CARLISLE AREA SCHOOL DISTRICT

Carlisle, PA 17013

FOODS AND NUTRITION

GRADES 10-12

Date of Board Approval: June 19, 2014

CARLISLE AREA SCHOOL DISTRICT

PLANNED INSTRUCTION COVER PAGE

TITLE OF COURSE:	Foods and Nutrition	**SUBJECT:**	FCS	**GRADE LEVEL:**	10-12
COURSE LENGTH:	1 Year	**DURATION:**	50 minutes	**FREQUENCY:**	4/wk
PREREQUISITES:	None	**CREDIT:**	1 credit	**LEVEL:**	N/A

Course Description/Objectives:

Foods and Nutrition invites students to experience food preparation techniques with an increased skill level. Through labs, students demonstrate time management and organizational skills along with the ability to plan and prepare meals with culinary appeal. Students also develop an appreciation for the importance of nutrient contributions in foods and the dietary impact on good health. Students' taste buds are tempted by the variety of cooking labs featuring appetizers, soups, salads, countless baked goods and main dishes with chicken, pork, beef and vegetarian entrees. An emphasis is placed on the proper use of kitchen tools and appliances.

Text: *Food for Today*, McGraw/Glencoe, 2004 by Helen Kowtaluk and Alice Orphanes Kopan.

Curriculum Writing Committee: Theresa Dixon and Jennifer Wiegand

COURSE TIME LINE

Unit 1: Kitchen Basics — 12 periods

- Basic Utensils
- Kitchen Safety
- Abbreviations and Equivalents
- Food Guide Pyramid-My Plate

Unit 2: Recipe Skills and Work Methods — 7 periods

- Elements of a Recipe
- Food Safety
- Lab Procedures

Unit 3: Nutrition for Life — 5 periods

- Key Nutrients
- Reading Food Labels
- My Plate
- Modification of Basic Recipes

Unit 4: Microwave Cooking — 12 periods

- Essential Vocabulary
- Food Characteristics
- Comparing Food Products

Unit 5: Egg Products — 14 periods

- Parts of an Egg
- Nutritional Contribution
- Functions of an Egg

Unit 6: Meats and Beans — 14 periods

- Types of Meat
- Cuts of Meat
- Cooking Methods
- Purchasing Meat

Unit 7: Dairy Unit — 10 periods

- Types of Cheeses
- Types of Milk
- Miscellaneous Dairy Products
- Dairy Processing

Unit 8: Fruits — 10 periods

- Categories
- Preparing and Storing
- Serving Size and Nutrition

Unit 9: Vegetables — 10 periods

- Classification
- Pigments and Cooking Methods
- Serving Sizes and Nutrition
- Proper Care

Unit 10: Grains — 7 periods

- Parts of a Kernel
- Grain Products
- Processing Grains
- Preparing Grains

Unit 11: Breads — 14 periods

- Yeast Breads
- Quick Breads

Unit 12: Fats and Sweets — 12 periods

- Candy/Cookies
- Cakes
- Pies
- Dessert Goods

Unit 13: Meal Planning and Grocery Shopping

- Meal Appeal
- Meal Planning
- Grocery Store Layout

5 periods

Unit 14: Convenience Foods

- Products
- Cooking Methods
- Comparing Costs and Quality
- Dairy Processing

7 periods

Unit 15: Collection Foods

- Soups/Salads
- Sandwiches
- Beverages
- Casseroles

5 periods

TOTAL: 127 days

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 12 days

UNIT # 1: Kitchen Basics (Essential) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.2.9.D	• Analyze the space requirements for a specified activity to meet a given need (e.g., family room, home office or kitchen).
11.3.9.B	• Identify the cause, effect and prevention of microbial contamination, parasites and toxin chemicals in food.
11.3.9.F	• Hypothesize the effectiveness of the use of meal management principles (e.g., time management, budgetary considerations, sensory appeal, balanced nutrition, safety, sanitation).

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influences, athletic goals.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation (time and skill), consumer skills (understanding food labels and evaluating fads), nutritional knowledge, and changes in nutritional requirements.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.5.9-10.C	• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.
CC.3.6.9-10.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.6.9-10.H	• Draw evidence from informational texts to support analysis, reflection and research.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 12 days

UNIT # 1: Kitchen Basics (Essential) **GRADE:** 10-12

UNDERSTANDINGS

Learning to name and use kitchen utensils properly and effectively increases efficiency and safety in a kitchen.

