

Food Sciences, Dietetics and Nutrition: Grades 9-12

Analyze career paths within food science, food technology, dietetics, and nutrition industries. 9.1

- 1 Explain the roles and functions of individuals engaged in food science, food technology, dietetics, and nutrition careers. 9.1.1
- 2 Analyze opportunities for employment and entrepreneurial endeavors. 9.1.2
- 3 Summarize education and training requirements and opportunities for career paths in food science, food technology, dietetics, and nutrition. 9.1.3
- 4 Analyze the correlation between food science, dietetics, and nutrition occupations and local, state, national, and global economies. 9.1.4
- 5 Create an employment portfolio to communicate food science, food technology, dietetics, and nutrition careers knowledge and skills. 9.1.5
- 6 Analyze the role of professional organizations in food science, food technology, dietetics, and nutrition careers. 9.1.6

Apply risk management procedures to food safety, food testing, and sanitation. 9.2

- 1 Analyze factors that contribute to food borne illness. 9.2.1
- 2 Analyze food service management safety and sanitation programs. 9.2.2
- 3 Implement industry standards for documenting, investigating, and reporting foodborne illnesses. 9.2.3
- 4 Use the Hazard Analysis Critical Control Point (HACCP) during all food handling processes (the flow of food) to minimize the risks of food borne illness. 9.2.4
- 5 Demonstrate practices and procedures that assure personal and workplace health and hygiene. 9.2.5
- 6 Demonstrate standard procedures for receiving, storage, and preparation of raw and prepared foods. 9.2.6
- 7 Classify cleaning and sanitizing materials and their correct use. 9.2.7
- 8 Use Occupational Safety and Health Administration's (OSHA) Right to Know Law and Material Safety Data Sheets (MSDS) and explain their requirements in handling hazardous materials. 9.2.8

9 Demonstrate waste disposal and recycling methods. 9.2.9

Evaluate nutrition principles, food plans, preparation techniques and specialized dietary plans. 9.3

- 1 Analyze nutrient requirements across the life span addressing the diversity of people, culture, and religions. 9.3.1**
 - 2 Analyze nutritional data. 9.3.2**
 - 3 Apply principles of food production to maximize nutrient retention in menus. 9.3.3**
 - 4 Assess the influence of cultural, socioeconomic and psychological factors on food and nutrition and behavior. 9.3.4**
 - 5 Analyze recipe/formula proportions and modifications for food production. 9.3.5**
 - 6 Critique the selection of foods to promote a healthy lifestyle. 9.3.6**
 - 7 Plan menus, applying the exchange system to meet various nutrient needs. 9.3.7**
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Apply basic concepts of nutrition and nutrition therapy in a variety of settings, considering social, geographical, cultural, and global influences. 9.4

- 1 Analyze nutritional needs of individuals. 9.4.1**
 - 2 Use nutritional information to support care planning. 9.4.2**
 - 3 Determine when to provide a selective menu approach in nutrition therapy settings. 9.4.3**
 - 4 Construct a modified diet based on nutritional needs and health conditions. 9.4.4**
 - 5 Design instruction on nutrition to promote wellness and disease prevention. 9.4.5**
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Demonstrate use of science and technology advancements in food product development and marketing. 9.5

- 1 Analyze various factors that affect food preferences in the marketing of food to a variety of populations. 9.5.1**
 - 2 Analyze data in statistical analysis when making development and marketing decisions. 9.5.2**
 - 3 Prepare food for presentation and assessment. 9.5.3**
 - 4 Maintain test kitchen/ laboratory and related equipment and supplies. 9.5.4**
 - 5 Implement procedures that affect quality product performance and sustainability. 9.5.5**
 - 6 Conduct sensory evaluations of food products. 9.5.6**
 - 7 Conduct testing for safety of food products, utilizing available technology. 9.5.7**
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Demonstrate food science, dietetics, and

- 1 Build menus to customer/ client preferences. 9.6.1**

nutrition management principles and practices. 9.6

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- 2 Implement food preparation, production, and testing systems. 9.6.2**

 - 3 Apply standards for food quality and sustainability. 9.6.3**

 - 4 Create standardized recipes. 9.6.4**

 - 5 Manage food production to meet needs and preferences of diverse customer populations. 9.6.5**

 - 6 Analyze new products utilizing most current guidelines and innovations in technology. 9.6.6**

 - 7 Implement procedures that provide cost effective products. 9.6.7**

 - 8 Establish par levels for the purchase of supplies based on an organization's needs. 9.6.8**

 - 9 Utilize Food Code Points of time, temperature, date markings, cross contamination, hand washing, and personal hygiene as criteria for safe food preparation. 9.6.9**

Demonstrate principles of food biology and chemistry. 9.7

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- 1 Explain the properties of elements, compounds, and mixtures in foods and food products. 9.7.1**

 - 2 Analyze the effects of thermodynamics on chemical reactions in foods and food products. 9.7.2**

 - 3 Explain the process of ionization in the formation of acids and bases and effect on food and food products. 9.7.3**

 - 4 Explain the impact of molecular structure of simple and complex carbohydrates on digestion, nutrition, and food preparation procedures. 9.7.4**

 - 5 Relate the composition of lipids and proteins to their functions in foods and their impact on food preparation and nutrition. 9.7.5**

 - 6 Explain the value of molds and enzymes in food products. 9.7.6**

 - 7 Analyze the impact of food presentation methods and techniques on nutrient value, safety and sanitation, and consumer appeal of food and products. 9.7.7**