

## Nutrition Science

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FACS Standard	Learning Resources	Gateway Correlation	FCCLA Integration (STAR Events & National Programs)	Higher Order Thinking
<p>1.0 Students will analyze the interrelationship of food, nutrition, and science.</p> <ul style="list-style-type: none"> <li>• Specifically relates to 1.1 Define the study of the science of food and nutrition and distinguish from a traditional food preparation course.</li> <li>• 1.3 Describe the main goal of food scientists.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will take a field trip to Mr. Dillon’s family garden to see how food is planted and grown. Mr. Dillon will talk about how he plants his garden and Mrs. Dillon will bring them in and give a lesson on canning to preserve the food. The students will be shown how to properly process, preserve, and package the food.</li> </ul>	<p>Algebra I –</p> <ul style="list-style-type: none"> <li>• Standard 2.0 Estimation, Measurement, and Computation</li> <li>• Standard 3.0 Patterns, Functions, and Algebraic Thinking</li> <li>• Standard 5.0 Spatial Sense and Geometric Concepts</li> </ul>	<p>STAR Events</p> <ul style="list-style-type: none"> <li>• Chapter Service Display (Nutrition)</li> </ul>	<p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>• Analysis</li> <li>• Evaluation</li> <li>• Conclusion</li> <li>• Cause/Effect</li> </ul> <p>Metacognition</p> <ul style="list-style-type: none"> <li>• Reasoning</li> </ul>

<p>2.0 Students will relate nutrition practices to the health of the individual in a global society across the life span.</p> <ul style="list-style-type: none"> <li>Specifically relates to 2.1 Analyze various guidelines for good nutrition that promote the health of the individual across the life span.</li> </ul>	<ul style="list-style-type: none"> <li>Nutrition News: Salt in the Diet (pg. 375 in Principles of Food Science text book)</li> <li>Ions: Charged Particles in Solution (pg. 59 in Principles of Food Science workbook)</li> <li>Experiment: Malarity of Sweet Tea (pg 62 in Principles of Food Science Lab Manuel)</li> </ul>	<p>Biology –</p> <ul style="list-style-type: none"> <li>Standard 3.0 Photosynthesis and Respiration</li> <li>Standard 2.0 Interactions</li> </ul>	<p>STAR Events</p> <ul style="list-style-type: none"> <li>Focus on Children/Nutrition</li> </ul>	<p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>Knowledge</li> <li>Comprehension</li> <li>Application</li> <li>Fact/Opinion</li> <li>Conclusion</li> </ul> <p>Applied Thinking Skills:</p> <ul style="list-style-type: none"> <li>Investigation</li> </ul>
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<p>3.0 Students will use knowledge of metabolism and digestion to establish lifelong habits of good nutrition.</p> <ul style="list-style-type: none"> <li>Specifically relates to 3.1 Analyze the relationships between calories, food, and energy</li> </ul>	<ul style="list-style-type: none"> <li>Six Essential Nutrients worksheet (<a href="http://www.uen.org">www.uen.org</a>)</li> <li>Calorie and carbohydrate crossword puzzle (<a href="http://www.puzzelmaker.com">www.puzzelmaker.com</a>)</li> <li>Students will keep a detailed record of food intake for one day and will write a one page paper over the nutritional intake from that day. If they did not get the proper nutritional intake they will add how they might change their diet to eat healthier.</li> </ul>	<p>English II –</p> <ul style="list-style-type: none"> <li>Standard 1.0 The students will develop the structural and creative skills necessary to produce written language that can be read and interpreted by various audiences.</li> <li>Standard 1.06 Practice of variety of prewriting activities to generate, focus and organize ideas.</li> <li>Standard 1.12 Identify and use a variety of resources to revise and edit writing.</li> </ul>	<p>National Programs In Action:</p> <ul style="list-style-type: none"> <li>Student Body</li> </ul>	<p>Applied Thinking Skills:</p> <ul style="list-style-type: none"> <li>Decision making</li> <li>Problem solving</li> <li>Investigation</li> </ul> <p>Creative Thinking Skills:</p> <ul style="list-style-type: none"> <li>Awareness</li> </ul> <p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>Knowledge</li> <li>Comprehension</li> </ul>
