Tennessee CTE

Nutrition Across the Lifespan

Safety & Sanitation NATL 1

1.1 Common Lab Safety Procedures: Demonstrate safety and sanitation procedures related to handling, preparing, storing, and serving food. Identify and review general common laboratory safety procedures including but not limited to prevention and control procedures and personal hygiene expectations. Incorporate safety procedures and complete a teacher made safety test with 100 percent accuracy. NATL 1.1

a. Demonstrate proper and safe handling of knives, tools and equipment. NATL 1.1.A

b. Apply the fundamentals of time, temperature and cooking methods to cooking, cooling, reheating and holding of a variety of foods. NATL 1.1.B

c. Demonstrate cooking methods that increase nutritional value, and lower calorie and fat content. NATL 1.1.C

Nutrition and Health Overview NATL 2

2.1 Dietary Guidelines for Americans: Summarize the Dietary Guidelines for Americans and its relationship to optimum physical, mental, and social well-being at all stages of development across the life span as outlined by the USDA and HHS. Illustrating findings on the nutritional needs of individuals and families in relation to age, gender, activity level, and health status. NATL 2.1

Anatomy and Physiology of Nutrition NATL 3

3.1 Anatomy and Physiology of the Gastrointestinal System: Create a model or graphic illustration that identifies the major anatomic structures and accessory organs of the gastrointestinal (GI) system. Explain the function of each structure, including the accessory organs, in the process of digestion, absorption, transport of nutrients in the body including the conversion of glucose to ATP. Also describe common gastrointestinal complications and digestive diseases, including how the body deals with deficiencies and excess nutrients and the impact on overall health NATL 3.1

3.2 Macronutrients, Micronutrients, and Water: Identify, analyze, and visually represent the macronutrients , micronutrients, and water required in the human diet. Include the common food sources of those nutrients, their chemical properties, and function in the May 2022 | Page 4 body, as well as the influence upon biological systems in reference to maintenance and growth. NATL 3.2

a. Macronutrients include carbohydrates, lipids, proteins NATL 3.2.A

b. Micronutrients include minerals, vitamins NATL 3.2.B

c. Water NATL 3.2.C

Skip to main content

Nutritional Requirements Across the Lifespan NATL 4

4.1 USDA Guidance: Accurately read, interpret, and communicate understanding of guidance from the U.S. Food and Drug Administration (FDA), such as nutrition labels and daily value recommendations using accurate symbols, key terms, and other domain-specific words and phrases. NATL 4.1

a. Accurately read and interpret nutrition labels using correct symbols and terminology. NATL 4.1.A

b. Analyze nutrition labels in correlation to specific dietary needs. NATL 4.1.B

4.2 Life Span Nutritional Guidelines: Research and prepare informational artifacts for consumers that present the specific nutritional guidelines for each stage of the life span using scientifically accurate terms and symbols. For each life span phase, include the following: NATL 4.2

a. How nutritional needs change throughout the lifespan. NATL 4.2.A

b. Factors that impact food choices at various stages of the lifespan. NATL 4.2.B

c. Common nutritional excesses and deficiencies at various stages of the lifespan. NATL 4.2.C

d. Importance of fitness and exercise during each stage of the lifespan. NATL 4.2.D

e. Plan meals for each stage of the lifespan. NATL 4.2.E

4.3 Meal Planning: Analyze various meal plans that meet the 2020-2025 Dietary Guidelines for Americans recommended by the U.S. Department of Agriculture. Create a meal plan that addresses the nutritional needs of a specific individual based on their age, gender, activity level, and other factors and justify choices using evidence. Select, prepare, and serve food(s) from the meal plan following recipes precisely, including defining and utilizing specific culinary and measurement terms as needed. Practice proper serving and etiquette principles during appropriate situations. NATL 4.3

4.4 Food Journal Analysis: Keep a food journal. Analyze the nutrient content of food consumed using a nutrient analysis program based on age, gender, activity level, and health status. Summarize the findings and include conclusions drawn on recommendations of how the diet could be modified to more closely align with the current edition of the Dietary Guidelines for Americans. NATL 4.4

