



OaklandWorks

A School-To-Career Partnership

Foods and Hospitality
Career Cluster Standards

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WestEd

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Introduction to the Foods and Hospitality Industry

The foods and hospitality industry is one of the largest industries in the nation, employing over 9 million people. There are a variety of different career opportunities in the field including chefs and cooks, bakers, butchers, food preparation workers, food service managers, caterers, dietitians, nutritionists, food engineers and scientists, and service people, among others. These jobs are found in a variety of different locations such as restaurants, hotels, theme parks, schools, hospitals, and a variety of business environments.

Employment in the foods and hospitality industry is expected to grow as fast or faster than the national average between now and 2006. The rate of growth will vary across different segments of the industry. Eating and drinking places will provide the most new jobs as the number of eating and drinking establishments increases and other industries (e.g., schools, hospitals, and other businesses) contract out more of their food services to institutional food service companies.

A number of key factors will contribute to growth in the foods and hospitality field. Increases in population, household income, and leisure time will allow people to dine out more often. In addition, as the number of two-income households grows, more families may eat more meals outside the home as a matter of convenience. Growth in the elderly population should also result in more food service jobs in nursing homes and other assisted-living facilities.¹

The OaklandWorks Industry/Education career cluster approach to standards is to identify broad career-technical, rather than job-specific skills, that are common to a group or cluster of similar occupations, highlighting the integration

Career Pathways within the Industry/Education Partnership

The Foods and Hospitality Career Cluster Standards are targeted to the following:

- Career academies in the Oakland Unified School District that focus on Foods and Hospitality (Castlemont High School)
- Community college programs including:
 - ❖ Laney College - Culinary Arts: Cooking Certificate Program and Baking Certificate
 - ❖ Merritt College - Dietary Manager
- California State University, Hayward program in Health Science

¹ A California Apprenticeship Trade Program with minimum entry age of 16 years of age in this cluster is culinarian.

of academic and vocational content. This approach helps to provide students with a general understanding of “all aspects of an industry.”

The OaklandWorks Standards Format

The standards in this document identify the core knowledge and skills for the Foods and Hospitality Career Cluster for the OaklandWorks Industry/Education School-to-Work Partnership. The standards specify in broad terms the knowledge and skills necessary for initial success in each program area (grades 13-14). They consist of content standards (specifying what a student should know and be able to do) and examples of performance indicators (products or actions and tasks that provide evidence of success).

The OaklandWorks standards format includes three different types/levels of standards. They include the following:

- *Employability Skills*—These skills and qualities are foundational to occupations in the cluster.
- *Career-Technical Standards*—These standards define general knowledge and skills—not job-specific skills—which are common across the multitude of occupations within the cluster.
- *Academic Standards*—The academic standards represent generic academic skills that support the career cluster. These standards have been synthesized from the district-adopted standards and highlight academic standards identified as important to this career cluster by the development teams. The performance indicators are examples of how the general academic skills can be contextualized by career-specific content.

The academic standards adopted by Oakland Unified School District in Language Arts, Mathematics, History/Social Science, and Science have been cross-referenced to related performance indicators to enhance their usability. For example, the sample performance indicator for Employability Skill Standard 5: Employment Literacy, “Explains the contributions the foods and hospitality industry makes to the state and national economy, including jobs and taxes”, is cross-referenced to the district’s history/social science standard, History/Social Science: Standard 3: Economics: Topic A: Fundamental Economic Concepts. When more than one topic is identified for a standard an alphanumeric coding system is used (e.g., History/Social Science

3A). A complete list of the alphanumeric codes related to the district's academic standards appears at the end of this document.

