Unit 04: Nutrition for Disease Prevention

Content Area: **Family and Consumer Sciences**
Course(s):
Time Period: **Marking Period 1**
Length: **2-3 Weeks**
Status: **Published**

Brief Summary of Unit

In this unit, students will understand that chronic diet-related disease (Type 2 Diabetes, Hypertension, Heart Disease, certain cancers, stroke) have risen, due in part to changes in lifestyle behaviors. This unit will allow students to explore how a history of poor eating habits and physical activity patterns have a cumulative effect on and contribute to significant nutrition related health challenges. Students will identify specific causes and learn how to treat diet related diseases nutritionally. In this course, students are provided with opportunities to develop skills that pertain to a variety of careers. When completing this course, students can make informed choices and pursue electives in the FCS program that further their study and contribute toward the formation of career interest.

Standards

The identified standards make interdisciplinary connections across content areas including social sciences, technology and career readiness. Within this course, as appropriate, cultural awareness and global citizenship are highlighted as related to culinary content.

National Standards for Family and Consumer Sciences Education

Standard 8.0 Food Production and Services Comprehensive Standard: Integrate knowledge, skills, and practices required for careers in food production and services.

8.3.6 Identify a variety of types of equipment for food processing, cooking, holding, storing, and serving, including hand tools and small ware.

8.5.4 Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods.

Area of Study 14.0 Nutrition and Wellness

14.2.1 Evaluate the effect of nutrition on health, wellness and performance.

14.2.3 Analyze the effects of food and diet fads, food addictions, and eating disorders on wellness.

14.3.1 Apply current dietary guidelines in planning to meet nutrition and wellness needs.

Area of Study 9.0 Food Science, Dietetics, and Nutrition dietary plans.

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

9.3.2 Analyze nutritional data.

9.3.4 Assess the influence of cultural, socioeconomic and psychological factors on food and nutrition and behavior.

9.3.5 Analyze recipe/formula proportions and modifications for food production.

9.3.6 Critique the selection of foods to promote a healthy lifestyle.

9.3.7 Plan menus, applying the exchange system to meet various nutrient needs.

9.4.4 Construct a modified diet based on nutritional needs and health conditions.

Cross curricular connections:

CS.K-12.2.b Create team norms, expectations, and equitable workloads to increase efficiency and effectiveness.

LA.K-12.NJSLSA.L3 Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

LA.K-12.NJSLSA.W4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

LA.K-12.NJSLSA.W5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

CS.K-12.2.d Evaluate and select technological tools that can be used to collaborate on a project.

HE.K-12.P.3 Communicating clearly and effectively (verbal and nonverbal)

CS.K-12.2.a Cultivate working relationships with individuals possessing diverse perspectives, skills, and personalities.

LA.WHST.6-8.4 Produce clear and coherent writing in which the development, organization, voice, and style are appropriate to task, purpose, and audience.

HE.K-12.P.10 Using technology tools responsibly

CS.K-12.2.c Solicit and incorporate feedback from, and provide constructive feedback to, team members and other stakeholders.

LA.WHST.6-8.6 Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.

MA.K-12.1 Make sense of problems and persevere in solving them.

TECH.K-12.P.8 [Practice] - Use technology to enhance productivity, increase collaboration and communicate effectively.

PFL.9.1.K12.P.4 [Practice] - Demonstrate creativity and innovation.

WRK.K-12.P.9 [Practice] - Work productively in teams while using cultural/global competence.

ELD standards: https://docs.google.com/document/d/1wdmsiGOdCHlrjU-WPvAtENnEgi0EStZXo0uiFYv1Nu4/edit

Essential Questions

- What changes can you make in your lifestyle and diet for optimal future health?
- What effect does the food you eat during your lifetime have on your health?

Students will know / Students will be skilled at

Students will be skilled at:

- recognizing the symptoms of nutrition related diseases such as diabetes, heart disease, hypertension, certain cancers, anemia, osteoporosis, celiac disease and diverticulitis.
- developing medical nutrition therapy plans to treat or prevent nutrition related diseases. these plans include how much of certain food groups and nutrients to eat, what food groups or nutrients to limit and avoid, and how much physical activity would be appropriate if recommended as part of a plan.
- identifying myths related to certain diseases, specifically diabetes.
- understanding the difference between type 1 and type 2 diabetes.

