

*Teaching Nutrition through
Family and Consumer Sciences:*
A Curriculum Guide for
Middle Schools



Teaching Nutrition through Family and Consumer Sciences: A Curriculum Guide for Middle Schools

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Introduction

Teaching Nutrition through Family and Consumer Sciences: A Curriculum Guide for Middle Schools

Why Teach Nutrition?

Nutrition education and the promotion of healthy eating behaviors and lifestyles are essential to students' health, well-being, and educational success. Healthy, well-nourished students are better able to reach their full academic and physical potential, are absent less often, and have higher test scores. Through education, Wisconsin students can become empowered to choose healthy lifestyle behaviors to help them excel in all their endeavors. Nutrition choices that children make today can dramatically affect their health and well-being tomorrow. Nutrition concepts need to be reinforced throughout the year, and students can learn about food and nutrition as part of many subjects, including math, science, social studies, physical education, and health.

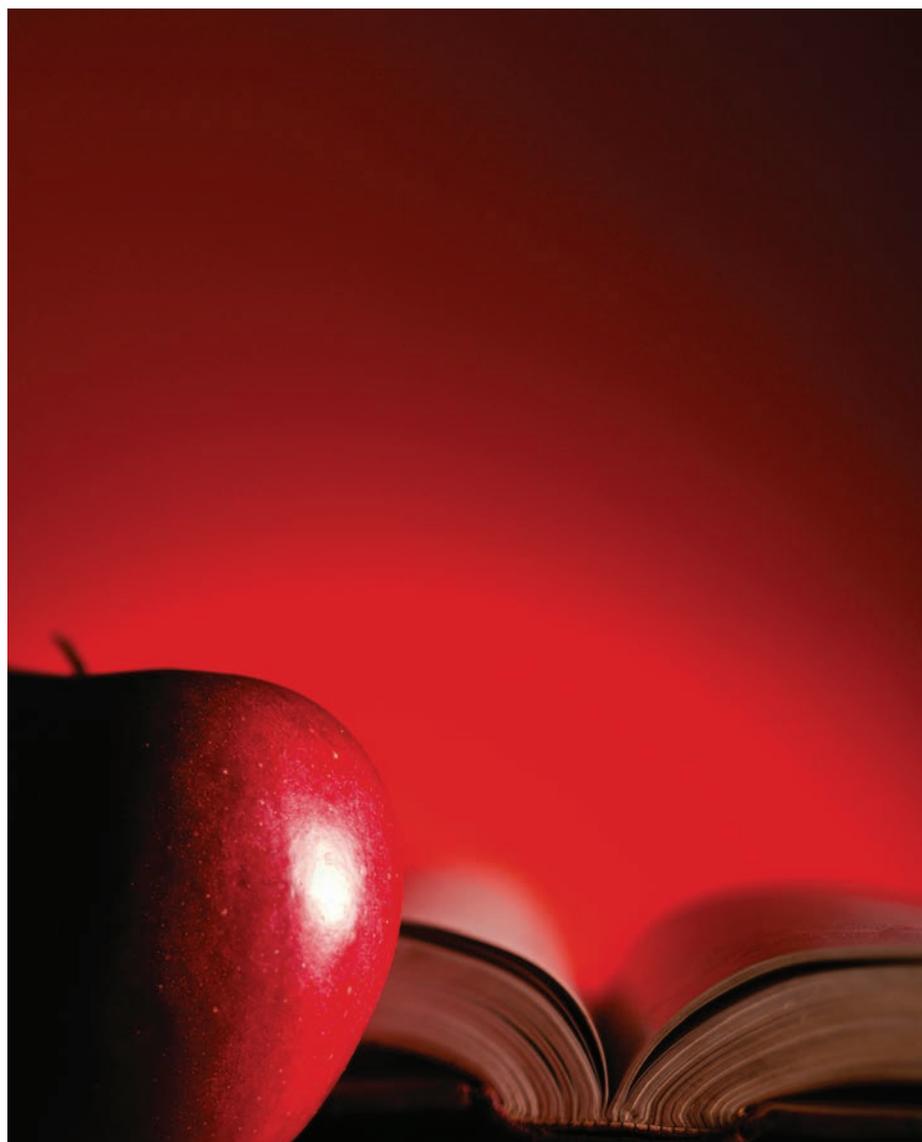
In 2008, 98% of teachers surveyed in the 2008 Wisconsin School Health Education Profile survey report trying to increase nutrition knowledge in their students. However, only 67% of teachers addressed all 14 nutrition and dietary behavior topics. Nutrition is not required to be part of the curriculum in Wisconsin, and teachers have indicated that it is especially challenging to work nutrition education into the curriculum.

Family and Consumer Sciences (FCS) is a field of knowledge concerned with preparing people for independence, family, employment and life by applying knowledge from a variety of educational disciplines. Courses are designed to promote the well-being of students, empowering them to become healthy, well-adjusted, self-confident and productive individuals, family members, and employees. The National Association of State Administrators of Family and Consumer Sciences recognizes the importance of preparing students for family life, work life, and careers in FCS by strengthening the well-being of individuals and family across the life span and promoting optimal nutrition and wellness across the life span. Due to this national outlook, the Wisconsin FCS academic standards provide guidelines for developing programs that give students the opportunity to acquire knowledge, skills, attitudes, and behaviors in food science, food production, and nutrition and wellness.

This curriculum guide connects *The Wisconsin Model Academic Standards for Nutrition*, *The Wisconsin Model Academic Standards for Family and Consumer Sciences*, and *The Wisconsin Model Academic Standards for Health Science*. The three subjects are linked together to provide the framework for offering nutrition education within FCS and Health Science classrooms to middle school students. Teachers are encouraged to utilize the crosswalk on page 11 to link their own lessons to the Wisconsin standards.

This guide provides standards, instruction and assessments that will assist teachers in teaching age-appropriate lessons that are consistent in scope and sequence. The ideas and materials provided are offered to support the inclusion of nutrition concepts into a Family and Consumer Sciences program. The key concepts included in the guide can be adapted to meet each individual teacher's needs. Each lesson in the curriculum guide includes the academic standards for Nutrition, corresponding learning priorities for Family and Consumer Sciences and Health Science, and recommended cooking components, optional activities, and adaptations that may be utilized.

It is important to note that nutrition can be a very challenging subject due to the myriad biases and sensitivities related to food, nutrition, and wellness. Students and teachers alike have different experiences related to food preferences, food availability, perception of health, and body image. These differences are not insurmountable, but they must be acknowledged, and education must be provided using factual information rather than personal biases.



Organization of Nutrition Standards

The Wisconsin Model Academic Standards for Nutrition was designed to help educators use developmentally appropriate messages when approaching the complex subject of nutrition. Six Lesson Summary areas were developed to help organize key messages. The concepts should all have the underlying theme of promoting variety, moderation and balance, and the encouragement of lifelong healthy eating behaviors. By focusing on the key concepts, students should gain the knowledge and skills necessary to choose a healthy lifestyle to reduce the risk of illness and chronic disease. Each lesson presented in this curriculum guide will relate to one of the six key concepts:

- Nutrition for growth, health, and energy
- Food safety
- Critical thinking skills/reasoning
- Promotion of healthy behaviors
- Diversity
- Food appreciation and classification

Organization of Family and Consumer Science Standards

The Wisconsin Model Academic Standards for Family and Consumer Sciences was designed to provide the essential skills needed to prepare students in meeting the needs of their children and families and those with whom they work. Family and Consumer Sciences teach the 21st-century skills within the concept of both work and family. Career and technical skills are developed through career clusters and pathways. Students have the opportunity to explore and prepare for careers in culinary arts, nutrition, food science, education, early childhood, fashion design and construction, interior design, textiles, tourism and hospitality, social services, and human services. Students gain skills, attitudes, and behaviors necessary for promoting nutrition and wellness; strengthening the well-being of individuals and families, becoming responsible citizens and leaders in family, community, and work settings; managing resources and finances; balancing personal and work lives; and preparing for successful life management, employment, and career management. Students will also gain critical and creative thinking skills needed to address critical problems of everyday life. Building career and technical education skills allows students to explore careers and make informed career choices based on those experiences while completing high school.