4.5 Alternative Diet and Lifestyle Approaches: Compare and contrast alternative diet and lifestyle approaches to the Dietary Guidelines for Americans for individuals of the same age and gender. Explain the reasons for the dietary differences summarizing information to describe the physiological differences of the lifestyles, including, but not limited to: NATL 4.5

a. Differences in physical activity (e.g., athletic training) NATL 4.5.A

b. Differences in religious or ethical values (e.g., vegetarian, vegan, kosher) NATL 4.5.B

c. Differences based on disease or physiological need (e.g., gluten free and low sodium diets) May 2022 | Page 5 NATL 4.5.C

Skip to main content

d. Common diet related diseases such as diabetes and/or cardiovascular disease NATL 4.5.D

Food Preferences and Choices NATL 5

5.1 Food Choices and Preferences: Research and summarize the factors that contribute to food choices and preferences, including cultural, geographical, economic, psychological, and social influences. Describe the most likely results of preferences and external factors on nutritional intake. NATL 5.1

a. Example of geographical external factor on nutritional needs: Individual living in an area without adequate sunlight exposure may need to eat a diet rich in Vitamin D to make up for vitamin deficiency. NATL 5.1.A

b. Example of geographical preference on food choice: Individual living in a colder climate might prefer methods of cooking that keep heat in the living area, while an individual living in a warmer climate might prefer preparation methods that reduce heat. NATL 5.1.B

5.2 Food Choices Related to the Senses and Preparation Techniques: Form a hypothesis and design and conduct an experiment to identify the role of the senses and/or food preparation techniques in food choices. Summarize and defend results. NATL 5.2

5.3 Nutritional Claims of Various Diets: Research nutritional claims of various diets and use appropriate/reliable sources of nutritional information to determine the validity of those claims. Use nutritional databases, food label information, and other sources to analyze the nutrient composition of one day of foods on each diet investigated. Compare and contrast two plans for an individual with specific characteristics, noting similarities and differences in two diets. NATL 5.3

Nutritional Issues and Controversies NATL 6

6.1 Topics in Nutrition: Synthesize evidence from multiple sources to analyze topics in nutrition, including but not limited to: NATL 6.1

a. Genetically modified foods NATL 6.1.A

b. Artificial sweeteners versus natural sugar NATL 6.1.B

c. Organic and local food movements NATL 6.1.C

d. Benefits and risk of different forms of dieting NATL 6.1.D

e. Use of probiotics Evaluate the validity and credibility of source materials and deduce the principle arguments for each, carefully weighing the author's evidence against potential biases. NATL 6.1.E

6.2 Obesity in America: Describe the correlation of energy balance, lifestyle, diet, age, gender, and metabolism to the obesity epidemic in America. Compare and contrast how different diets, habits, heredity, and physical characteristics contribute to obesity. Analyze the government's role in the food supply and research various initiatives to fight obesity and improve nutrition across the nation including government assistance programs. NATL 6.2

Skip to main content

Food Preparation and Integrity NATL 7

7.1 **Food Supply: Investigate the food supply chain from point of origin to the point of sale – analyzing handling, transportation, storage, processing, and packaging – to identify where food safety and nutritional value could be compromised. Determine where food is most susceptible to contamination, food-borne illness, spoilage, and nutrient loss.** NATL 7.1

7.2 **Selection and Preparation of Food: Demonstrate food selection and preparation methods that maximize the nutritional value of foods while minimizing dietary health risks. Plan and conduct nutrition laboratory experiments to determine the physical and chemical changes of food structure through chemical reactions then compare and contrast the results. Demonstrate relationships among concepts including, but not limited to:** NATL 7.2

a. Heat NATL 7.2.A

b. Acidity level NATL 7.2.B

c. Fermentation NATL 7.2.C

d. Maillard reactions NATL 7.2.D

e. Chemically processed foods NATL 7.2.E

f. Preparation techniques and product yield NATL 7.2.F

Socioecological Nutrition NATL 8

8.1 **Government Nutrition Programs: Analyze the roles and responsibilities of the USDA, FNS, DHS, FDA in relation to food and nutrition. Research various government programs that aim to improve the nutrition of low-income families.** NATL 8.1

8.2 **Healthy Living Strategies: Describe strategies that can be implemented at a workplace or in the community to promote the consumption of healthy foods and beverages.** NATL 8.2