Students will know:

- key terms: bone density, HDL, LDL, blood pressure, antioxidants, phytochemicals, insulin, glucose, glucagon, carbohydrate counting, hyper / hypo-glycemia, atherosclerosis, superfood.
- symptoms of the diseases discussed in this unit such as: osteoporosis, heart disease, anemia, hypertension, diabetes, and certain types of cancer, etc.
- the recommended medical nutritional therapy for the diseases covered in this unit.

Evidence/Performance Tasks

FCS courses are designed to promote skill attainment. Student progression and pace through which they proceed through the performance tasks is based on their affinity for and ability to reach skill attainment. The teacher will determine formative and summative skill attainment; alternative assessments will be incorporated for each student based on their strengths and challenges.

Students will:

- participate in related food labs that correlate with nutrition therapy plans for specific disease groups
- actively participate in guided question and answer sessions, group and individual discussions, show an understanding of the purpose of the unit lesson(s), and the key terms and concepts.
- be evaluated by the teacher through observation of performance.
- complete a Reflective journal on each unit related disease that was discussed and presented in class ; suggested guiding questions include but are not limited to: What single most important finding did you learn? How may you apply the information learned in your own life? What changes do you see yourself making in your own lifestyle and diet? o How will what you learned affect you?
- complete a self evaluation rubric of performance and lab critique submissions.
- complete unit tests, engage in group work, actively participate in group presentations, complete reflective journal, demonstrate understanding in taking a Diet and Disease Test
- meaningfully address the essential and guiding questions of this unit of study.
- participate in a group presentation on a diet related disease.

Learning Plan

The teacher will:

- Preview the essential questions and connect to learning throughout the unit
- Assign Homework: Family Health Tree
- Administer pre-test on "Disease Prevention" to determine student baseline unnderstanding of unit-based topics
- Initiate and encourage class discussion based on “superfood” articles to develop their own top 5 “superfoods”
- Access video: Beauty and the Feast (chapter 2). Demonstrating the connection of foods to the “whole person,” rather than solely the total of its vitamins and calorie counts.
- Facilitate Lab #1: superfoods. have groups choose and prepare recipes incorporating superfoods
- Introduce and explain “Diet and Disease Team Teaching Assignment” packet
- Reinforce understanding and/or provide review the topic of osteoporosis (introduced as part of the Cooking Basics curriculum) via the game,“Boning Up.”
- Assign groups to research specific diseases including diabetes, heart disease, cancer, anemia, hypertension, diverticulitis, osteoporosis, and celiac disease and prepare outline, note cards, and individual presentation assignments. Assess students as they make presentations, Engage audience during presentations via note taking and reflection on the information presented. Collect reflective journals and provide targeted feedback on unit-related content referencd in journals.
- Facilitate labs for each unit presented disease(for example: osteoporosis labs will contain foods that are high in calcium)
- Access video: Diet and Disease in Modern Society and provide study guides for completion as they watch the video.
- Administer assessment to determine student understanding of the connection betweeen diet and disease.
- Provide unit review; suggestions based on available resources include: Diet and Disease Jeopardy, Heart disease bingo. diabetes bingo, Diet and Disease review worksheets

Materials

The materials used in this course allow for integration of a variety of instructional, supplemental, and intervention materials that support student learners at all levels in the school and home environments. Associated web content and media sources are infused into the unit as applicable and available

In addition to the materials below, the link that connects to district approved textbooks and resources utilized in this course can be found on the Curriculum and Instruction webpage: (https://www.cranfordschools.org/apps/pages/index.jsp?uREC_ID=1774932&type=d&pREC_ID=1953860). Any additional resources, not included in the current Core Book List, must be explicitly presented to and reviewed by the supervisor the week before the resource is included into lesson plans. This ensures resources are reviewed and vetted for relevance and appropriateness prior to implementation.

- topic related DVDs
- websites

- interactive use of SmartBoard
- necessary recipes and ingredients
- necessary kitchen equipment
- review worksheetss
- cooking equipment
- Diet and Desease resources (BINGO, Jeopardy)

Suggested Strategies for Modifications

This link includes content specific accommodations and modifications for all populations: https://docs.google.com/spreadsheets/d/1ZSDsCUamViCaBpr1lPOB7FJEC-jx4KnDjZzegIUKeMg/edit?usp=sharing