Learning to relate and categorize food within the six categories of the Food Guide Pyramid or My Plate leads to better nutrition.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activities in kitchen groups.

KNOW

- Define: basic kitchen utensils: custard cup, pastry blender, baking sheet, flat edge scraper, measuring cup (dry/liquid), meat mallet.
- Describe the function of basic kitchen utensils.
- Describe the five most common food borne illnesses and their food sources: Botulism, Salmonella, Staph, Ecoli, and Listeria.
- Define the most common recipe abbreviations and their measuring equivalents.
- Define the six categories of the Food Guide Pyramid.
- Define the essentials elements of My Plate.

DO

- Lab Activities: Demonstrate safety techniques to avoid accidents in the kitchen.
- Lab Activities: Demonstrate proper food handling procedures to prevent the spread of foodborne illnesses.
- Lab Activities: Classify and categorize kitchen utensils.
- Compare and contrast the Food Guide Pyramid and My Plate in creating a balanced meal.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 7 days

UNIT # 2: Recipe Skills and Work Methods (Important) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.2.12.A	• Justify solutions developed by using practical reasoning skills.
11.3.9.B	• Identify the cause, effect and prevention of microbial contamination, parasites and toxic chemicals in food.
11.3.9.F	• Hypothesize the effectiveness of the use of meal management principles (e.g., time management, budgetary considerations, sensory appeal, balanced nutrition, safety, sanitation).

Pennsylvania Common Core Standards for Science and Technical Subjects: Grades 9-12:

CC.3.5.9-10.C	• Follow precisely a complex multistep procedure when carrying our experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.
CC.3.6.9-10.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate task, purpose and audience.
CC.3.6.9-10.H	• Draw evidence from informational texts to support analysis, reflection and research.

Pennsylvania Academic Standards for Business Computer and Informational Technology-Grades 9-12:

15.3.12.P	• Demonstrate leadership communication skills through delegating, negotiating, goal setting and generating ideas.
15.3.12.N	• Demonstrate appropriate work ethic in the workplace, community and classroom.
15.3.12.I	• Synthesize information gathered from multiple sources (e.g., digital, print, face to face).

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 7 days

UNIT # 2: Recipe Skills and Work Methods (Important) **GRADE:** 10-12

UNDERSTANDINGS

The six elements of a recipe (ingredients directions, time, equipment, temperature, nutrition facts) work together to bring about food construction.

Improper handling of ingredients, supplies, or utensils can result in a food safety hazard.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Food safety lab activities and project.

KNOW

- Define: food safety, cross contamination, thawing, temperature, sanitation, lab prep and lab construction.
- Describe the six elements of a recipe.
- Explain how cross contamination can be prevented.
- Describe how thawing procedures minimize or eliminate cross contamination.
- Distinguish between the processes associated with lab prep and lab construction.

DO

- Lab Activities: Demonstrate proper food safety procedures.
- Lab Activities: Demonstrate proper use of lab/recipe elements through group lab activities.
- Distinguish between the six basic elements of a recipe.
- Analyze kitchen procedures to prevent hazards an improve skills level.
- Use proper procedures to prep a lab.
- Use proper procedures to construct a lab.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 5 days

UNIT # 3: Nutrition for Life (Compact) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.9.A	• Explain how scientific and technological developments enhance our food supply (e.g., food preservation techniques, packaging, nutrient fortification).
11.3.12.C	• Evaluate sources of food and nutrition information.
11.3.12.F	• Evaluate the application of meal planning principles in the selection, planning, preparation and serving of meals that meet the specific needs of individuals across their life span.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, athletic goals.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventative strategies: fitness level, environment, nutrition, and health status.
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation (time and skill), consumer skills (understanding food labels, evaluating fads), nutritional knowledge, changes in nutritional requirements.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.9-10.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.5.9-10.A	• Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
CC.3.5.9-10.D	• Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 5 days

UNIT # 3: Nutrition for Life (Compact) **GRADE:** 10-12

UNDERSTANDINGS

There is relationship between calories, serving size, and amount per box/bag/package.