The K-12 Wisconsin FCS framework addresses the following 16 content standards, which are based upon the Family and Consumer Sciences National Standards:

- Reasoning for Action
- Career, Community, and Family Connections
- Consumer and Family Resources
- Education and Early Childhood
- Facilities Management and Maintenance
- Family
- Family and Community Services
- Food Production and Services
- Food Science, Dietetics, and Nutrition
- Hospitality, Tourism, and Recreation
- Housing and Interior Design
- Human Development
- Interpersonal Relationships
- Nutrition and Wellness
- Parenting
- Textiles, Fashion, and Apparel





The 16 standards, including the Reasoning for Action process, will be implemented in various ways depending on educators' overall approaches to curriculum and needs and issues of the local setting. Process and content are tandem components of the curriculum, with each aspect supporting the other. The Reasoning for Action standard and the process-area questions provide a vehicle for students to take greater initiative and responsibility for their learning and to develop knowledge and skills for the rapidly changing environments they will experience throughout their lives.

The framework is organized by grade levels: K-5, 6-8, and 9-12, and is intended to serve as a guideline for school districts in developing curriculum for family and consumer sciences programs. The comprehensive standard of Reasoning for Action provides a foundation for instruction and student learning about reasoned action and for using reasoning in applied contexts. The Wisconsin FCS standards add alignment with Family, Career and Community Leaders of America (FCCLA) programs, Career Clusters, and 21st-century skills.

Adaptability and accessibility are important elements of a wide variation in what, how much, and when concepts in FCS are introduced to students and in the level of depth in which any particular standard is developed. The standards apply to all students, regardless of age, gender, cultural or ethnic background, disabilities, aspiration, interests, or motivations.

Organization of Health Science Standards

The Wisconsin Standards for Health Science was designed to provide direction in the development of Health Science course offerings and curriculum in school districts across Wisconsin. Health Science education is an interdisciplinary subject that provides multifaceted opportunities for students to become prepared for healthcare careers and for postsecondary education through hands-on lessons in the classroom and industry-based opportunities in their communities. Health Science develops caring and contributing citizens who can deliver high-quality healthcare. HOSA: Future Health Professionals student organization is an integral part of the Health Science education experience.

Wisconsin Model Academic Standards for Health Science include 11 foundation standards that are based upon the National Healthcare Foundation Standards and Accountability Criteria from the National Consortium of Health Science Education:

- Academic Foundations in Health Science
- Communications within Healthcare Setting
- Healthcare Systems
- Employability Skills for Healthcare Workers
- Legal Responsibilities of Healthcare Providers
- Ethical Practices for Healthcare
- Safety within Healthcare Settings
- Teamwork Skills for Healthcare Workers
- Health Maintenance Practices
- Technical Skills for Healthcare Workers
- Health Information Technology for Healthcare Applications

Five pathway standards are included for more advanced secondary coursework in the Health Science career cluster:

- Biotechnology Research and Development
- Diagnostic Services
- Health Informatics
- Support Services
- Therapeutic Services



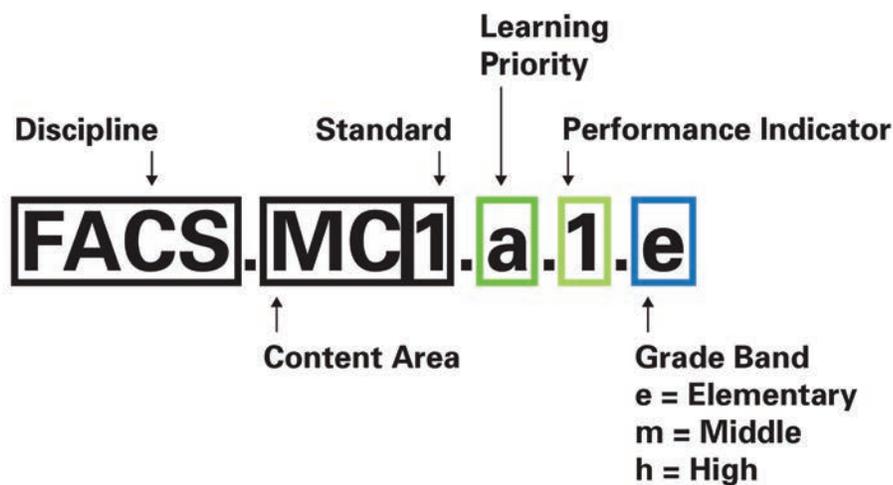


Interpreting the Wisconsin Model Academic Standards

The following *Crosswalk Connecting Wisconsin Model Standards in Nutrition, Family and Consumer Sciences, and Health Science* provides the connective framework to link the middle school standards together. The crosswalk offers the full content standards and rationale for Nutrition and provides the corresponding Family and Consumer Science and Health Science learning priorities. Additionally, the crosswalk offers a place for teachers to include their own curriculum that meet the corresponding standards.

Standard Structure

Career and technical education at the high school level must go beyond the **Wisconsin Standards for Career and Technical Education**, including the **Family and Consumer Sciences and Health Science**; each follow a similar structure. Discipline, content area, standard, learning priority, and performance indicator and grade band form the basis for interpretation. For the purpose of this guide, the grade band is m = Middle.



Career and technical education should be part of the core curriculum for all middle school students. Awareness, exploration, and building foundational skills for career pathways occur in middle school. The performance indicators in grade band 6-8 showcase foundational skills with an emphasis on career development.



Crosswalk Connecting Wisconsin Model Standards in Nutrition, Family and Consumer Sciences, and Health Science

Wisconsin's Model Academic Standards for Nutrition	Wisconsin Standards for Family and Consumer Sciences and Health Science	Local Curriculum
<p>Nutrition for Energy and Growth</p> <p>Students will understand the concepts related to and the connections between food choices, eating habits, activity, and healthy growth.</p> <p>Rationale: Nutritional needs vary across the lifecycle. Growth and energy are dependent on healthy eating and nutrition. Students who understand the personal relationship of food choices to energy and growth may be more likely to maintain or improve health.</p> <p>By the end of grade 8 students will:</p> <p>A.8.1 explain the concepts of variety, moderation and balance, and balancing caloric intake and energy expenditure</p> <p>A.8.2 identify recommended amounts of foods from each food group using the food guidance system</p> <p>A.8.3 compare portion and serving sizes and demonstrate an awareness of the amount of food consumed and the calories and other nutrients consumed as compared to recommended or label amounts</p> <p>A.8.4 describe how factors such as age, physical activity, and gender affect nutritional requirements</p>	<p>PASI.a.2.m: Distinguish between adequate and inadequate decisions of information.</p> <p>PASI.b.2.m: Classify concerns such as theoretic, technical, practice.</p> <p>PASI.c.2.m: Differentiate types of knowledge needed for reasoned action: contextual factors, valued-ends, goals, action taken, and consequences.</p> <p>PASI.d.2.m: Evaluate short- and long-term consequences of possible actions of self, others, culture/society, and global environment.</p> <p>PASI.e.2.m: Test hypotheses based on scientific principles, observations, and evidence.</p> <p>CRF1.e.4.m: Demonstrate competence in using various information sources, including reading and mathematics to compare economic system and consumer actions.</p> <p>CCLC1.b.14.m: Explore factors that contribute to maintaining safe and healthy school, work, and community environments.</p> <p>CCLC1.c.10.m: Identify ways individuals and families can influence change in policies, agencies, and institutions that affect individuals and families.</p> <p>CRF1.a.9.m: Utilize nutrition standards and guidelines from recommended intake in analyzing safe and nutritious food for individuals and families.</p> <p>EC1.g.2.m: Recognize healthy food choices.</p> <p>FSDN1.a.10.m: Research the impact of our choices on our health.</p> <p>FSDN1.c.6.m: Discover the functions of nutrients to meet dietary needs.</p> <p>FSDN1.c.7.m: Identify reliable sources of nutrition information.</p> <p>FSDN1.d.5.m: Identify nutritional needs of individuals.</p> <p>FSDN1.f.10.m: Describe how factors such as age, physical activity, and gender affect nutritional requirements.</p>	

