

Food Science & Nutrition Overview

Content Area: **Family/Consumer Science**
Course(s): **Math , FOOD SCIENCE & NUTRITION**
Time Period:
Length: **90 Days**
Status: **Published**

Cover

EAST BRUNSWICK PUBLIC SCHOOLS

East Brunswick New Jersey

Superintendent of Schools

Dr. Victor P. Valeski

BOARD OF EDUCATION

Todd Simmens, President

Vicki Becker, Vice President

Susanna Chiu

Robert Cancro

Liwu Hong

Laurie Lachs

Barbara Reiss

Chad Seyler

Meredith Shaw

Course Adoption: 12/20/1990

Curriculum Adoption: 12/20/1990

Date of Last Revision Adoption: 9/1/2017

Course Overview

COURSE DESCRIPTION

The intention of this comprehensive program is to inspire and engage students, at all ability levels, in the exploration of standard scientific principles relating to food. The students will recognize the involvement and importance of food in our everyday lives via teacher contribution, multi-media resources, and hands-on practical experiential activities. This one-semester elective will be offered to students in grades 8-12 at the Churchill Jr. High School and East Brunswick High School. The class will meet for one full period, five days per week.

COURSE SCOPE AND SEQUENCE

| Sequential Unit Description | Other Pacing Guide References | Proficiency (Summative) Assessments |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit 1 What is Food Science? • Introduction to Course • Awareness of Influences In Our Life • Food Labeling • Unit Pricing • Careers in Food Science | 4 weeks (approximate) | <ul style="list-style-type: none">• Career Exploration Research Project• Unit Pricing Product Evaluation• Food Labeling Investigation• Media Study |
| Unit 2 Sensory Evaluation • Touch • Smell • Taste • Hearing • Sight | 3 weeks | <ul style="list-style-type: none">• Unit Test• Lab Reports (various)• Article Analysis |
| Unit 3 Laboratory Procedures • Safety – Kitchen | 4 days | <ul style="list-style-type: none">• Safety Test• Measuring Lab |

- Safety- Lab
- Measuring

Unit 4 Microwave Cooking

- Safe use of the microwave oven
 - Energy Distribution
 - Adapting a recipe
 - Change of state
- 2 weeks
- Microwave Labs (various)
 - Unit Test

Unit 5 Nutrients

- Introduction
 - Water
 - Lipids
 - Carbohydrates
 - Proteins
 - Minerals & Vitamins
- 7 weeks
- Lab Reports (various)
 - Unit Tests/Quizzes (various)
 - Article Analyses

Unit 6 Culminating Project

- 1 week
- Exploring Food Science In Our Lives
- Final Presentation

CONTENT FOCUS AREA AND COURSE NAME

Course Name: Food Science and Nutrition, #1360, #2363

| Course Number | School Numbers | Course Level | Grads(s) | Credits | Min. Per Week | Elective/ Required | Initial Course Adopted |
|---------------|----------------|--------------|----------|---------|---------------|--------------------|------------------------|
| 1360 | 050 | S | 10-12 | 2.50 | 210 | E | 12/20/90 |
| 2363 | 055 | S | 8-9 | 2.50 | 210 | E | 12/20/90 |

Textbooks and Other Resources

Textbook: FOOD SCIENCE AND YOU by Kay Y. Mehas and Sharon L. Rodgers; Glencoe Publishing

Teacher Resource Guide

Student Workbook Activities

Magazine and News Articles

Kitchen Labs & Tools/Materials

Food Supplies

Teacher Developed Materials

DVD's/Online Resources

Standards

| | |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9.3.12.AG.1 | Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster. |
| 9.3.12.AG.2 | Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy. |
| 9.3.12.ED.1 | Apply communication skills with students, parents and other groups to enhance learning and a commitment to learning. |
| 9.3.12.ED.2 | Demonstrate effective oral, written and multimedia communication in multiple formats and contexts. |
| 9.3.12.AG-FD.1 | Develop and implement procedures to ensure safety, sanitation and quality in food product and processing facilities. |
| 9.3.12.AG-FD.2 | Apply principles of nutrition, biology, microbiology, chemistry and human behavior to the development of food products. |
| 12.9.3.HT-RFB.2 | Demonstrate safety and sanitation procedures in food and beverage service facilities. |
| CRP.K-12.CRP1.1 | Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater |

| | |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | good. |
| CRP.K-12.CRP4 | Communicate clearly and effectively and with reason. |
| CRP.K-12.CRP4.1 | Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome. |
| HPE.2.1.12.A.CS1 | Developing and maintaining wellness requires ongoing evaluation of factors impacting health and modifying lifestyle behaviors accordingly. |
| HPE.2.1.12.B.1 | Determine the relationship of nutrition and physical activity to weight loss, weight gain, and weight maintenance. |
| HPE.2.1.12.B.2 | Compare and contrast the dietary trends and eating habits of adolescents and young adults in the United States and other countries. |
| HPE.2.1.12.B.3 | Analyze the unique contributions of each nutrient class (fats, carbohydrates, protein, water, vitamins, and minerals) to one's health. |
| HPE.2.1.12.B.CS1 | Applying basic nutritional and fitness concepts to lifestyle behaviors impacts wellness. |
| CAEP.9.2.12.C.1 | Review career goals and determine steps necessary for attainment. |
| CAEP.9.2.12.C.3 | Identify transferable career skills and design alternate career plans. |

Grading and Evaluation Guidelines

GRADING PROCEDURES

In terms of proficiency level the East Brunswick grades equate to:

- A Excellent Advanced Proficient
- B Good Above Average Proficient
- C Fair Proficient
- D Poor Minimally proficient
- F Failing Partially Proficient

COURSE EVALUATION

Each quarter students will be evaluated with tests and programming assignments using a total point basis to determine the quarter average. The semester/course average will be a weighted average of the 2 quarter averages (40% each) and a final exam (20%)

Course achievement will be evaluated based on the percent of all pupils who achieve the minimum level of proficiency (final average grade) in the course. Student achievement levels above minimum proficiency will also be reported. Final grades, and where relevant mid-term and final exams, will be analyzed by staff for the

total cohort and for sub-groups of students to determine course areas requiring greater support or modification.)

Other Details

22203 Food Science

Food Science courses offer opportunities to study the composition, structure, and properties of foods and the chemical changes that occur during the processing, storage, preparation, and consumption of food. These courses often explore the effects of various materials, microorganisms, and processes on food products through laboratory experiments.