Learning how to read food labels and a deeper understanding of the Food Guide Pyramid, including My Plate, allows a person to eat to live not live to eat. Recipes can be altered to achieve a greater nutritional impact.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

KNOW

- Define: riboflavin, calcium, phosphorus, iron, zinc, serving size, calorie, fat, saturated fat, cholesterol, vitamins C-A-K
- Recognize the food sources of water-soluble vitamins.
- Recognize the food sources of fat-soluble vitamins.
- Describe the nutrients essential to daily life.
- Explain how nutrients are absorbed in the blood stream.
- Describe the nutritional facts included on a food label.
- Explain how height, weight and physical activity impact calorie intake.
- Determine the products that can be used in place of sugar and butter.
- Describe how lean meats and egg whites alter a recipe.
- Recognize the food sources of cholesterol.

DO

- Analyze food labels according to serving size, calories, fats and cholesterol. Present the findings, in writing, to a kitchen/lab group.
- Analyze how food consumption relates to overall health.
- Lab Activity: distinguish between major and minor minerals.
- Lab Activity: modify a recipe according to calories, fat and sugar content.
- Analyze height and weight relationship to the categories of the Food Guide Pyramid and My Plate. Plan a week's worth of meals for a person of a particular age, weight and height. Consider any health conditions the person may have.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 12 days

UNIT # 4: Microwave Cooking (Important) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation and packaging.
11.3.12.A	• Analyze how food engineering and technology trends will influence the food supply.
11.2.12.E	• Assess the availability of emerging technology that is designed to do the work of the family and evaluate the impact of its use on individuals, families and communities.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.11-12.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.5.11-12.I:	• Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
CC.3.5.11-12.C	• 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.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, and changes in nutritional requirements.
10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, athletic goals.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 12 days

UNIT # 4: Microwave Cooking (Important) **GRADE:** 10-12

UNDERSTANDINGS

Emerging technologies have impacted how foods are cooked/prepared.

There are advantages and disadvantages to relying on a microwave to prepare meals.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

KNOW

- Define: magnetron tube, waveguide, striver blade, over cavity, nonionizing, ionizing, microwave safe, browning agents, non-browning, moisture-content.
- Explain who and how the microwave was invented.
- Recognize how the different parts (technological components) of the microwave function together to heat and cook food.
- Explain how moisture content in food is affected during microwave cooking.
- Describe the advantages and disadvantages of using a microwave oven over a conventional oven.
- Evaluate consumer reports in deciding which type of microwave to purchase.

DO

- Demonstrate knowledge of basic usage of microwave oven through labs.
- Draw and identify the parts and functions of a microwave oven.
- Compare and contrast: structure, texture, taste, preparation time of foods prepared in conventional and microwave ovens.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 14 days

UNIT # 5: Egg Products **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.9.B	• Analyze the application of physical and chemical changes that occur in food during preparation and preservation.
11.3.9.D	• Analyze the relationship between diet and disease and risk factors (e.g., calcium and osteoporosis; fat, cholesterol and heart disease; folate and birth defects; sodium and hypertension).
11.3.12.C	• Evaluate sources of food and nutrition information.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.11-12.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.5.11-12.I	• Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
CC.3.5.11-12.B	• Determine the 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.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, and changes in nutritional requirements.
10.1.9.C	• Analyze factors than impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, athletic goals.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status and nutrition.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 14 days

UNIT # 5: Egg Products **GRADE:** 10-12

UNDERSTANDINGS

There are nine parts of an egg. Each part has a unique function in cooking. Each part has nutritional contributions.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activities in kitchen groups.

KNOW

- Recognize the nine parts of an egg: shell, yolk, chalaza, vitelline membrane, outer membrane, inner membrane, albumen, germ spot, air cell.
- Describe the functions of the three egg membranes.
- Recognize the nutritional contributions of an egg: protein, vitamin A, vitamin B, vitamin E, thiamin, riboflavin, niacin, iron, phosphorous.
- Describe the functions of an egg: foam, coloring agent, interfering agent, structure agent, emulsifier, thickener, nutritive additive, flavoring additive, binding agent.

