



Northern York County School District

Curriculum Overview

Course: Nutrition and Food Science

Grade Level: 9-12

Approval Date: January 2025

Length of Time: 90 days

Course Description:

As part of the Family and Consumer Sciences (FCS) curriculum, Nutrition and Food Science introduces students to the fundamentals of nutrition, healthy eating habits, and food preparation. Students will examine the science of food, its effects on human health, and the skills necessary to make informed dietary choices. The course emphasizes the cultural, social, and environmental factors that influence food consumption, while encouraging students to adopt sustainable and health-conscious lifestyles.

Topics include the study of nutrients, food labels, meal planning, and dietary guidelines, complemented by hands-on experience in food preparation and kitchen safety. Through this course, students will develop practical skills beneficial for personal health, as well as careers in food science, hospitality, healthcare, and long-term wellness.

Prerequisite: Introduction to Culinary

Course Objectives:

- Identify and explain the roles of major nutrients in the body, assess how nutritional needs change throughout life stages, and evaluate the relationship between diet, health, and the prevention of chronic diseases.
- Analyze food labels to make informed dietary choices, create balanced meal plans using resources like MyPlate, and examine the cultural, social, and personal factors that shape food choices.
- Apply kitchen safety and sanitation protocols, master essential food preparation techniques in relation to food allergies and sensitivities.
- Work both independently and as part of a team to complete cooking assignments, learning how to manage responsibilities and collaborate effectively in a kitchen environment.
- Explore the scientific principles behind food preparation and preservation, analyze how different cooking methods impact nutritional value and flavor, and conduct experiments on food reactions such as fermentation and caramelization.
- Analyze the nutritional content of foods and learn how to modify recipes to accommodate various dietary restrictions.
- Critically analyze media portrayals and current events related to nutrition, debunk myths around food trends and diets, and connect personal dietary choices to broader public health and food policy issues.

Related Standards:

National Standards for Family & Consumer Sciences

- 1.0 Career Community and Family
- 2.0 Consumer and Family Resources
- 3.0 Consumer Services
- 8.0 Food Production and Services
- 9.0 Food Science, Dietetics, and Nutrition
- 14.0 Nutrition and Wellness

Pennsylvania Academic Standards for Career Education and Work

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

Pennsylvania Academic Standards for Reading in Science and Technology

CC.3.5.11-12.C. Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Pennsylvania Standards for Writing in Science and Technology

CC.3.6.11-12.F. Conduct short as well as more sustained research projects to answer a question (including the self-generated 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.

Units:

- Eating Habits
- Understanding Nutrients
- Managing your Nutrition
- Wellness beyond Nutrition

Concepts:

- **Nutritional Balance** – Understanding the role of nutrients and how to maintain a balanced diet for overall health.
- **Food Safety and Sanitation** – Practicing proper food handling, preparation, and storage to prevent illness.
- **Impact of Lifestyle on Wellness** – Exploring how physical activity, mental health, and stress management contribute to overall wellness.
- **Cultural and Environmental Influences on Food Choices** – Examining how culture, environment, and sustainability shape dietary habits.
- **Critical Analysis of Food Trends** – Evaluating media, myths, and current trends related to diets, supplements, and health.

Competencies:

Students will:

- Identify and explain the role of major nutrients in maintaining health and supporting bodily functions.
- Analyze personal dietary habits and create balanced meal plans based on nutritional guidelines.
- Interpret food labels and evaluate the nutritional content of various food products.
- Demonstrate safe food handling and preparation techniques to prevent foodborne illnesses.
- Apply kitchen safety and sanitation procedures during hands-on food preparation activities.

	<ul style="list-style-type: none"> • Examine factors that influence food choices, including cultural, social, and personal preferences. • Assess the relationship between physical activity, mental health, and overall wellness. • Identify strategies to manage stress and maintain mental and social wellness. • Critically evaluate media and trends related to diets, supplements, and food marketing. • Investigate the environmental and global impacts of food production and explore sustainable eating practices.
Learning Activities: <ul style="list-style-type: none"> • Students will analyze food labels identifying key nutritional information and compare these values to daily recommended allowances. • Students will create a meal plan that balances nutritional needs using resources like MyPlate and the USDA Dietary Guidelines. • Students will participate in regular cooking labs where they practice essential kitchen skills, including proper food handling, safety procedures, and various cooking techniques. They will prepare foods that align with specific nutritional goals, applying concepts learned in class. • Students will conduct food science experiments in the kitchen. They will observe the chemical changes in food and analyze how these processes affect the taste, texture, and nutritional value of the food. • Students will research popular foods or diet myths. • Students will engage with guest speakers from the nutrition or food science fields, such as a dietitian or chef, and ask questions about their career. Alternatively, they will research various careers related to nutrition and food science and present on job requirements, roles, and future career prospects. 	Performance Tasks: <p>Classwork Projects Lab planning Cooking labs Lab evaluations/reflection (both peer and self) Unit tests</p>
Other Assessment Measures: In class discussions Knowledge checks AAFCS Pre-Professional Assessment and Certification: Nutrition, Food, and Wellness YouScience Nutrition and Wellness Certificate	

Textbook/Primary Resource:

Nutrition and Wellness for Life By: Dorothy F. West, Ph.D., Cindi Calhoun, and Jessica Peconi-Cook
Copyright: 2023 ISBN: 978-1-63776-170-0

Supplemental Resource Materials:

Online resources

Teacher generated notes and presentations

Teacher generated activities

Multimedia resources

Recipe book or access to online culinary resources

Kitchen equipment and supplies for hands-on labs (stoves, utensils, ingredients etc.)