, and poultry using safe handling and professional preparation techniques.
- 8.5.7 - Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
- 8.5.11 - Prepare breakfast meats, eggs, cereals, and batter products using safe handling and professional preparation techniques.
- 8.5.14 - Demonstrate cooking methods that increase nutritional value, lower calorie and fat content, and utilize herbs and spices to enhance flavor.
- 9.5.3 - Prepare food for presentation and assessment.
- 9.5.4 - Maintain test kitchen/ laboratory and related equipment and supplies.
- 9.6.9 - Utilize Food Code Points of time, temperature, date markings, cross contamination, hand washing, and personal hygiene as criteria for safe food preparation.

KY Academic Standards (Big Idea)
Nutrition (Health Education) - Practical Living
Proper nutrition is critical to good health. To maintain a healthy weight, good dietary habits and physical activity are essential. Nutritious foods are necessary for growth, development and maintenance of healthy bodies.

English/Language Arts Standards
- CC.9-10.W.2 Text Types and Purposes: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
- CC.9-10.W.10 Range of Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
- CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- CC.11-12.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
Technical Literacy Standards
Reading / 11-12 / #3 – Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
Reading / 11-12 / #4 – Determine the meaning of symbols, key terms, and other domain-specific words/phrases as they are used in specific scientific and technical context.
Reading / 11-12 / #9 – Synthesize information from a range of sources into a coherent understanding of a process, resolving conflicting information when possible.
Writing / 11-12 / #2 – Write informative/explanatory texts, including narration of historical events, scientific procedures/experiments, or technical processes.
Writing / 11-12 / #4 – Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.

Mathematics Standards
CC.9-12.S.MD.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).*

21st Century Skills and Knowledge
Health Literacy
ICT (Information, Communications, and Technology) Literacy
Creativity and Innovation

KOSSA Standards
3002.AA.3 Communicate and follow directions/procedures
3002.EA.5 Take and provide direction in the workplace
3002.EF.2 Contribute to the success of the team
3002.EF.3 Demonstrate effective team skills and evaluate their importance in the workplace (e.g., setting goals, listening, following directions, questioning, dividing work)
3002.EL.3 Seek and capitalize on self-improvement opportunities
3002.EN.1 Assume responsibility for safety of self and others
3002.EN.2 Follow safety guidelines in the workplace
3002.OE.2 Demonstrate a variety of cooking methods: roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, woking, convection, microwaving, and other emerging technologies
3002.OE.5 Prepare various meats, seafood, and poultry
3002.OE.6 Prepare various stocks, soups, and sauces
3002.OE.7 Prepare various fruits, vegetables, starches, and farinaceous items
3002.OE.9 Prepare sandwiches, canapés, and appetizers
3002.OE.10 Prepare baked goods and desserts
3002.OE.11 Prepare breakfast meats, eggs, cereals, and batter products
3002.ON.1 Assess the effect of nutrients on health, appearance, and peak performance
3002.ON.2 Research the relationship of nutrition and wellness to individual and family health throughout the life span
3002.ON.4 Appraise sources of food and nutrition information, including food labels, related to health and wellness
3002.OI.1 Determine nutrient requirements across the life span addressing the diversity of people, culture, and religions
3002.OI.5 Critique the selection of foods to promote a healthy lifestyle
3002.ON.1 Assess the effect of nutrients on health, appearance, and peak performance
3002.OO.1 Apply various dietary guidelines in planning to meet nutrition and wellness needs
3002.OO.2 Design strategies that meet the health, nutrition, and requirements of individuals and families with special needs
3002.OO.5 Know the environmental impact of materials (e.g., solid, liquid, gaseous)
3002.OO.9 Describe and explain chemical reactions including inhibitor
Learning Targets - Click here to view Sample Learner Activities

Describe the nutritional benefits of fruit.
Identify the six major types of fruit.
Demonstrate methods for cooking and preparing fruits.
Describe the nutritional benefits of vegetables.
Identify the eight categories of vegetables.
Demonstrate methods for cooking and preparing vegetables.
Describe the nutritional benefits of grains.
Identify the six grains used around the world.
Label the three main parts of a grain kernel.
Demonstrate methods for cooking and preparing grains.
Describe the nutritional benefits of dairy.
List the four different foods that come from milk.
Analyze the effects of heat on milk and cheese.
Describe the nutritional value of eggs.
Identify and describe the three parts of an egg.
Summarize and demonstrate the cooking methods for eggs.
**National Standards**

21. Students will categorize careers in nutrition/food service according to skill required and type of job.

22. Students will assess employment opportunities and preparation requirements.

23. Students will demonstrate employability and social skills relevant to the career cluster.

25. Students will demonstrate written, verbal and non-verbal communication skills.

28. Students will apply math, science and communication skills within technical content.

29. Students will demonstrate employability and social skills relevant to the career cluster.

30. Students will utilize activities of the Family, Career and Community Leaders of America (FCCLA) student organization as an integral component of course content and leadership development.