DO

- Demonstrate proper handling of egg products through lab activities.
- Demonstrate the functions of eggs through lab activities and procedures.
- Demonstrate how eggs relate to their multiple functions and purposes.
- Demonstrate the difference between soft and stiff peaks.
- Analyze the nine parts of an egg.
- Properly construct a dish using eggs.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 14 days

UNIT # 6: Meats and Beans (Essential) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.12.C	• Evaluate sources of food and nutrition information.
11.3.12.F	• Evaluate the application of nutrition and meal-planning principles in the selection, planning, preparation and serving of meals that meet the specific nutritional needs of individuals across their lifespan.
11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation and packaging.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, changes in nutritional requirements.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.
10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, athletic goals.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.5.11-12.B	• Determine the central ideas or conclusions of a text; summarize complex concepts, processes or information presented in text by paraphrasing them in simpler but still accurate terms.
CC.3.6.11-12.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.5.11-12.I	• Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 14 days

UNIT # 6: Meats and Beans (Essential) **GRADE:** 10-12

UNDERSTANDINGS

Knowing how to properly read a meat label helps consumers to (1) purchase meat products from a variety of animals in relation to preferred cooking methods and (2) make cost effective selections.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activities in kitchen groups-nutritional benefits of meat for protein versus a vegetarian diet.

KNOW

- Identify types of poultry, red meat products and white meat products: pork, beef, poultry, seafood, sausage, lamb, veal.
- Define the major wholesale cuts of meat.
- Explain how reading the retail cut identifies the wholesale cut.
- Describe the ingredients necessary for a moist heat cooking method.
- Identify the major methods of cooking meat: braising, roasting, grilling, stir fry, broiling, pan fry, cooking in liquids.
- Identify the types of meat products that cannot be cooked using dry heat.
- Explain how moist heat enhances the flavor of cheaper cuts of meat.
- Explain the relationship between price per pound and net weight.
- Define: select choice, prime, marbling.

DO

- Demonstrate the ability to cook meat using dry and moist heat methods.
- Distinguish between cuts of meat by reading and interpreting meat labels.
- Determine the quality of meat products by examining marbling, bone shapes, cost and cooking method.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 10 days

UNIT #7: Dairy (Important) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-(Grades 9-12):

11.3.12.C.	• Evaluate sources of food and nutrition information.
11.3.9.G	• Analyze the application of physical and chemical changes that occur in food during preparation and preservation.
11.3.9.B	• Identify the cause, effect and prevention of microbial contamination, parasites and toxic chemicals in food.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, athletic goals.
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, changes in nutritional requirements.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.11-12.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC3.5.11-12.I	• Synthesize information from a range of sources (texts, experiments. Simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
CC.3.6.11-12.H	• Draw evidence from informational texts to support analysis, reflection and research.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 10 days

UNIT #7: Dairy (Important) **GRADE:** 10-12

UNDERSTANDINGS

Dairy products differ from each other in processing, taste, nutritional value, and function.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Cheese classification lab.

KNOW

- Distinguish between pasteurized, unpasteurized, and homogenized
- Define: curds, whey, culture
- Distinguish between sweetened condensed milk, evaporated milk, fat-free milk, and vitamin D milk.
- Describe the textual differences in cheeses.
- Explain the process used to culture sour cream and yogurt.
- Explain homogenization and its importance to the dairy process.
- Explain the differences between processed and unprocessed cheeses.

DO

- Analyze a variety of cheeses according to taste, texture and appearance.
- Demonstrate a variety of methods to construct a dairy recipe.
- Compare and contrast various hard, soft and semi-soft cheeses.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 10 days

UNIT #8: Fruit Unit (Important) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.9.G	• Analyze the application of physical and chemical changes that occur in food during preparation and preservation.
11.3.9.A	• Explain how scientific and technological developments enhance our food supply (food preservation techniques, packaging, nutrient fortification)
11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation and packaging.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, and changes in nutritional requirements.
10.1.9.C	• Analyze factors that impact the nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence and athletic goals.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.11-12.H	• Draw evidence from informational texts to support analysis, reflection, and research.
CC.3.5.11-12.C	• 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.
CC.3.6.11-12.F	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 10 days

UNIT #8: Fruit Unit (Important) **GRADE:** 10-12

UNDERSTANDINGS

It is essential to classify fruit before determining the best approach for cleaning and preparing it.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Fruit enzymatic browning lab.

KNOW

- Describe the nutrients found in fruit products.
- Describe the relationship between where a fruit is grown, how it is grown and caring for the specific type of fruit.
- Explain how enzymatic browning effects food preparation.
- Describe the proper fruit serving size.
- Describe the nutrients found naturally in all fruit products.