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<p>4.0 Students will examine methodology for use of the scientific laboratory to conduct and report results of food science experiments.</p> <ul style="list-style-type: none"> <li>Specifically relates to 4.1 Apply proper safety techniques for the laboratory</li> <li>4.2 Identify the location and demonstrate the correct use of emergency equipment in the laboratory.</li> </ul>	<ul style="list-style-type: none"> <li>Tour the Lab</li> <li>Lab Safety Worksheet/Test</li> <li>Students will be given a lab floor plan drawn out by the teacher and they will have to label the emergency exits and each piece of emergency equipment.</li> </ul>	<p>English II –</p> <ul style="list-style-type: none"> <li>Standard 3.0 Students will use, read, and view media/technology and analyze content and concepts accurately.</li> <li>Standard 4.0 Students will express ideas clearly and effectively in a variety of oral contexts and apply active listening skills in the analysis and evaluation of spoken ideas.</li> </ul>	<p>STAR Events:</p> <ul style="list-style-type: none"> <li>Applied Technology</li> </ul>	<p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>Knowledge</li> <li>Comprehension</li> <li>Application</li> <li>Cause/Effect</li> </ul> <p>Metacognition</p> <ul style="list-style-type: none"> <li>Reasoning</li> </ul>
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<p>5.0 Students will analyze methods used in food product development and marketing</p> <ul style="list-style-type: none"> <li>Specifically relates to 5.1 Examine the sensory factors that make up the sensory characteristics for tasting food</li> <li>Specifically relates to 5.3 Evaluate food label information</li> </ul>	<ul style="list-style-type: none"> <li>Research the web for controlled sensory testing and rating techniques for three different food product development &amp; marketing companies. Students will share with the class.</li> <li>Students will be given three Nutritional Facts Handouts which they will evaluate and decide which product is healthier for them to eat. (www.uen.org)</li> </ul>	<p>English II –</p> <ul style="list-style-type: none"> <li>3.0 Student will use, read, and view media/technology and analyze content and concepts accurately.</li> <li>3.05 research, organize, interpret, and present information from print and non-print media.</li> <li>4.02 demonstrate confidence and poise in various speaking situations</li> </ul>	<p>National Programs In Action:</p> <ul style="list-style-type: none"> <li>Student Body</li> </ul> <p>STAR Events</p> <ul style="list-style-type: none"> <li>Illustrated Talk</li> </ul>	<p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>Knowledge</li> <li>Comprehension</li> </ul> <p>Creative Thinking Skills:</p> <ul style="list-style-type: none"> <li>Originality</li> <li>Elaboration</li> <li>Awareness</li> </ul> <p>Applied Thinking Skills:</p> <ul style="list-style-type: none"> <li>Decision Making</li> <li>Problem Solving</li> <li>Investigation</li> </ul>
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<p>6.0 Students will evaluate a variety of changes, inclusion chemical and physical, that affect food product quality</p> <ul style="list-style-type: none"> <li>Specifically relates to 6.5 Demonstrate the difference between the process of fermentation and pasteurization and explain the usage in food technology.</li> </ul>	<ul style="list-style-type: none"> <li>Students will give a definition of fermentation and pasteurization before reading the lesson. We will go over the lesson in our book and then will come up with a class definition. Students will give examples of each.</li> <li>The class will have a lab evaluating fermented foods and pasteurized foods and will see how different they look, taste, feel, etc.</li> </ul>	<p>Biology –</p> <ul style="list-style-type: none"> <li>2.0 student will investigate the interactions of organisms with their environment through different relationships, population dynamics, and patterns of behavior.</li> <li>2.1 compare and contrast the different types of symbiotic relationships.</li> </ul>	<p>Power of One</p> <ul style="list-style-type: none"> <li>Working on Working</li> </ul>	<p>Critical Thinking Skills</p> <ul style="list-style-type: none"> <li>Analysis</li> <li>Evaluation</li> <li>Cause/effect</li> <li>Fact/opinion</li> <li>Conclusion</li> </ul> <p>Applied Thinking Skills:</p> <ul style="list-style-type: none"> <li>Problem Solving</li> <li>Decision Making</li> </ul> <p>Metacognition</p> <ul style="list-style-type: none"> <li>Reasoning</li> </ul>