<p>Food Safety Students will understand/know how to keep food safe for consumption, and how to prepare food safely.</p> <p>Rationale: Food-borne illness is a common and serious consequence of poor hygiene, unsafe food handling and improper food preparation.</p> <p>By the end of grade 8 students will:</p> <p>B.8.1 identify and explain the importance of key food safety messages (clean, cook, chill, avoid cross-contamination)</p> <p>B.8.2 verbalize how to safely prepare/pack foods</p> <p>B.8.3 explain the relationship between food safety practices and health</p> <p>B.8.4 describe factors associated with a safe food supply (food handling, production, storage, and preparation techniques)</p> <p>B.8.5 construct a food chain</p> <p>B.8.6 identify points in food preparation where hand washing is needed</p>	<p>HD1.b.6.m: Discuss the effect of heredity and environment on human growth and development.</p> <p>NW1.c.3.m: Identify nutrients important in dietary needs for different stages of the life span.</p> <p>HSF1.a.6.m: Describe the functions of each organ system.</p> <p>HSF1.b.3.m: Identify common diseases and disorders of the human body (i.e. influenza, heart disease, diabetes, cancer).</p> <p>HSF1.b.4.m: Describe healthcare treatments that promote recovery from human diseases and disorders.</p> <p>HSF4.a.4.m: Define and list personal traits that might be possessed by people in the healthcare field.</p> <p>HSF9.a.4.m: Describe short- and long-term benefits of healthy eating and regular physical activity.</p> <p>HSF9.b.4.m: Identify strategies, including health screenings and examinations, for the prevention of diseases.</p> <p>HSF9.c.3.m: Identify complementary (alternative) health practices as they relate to wellness and disease prevention.</p> <p>EC1.g.5.m: Demonstrate strategies for good health, safety, and sanitation.</p> <p>EC1.g.7.m: Identify procedures for food safety, storage, preparation, and handling.</p> <p>EC1.h.7.m: Practice daily safety and sanitation procedures.</p> <p>FMM1.e.5.m: Analyze current safety procedures utilized within your home.</p> <p>FPS1.b.10.m: Recognize how germs spread in foods.</p> <p>FPS1.b.12.m: Report on a current food-borne illness or outbreak.</p> <p>FPS1.b.13.m: Distinguish between refrigerated, freezer, and room temperature food storage.</p> <p>FPS1.b.15.m: Check proper purchasing, receiving, storage, and handling of both raw and prepared foods through case studies.</p> <p>FPS1.b.16.m: Identify protein foods found at home and in a restaurant, and explain how to prevent cross contamination with those foods.</p> <p>FPS1.b.17.m: Analyze current types of cleaning materials and sanitizers for proper uses and safety hazards.</p> <p>FPS1.c.6.m: Store common cooking tools and equipment in a safe manner.</p> <p>FPS1.c.7.m: Demonstrate how to properly wash and sanitize dishes and cooking surfaces.</p> <p>FPS1.e.15.m: Demonstrate how to use a food thermometer.</p>
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	<p>FSDN1.b.9.m: Explore food-borne illness, and discover ways to reduce the spread of microorganisms.</p> <p>FSDN1.a.7.m: Identify potential careers in food science, technology, dietetics, and nutrition.</p> <p>FSDN1.b.10.m: Explain the importance of safety and sanitation procedures used by food service professionals.</p> <p>FSDN1.b.11.m: Investigate documented food-borne illness outbreaks.</p> <p>FSDN1.b.12.m: Identify potential sources of food contamination between the origin of food and consuming the food.</p> <p>FSDN1.b.14.m: Practice proper storage of food.</p> <p>FSDN1.f.14.m: Demonstrate Food Code Points of time, temperature, date marking, cross contamination, hand washing, and personal hygiene as criteria for safe food preparation.</p> <p>HSF1.b.3.m: Identify common diseases and disorders of the human body (i.e., influenza, heart disease, diabetes, cancer).</p> <p>HSF1.b.4.m: Describe healthcare treatments that promote recovery from human diseases and disorders.</p> <p>HSF3.b.1.m: Identify current factors influencing the healthcare delivery system.</p> <p>HSF4.a.4.m: Define and list personal traits that might be possessed by people in the healthcare field.</p> <p>HSF4.a.5.m: Discuss possible implications of inappropriate dress and hygiene practices of healthcare workers.</p> <p>HSF6.b.4.m: Explain how diversity influences beliefs and behaviors about medical care.</p> <p>HSF7.a.4.m: Identify five classes of microorganisms.</p> <p>HSF7.a.6.m: Describe standard precautions in prevention of disease transmission.</p> <p>HSF7.b.2.m: Demonstrate how to apply and remove safety gloves, safety glasses, and gowns used in healthcare settings.</p> <p>HSF7.c.3.m: Create environmental safety rules for healthcare setting.</p> <p>HSF9.a.4.m: Describe short- and long-term benefits of healthy eating and regular physical activity.</p> <p>HSF9.b.3.m: Explain the role of proper hand washing and personal etiquette as it relates to disease prevention.</p>