DO

- Demonstrate how to properly was and prepare a variety of fruits.
- Calculate the cost of fruit during the off-season.
- Construct a variety of fruit recipes to demonstrate content knowledge.
- Locate examples and non-examples of fruit products in grocery store advertisements and magazines.
- Conduct and enzymatic browning experiment to determine the best method for avoiding the problem.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 10 days

UNIT #9: Vegetable Unit (Important) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.12.C	• Evaluate sources of food and nutrition information.
11.3.12.E	• Analyze the breakdown of foods, absorption of nutrients and their conversion to energy by the body.
11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation and packaging.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence and athletic goals.
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge and changes in nutritional requirements.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.11-12.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.5.11-12.C	• 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.
CC.3.5.11-12.I	• Synthesize information from a range of sources (texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 10 days

UNIT #9: Vegetable Unit (Important) **GRADE:** 10-12

UNDERSTANDINGS

The pigment and composition of a vegetable determines the cooking technique, which ultimately impacts the flavor of the vegetable.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activities in kitchen groups-analysis of nutritional benefits of vegetables.

KNOW

- Identify the eight classifications of vegetables.
- Define: stem, tuber, leafy, flower, root, bulb, seed.
- Define: chlorophyll, carotene, flavones, anthocyanin
- Explain how to determine if a product is fruit or a vegetable.
- Explain how cooking techniques affect the flavor of vegetables.
- Describe the proper serving size for raw vegetables.
- Explain why certain vegetables should have their peels removed.
- Explain why all vegetables should be cleaned.

DO

- Demonstrate proper cleaning of various vegetables.
- Categorize vegetables according to pigment, cooking technique and flavor.
- Create an original dish using a variety of vegetables.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 7 days

UNIT #10: Grains Unit (Compact) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation and packaging.
11.3.12.C	• Evaluate sources of food and nutrition information.
11.3.9.G	• Analyze the application of physical and chemical changes that occur in food during preparation and preservation.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, changes in nutritional requirements.
10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, athletic goals.
10.1.12.B	• Evaluate the factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.5.11-12.I	• Synthesize information from a range of sources (texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
CC.3.6.11-12.C.	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.5.11-12.C	• 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.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 7 days

UNIT #10: Grains Unit (Compact) **GRADE:** 10-12

UNDERSTANDINGS

A deeper understanding of the parts of a grain will lead to a greater understanding of the proper cooking techniques for grain products.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activities in kitchen groups-analysis of grain products for health benefits.

KNOW

- Define the four parts of a kernel: endosperm, bran, germ, hull.
- List the different types of grains: wheat, corn, barley, oats, rice, rye, flour, cornstarch, cuscus, pasta, grits, and cereal.
- Explain the difference between fortification and enrichment.
- Explain how grains are refined.
- Describe the six main types of flour.
- Describe the proper method for preparing grains.
- Define: Al dente, starch, absorption, equation, boil, simmer.

DO

- Demonstrate through lab activities the proper cooking methods for various grain products.
- Classify grains according to texture, processing and cooking methods.
- Create an original dish using grain products.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 14 days

UNIT #11: Bread Unit (Essential) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer and Sciences-Grades 9-12:

11.3.12.C	• Evaluate sources of food and nutrition information.
11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation and packaging.
11.3.9.G	• Analyze the application of physical and chemical changes that occur in food preparation and preservation.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.12.C	• Analyze factors that impact nutritional choices of adults: costs, food preparation, consumer skills, nutritional knowledge, and changes in nutritional requirements.
10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence and athletic goals.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness levels, environment, health status, and nutrition.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.11-12.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, audience.
CC.3.5.11-12.I	• Synthesize information from a range of sources (texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
CC.3.5.11-12.D	• Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 14 days

UNIT #11: Bread Unit (Essential) **GRADE:** 10-12

UNDERSTANDINGS

Success in baking bread is determined by an understanding of the differences between yeast, quick bread ingredients, and leavening agents.

Determine the different temperature ranges necessary to produce a variety of bread products.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activities-analysis of carbohydrates in bread products.

KNOW

- Explain how yeast reacts with water temperature.
- Describe the function eggs play in yeast bread construction.
- Describe the four steps of the kneading process.
- Describe how proper mixing technique impacts quick bread recipes.
- Explain how leavening agents of quick breads differ from yeast breads.
- Describe the role/function using the proper flour type plays in making quick breads.
- Define: leavening agent

DO

- Demonstrate proper kneading procedures.
- Demonstrate proper use of ingredients through various lab activities.
- Properly construct a Stromboli using homemade kneaded dough.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 12 days

UNIT #12: Fats and Sweets (Essential) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.9.G	• Analyze the application of physical and chemical changes that occur in food during preparation and preservation.
11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation and packaging.
11.3.12.C	• Evaluate sources of food and nutrition information.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.5.11-12.H	• Synthesize information from a range of sources (e.g. texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
CC.3.6.11-12.H	• Draw evidence from informational texts to support analysis, reflection and research.
CC.3.6.9-10.C	• Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, changes in nutritional requirements.
10.1.9.C	• Analyze factors that impact nutritional choices of adolescents.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 12 days

UNIT #12: Fats and Sweets (Essential) **GRADE:** 10-12

UNDERSTANDINGS

Fats and sweets can positively and negatively impact a person's diet.