Employability Skill Standards for Foods and Hospitality

Employability Skill Standards	Sample Performance Indicators
<p>Standard 1: Personal Qualities Students will understand and demonstrate personal skills and work habits that positively affect performance and employability. They will demonstrate professionalism by exhibiting positive attitudes, self-confidence, dependability, flexibility, self-discipline, perseverance, and ongoing self-evaluation and assessment.</p>	<ul style="list-style-type: none"> • Defines “professionalism” and explains its importance in the foods and hospitality industry • Demonstrates a willingness to take on responsibilities/tasks • Demonstrates self-motivation and self-discipline when working unsupervised • Demonstrates strong organization skills and meticulous attention to detail and quality • Maintains a high level of personal hygiene and grooming • Demonstrates a high level of ethics and integrity • Establishes priorities and manages time effectively • Manages work tasks and projects to completion • Demonstrates ability to work quickly and carefully under pressure and to manage stress effectively • Demonstrates flexibility and an ability to assimilate into unique and different situations • Demonstrates strong hand-eye coordination in relation to food production and processing • Demonstrates effective customer service skills (e.g., friendly, organized, attentive) • Demonstrates an ability to withstand physical, mental, and emotional challenges without losing focus on work at hand. Challenges might include working in close quarters, working under hot and humid conditions, standing for many hours, lifting heavy objects, working under time pressure, working irregular hours (e.g., late into the evening, weekends, holidays), and facing exposure to potential job hazards (e.g., hot/sharp equipment and utensils, dust, fumes, smoke) • Actively seeks opportunities to improve own knowledge and skills

Employability Skill Standards for Foods and Hospitality

Employability Skill Standards	Sample Performance Indicators
<p>Standard 2: Interpersonal Skills Students will understand and demonstrate skills that contribute to effective working relationships with individuals (i.e., one-on-one) and within groups. Their interpersonal interactions with others will promote effective teamwork and client/customer satisfaction.</p>	<ul style="list-style-type: none"> • Demonstrates an awareness of the contribution that teams and individual team members make to a foods and hospitality operation • Recognizes the impact (both positive and negative) that individual team members can have on a team’s performance • Demonstrates a willingness to participate in and contribute to team efforts • Works effectively with others (e.g., peers, supervisors, clients/customers) to meet shared goals and make joint (team) decisions • Shares ideas and resources • Accepts supervision and follows directions and established procedures (written and oral) [Language Arts 1A, 1D, 4B-C] • Actively looks for ways to assist others • Interacts with others in a respectful and considerate manner, showing restraint and compassion when necessary [Language Arts 4B-C] • Resolves conflicts effectively, using appropriate and peaceful conflict resolution strategies (e.g., negotiation, compromise, mediation) • Demonstrates an understanding of cultural factors that can influence working relationships and group dynamics [Language Arts 2A] • Interacts effectively with individuals from culturally-diverse backgrounds [Language Arts 2A]

Employability Skill Standards for Foods and Hospitality

Employability Skill Standards	Sample Performance Indicators
<p>Standard 3: Communication Skills Students will know the various methods of giving and obtaining information. They will communicate effectively, both orally and in writing.</p>	<ul style="list-style-type: none"> • Reads and understands information and ideas presented in writing [Language Arts 1A-D] • Communicates information and ideas in speaking and in writing confidently and so that others will understand [Language Arts 3A-C, 4A, 4C] • Listens actively and patiently to what others say and asks questions to gather information and clarify meaning [Language Arts 4B] • Recognizes and responds to non-verbal forms of communication (i.e., elements of body language) that indicate a need for action [Language Arts 4B]
<p>Standard 4: Critical Thinking and Problem Solving Skills Students will understand and demonstrate a variety of strategies for making decisions and solving problems. They will use creative thinking and logical reasoning skills to research and pose appropriate solutions to a variety of challenges.</p>	<ul style="list-style-type: none"> • Sets short-term and long-term goals and develops/implements plans for achieving the goals • Uses common sense and critical thinking skills to anticipate potential problems and to take appropriate preventive actions • Deals calmly and effectively with unexpected situations and events • “Thinks quickly on feet,” to find imaginative solutions to challenging problems • Demonstrates effective decision-making skills (e.g., identifies and evaluates multiple solutions to a problem before deciding which course of action to take) • Learns from prior experiences (e.g., mistakes and successes), by evaluating the effectiveness of own actions and decisions • Demonstrates resourcefulness (e.g., knows how to obtain information or help when needed) • Resolves client/customer complaints efficiently and effectively • Demonstrates an ability to memorize information • Demonstrates an ability to distinguish facts from opinion