<p>Critical Thinking Skills/Practical Reasoning</p> <p>Students will understand and use critical thinking and practical reasoning skills to address food choices, nutrition, and health concerns.</p> <p>Rationale: Critical thinking and practical reasoning are used in everyday problem solving. Students who develop these skills are more likely to approach everyday problem solving more deliberately, with greater flexibility and increased open-mindedness.</p> <p>By the end of grade 8 students will:</p> <p>C.8.1 demonstrate the ability to apply a decision-making process to food choices at home and away from home</p> <p>C.8.2 identify the consequences of consuming too much or too little food</p> <p>C.8.3 assess eating habits (meals and snacks), set a personal nutrition goal, and track progress toward achieving this goal</p> <p>C.8.4 plan snacks and/or meals that are consistent with the Food Guidance System</p> <p>C.8.5 identify examples of how the food companies, advertising, and the media encourage people to buy and eat different foods</p> <p>C.8.6 differentiate between hunger and non-hunger cues to eating</p> <p>C.8.7 demonstrate how to use food labels to make healthier choices</p> <p>C.8.8 identify reliable sources of nutrition information</p>	<p>PAS1.c.2.m: Differentiate types of knowledge needed for reasoned action: contextual factors, valued-ends, goals, action taken, and consequences.</p> <p>CRF1.a.8.m: Discuss how individuals and families make choices to satisfy needs and wants.</p> <p>CRF1.a.9.m: Utilize nutrition standards and guidelines from recommended intake in analyzing safe and nutritious food for individuals and families.</p> <p>CRF1.b.6.m: Make decisions about providing safe and nutritious food for individuals and families.</p> <p>FPS1.d.3.m: Analyze and modify restaurant menus according to principles of menu planning.</p> <p>FPS1.e.24.m: Compare and contrast convenience foods used in the menu based on cost, time, and use of resources.</p> <p>FPS1.f.2.m: Recognize the differences between food expirations or “best if used by” labels.</p> <p>FSDNI.c.6.m: Discover the functions of nutrients to meet dietary needs.</p> <p>FSDNI.c.7.m: Identify reliable sources of nutrition information.</p> <p>FSDNI.c.11.m: Compare food options for health benefits.</p> <p>FSDNI.c.12.m: Categorize foods into exchange groups.</p> <p>FSDNI.d.5.m: Identify nutritional needs of individuals.</p> <p>FSDNI.d.6.m: Compare food labels, portions, and serving sizes to aide in decision making.</p> <p>FSDNI.d.8.m: Discuss a modified diet based on nutritional need and health conditions.</p> <p>FSDNI.d.9.m: Identify ways to maintain health and prevent disease.</p> <p>FSDNI.e.5.m: Conduct a survey to assist in decision making in making development and marketing decisions.</p> <p>FSDNI.e.6.m: Prepare food for presentation and assessment.</p> <p>FSDNI.e.9.m: Evaluate food products.</p> <p>FSDNI.f.11.m: Develop new food products.</p> <p>NW1.a.5.m: Identify and define the areas of wellness.</p> <p>NW1.a.8.m: Identify global and local nutrition trends of health promotion concepts.</p> <p>NW1.b.5.m: Identify key nutrients, and list ways nutrients can promote health and prevent chronic disease.</p> <p>NW1.b.6.m: Describe the relationship between food choices and health problems.</p>
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<p>Nutrition for Health/Promotion of Healthy Behaviors Students will understand concepts related to personal health promotion and disease prevention and will practice behaviors to promote health, prevent disease, and reduce health risks.</p> <p>Rationale: Making nutritious food choices is a cornerstone of healthy behaviors. Knowledge of nutrition concepts will assist students in making informed choices regarding their lifestyles.</p> <p>By the end of grade 8 students will:</p> <p>D.8.1 define the concepts of balance and moderation as part of a healthy diet</p> <p>D.8.2 identify avenues of support for eating disorders and where to go with concerns</p> <p>D.8.3 describe the relationship between food choices and health problems, such as dental caries, osteoporosis, diabetes, obesity, and blood pressure</p>	<p>NW1.b.7.m: Assess eating habits (meals and snacks), set a personal nutrition goal, and track progress toward achieving this goal.</p> <p>NW1.b.8.m: Demonstrate how to use food labels to make healthier choices.</p> <p>NW1.c.3.m: Identify nutrients important in dietary needs for different stages of the life span.</p> <p>NW1.c.4.m: Explore health-related concerns that affect food choices.</p> <p>NW1.d.9.m: Identify agencies responsible for monitoring the food supply.</p> <p>NW1.d.10.m: Discuss the inspection and labeling systems on food.</p> <p>NW1.e.2.m: Give examples of how the food supply has changed over time.</p> <p>NW1.e.3.m: Identify food marketing strategies.</p> <p>NW1.e.5.m: Identify examples of how the food companies, advertising, and the media encourage people to buy and eat different foods.</p> <p>HSF6.a.4.m: Discuss the difference between legal behavior and ethical behavior.</p> <p>HSF6.a.5.m: Explain how medical treatment of others is influenced by ethical behavior.</p> <p>HSF6.b.4.m: Explain how diversity influences beliefs and behaviors about medical care.</p> <p>PAS1.d.2.m: Evaluate short- and long-term consequences of possible actions of self, others, culture/society, and global environment.</p> <p>CCLC1.a.7.m: Recognize local and global policies, issues, and trends in the workplace and community that affect individuals and families.</p> <p>FSDN1.a.8.m: Identify potential employers in food science, technology, dietetics, and nutrition</p> <p>FSDN1.a.9.m: Explore various career pathways for food-related occupations by researching careers, and define values supported by career decision making.</p> <p>FSDN1.b.12.m: Identify potential sources of food contamination between the origin of food and consuming the food.</p> <p>FSDN1.c.11.m: Compare food options for health benefits.</p> <p>FSDN1.d.8.m: Discuss a modified diet based on nutritional need and health conditions.</p> <p>FSDN1.d.9.m: Identify ways to maintain health and prevent disease.</p>
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<p>D.8.4 demonstrate the ability to influence and support others in making positive eating and physical activity choices</p> <p>D.8.5 identify key nutrients from each food group, and list ways nutrients can promote health and prevent chronic disease</p> <p>D.8.6 demonstrate understanding of health promotion concepts</p>	<p>HD1.b.8.m: Identify effects of gender, ethnicity, and culture on individual development.</p> <p>HSF9.a.3.m: Explain how personal hygiene affects wellness.</p> <p>HSF9.a.4.m: Describe short- and long-term benefits of healthy eating and regular physical activity.</p> <p>HSF9.a.5.m: Explain the benefits of adequate sleep in promoting health and wellness.</p> <p>HSF9.a.6.m: Identify indicators of intellectual, emotional, social, and physical health.</p> <p>HSF9.b.3.m: Explain the role of proper hand washing and personal etiquette as it relates to disease prevention.</p> <p>HSF9.b.4.m: Identify strategies for the prevention of diseases including health screenings and examinations.</p> <p>HSF9.b.5.m: Describe how the body fights germs and diseases naturally, with medicines, and through immunizations.</p> <p>HSF9.c.3.m: Identify complementary (alternative) health practices as they relate to wellness and disease prevention.</p>	
<p>Diversity</p> <p>Students will understand that nutritional status and health can be impacted by many factors and that healthy eating must be individualized to meet personal preferences and characteristics.</p> <p>Rationale: The Wisconsin population is growing more diverse. Nutritional status is affected by the food choices available and the nutritional adequacy and appropriateness of the food available. In addition, diversity in body size and shape, economic resources, and racial and ethnic background may influence and impact food choices.</p> <p>By the end of grade 8 students will:</p> <p>E.8.1 locate supplier(s), source(s), or retail outlet(s) for ethnic foods within the community</p> <p>E.8.2 demonstrate respect for others' body weight, size, shape, and abilities, and identify factors that contribute to differences in people (genetics, lifestyle behaviors, age)</p> <p>E.8.3 describe the food customs and habits of various cultures, and recognize that our culture, ethnicity, and health status may impact our food choices</p> <p>E.8.4 discuss different dietary needs related to food allergies and medical conditions</p>	<p>CRF1.b.5.m: Identify environmental trends and issues affecting families and future generations.</p> <p>CCLC1.a.11.m: Differentiate needs and wants that may influence opportunities for family members.</p> <p>F1.a.6.m: Recognize the role of family in teaching culture and traditions across the life span.</p> <p>F1.b.2.m: Demonstrate respect for diversity with sensitivity to anti-bias, gender, equity, age, culture, and ethnicity.</p> <p>F1.b.3.m: Recognize the effects of empathy for diversity on individuals in family, work, and community settings.</p> <p>FCS1.d.3.m: Discuss issues and concerns of poverty diversity for individuals, families, and communities.</p> <p>FSDN1.a.7.m: Identify potential careers in food science, technology, dietetics, and nutrition.</p> <p>FSDN1.a.9.m: Explore various career pathways for food-related occupations by researching careers and define values supported by a career decision making.</p> <p>FSDN1.c.6.m: Discover the functions of nutrients to meet dietary needs.</p> <p>FSDN1.d.7.m: Identify factors that affect menu choices.</p> <p>FSDN1.e.4.m: Identify factors that affect food preferences in the marketing of food.</p> <p>FSDN1.f.6.m: Identify food preferences for individuals and families.</p>	

