Unit 06: Nutrition as Fuel for Fitness

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

Brief Summary of Unit

In this unit, students will explore the connections between diet and exercise as a daily concern for total health. 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 is the connection between diet, exercise and good nutrition?
- What nutrients from foods and fluids do athletes need for optimum performance?

Students will know / Students will be skilled at

Students will be skilled at:

- creating meal plans for an athlete
- identifying foods that promote a healthy body
- calculating BMI and calorie needs

Students will know:

- facts and myths related to fitness.
- how foods promote a healthy body.
- how to calculate BMR and calorie needs.
- key terms: BMR, electrolytes, CHO loading, dehydration, rehydration, ergogenic aids, “hitting the wall,” aerobic exercise, anaerobic exercise, heat stroke, target heart rate.
- the importance of warm-up and cool down with exercise.
- the signs and prevention of dehydration.
- which foods promote a healthy body.

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:

- 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.
- analyze sports bars and drinks
- be evaluated by the teacher through observation of performance.
- complete a self evaluation rubric of performance and lab critique submissions.
- complete unit test: Sports Nutrition.
- complete writing prompts including but not limited to: Are dietary supplements necessary? Why or why not?
- meaningfully address the essential and guiding questions of this unit of study.
- participate in related labs.
- plan a personal exercise program and track activities
- plan and prepare a nutritious pre and post-competition meal

Learning Plan

- Administer Test: sports nutrition.
- Engage students in brainstorming personal exercise activities and excuses for not exercising. Record on smart board. Discuss these excuses and what could be done about them.
- Facilitate Lab #1: Students prepare power bars and compare them to commercial products.
- Facilitate Lab #2: Have students select and prepare high carbohydrate foods that would be appropriate for a pre-competition meal.
- Facilitate Lab #3: smoothie recipe as a post-competition snack.
- Have students monitor their steps for a 24 hour period. On day two have students decide the number by which they plan to increase their steps. Continue this increase in steps for three more days.
- Introduce 10,000 steps/ the Step Diet.
- Lead discussion on nutritional needs of an athlete for peak performance, supported by strategies for before, during, and after strenuous activity.
- Prepare a taste test of popular sports drinks and power bars. Compare cost, flavor, nutritional value, and marketing hook. Engage students in considering other foods that can provide portable nutrition for before or after physical activity.
- Preview the essential questions and connect to learning throughout the unit.
- Provide opportunities for practice as needed in utilizing worksheet: 40 Fact Relay.
- Utilize the following resources as appropriate to discussion and student readiness: Video: “Eat to Win”, Reading: "Focus on Water", Dietary Supplement Scavenger Hunt

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
- worksheets to support unit theme

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