Employability Skill Standards for Foods and Hospitality

Employability Skill Standards	Sample Performance Indicators
<p>Standard 5: Employment Literacy Students will understand the breadth of their career field and its role in the economy. They will understand career paths and strategies for obtaining employment within their field and will assume responsibility for their own professional growth.</p>	<ul style="list-style-type: none"> • Identifies and explains the functions and roles of different segments of the foods and hospitality industry • Describes different jobs and career paths within the foods and hospitality industry (e.g., typical responsibilities of specific jobs, educational/training requirements for specific jobs, logical paths for advancing up the career ladder) • Explains the contributions the foods and hospitality industry makes to the state and national economy, including jobs and taxes [History/Social Science 1B, 1E, 3A] • Explains the contributions that the foods and hospitality industry makes to the quality of peoples' lives • Demonstrates proficiency in basic job search skills (e.g., writing a resume, interviewing for jobs) [Language Arts 3B8, 3C, 4B-C] • Demonstrates an ability to locate and use a variety of career-related resource materials [Language Arts 1A-B, 5A] • Actively seeks opportunities to improve own knowledge and skills • Requests and accepts feedback regarding performance and acts on the feedback to continually improve performance

Employability Skill Standards for Foods and Hospitality

Employability Skill Standards	Sample Performance Indicators
<p>Standard 6: Technology and Equipment Students will understand the role that various types of technology and equipment play in the foods and hospitality industry.</p>	<ul style="list-style-type: none"> • Knows and uses computer systems and basic software applications commonly used to support work in the foods and hospitality industry (e.g., word-processing, spreadsheet programs, database programs, desktop publishing, the Internet) [Language Arts 5A] • Identifies tools, utensils, appliances, and equipment according to their functions in food production and service • Demonstrates knowledge of the proper use, care (maintenance), and storage of a variety of food services tools, utensils, appliances, equipment, and technology (e.g., French knife, deep fat fryer, commercial range/oven, commercial slicer, bench mixer, baker’s scale, induction burners, convection ovens, electronic tracking of food temperature, time, taste)
<p>Standard 7: Research Skills Students will understand the basic processes and methodology of research.</p>	<ul style="list-style-type: none"> • Uses a variety of resources and tools, including the Internet, to gather information on topics of interest/study [Language Arts 1A-B, 5A] • Draws conclusions based on information gathered during research efforts • Writes reports on foods and hospitality topics [Language Arts 3B2] <p><i>*See Appendix A for ideas for advanced level performance indicators (for enrichment purposes)</i></p>

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 1: Food Safety and Sanitation Students will understand and apply principles of food safety and sanitation in all facets of food production, service, and testing. They will demonstrate sanitary work habits and will adhere to regulations related to health and sanitation (e.g., HACCP: Hazard Analysis and Critical Control Points).</p>	<ul style="list-style-type: none"> • Describes the three primary types of food contamination (i.e., physical, biological, and chemical) and gives specific examples of each type of contamination • Explains the primary causes of common food-borne illnesses (e.g., E-coli, salmonella, botulism, and staphylococcus infection) and specific strategies for preventing such illnesses • Describes potential hazard points in food production and service (i.e., describes specific principles of HACCP) and applies critical control points for time and temperature • Explains how sanitary work habits and adherence to sanitation regulations help minimize the likelihood of food contamination and food-borne illnesses • Explains and follows procedures for preventing, eliminating, or reducing food safety (sanitation) hazards, including: <ul style="list-style-type: none"> – checking food deliveries carefully for evidence of damage and contamination – cooking foods to proper internal temperatures – holding and storing foods at proper temperatures – avoiding cross-contamination – following the FIFO method when storing and using foods/supplies – cleaning, sanitizing, maintaining, and storing food service appliances, equipment, and tools properly – maintaining clean work stations <p style="text-align: right;"><i>(continued on next page)</i></p>

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
Standard 1: Food Safety and Sanitation (continued)	<ul style="list-style-type: none"> – maintaining good personal hygiene – storing potentially toxic materials properly – monitoring food production and service activities carefully for evidence of potential sanitation problems – correcting sanitation problems as soon as they are identified <ul style="list-style-type: none"> • sanitation and demonstrates an overall understanding of the role the government plays in regulating the foods and hospitality industry [History/Social Science 2C, 2F]