**Technical Content**

21. Students will categorize careers in nutrition/food service according to skill required and type of job.

22. Students will assess employment opportunities and preparation requirements.

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28. Students will apply math, science and communication skills within technical content.

29. Students will demonstrate employability and social skills relevant to the career cluster.

30. Students will utilize activities of the Family, Career and Community Leaders of America (FCCLA) student organization as an integral component of course content and leadership development.

**National Standards**

8.1.1 - Explain the roles, duties, and functions of individuals engaged in food production and services careers.

8.1.2 - Analyze opportunities for employment and entrepreneurial endeavors.

9.1.1 - Explain the roles and functions of individuals engaged in food science, food technology, dietetics, and nutrition careers.

9.1.2 - Analyze opportunities for employment and entrepreneurial endeavors.

9.1.3 - Summarize education and training requirements and opportunities for career paths in food science, food technology, dietetics, and nutrition.

**KY Academic Standards (Big Idea)**

Career Awareness, Exploration, Planning - Vocational Studies

Career awareness, exploration and planning gives students the opportunity to discover the various career areas that exist and introduce them to the realities involved with the workplace. Many factors need to be considered when selecting a career path and preparing for employment. Career awareness, exploration and planning will enable students to recognize the value of education, learn how to plan for careers and integrate academic subjects.

Employability Skills - Vocational Studies

Employability skills will focus on student’s competencies with their work habits and academic/technical skills that will impact an individual’s success in school and workplace. School-to-work transition skills will help students develop interpersonal skills and positive work habits.

**English/Language Arts Standards**

CC.9-10.W.10 Range of Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

CC.11-12.L.2 Conventions of Standard English: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CC.11-12.SL.5 Presentation of Knowledge and Ideas: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
Technical Literacy Standards

Reading / 11-12 / #7 - Integrate and evaluate multiple sources of information presented in diverse formats and media in order to address a question or solve a problem.
Reading / 11-12 / #8 – Evaluate the hypothesis, data, analysis, and conclusions in a science or technical text.
Writing / 11-12 / #4 – Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
Writing / 11-12 / #5 – Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
Writing / 11-12 / #6 – Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
Writing / 11-12 / #7 – Conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Mathematics Standards

CC.9-12.S.IC.6 Evaluate reports based on data.*

21st Century Skills and Knowledge

Global Awareness
Financial, Economic, Business and Entrepreneurial Literacy
Leadership and Responsibility
ICT (Information, Communications, and Technology) Literacy

KOSSA Standards

3002.EL.4 Discuss the importance of flexible career planning and career self-management
3002.EL.5 Employ leadership skills to achieve workplace objectives (e.g., personal vision, adaptability, change, shared vision)
3002.EL.8 Describe the impact of the global economy on jobs and careers
3002.EM.2 Research and identify emerging technologies for specific careers
3002.OA.1 Determine the roles and functions of individuals engaged in food production and services careers
3002.OA.2 Explore opportunities for employment and entrepreneurial endeavors
3002.OA.3 Examine education/training requirements and opportunities for career paths in food production and services
3002.OA.4 Examine the impact of food production and services occupations on local, state, national, and global economies
3002.OH.1 Determine the roles and functions of individuals engaged in food science, dietetics, and nutrition careers
3002.OH.2 Explore opportunities for employment and entrepreneurial endeavors
3002.OH.3 Examine education and training requirements and opportunities for career paths in food science dietetics, and nutrition
3002.OH.4 Examine the impact of food science, dietetics, and nutrition occupations on local, state, national, and global economies
3002.EK.2 Define jobs associated with a specific career path or profession

Learning Targets

Categorize careers within the nutrition and foodservice industries.
Assess employment opportunities and preparation requirements.