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<p>7.0 Students will apply science process skills when analyzing the structure and composition of food.</p> <ul style="list-style-type: none"> <li>Specifically relates to 7.1 examine the properties and functions of water.</li> </ul>	<ul style="list-style-type: none"> <li>Water: The Universal Solvent word puzzle (pg 89 in Principles of Food Science workbook)</li> <li>Water Purity in Lab manual (pg. 97 in lab manual) Testing several types of water to see which is more pure. Students will type up each response to each type of water on excel</li> </ul>	<p>Biology –</p> <ul style="list-style-type: none"> <li>3.0 student will compare and contrast the biochemical processes involved in the transfer of energy during photosynthesis and respiration and analyze the major chemical cycles in the biosphere.</li> </ul>	<p>National Programs In Action:</p> <ul style="list-style-type: none"> <li>Community Service</li> <li>Student Body</li> </ul>	<p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>Knowledge</li> <li>Comprehension</li> <li>Application</li> <li>Synthesis</li> <li>Cause/Effect</li> </ul> <p>Creative Thinking Skills:</p> <ul style="list-style-type: none"> <li>Curiosity</li> </ul> <p>Applied Thinking Skills:</p> <ul style="list-style-type: none"> <li>Problem Solving</li> <li>Investigation</li> </ul> <p>Metacognition</p> <ul style="list-style-type: none"> <li>Reasoning</li> </ul>
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<p>8.0 Students will analyze methods used and factors involved in the scientific processing of food</p> <ul style="list-style-type: none"> <li>Specifically relates to 8.1 examine the use of additives in food processing</li> <li>8.3 explain the process and methods of processing foods by dehydration</li> </ul>	<ul style="list-style-type: none"> <li>Additives: Producing Desired Characteristics in Foods Puzzel (<a href="http://www.puzzelmaker.com">www.puzzelmaker.com</a>)</li> <li>In groups of four, ask the students what a food additive is. We will make a master copy on the board. Have students to research there book for information an Food Additives and share with the class. We will add on to our master copy to see the difference.</li> <li>During Lab we will talk about dehydration of foods. We will dehydrate many different foods including deer meat, pineapples, apples, etc. This will preserve the fruit and make it last longer to save money. We will share with the class and see the difference before and after.</li> </ul>	<p>English II –</p> <ul style="list-style-type: none"> <li>2.0 students will develop the reading skills necessary for word recognition, comprehension, interpretation, analysis, evaluation, and appreciation of the written text.</li> <li>2.04 use comprehension strategies to enhance understanding, to make predictions, and to respond to literature</li> <li>2.05 improve comprehension strategies to enhance understanding, to make predictions, and to respond to literature.</li> <li>4.0 student will express ideas clearly and effectively in a variety of oral contexts and apply active listening skills in the analysis and evaluation of spoken ideas.</li> </ul>	<p>National Programs In Action:</p> <ul style="list-style-type: none"> <li>Financial Fitness</li> </ul>	<p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>Cause/Effect</li> <li>Fact/Opinion</li> <li>Knowledge</li> <li>Comprehension</li> <li>Application</li> </ul>