<p>Identification and Classification of Food</p> <p>Students in Wisconsin will be able to appreciate and classify foods. They will also demonstrate an interest and appreciation for a variety of foods.</p> <p>Rationale: Foods are classified in many ways. Awareness of the variety and types of foods available may increase willingness to try unfamiliar foods. Identifying and trying new foods is one of the first steps leading to knowledge of foods. Students who understand why foods are processed, and how foods change during processing, establish a foundation for understanding how nutritional content can change with changes in form of a food.</p> <p>By the end of grade 8 students will:</p> <p>F.8.1 identify foods by food group and nutrient contributions</p> <p>F.8.2 use descriptive words and sensory characteristics to evaluate and classify foods</p> <p>F.8.3 identify processed foods by source (plants and animal products), and explain how food may change during processing</p> <p>F.8.4 list the basic food groups, give examples from each group, and use the food groups to plan a meal and snack</p>	<p>HSF6.b.4.m: Explain how diversity influences beliefs and behaviors about medical care.</p> <p>HSF6.b.5.m: Describe the role of respectful behavior in healthcare customer service.</p> <p>HSF6.b.6.m: Recognize ways to use different strengths to improve work outcomes in a healthcare setting.</p> <p>PAS1.c.2.m: Differentiate types of knowledge needed for reasoned action: contextual factors, valued-ends, goals, action taken, and consequences.</p> <p>CCLC1.a.11.m: Differentiate needs and wants that may influence opportunities for family members.</p> <p>CRF1.a.8.m: Discuss how individuals and families make choices to satisfy needs and wants.</p> <p>FSDN1.a.7.m: Identify potential careers in food science, technology, dietetics, and nutrition.</p> <p>FSDN1.a.10.m: Research the impact of our choices on our health.</p> <p>FSDN1.c.6.m: Discover the functions of nutrients to meet dietary needs.</p> <p>FSDN1.c.7.m: Identify reliable sources of nutrition information.</p> <p>FSDN1.c.11.m: Compare food options for health benefits.</p> <p>FSDN1.d.5.m: Identify nutritional needs of individuals.</p> <p>FSDN1.e.6.m: Prepare food for presentation and assessment.</p> <p>FSDN1.e.9.m: Evaluate food products.</p> <p>FSDN1.f.11.m: Develop new food products.</p> <p>HSF9.a.4.m: Describe short- and long-term benefits of healthy eating and regular physical activity.</p>
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Variety, Where Food Comes From (Geography)

Grades 5-7

Topic	Nutrition for Energy and Growth Critical Thinking and Practical Reasoning Nutrition for Health, Promotion of Healthy Behaviors Diversity
Activity will meet Performance Standards:	A.8.1 Explain the concepts of variety, moderation, and balance, and balancing caloric intake and energy expenditure. C.8.7 Demonstrate how to use food labels to make healthier choices.
Lesson Summary	Students will become aware of the origin of their food.

GOALS/OBJECTIVES

Students will understand that a wide variety of food choices are available. Food choices can be limited by location or geographic region.

SUPPLIES NEEDED

- A blank U.S. and Wisconsin (*for optional piece*) map for each student.
- Colors, colored pencils.
- Nutritious, Delicious, Wisconsin poster.
(http://ne.dpi.wi.gov/files/ne/pdf/ndw_p.pdf)

ANTICIPATORY SET

Discussion on variety of food and health.

TIMELINE

One to two class periods.

SET UP

Have resource materials available. This can also be an out-of-class project assignment.



ACTIVITY

1. Have students use encyclopedias, food labels, Internet, grocery store information, and other resources to learn which food products are grown and/or produced in each state, and for what foods each state is known.
2. On the map, students should draw and label a fruit or vegetable grown in at least 10 different states. (*Adjust expectations according to your grade.*) This may also be done with a world map for older students.

OPTIONAL

Conduct exercise with the Wisconsin map to look at what is grown, produced, and processed in Wisconsin.

CLOSURE

We need a variety of climates and growing conditions to provide a variety of food products. What if we could only eat foods that are grown 100 miles from our house or only from Wisconsin? What would our meals be like?

COOKING CONNECTION

Have students create and prepare a recipe using foods grown, produced, and processed in Wisconsin.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will synthesize knowledge, skills, and practices required for careers in family and community services.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.

- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.
- Students will evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will demonstrate how employability skills enhance their employment opportunities and job satisfaction.
- Students will apply accepted ethical practices with respect to cultural, social, and ethical differences within the healthcare environment and perform quality healthcare delivery.
- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.



Calories Count: Using the Nutrition Facts Label

Grades 7-8

Topic	Nutrition for Energy and Growth
Activity will meet Performance Standards:	A.8.3 Compare portion and serving size, and demonstrate an awareness of the amount of food consumed and the calories and other nutrients consumed as compared to recommended or label amounts.
Lesson Summary	Students will understand the concept of a calorie and the importance of reading a Nutrition Facts label.

GOALS/OBJECTIVES

To educate students on the importance of calories in relation to food and the basic understanding of information found on food Nutrition Facts labels. Students will learn how to read Nutrition Facts labels on cereal boxes and use the calorie count to determine if it is a nutritious food. Students will also compare the recommended serving size to their individual estimated consumption of that product.

SUPPLIES NEEDED

- A variety of food labels from cereal boxes.
- A variety of full cereal boxes lined up on a table with just the Nutrition Facts label showing toward students.
- Copy of USDA's *READ IT before you eat it!* poster. (http://teammnutrition.usda.gov/resources/read_it.pdf)
- Measuring cups and bowls.

Web Resources:

- USDA's Eat Smart, Play Hard www.fns.usda.gov
- US Dept of Health and Human Services-Dietary Guidelines for a Healthier You www.hhs.gov
- www.howstuffworks.com

ANTICIPATORY SET

Ask students: What is something that you are able to find listed on a Nutrition Facts label that tells you the energy value of the food? (*Answer: calorie*)

TIMELINE

One class period.

SET UP

- A variety of cereals, in original packaging, and cereal boxes will be used for this exercise. Put the cereal boxes in a row on a counter or table with the Nutrition Facts panel facing the students.
- Have additional labels available.
- Have several sizes of bowls and a set of measuring cups for each work station.

ACTIVITY

1. Ask students if they know what a calorie is. People refer to calories when dieting. Often calories are spoken of as if they were an ingredient in food, or have a physical attribute. While technically this reference is grammatically correct, a calorie is solely a unit of measurement. In scientific terms, a calorie is the amount of energy required to raise the temperature of one kilogram of water by one degree Celsius. In other words, it is a way to measure energy.
2. Discuss what you should know about calories. You need to think about what you regularly eat, what your caloric needs are, and how to calculate the calories you eat.
3. Create groups of two to four students.
4. Instruct students to pour into a bowl what they would normally eat for breakfast and then measure out their portion size.
5. Have students look at the Nutrition Facts labels on the box. Students are to locate calories, the Percent of Daily Values based on a 2,000 calorie diet, and serving size.
6. Ask students to measure out the serving size of cereal listed on Nutrition Facts label and compare their portion to the actual serving.

OPTIONAL

Conduct the activity using different sized bowls to demonstrate how our perception of food volume changes. This can be related to a basic understanding of proportion and how we don't always consume the serving size listed on the Nutrition Facts label.

CLOSURE

To effectively count calories, you can use the Nutrition Facts label on packaged goods to make smart food choices and to find out how many calories and nutrients you are actually eating. The serving size is the amount stated on the Nutrition Facts label. Sometimes your portion size and the product's serving size match; sometimes they don't. For example, if the label says that 1 serving is $\frac{3}{4}$ cup of cereal, but you have eaten $1\frac{1}{2}$ cups, you have just doubled the serving size as well as your calories. Remember that the serving size on the Nutrition Facts label is not a recommended amount to eat; it's a simple and easy way for letting you know the calories and nutrients in a certain amount of a food.

COOKING CONNECTION

Provide students with a recipe with no nutritional information. While preparing the recipe, have students use the Nutrition Facts label of each ingredient and calculate the total calories in the recipe and the total calories per serving.



CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will synthesize knowledge, skills, and practices required for careers in family and community services.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
- Students will analyze factors that influence human growth and development.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.
- Students will evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.

Creating a Food Safety Brochure

Grades 6-8

Adapted from a lesson by Linda Bergen

Topic	Nutrition for Growth, Health, and Energy Needs; and Food Safety
Activity will meet Performance Standards:	B.8.1 Identify and explain the importance of key food safety messages (clean, cook, chill, avoid cross-contamination). B.8.2 Verbalize how to safely prepare/pack foods. B.8.3 Explain the relationship between food safety practices and health. B.8.4 Describe factors associated with a safe food supply (food handling, production, storage, and preparation techniques). B.8.6 Identify points in food preparation where hand washing is needed.
Lesson Summary	Students will describe the steps to keep food safe.