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 2: Occupational Safety Students will understand principles of safety as they relate to employment in all facets of food production, service, and testing. They will understand that accidents are avoidable and will demonstrate safe work habits and an awareness of emergency and operational procedures.</p>	<ul style="list-style-type: none"> • Describes common types and causes of accidents and emergencies in food production and service, such as slips and falls, lifting-related strains, burns, cuts, electric shock, and fires • Describes and demonstrates procedures for preventing specific types of accidents and emergencies, for example: <ul style="list-style-type: none"> – Describes and demonstrates proper procedures for storing, lifting, and moving heavy objects – Describes and demonstrates proper procedures for handling, using, and maintaining knives and other sharp utensils, tools, and equipment – Describes and demonstrates proper procedures for handling hot objects and for dealing with steam – Describes and demonstrates proper procedures for cleaning spills – Describes and demonstrates procedures for preventing fires in foods and hospitality establishments • Explains the overall importance of operational procedures and follows such procedures when using and caring for appliances and equipment and when cleaning and maintaining work areas • Explains proper procedures for handling and documenting minor injuries, accidents, and emergency/disaster situations (e.g., fires) according to state and federal regulations • Explains the primary role of the California Occupational Safety and Health Administration (Cal/OSHA) in regulating the foods and hospitality industry and understands basic Cal/OSHA requirements, such as Material Safety Data Sheets (MSDS) [History/Social Science 2C, 2F]

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 3: Food Production and Preparation Students will understand standardized recipes and will be able to prepare and present a variety of foods, using appropriate food preparation and measuring techniques, equipment, tools, and supplies. They will be able to modify recipes and cooking techniques.</p>	<ul style="list-style-type: none"> • Explains the function and structure of standardized recipes • Defines and explains common cooking terms used in recipes • Converts a standardized recipe to serve more or fewer people than specified • Follows standardized recipes and/or approved procedures to prepare and cook a variety of foods, such as salads, dressings, soups, sauces and gravies, meats/poultry/seafood, eggs, pasta dishes, fruits and vegetables, baked products, basic desserts, and beverages [Language Arts 1A-B, 1D] • Selects appropriate appliances, equipment, tools, utensils, and supplies for specific food preparation and cooking tasks • Defines <i>mise en place</i> and explains the importance of this concept in food preparation • Accurately and carefully weighs and measures solid and liquid ingredients, using both standard measuring tools and metric measuring equipment [Mathematics 3] • Demonstrates an ability to convert measurements [Mathematics 1A-B, 1G] • Describes and performs a variety of methods for neatly mixing ingredients, such as stirring, whipping, folding, creaming, and emulsifying • Describes and performs a variety of methods for safely cutting ingredients, such as dicing, chopping, cubing, slicing, julienning, and grating <p><i>(continued on next page)</i></p>

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 3: Food Production and Preparation (continued)</p>	<ul style="list-style-type: none"> • Describes and performs a variety of methods for moist-heat cooking and dry-heat cooking, such as boiling, steaming, blanching, poaching, simmering, stewing, sautéing, baking, broiling, roasting, and grilling • Properly uses and stores herbs, spices, and extracts • Properly washes, soaks, peels, cuts, seeds, and portions fruits and vegetables in preparation for cooking or assembly (i.e., pre-preparation, <i>mise en place</i>) • Properly carves and trims meats in preparation for hot or cold service or for sandwich assembly (i.e., pre-preparation, <i>mise en place</i>) • Properly portions, arranges, and garnishes food on serving dishes, trays, and/or carts • Demonstrates consistency in food production • Organizes and maintains work stations for efficiency • Manages time efficiently and effectively in food production (e.g., coordinates the preparation of a food order so that all foods are ready quickly and at the same time) • Effectively evaluates finished food products for taste and aesthetic appeal • Follows proper procedures for holding and storing foods until needed <p><i>*See Appendix A for ideas for advanced level performance indicators (for enrichment purposes)</i></p>

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 4: Nutrition Students will understand principles of nutrition and how these principles can be used to promote good health.</p>	<ul style="list-style-type: none"> • Knows the essential nutrients (i.e., carbohydrates, proteins, fats, vitamins, and minerals) and can identify food sources that contain the nutrients • Reads and explains the recommendations made in established (i.e., valid) food guides and dietary guidelines (e.g., Food Guide Pyramid, Dietary Guidelines for Americans) [Language Arts 1A-B, 1D] • Plans a day’s menu (i.e., breakfast, lunch, and dinner) that is appetizing and flavorful and that meets the recommendations made in established food guides and dietary guidelines • Describes and performs a variety of food preparation techniques that preserve nutritional value • Explains ways to change a recipe to make it more healthful (e.g., by substituting ingredients, by modifying cooking techniques) • Compares two meals and explains why one is more healthful than the other <p><i>*See Appendix A for ideas for advanced level performance indicators (for enrichment purposes)</i></p>