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<p>9.0 Students will analyze career paths within the food science, dietetics, and nutrition industries</p> <ul style="list-style-type: none"> <li>Specifically relates to 9.1 evaluate jobs and preparation requirements for careers within the food science, dietetics, and nutrition industries</li> <li>9.2 assess personal qualifications, interests, values, and educational preparation necessary for employment in a career in nutrition and the food science industries</li> </ul>	<ul style="list-style-type: none"> <li>Students will each be given a specific job to research. The students may use multiple resources to get information from the company they are going to be researching. The students will be responsible for writing a two page report on information about the company and why or why not they would want to work for that company. All companies are in correlation with food science, dietetics, and/or nutritional industries. The students will have one week to complete the assignment.</li> <li>Students will be required to complete a cover letter and resume to turn in with the paper for a career in nutrition and the food science industries.</li> </ul>	<p>English II –</p> <ul style="list-style-type: none"> <li>1.10 evaluate and revise writing to focus on purpose, organization, development, transitions, unity, and audience awareness.</li> <li>1.11 recognize and demonstrate appropriate use of standard English: usage, mechanics and standard spelling, and sentence structure.</li> </ul>	<p>National Programs In Action:</p> <ul style="list-style-type: none"> <li>Leaders at Work</li> <li>Interpersonal Communications</li> <li>Career Connection/Career Investigations</li> </ul>	<p>Creative Thinking Skills:</p> <ul style="list-style-type: none"> <li>Knowledge</li> <li>Application</li> </ul> <p>Creative Thinking Skills:</p> <ul style="list-style-type: none"> <li>Curiosity</li> <li>Originality</li> <li>Elaboration</li> <li>Imagination</li> <li>Awareness</li> </ul> <p>Applied Thinking Skills:</p> <ul style="list-style-type: none"> <li>Decision Making</li> <li>Problem Solving</li> <li>Investigation</li> <li>Invention</li> </ul> <p>Metacognition</p> <ul style="list-style-type: none"> <li>Reasoning</li> </ul>
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<p>10.0 Students will demonstrate leadership, citizenship, and teamwork skills required for success in the family, workplace, and community</p> <ul style="list-style-type: none"> <li>Specifically relates to 10.1 examine the components of FCCLA and the relationship to the food science and nutrition course of study</li> </ul>	<ul style="list-style-type: none"> <li>Students will work in class on a community service project that will show an awareness for childhood obesity. The students will make a colorful poster that will be eye catching to children and adults as well. The class will make exercise fun and exciting such as playing basketball and riding a bike. The purpose is to try to get children interested in physical exercise and their health. This will take extreme leadership, citizenship, and teamwork skills that are required for success in the family, workplace, and community. It will also take much research and brainstorming.</li> </ul>	<p>English II –</p> <ul style="list-style-type: none"> <li>3.0 student will use, read, and view media/technology and analyze content and concepts accurately.</li> <li>3.01 access and demonstrate multiple technological reference sources.</li> <li>3.05 research, organize, interpret, and present information from print and non-print media</li> </ul>	<p>National Programs In Action:</p> <ul style="list-style-type: none"> <li>Community Service</li> <li>Student Body</li> </ul> <p>STAR Events:</p> <ul style="list-style-type: none"> <li>Illustrated Talk</li> <li>Focus on Children</li> </ul>	<p>Critical Thinking Skills:</p> <ul style="list-style-type: none"> <li>Analysis</li> <li>Evaluation</li> <li>Observation</li> <li>Cause/Effect</li> <li>Application</li> <li>Comprehension</li> <li>Knowledge</li> </ul> <p>Creative Thinking Skills:</p> <ul style="list-style-type: none"> <li>Originality</li> <li>Curiosity</li> <li>Awareness</li> <li>Elaboration</li> </ul> <p>Applied Thinking Skills:</p> <ul style="list-style-type: none"> <li>Decision Making</li> <li>Problem Solving</li> <li>Investigation</li> </ul> <p>Metacognition</p> <ul style="list-style-type: none"> <li>Reasoning</li> </ul>
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