GOALS/OBJECTIVES

Students will understand the importance of preparing food safely.

SUPPLIES NEEDED

- Creating a Food Safety Brochure handout.

ANTICIPATORY SET

Prior lessons on hand washing and food safety.

TIMELINE

One class for brochure creation, computer lab time to finish the brochure, one to two class periods for presentations.

ACTIVITY

1. Discuss food-borne illnesses with class.
2. Review food safety, asking questions to assess the knowledge of students.
 - A. What is food-borne illness? How is food contaminated? When do food-borne illnesses strike (*symptoms, who is at risk, etc.*)? How do you prevent food-borne illness?

- B. How do you shop and store food safely? Does it make a difference where the food comes from? (*Pesticides used in Brazil or China, for example, may be illegal in the U.S.*) Does this matter with food processing and shipping procedures?
- C. What are proper personal hygiene techniques?
- D. What are control temperatures?
3. Distribute the handout “Creating a Food Safety Brochure,” and go over the activity. Assign students a food-borne illness to research. The most common food-borne illnesses include *Campylobacter*, *Salmonella*, *E. Coli 0157:H7*, *Calicivirus (Norwalk-like virus)*, *Shigella*, *Giardia lamblia*, *Hepatitis A*, *Cryptosporidia*, and *Clostridium botulinum (botulism)*. Pesticide, mercury, and lead contamination can also be topics for advanced groups.
4. Divide students into teams of two or three, and assign each team a food-borne illness. Each team has been “hired by the Food Safety Institute” to create a brochure that contains valuable information for the public about preparing food safely. Each team will research their assigned topic, create a brochure, and “pitch” the brochure to the class in a presentation. The class will provide feedback on the presentation and brochure, and discuss whether or not it is effective. A clear message that provides helpful information is required. Remind students to use science-based information and be creative.





TEACHER ONLY:

Additional information (*from www.cdc.gov*): Food-borne illnesses are caused by consuming contaminated foods or beverages. More than 250 different food-borne diseases have been described. Most of these diseases are infections, caused by a variety of bacteria, viruses, and parasites that are present in a food. Other diseases are caused by harmful chemicals or toxins that have contaminated the food, for example, poisonous mushrooms. These different diseases have many different symptoms, so there is no one “syndrome” that is food-borne illness. However, the microbe or toxin enters the body through the gastrointestinal tract and often causes the first symptoms there, so nausea, vomiting, abdominal cramps, and diarrhea are common symptoms in many food-borne diseases.

An estimated 76 million cases of food-borne disease occur each year in the United States. The majority of cases are mild and cause symptoms for only a day or two. However, the CDC estimates that there are 325,000 hospitalizations and 5,000 deaths related to food-borne diseases each year. The most severe cases tend to occur in the very old, the very young, those who have an illness already that reduces their immune system function, and in healthy people exposed to a very high dose of an organism. Additionally, several important diseases of unknown cause have turned out to be complications of food-borne infections. For example, Guillain-Barre syndrome can be caused by *Campylobacter* infection, and the most common cause of acute kidney failure in children, hemolytic uremic syndrome, is caused by infection with *E. coli* O157:H7 and related bacteria.

Campylobacter is a bacterial pathogen that causes fever, diarrhea, and abdominal cramps. It is the most commonly identified bacterial cause of diarrheal illness in the world. These bacteria live in the intestines of healthy birds, and most raw poultry meat has Campylobacter on it. Eating undercooked chicken or other food that has been contaminated with juices dripping from raw chicken is the most frequent source of this infection.

Salmonella is also a bacterium that is widespread in the intestines of birds, reptiles, and mammals. It can spread to humans via a variety of different foods of animal origin. The illness it causes, salmonellosis, typically includes fever, diarrhea, and abdominal cramps. In persons with poor underlying health or weakened immune systems, it can invade the bloodstream and cause life-threatening infections.

E. coli O157:H7 is a bacterial pathogen that has a reservoir in cattle and other similar animals. Human illness typically follows consumption of food or water that has been contaminated with microscopic amounts of cow feces. The illness it causes is often a severe and bloody diarrhea and painful abdominal cramps, without fever. In 3% to 5% of cases, a complication called hemolytic uremic syndrome (HUS) can occur several weeks after the initial symptoms. This severe complication includes temporary anemia, profuse bleeding, and kidney failure.

Calicivirus, or Norwalk-like virus, is an extremely common cause of food-borne illness, though it is rarely diagnosed because the laboratory test is not widely available. It causes an acute gastrointestinal illness, usually with more vomiting than diarrhea, which resolves within two days. Unlike many food-borne pathogens that have animal reservoirs, it is believed that Norwalk-like viruses spread primarily from one infected person to another. Infected kitchen workers can contaminate a salad or sandwich as they prepare it if they have the virus on their hands.

Some common diseases are occasionally food borne, even though they are usually transmitted by other routes. These include infections caused by Shigella, Hepatitis A, and the parasites Giardia lamblia and Cryptosporidia. Even strep throat infections have been transmitted occasionally through food.

In addition to disease caused by direct infection, some food-borne diseases are caused by the presence of a toxin in the food that was produced by a microbe in the food. For example, the bacterium Staphylococcus aureus can grow in some foods and produce a toxin that causes intense vomiting. The rare but deadly disease botulism occurs when the bacterium Clostridium botulinum grows and produces a powerful paralytic toxin in foods. These toxins can produce illness even if the microbes are no longer present.

CLOSURE

Students share brochures.

COOKING CONNECTION

Have students prepare a recipe using multiple ingredients, including one that has a critical cooking temperature. Students will follow proper food preparation techniques (i.e., use of vegetable-only cutting boards). Students also will use meat thermometers to take internal temperatures to identify when a food is safe to eat.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skill and practices required for careers in hospitality, tourism, and recreation.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the existing and potential hazards to clients, co-workers, and self, working to prevent injury or illness through safe work practices and following health and safety policies and procedures.



CREATING A FOOD SAFETY BROCHURE

Names: _____

Your team has just been hired by the Food Safety Institute to create a brochure that contains valuable information for the public about preparing food safely. Your team will research the assigned topic, create a brochure, and “pitch” the brochure to the class in a presentation.

The procedure to accomplish this task is listed below. Remember to use science-based information and be creative.

Project is due for class presentation on: _____

Our group is assigned this topic: _____

1. Define your brochure parameters.

Who is your target audience? How will your brochure be used?

2. Research assigned topic. Consider using the following internet resources:

- <http://www.fightbac.org>
- <http://www.nsf.org/>
- <http://www.foodsafety.gov>
- <http://www.cdc.gov>

3. Design your brochure. Include the following information:

- A. Name of food-borne illness
- B. Foods affected
- C. Symptoms
- D. How does it occur—risky food handling
- E. Prevention of illness—safe food handling
- F. Other important information

Fighting BAC with Knowledge

Grades 5-8

Adapted from a lesson by Delaine Stendahl

Topic	Food Safety
Activity will meet Performance Standards:	B.8.1 Identify and explain the importance of key food safety messages (clean, cook, chill, avoid cross-contamination). B.8.2 Verbalize how to safely prepare/pack foods. B.8.3 Explain the relationship between food safety practices and health. B.8.4 Describe factors associated with a safe food supply (food handling, production, storage, and preparation techniques). B.8.6 Identify points in food preparation where hand washing is needed.
Lesson Summary	Students will understand and demonstrate safe food preparation and storage techniques.

GOALS/OBJECTIVES

Students will understand and demonstrate safe food preparation and storage techniques.

SUPPLIES NEEDED

- Computer lab.
- Fighting BAC with Knowledge — You be the Detective! worksheet.
- Optional cooking lab ingredients.

ANTICIPATORY SET

Prior lessons on hand washing and food safety.