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 5: Customer Service and Satisfaction Students will understand and apply principles that contribute to customer satisfaction. They will know how to meet customers’ expectations for quality.</p>	<ul style="list-style-type: none"> • Demonstrates knowledge and skill in the basic components of food service (e.g., greeting and seating guests, writing food and beverage orders, relaying food orders to the kitchen, using proper procedures for setting/clearing tables and maintaining service stations/busing tables, preparing guest checks, making and counting change, performing sidework) • Explains different factors that can influence individuals’ food preferences and choices, such as health considerations, age, culture, tradition, religion, economic status, social status, and personal beliefs • Effectively uses a variety of strategies for identifying and anticipating customers’ preferences and needs (e.g., questioning, active listening, observation) [Language Arts 4A-C] • Makes menu/diet recommendations that are sensitive to customers’ food preferences and/or health needs • Explains and provides examples of up-selling and suggestive selling • Responds to customer complaints promptly and effectively with a “customer is always right” attitude • Clearly and correctly answers customer questions in a timely manner Note: Finds the answers to customers’ questions by asking others when necessary (i.e., if he/she does not know the correct answer) • Explains how the behavior of all workers in a foods and hospitality operation impacts operational efficiency and customer satisfaction

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 6: Food Service Management and Entrepreneurship Students will understand the role of a foods and hospitality manager. They will understand basic factors that contribute to the overall success of a foods and hospitality operation, such as effective leadership, cost analysis/control, profitability analysis/control, quality control, inventory management, marketing, and human resources.</p>	<ul style="list-style-type: none"> • Explains the primary responsibilities of a foods and hospitality manager • Describes general factors that affect the success or failure of foods and hospitality businesses • Explains the basic steps involved in starting a foods and hospitality business, such as researching the market, writing a business plan, finding an appropriate location, finding investors/getting funding, developing a menu, buying equipment and supplies, and marketing and advertising the business • Explains the importance of portion control in foods and hospitality (i.e., the connection to waste/loss and profitability) • Explains the effects of waste, shrinkage, and loss on the profitability of a foods and hospitality operation • Describes and gives examples of different types of costs in a foods and hospitality business • Demonstrates an ability to carry out basic procedures related to cost analysis and control (e.g., calculating the per portion food cost of a simple recipe, calculating an appropriate price for a menu item, estimating food, beverage, labor, and other costs) [Mathematics 1-5] • Explains the importance of accurate inventory control and can maintain accurate inventory records [Mathematics 1, 3] • Explains specific strategies for maintaining a high level of quality in food production and service <p style="text-align: right;"><i>(continued on next page)</i></p>

Foods and Hospitality Technical Content Standards

Technical Content Standards	Sample Performance Indicators
<p>Standard 6: Food Service Management and Entrepreneurship (continued)</p>	<ul style="list-style-type: none"> • Explains different marketing strategies and the importance of market research (e.g., knowing market and what they want) to the success of foods and hospitality businesses • Describes types of advertising that can benefit foods and hospitality businesses • Describes techniques that a foods and hospitality manager/entrepreneur can use to motivate workers to do their best work and to satisfy customers • Demonstrates proficiency in teaching others to carry out food service tasks and procedures <p><i>*See Appendix A for ideas for advanced level performance indicators (for enrichment purposes)</i></p>

