

## Nutrition Across the Lifespan

### Safety and Sanitation

- 1) Compile and critique safety and sanitation procedures related to handling, preparing, storing, and serving food from industry-approved technical manuals and government published fact sheets. 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 safety test with 100 percent accuracy.

I can analyze safety and sanitation rules and procedures.

I can identify ways to handle, prepare, store and serve food.

I can identify and review common laboratory safety procedures.

I can complete a kitchen safety test with 100% accuracy.

### Nutrition and Health

- 2) Synthesize research published by government agencies or academic journals on the contribution of nutrition and exercise to achieving optimum physical, mental, and social wellbeing at all stages of development across the life span. Create an informative essay illustrating findings on the nutritional needs of individuals and families in relation to age, gender, activity level, and health status.

I can analyze nutrition research and academic journals.

I can compare and contrast nutrition in the physical, mental, and social stages of development across the lifespan.

I can create a essay about nutritional needs of individuals at different stages of the lifespan.

### Anatomy and Physiology of Nutrition

- 3) Create a model or graphic illustration that identifies the major anatomic structures of the gastrointestinal (GI) system. Explain the function of each structure in the process of digestion, absorption, transport, and use of nutrients in the body. Research and develop a logical explanation of how the body deals with deficiencies and surplus nutrients, citing specific textual evidence on the impact on an individual's health.

I can create a illustration or model of the gastrointestinal system.

I can identify the functions of each structure in the digestion, absorption, and transport of nutrients in the digestion process.

I can explain the use of nutrients in the body.

I can research how the body deals with deficiencies and surplus of nutrients in the body.

- 4) Identify, analyze, and visually represent the macro- and micro-nutrients required in the human diet. Include the common food sources of those nutrients, their chemical properties, and

function in the body, as well as the influence upon biological systems in reference to maintenance and growth.

I can identify macro and micro-nutrients.

I can analyze macro and micro-nutrients.

I can identify common food sources of macro and micro-nutrients.

I can research chemical properties, function in the body, and influence on body systems of macro and micro-nutrients.

#### Nutritional Requirements Across the Lifespan

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

I can analyze the U.S. Food and Drug guidance system.

I can identify the parts of a nutrition label.

I can identify symbols, key terms and specific phrases used on nutrition fact labels.

6) 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. Life span phases should include:

a. Birth to 1 year b. Toddlerhood c. Preschool d. School age e. Puberty and adolescence f. Pregnant and lactating females g. Early adulthood h. Middle adulthood i. Late adulthood

I can research specific nutritional guidelines for each stage of the life span.

Birth to 1 yr.

Toddlerhood

Preschool

School age

Puberty

Pregnant females

Early adulthood

Middle adulthood

## Late adulthood

7) Analyze a variety of meal plans that meet nutritional requirements (caloric and RDA) as recommended by the U.S. Food and Drug Administration (FDA). 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.

I can create a meal plan for a specific individual with special nutritional needs.

I can select, prepare, and serve food for this meal plan.

I can identify etiquette and serving rules.

8) Keep a food journal and compare an individual's diet to nutritional recommendations for their respective age, gender, activity level, and health status. Write a summary of the findings and include conclusions drawn on recommendations of how the diet could be modified to make up for deficiencies and surpluses.

I can keep a food journal.

I can compare and contrast nutritional recommendations for individuals of different ages, gender, activity level and health status.

I can summarize the findings of these recommendations.

9) Compare and contrast alternative diet and lifestyle approaches to recommended dietary requirements for individuals of the same age and gender. Explain the reasons for the dietary differences in an informational artifact summarizing information to describe the physiological differences of the lifestyles, including, but not limited to: a. Differences in physical activity (i.e. athletic training) b. Differences in religious or ethical values (i.e. vegetarian, vegan, kosher) c. Differences based on disease or physiological need (i.e. gluten free, elimination or rotation diets)

I can compare and contrast alternative diets and lifestyle approaches for individuals of same age and gender.

I can research artifact for physiological differences of the lifestyles.

-physical activity

-religious or ethical values

-disease or physiological need

## Food Preferences and Choices

10) Research and summarize in an explanatory text the factors that contribute to food choices and preferences including cultural, geographical, economic, psychological, and societal influences. Describe the most likely results of preferences and external factors on nutritional intake. a. Example of geographical external factor on nutritional intake: 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. 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.

I can research and summarize factors that contribute to food choices and preferences.

-geographical preferences

11) 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 experiment results into an argument making a claim about the impact of variables on food choice. Compare results to findings in news media and note when findings support or contradict previous explanations or accounts.

NI can hypothesize and design an experiment on the role of senses and food preparation techniques on food choices.

I can analyze the results of the experiment.

I can compare and contrast the results.

12) 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. Create a graphic illustration comparing actual nutrition provided by each diet to the recommended nutrition requirements for an individual with specific characteristics, noting similarities and differences in two diets

I can research nutritional claims of various diets.

I can use nutritional databases and food labels to analyze the nutrient composition of the diets investigated.

I can create a graphic illustration comparing nutrition provided by the diet and nutrition requirements.

#### Nutritional Issues and Controversies

13) Synthesize evidence from multiple sources to analyze topics in nutrition, including but not limited to: a. The use of genetically modified foods b. Artificial sweeteners versus natural sugar c. Organic and local food movements d. Benefits and risk of different forms of dieting 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.

I can summarize evidence of multiple sources to analyze topic in nutrition.

I can research genetically modified foods, artificial sweeteners, organic food movements, diets, and probiotics.

14) 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. Research various initiatives that have sought to fight obesity and improve nutrition across the nation. Summarize the intended result of an initiative in an explanatory essay, informational artifact, or presentation.

I can identify the correlation of energy balance, lifestyle, diet, age, gender, and metabolism to the obesity epidemic in America.

I can compare and contrast different diets, habits, heredity, and physical characteristics that contribute to obesity.

I can research ways to fight obesity.

#### Food Preparation and Integrity

15) Investigate the food supply 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. Compare this to the food handling, transportation, storage, processing, and preparation from point of sale to the table by creating a graphic illustration indicating where food is most susceptible to contamination, food-borne illness, spoilage, and nutrient loss.

I can research the food supply.

I can identify the steps in the food supply process.

I can compare and contrast food handling, transportation, storage, processing and preparation of food.

I can create an illustration of food supply.

16) 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. Communicate results of experiences, including comparing and contrasting results to findings in a report. Demonstrate relationships among concepts including, but not limited to: a. Heat Page 5 b. Acidity level c. Fermentation d. Millard reactions e. Chemically processed foods f. Preparation techniques and product yield

I can prepare and select food.

I can identify preparation methods.

I can plan and conduct a nutrition foods lab.

I can analyze the food lab.

I can compare: Heat Page, Acidity level ,Fermentation, Millard reactions, Chemically processed foods, Preparation techniques and product yield