Using the proper tools and procedures to measure ingredients is the first step to success in baking.

Baked goods can be appealing in both taste and texture; they can also be healthy options for snacking.

COMMON ASSESSMENTS/CULMINATING ACTIVITIES

Supervised lab activities-analyze nutritional value of baked goods and homemade candy.

KNOW

- Define the following terms as they related to baking: shortened, foam, molded, bar, drop, cut-out
- Determine the correct temperature for boiling syrup for candy making.
- Explain how to properly roll cookies.
- Explain the stages of candy making.
- Distinguish between the proper measuring tools for making candy and baked goods.

DO

- Demonstrate knowledge of the steps to making candy.
- Properly construct a shortened and foam cake.
- Properly construct drop, bar, cut-out and molded cookies.
- Demonstrate proper measuring techniques for making baked goods and candy.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 5 days

UNIT #13: Meal Planning and Grocery Shopping (Compact) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.12.F	• Evaluate the application of nutrition and meal-planning principles in the selection, planning, preparation and serving of meals that meet the specific nutritional needs of individuals across their lifespan.
11.1.12.F	• Compare and contrast the selections of goods and services by applying effective consumer strategies.
11.3.9.F	• Hypothesize the effectiveness of the use of meal management principles (time management, budgetary considerations, sensory appeal, balanced nutrition, safety, sanitation).

Pennsylvania Academic Standards for Business, Computer and Information Technology-Grades 9-12:

15.3.12.I	• Synthesize information gathered from multiple sources (e.g., digital, print, face to face).
15.6.12.A	• Evaluate the impact of internal and external influences on financial decisions.
15.6.12.G	• Evaluate strategies for personal financial management.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.9-10.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.6.9-10.G	• Draw evidence from informational texts to support analysis, reflection and research.
CC.3.5.9-10.C	• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 5 days

UNIT #13: Meal Planning and Grocery Shopping (Compact) **GRADE:** 10-12

UNDERSTANDINGS

Meals should be designed to meet size, shape, texture, color, flavor, and temperature classifications.

The elements of meal planning include health, allergies, resources, size, and time.

Grocery stores are laid out according to logic and marketing principles.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Meal planning for 7 days using a budget.

KNOW

- Explain the elements that contribute to meal design.
- Explain how health and allergies relate to meal planning and meal choices.
- Describe the elements of meal planning.
- Describe the logic and marketing principles used to design grocery stores.
- Describe how technology has impacted grocery shopping.

DO

- Demonstrate knowledge of meal appeal through meal construction.
- Compare and contrasts meal ideas for single family, individuals and families with children.
- Analyze a blueprint for a grocery store using marketing principles.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 7 days

UNIT #14: Convenience Foods (Compact) **GRADE:** 10-12

STANDARDS:

Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:

11.3.12.A	• Analyze how food engineering and technology trends will influence the food supply.
11.3.12.C	• Evaluate sources of food and nutrition information.
11.3.12.G	• Evaluate the application of nutrition and meal-planning principles in the selection, planning, preparation and serving of meals that meet the specific nutritional needs of individuals across their lifespan.

Pennsylvania Academic Standards for Health, Safety and Physical Education-Grades 9-12:

10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, athletic goals.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, changes in nutritional requirements.

Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:

CC.3.6.9-10.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.
CC.3.5.11-12.C	• 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.
CC.3.5.11-12.I	• Synthesize information from a range of sources (texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 7 days

UNIT #14: Convenience Foods (Compact) **GRADE:** 10-12

UNDERSTANDINGS

A thorough knowledge of the types and cooking methods of convenience foods can make meal planning easier and less expensive without sacrificing nutritional value.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activity: meal planning and preparation with convenience foods.

KNOW

- Explain the difference between fresh food products and convenience foods.
- Describe the purpose of convenience foods.
- Define: unit cost, serving size
- Identify the preservatives found in convenience foods.
- Explain the cost and time benefits of cooking with convenience foods.