Academic Standards for Foods and Hospitality

Academic Standards	Sample Performance Indicators
<p>Standard 1: Language Arts Students will demonstrate reading, writing, speaking, and listening skills, as well as media literacy and an appreciation for cultural diversity in literature and language.</p>	<ul style="list-style-type: none"> • Uses a wide range of strategies to read, comprehend, interpret, and evaluate a variety of food service and hospitality materials, including public and functional documents (e.g., operational procedures, Material Safety Data Sheets, standardized recipes, food guides, and dietary guidelines) [Language Arts 1A-D] • Expresses ideas and information clearly and accurately in writing, and tailors written work to the intended purpose and audience [Language Arts 3A-C] • Listens actively to what others (e.g., classmates, coworkers, customers/guests) say, and asks questions to gather information and clarify meaning • Respects language differences and employs varieties of English appropriately for audience and purpose [Language Arts 2A] • Communicates in a clear, courteous, and complete manner when speaking to groups and individuals (e.g., when delivering oral reports, when conversing with classmates/coworkers/customers) [Language Arts 4A-C] • Uses a variety of technological and informational resources (e.g., libraries, databases, computer networks, print media, and audiovisual resources) to access information and expand learning, and to create, communicate, and express knowledge and ideas (Language Arts 5A)

Academic Standards for Foods and Hospitality

Academic Standards	Sample Performance Indicators
<p>Standard 2: Mathematics Students are able to reason, communicate, solve problems, and develop understanding of numbers, measurement, geometry, functions, statistics and probability, logic, and algebra.</p>	<ul style="list-style-type: none"> • Demonstrates skill in estimation and the ability to perform basic mathematical computations without the use of a calculator (e.g., adding, subtracting, multiplying, dividing, and converting fractions, decimals, percentages, and metric values) [Mathematics 1] • Analyzes and interprets numeric information found in a variety of foods and hospitality materials (e.g., standardized recipes, menus, inventory records, purchase orders/supply invoices, basic financial documents) [Mathematics 1-5] • Demonstrates knowledge of different systems of measurement and the ability to convert measurements [Mathematics 1-3, 6] • Applies a variety of mathematical concepts (e.g., numbers, algebra, geometry, statistics and probability) to solve problems in foods and hospitality (e.g., converting a standardized recipe to serve more or fewer people, calculating the per portion food cost of a simple recipe, calculating an appropriate price for a menu item) [Mathematics 1-8]

Academic Standards for Foods and Hospitality

Academic Standards	Sample Performance Indicators
<p>Standard 3: History/Social Science Students will demonstrate historical thinking (e.g., examining evidence, diversity/multiple perspectives, interpretation, significance, participation) and an understanding of government (e.g., courts, legislative, and executive branches, contemporary issues) and economics (e.g., fundamental economic concepts) as they relate to foods and hospitality.</p>	<ul style="list-style-type: none"> • Analyzes and describes how contemporary issues and different societal trends (e.g., a strong/weak economy, an increase in two-income households, an increase in single professional people, an aging population) impact the demand for foods and hospitality services [History/Social Science 1A-B, 1D-E, 2F, 3A] • Analyzes and describes the role that the foods and hospitality industry plays in the local, state, and national economy [History/Social Science 1B, 1E, 3A] • Describes the role of the government in regulating the foods and hospitality industry (e.g., OSHA regulations, USDA meat inspection standards, health department standards for safety and sanitation) [History/Social Science 2C, 2F] • Applies understanding of diverse viewpoints and linguistic and cultural backgrounds in foods and hospitality environments [History/Social Science 1C, 1E]



Academic Standards for Foods and Hospitality

Academic Standards	Sample Performance Indicators
<p>Standard 4: Science Students will demonstrate understanding of physics (e.g., heat and thermodynamics), chemistry (e.g., atomic and molecular structure, chemical bonds, acids and bases, solutions, chemical thermodynamics, reaction rates, chemical equilibrium, and organic and biochemistry), and biology/life sciences (e.g., cell biology, genetics, and structure/function in living systems) as they relate to foods and hospitality.</p>	<ul style="list-style-type: none"> • Explains basic physics and chemistry concepts as they relate to food preparation (e.g., chemical reactions that occur when different food ingredients are mixed together, the changes that occur in foods as they are heated or cooled) [Science 1C, 1F-H, 3A-H, 4G] • Explains conditions that promote bacteria growth in foods, as well as strategies for controlling bacteria growth (Science 2A, 2F-G] • Describes different ways that genetic research has impacted the foods and hospitality industry [Science 2B-C] • Demonstrates an understanding of the principles of scientific inquiry.
<p>Other Skills for the Foods and Hospitality Cluster: Psychology Students will demonstrate understanding of basic principles of human psychology as they relate to foods and hospitality.</p>	<ul style="list-style-type: none"> • Effectively uses a variety of strategies for identifying and anticipating customers' preferences and needs (e.g., questioning, active listening, observation) [Language Arts 4A-C] • Explains and provides examples of up-selling and suggestive selling
<p>Other Skills for the Foods and Hospitality Cluster: Sociology Students will demonstrate understanding of basic principles of sociology as they relate to foods and hospitality.</p>	<ul style="list-style-type: none"> • Explains different factors that can influence individuals' food preferences and choices, such as health considerations, age, culture, tradition, religion, economic status, social status, and personal beliefs • Explains how the behavior of all workers in a foods and hospitality operation impacts operational efficiency and customer satisfaction