TIMELINE

One class for completing computer lab component, one class for discussion and creation of a food safety rubric, and one class for cooking lab.

ACTIVITY

Note: online activity best for students in grades 5 and 6. Older students may enjoy creating a food safety brochure instead of completing the online activity.

1. Review hand washing procedures.
2. Discuss why hand washing is essential in general and specifically in foods laboratory.

3. Students will complete activity “Fighting BAC with Knowledge—You be the Detective!” through interactive website: <http://fooddetectives.com>
4. Students will complete the worksheet and turn it in with a printed certificate from the website showing their successful completion of the content.
5. Review of content learned through the web activities by sharing stickers or posters (or food safety brochures) in small groups.
6. Brainstorm as a class criteria that would need to be used in lab to ensure food safety.
7. Review a recipe and control points in lab for food safety.

CLOSURE

Students are provided with food safety rubric to use during cooking labs. If cooking connection activity is completed, ask students to write a reflection of the foods laboratory experience, summarizing what the group did well and what areas are in need of improvement.

COOKING CONNECTION

Students complete the Food Safety Lab — Tacos component of this activity.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the existing and potential hazards to clients, co-workers, and self, working to prevent injury or illness through safe work practices and following health and safety policies and procedures.

SAMPLE FOOD SAFETY RUBRIC

Students award scores:

- 5 points – students successfully completed all food safety activities
- 3 points – students completed most food safety activities
- 0 points – students failed to address the food safety issue

Area of Food Safety	Points Awarded
CLEANLINESS	
Hands washed at all appropriate times (before lab, between tasks, before eating)	
Aprons On	
Hair Restrained/Covered	
Gloves worn for cuts, etc.	
Counters washed prior to start	
Dishes washed adequately and stored properly	
FOOD PREPARATION	
Frozen food thawed safely	
Produce washed before used	
Toppings chilled after preparation or put on ice on the table	
Meat cooked to correct temperature or until completely browned	
Meat prepared on proper cutting board	
Produce prepared on proper cutting board	
Produce prepared on proper cutting board	
Meat and produce kept on separate counters for preparation	
Total Score	

FIGHTING BAC WITH KNOWLEDGE— YOU BE THE DETECTIVE!

Name: _____

Directions: Go to the website <http://fooddetectives.com>, and play the interactive games. Answer/complete each of the following as you play the games.

1. What are three symptoms of food-borne illness?
2. What methods are used by food detectives to prevent illness?
3. Complete the file “the case of ...Filthy Fingers.” Give 5 examples of when a person should wash his or her hands.
4. Play the “Bacteria that Kept Growing” game. Summarize the message of the game and how to prevent bacteria from growing.
5. Create 4 stickers/posters in the file “The Kid Who Knew Enough.” When all four stickers are created, show the teacher so you can print them out.
6. Enter the file folder “the case of... Good Food Gone Bad,” and participate in the concentration game. List all messages you received that have to do with food safety as you completed a match. (Use the back of your sheet if necessary.)
7. Print off your certificate and turn in with the questions.

FIGHTING BAC WITH KNOWLEDGE— ANSWER KEY

1. What are three symptoms of food-borne illness? (3 points)

Stomach cramps, vomiting, diarrhea

2. What methods are used by food detectives to prevent illness? (4 points)

Keeping things clean, cooking to correct temperatures, chilling food properly, separating raw meats from foods that are ready to eat or won't be cooked before eating.

3. Complete the file “the case of ...Filthy Fingers.” Give 5 examples of when a person should wash his or her hands. (5 points)

Playing with the dog, preparing supper, feeding baby sister, making a drink, going to the bathroom, eating supper, eating a sandwich

4. Play the “Bacteria that Kept Growing” game. Summarize the message of the game and how to prevent bacteria from growing. (3 points)

BAC are killed with soap (cleaning) or heat and are slowed down with cold temperatures.

5. Create 4 stickers/posters in the file “The Kid Who Knew Enough.” When all four stickers are created, show the teacher so you can print them out. (8 points)

6. Enter the file folder “the case of... Good Food Gone Bad,” and participate in the concentration game. List all messages you received that have to do with food safety as you completed a match. Use the back of your sheet if necessary. (7 points)

- *BAC loves raw meat and poultry juices, keep them away from fresh vegetables.*
- *Wash hands after using the bathroom.*
- *How dirty is your hand towel? Wash it often.*
- *Keep cold food in an ice chest. Put left overs back in there, too.*
- *BAC loves pizza, too. Refrigerate it within 2 hours.*
- *Keep that fridge clean, wipe up spills.*
- *Different foods need different temperatures to kill BAC.*

7. Print off your certificate and turn in with the questions. (5 points)

FOOD SAFETY LAB: TACOS RECIPE

Yield: 8 tacos

- ½ lb ground beef
- Dash of garlic powder
- ½ tsp Worcestershire sauce
- ¼ tsp chili powder
- ¼ c finely chopped onion
- ½ c tomato sauce
- ¼ tsp salt
- 8 taco shells/tortillas
- 1 cup grated cheese
- 1 cup shredded lettuce
- ½ c chopped tomatoes
- ¼ c sour cream
- taco sauce, as desired
- ¼ c sliced black olives

1. In a cast iron skillet, break up the meat into small pieces with a fork. Add onion and garlic powder. Cook on medium high heat. Stir constantly until the meat is completely browned.
2. Drain well. Return meat to the skillet.
3. Add tomato sauce, Worcestershire sauce, chili powder, and salt into the drained meat.
4. Cook over medium heat for 5-10 minutes while stirring constantly.
5. While sauce continues to cook, prepare toppings (cheese, lettuce, tomatoes).
6. Fill tacos with meat sauce, and then top with choice of toppings. Serve immediately.

Deciphering the Food Label

Grades 6-8

Topic	Critical Thinking/Practical Reasoning
Activity will meet Performance Standards:	C.8.1 Demonstrate the ability to apply a decision-making process to food choices at home and away from home C.8.4 Plan snacks and/or meals that are consistent with the Food Guidance System C.8.7 Demonstrate how to use food labels to make healthier choices C.8.8 Identify reliable sources of nutrition information
Lesson Summary	Students will use the food label to make choices.

GOALS/OBJECTIVES

Students will choose more fruits, vegetables, and grains to consume less fat and more fiber.

SUPPLIES NEEDED

- Food labels from foods/snacks the students like to eat (*two labels for each small group*).
- Students can also bring a Nutrition Facts label from a snack item (*Have fruits, raw vegetables and dip and other common snack food labels available*).
- *Read It Before You Eat It Poster*
(http://teammnutrition.usda.gov/resources/read_it.pdf)

ANTICIPATORY SET

Nutrition Facts label reading.

SET UP

Have poster and food labels available.

TIMELINE

One class period.

ACTIVITY

1. Review the poster *Read It Before You Eat It* with the class.
2. Divide the class into small groups. Give each group two real food labels.
3. Have groups complete the Label Logic worksheet for the item they think is the healthiest and share findings with the class.

CLOSURE

Discuss snacks that are lower in fat and sugar and higher in fiber.

COOKING CONNECTION

Have students prepare a recipe from the DPI's *FAST Recipes* cookbook (available upon request from WI Team Nutrition <http://ne.dpi.wi.gov/>) to identify healthy food options, food labels, and serving sizes.



CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will integrate knowledge, skills, and practices needed for a career in consumer services.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will synthesize knowledge, skills, and practices required for careers in family and community services.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
- Students will analyze factors that influence human growth and development.
- Students will demonstrate respectful and caring relationships in the family, workplace, and community.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.
- Students will evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.