DO

- Compare and contrast calories and nutritional differences between convenience foods and fresh food products.
- Compare and contrast cooking methods used for various convenience foods.
- Demonstrate cooking time differences for fresh and convenience foods products.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 5 days

UNIT #15: Collection Unit (Compact) **GRADE:** 10-12

STANDARDS:	
Pennsylvania Academic Standards for Family and Consumer Sciences-Grades 9-12:	
11.3.12.C	• Evaluate sources of food and nutrition information.
11.3.12.G	• Analyze the relevance of scientific principles to food processing, preparation, and packaging.
11.3.12.F	• Evaluate the application of nutrition and meal-planning principles in the selections, planning, preparation and serving of meals that meet the specific nutritional needs of individuals across their lifespan.
Pennsylvania Academic Standards and Health, Safety and Physical Education-Grades 9-12:	
10.1.12.C	• Analyze factors that impact nutritional choices of adults: cost, food preparation, consumer skills, nutritional knowledge, and changes in nutritional requirements.
10.1.12.B	• Evaluate factors that impact the body systems and apply protective/preventive strategies: fitness level, environment, health status, and nutrition.
10.1.9.C	• Analyze factors that impact nutritional choices of adolescents: body image, advertising, dietary guidelines, eating disorders, peer influence, and athletic goals.
Pennsylvania Common Core Standards for Science and Technical Subjects-Grades 9-12:	
CC.3.5.9-10.C	• Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.
CC.3.5.9-10.D	• Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context.
CC.3.6.9-10.C	• Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.

KNOW, UNDERSTAND, DO

COURSE: Foods and Nutrition **TIME FRAME:** 5 days

UNIT #15: Collection Unit (Compact) **GRADE:** 10-12

UNDERSTANDINGS

Collection foods like soups, salads, beverages, sandwiches and casseroles, nutritional value when prepared correctly.

COMMON ASSESSMENTS/CULMINATING ACTIVITY

Supervised lab activity: compare and contrast nutritional values of various collection foods.

KNOW

- Explain why it is important to start all soups with a stock or base.
- Define the essential elements of a salad.
- Describe the ingredients that create the based for all beverages.
- Describe the nutrients that are added when dairy is added to beverages.
- Explain why all casseroles must be baked.

DO

- Create proper meal plans for the following collection foods: casserole, soup, salad and beverages.
- Demonstrate proper technique for constructing homemade soups, casseroles, salads and beverages.
- Analyze various beverages according to nutritional values.
- Demonstrate the proper method for making a roux.

ASSESSMENT

The teacher will use a variety of assessment techniques selected from, but not limited to, the following list:

1) Objective tests/quizzes
2) Essay tests
3) Take-home / in-class essays
4) Research papers
5) Oral presentations:
    - Reports
6) Various writing assignments:
    - Food Journals
    - Recipes
7) Posters/Pictures
8) Homework
9) Class discussion
10) Teacher/Student conferences

Although each individual assessment will have its own grading value, common guidelines include, but are not limited to:

- Accurate information
- Logical development
- Proper format
- Clear presentation
- Focused argument/theme
- Neatness/Organization

Teacher and student-made rubrics will be developed at the discretion of the individual instructor.

Adaptations/Modifications for Students with I.E.P.s

Adaptations or modifications to this planned course will allow exceptional students to earn credits toward graduation or develop skills necessary to make a transition from the school environment to community life and employment. The I.E.P. team has determined that modifications to this planned course will meet the student's I.E.P. needs.

Adaptations/Modifications may include but are not limited to:

INSTRUCTION CONTENT

- Modification of instructional content and/or instructional approaches
- Modification or deletion of some of the essential elements

SETTING

- Preferential seating

METHODS

- Additional clarification of content
- Occasional need for one to one instruction
- Minor adjustments or pacing according to the student's rate of mastery
- Written work is difficult, use verbal/oral approaches
- Modifications of assignments/testing
- Reasonable extensions of time for task/project completion
- Assignment sheet/notebook
- Modified/adjusted mastery rates
- Modified/adjusted grading criteria
- Retesting opportunities

MATERIALS

- Supplemental texts and materials
- Large print materials for visually impaired students
- Outlines and/or study sheets
- Carbonless notebook paper
- Manipulative learning materials
- Alternatives to writing (tape recorder/calculator)