Resources

America's Career InfoNet. Internet: (<http://www.acinet.org/acinet/default.htm>).

Bureau of Labor Statistics. *1998-99 Occupational Outlook Handbook*. Internet: (<http://stats.bls.gov/ocohome.htm>).

California Department of Education. (1994). *Home Economics Education Career Path Guide and Model Curriculum Standards*. Sacramento, CA: author.

California Department of Education. (1995). *Superintendent's Challenge Initiative—Career Preparation Standards: Draft Interim Content and Performance Standards in Home Economics Careers and Technology*. Sacramento, CA: author.

Hospitality and Tourism Skills Board (HTSB) and the Council on Hotel, Restaurant and Institutional Education (CHRIE). (1995). *Hospitality and Tourism Skill Standards (Server)*. Internet: (<http://www.nssb.org>).

Hospitality and Tourism Skills Board (HTSB) and the Council on Hotel, Restaurant and Institutional Education (CHRIE). (1995). *Building Skills by Building Alliances: A Report on Voluntary, National Skill Standards from America's Hospitality and Tourism Board*. Washington, DC: CHRIE.

Secretary's Commission on Achieving Necessary Skills. (1991). *What Work Requires of Schools: A SCANS Report for America 2000*. Washington, DC: U.S. Department of Labor.

U.S. Department of Labor, Employment, and Training Administration. (1998). *O*NET 98 Viewer, Version 1.0: The Occupational Information Network*. Internet: (<http://www.onetcenter.org>).



APPENDIX A

Ideas for Advanced Performance Indicators (for enrichment purposes)	
Employability Skills	Sample Performance Indicators
Standard 7: Research	<ul style="list-style-type: none"> • Demonstrates knowledge of the scientific method as it applies to formal research in the food services industry (e.g., to achieve consistent quality in food production) • Creates and communicates formal reports based on research observations and results • Invents or alters a recipe based on a synthesis of similar recipes
Standard 8: Food Service Management	<ul style="list-style-type: none"> • Helps plan recipes, meals, and menus, using information about anticipated consumption, nutritional value, palatability, popularity, and costs • Demonstrates skill in planning and coordinating special events • Analyzes information from recipes and menus to estimate food, labor, and overhead costs • Uses information about inventory levels and estimated consumption to determine what foods, beverages, and other supplies must be purchased or requisitioned

**Ideas for Advanced Performance Indicators
(for enrichment purposes)**

Technical Content Standards	Sample Performance Indicators
Technical Standard 3: Food Preparation	<ul style="list-style-type: none"> • Demonstrates ability to properly trim a piece of meat and bone a chicken/fish • Uses advanced cooking skills and techniques to prepare a variety of complicated foods
Technical Standard 4: Nutrition	<ul style="list-style-type: none"> • Explains the primary functions of the essential nutrients • Evaluates food products for nutritive value (e.g., interprets nutritional or ingredient information on food labels and nutrition information sheets) • Explains the similarities and differences between the nutritional needs of individuals at different stages of the life cycle, and understands that nutritional needs may also vary by individual • Explains the processes by which the human body ingests, digests, absorbs, transports, utilizes, and excretes food and nutrients (e.g., digestion, absorption, and metabolism) and the relationship of these processes to health • Explains how good nutrition can be used to help prevent and treat a variety of medical conditions (e.g., high blood pressure, heart disease, diabetes, obesity) • Evaluates individuals' dietary histories to determine nutritional needs and dietary restrictions • Plans healthy nutritional programs based on established (i.e., valid) food guides and dietary guidelines • Plans healthy nutritional programs based on individual nutritional needs and dietary restrictions