LABEL LOGIC

Student Names: _____

Food Items: _____

_____ Container Size _____ Servings per Container _____ Serving Size

_____ Calories per Serving _____ Calories in Entire Container

Per Serving		
Total Fat	_____	g
Calories from fat	_____	% Calories from Fat
Saturated fat	_____	g % DV
Sodium	_____	mg % DV
Total carbohydrate	_____	g % DV
Dietary fiber	_____	g % DV
Sugars	_____	g
Protein	_____	g % DV
Vitamin A	_____	% DV
Vitamin C	_____	% DV
Calcium	_____	% DV
Iron	_____	% DV

Is this a good choice for a snack? Why or why not?

Compare to another product. Name of product: _____

Which product is:

- Lower in calories _____
- Lower in fat _____
- Bigger portion _____
- Higher in fiber _____

Which is the healthier snack? _____

Design a Cereal

Grades 5-7

Topic	Critical Thinking and Practical Reasoning
Activity will meet Performance Standards:	C.8.5 Identify examples of how the food companies, advertising, and the media encourage people to buy and use different foods.
Lesson Summary	Students will become aware of how packaging design affects purchasing decisions.

GOALS/OBJECTIVES

Discuss how packaging design and appeal can influence decisions to purchase a product.

SUPPLIES NEEDED

- Variety of cereal boxes/bags/containers that students can use to create their product (*include different packaging materials and sizes with various nutritional claims and gimmicks*).
- Paper
- Drawing supplies
- Scissors
- Glue

ANTICIPATORY SET

Label reading, some exposure to influences on decision making.

TIMELINE

Two to four class periods, depending on the amount of work time in class or if this is an assigned homework project. Allow one class period for sharing the campaigns.

SET UP

Have cereal boxes and supplies available.

ACTIVITY

1. Ask students, “How important is graphic design in product packaging?” and “Do nutritional claims influence you to buy or not buy a product?”
2. Have students look at how principles of elements and design can influence a buyer. Look at several cereal boxes, and have students identify healthful and unhealthful cereals by examining the cereal boxes.
3. Discuss the differences in the packaging.
4. Work in teams of four students to brainstorm cereal ideas and strategies to sell cereal to young children, adolescents, and adults.
 - Have each group design a nutritious cereal and marketing campaign that will encompass the cereal package design.
 - Teams will build a box/bag or container for their product, complete with the name of the cereal, trademark/logo, gimmick, ingredients, and nutrition claims.
5. Students will present their products to “sell” them to classmates. Classmates react to the advertisement by indicating if they would want to buy the product.
6. Remind students to not be fooled by the advertising or gimmicks.

OPTIONAL

Have students create and record a commercial selling their products.

CLOSURE

Ask students to reflect on this statement as it relates to this assignment: “It’s what is inside that counts.”

COOKING CONNECTION

Have students create and prepare their own granola (cereal or bar) recipe. Provide students with a variety of ingredients for students to select from (oats, sesame seeds, sunflower seeds, nuts, oil, honey, dried fruit). Refer to the Flavorful Blender Granola recipe in the FAST Recipes cookbook (available upon request from WI Team Nutrition <http://ne.dpi.wi.gov/>) or your own recipe for preparation directions.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

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- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will integrate knowledge, skills, and practices needed for a career in consumer services.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will synthesize knowledge, skills, and practices required for careers in family and community services.
- Students will demonstrate respectful and caring relationships in the family, workplace, and community.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.
- Students will evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.



Ditch the Fizz

Grades 7-8

Topic	Critical Thinking Skills/Practical Reasoning
Activity will meet Performance Standards:	C.8.7 Demonstrate how to use food labels to make healthier choices.
Lesson Summary	Students will learn to choose beverages responsibly.

GOALS/OBJECTIVES

Students will use food labels to evaluate the sugar content of beverages and develop a health promotion statement in relation to drinks high in added sugar.

SUPPLIES NEEDED

- Empty soft drink, juice, milk, and sports drink bottles that are clean and dry and have an intact Nutrition Facts label.
- Packets, cubes, or canisters of sugar, bowls, and teaspoon measuring spoons.
- “Ditch the Fizz” worksheet.

ANTICIPATORY SET

Label reading.

TIMELINE

One class period.

SET UP

Have empty bottles available for students to view. Have sugar, sugar cubes, or sugar packets available for demonstrations.

ACTIVITY

1. Explain to students that sugars are carbohydrates and a source of energy (*calories*). Dietary carbohydrates also include the complex carbohydrates starch and dietary fiber. During digestion all carbohydrates except fiber break down into sugars. Sugars and starches occur naturally in many foods that also supply other nutrients, including milk, fruits, some vegetables, breads, cereals, and grains.

2. Conduct a discussion about added sugars.

- Ask if they know what added sugars are. (*Sugars added to foods in processing or preparation, not the naturally occurring sugars in foods like fruit or milk.*)
- Is the body able to tell the difference between naturally occurring and added sugars? (*No, because they are identical chemically.*)
- Can they guess what the number one source of added sugars is in the United States? (*Soda or pop*)
- What other foods do they think are also major sources of added sugars? (*Sweets and candies, cakes and cookies, fruit drinks and fruitades.*)
- Why is eating or drinking a lot of foods high in added sugars, like soft drinks, a concern? (*Foods containing added sugars provide calories but may have few vitamins and minerals. Consuming excess calories from these foods may contribute to weight gain or lower consumption of more nutritious foods. Foods containing sugars and starches can also promote tooth decay. Bacteria in your mouth use sugars and starches to produce the acid that causes tooth decay.*)
- Can foods with added sugars be part of a healthy diet? (*Some foods like chocolate milk, presweetened cereals, and sweetened canned fruits also are high in vitamins and minerals. These foods may provide extra calories along with the nutrients and are fine if you need the extra calories.*)



- How can you tell if a food is high in sugar? (*The Nutrition Facts label gives the content of sugars from all sources—naturally occurring sugars plus added sugars, if any. To find out if sugars have been added, look at the ingredient list on the food label.*)
 - Are drinks with added vitamins and minerals a good choice? (*A healthy diet provides you with your nutrients needs, including health promoting phytochemicals, which are natural plant chemicals that help to decrease the risk of heart disease and certain cancers.*)
 - Don't athletes need to consume sports drinks to replace minerals they lose during competitions? (*Unless you're an endurance athlete or exercising more than an hour at a time, your diet and plain water provides you with all you need to perform well. Make sure you drink adequate water when competing.*)
3. Provide students with drink bottles and explain the “Ditch the Fizz” worksheet.
 4. Have students calculate the amount of sugars in their drink by using the labels to determine the grams of sugar per serving and the grams of sugar for the entire bottle. Divide the grams of sugar by four to get the number of teaspoons.
 5. Have students share their findings with the class.
 6. Have students explore their drink of choice, why they like it, and whether it is a good choice for routine consumption.

OPTIONAL

Students can develop a display using sugar packets or sugar (*have them measure it and pour into the clean, dry beverage bottle using a funnel*) to show the amount in a serving or in the bottle. (*It is also helpful to have these available for the exercise as well.*) Another option is to have students calculate the amount of sugar consumed by someone drinking 24 ounces of regular soda each day for two weeks (*around 5 $\frac{3}{4}$ cups*) and measuring it into a quart jar.

CLOSURE

Conclude with the following messages:

- Drink water often.
- Choose sensibly to limit your intake of beverages and foods that are high in added sugars.



- Take care not to let soft drinks or sweets crowd out other foods you need to maintain health, such as low-fat milk or other good sources of calcium.
- Get most of your calories from grains, especially whole grains, fruits and vegetables, low-fat or non-fat dairy products, and lean meats and meat substitutes.

COOKING CONNECTION

Have students prepare the same recipe but vary sugar content and sugar types. Adjust recipes to use honey, syrup, brown sugar, and unsweetened applesauce. You can even consider trying to use artificial sweeteners, but remember that not all artificial sweeteners are heat stable. Compare the taste and sugar content of each recipe once completed.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

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- Students will evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.

DITCH THE FIZZ

Name: _____ Name of Beverage: _____

Directions: Study your drink's Nutrition Facts label. Answer the following questions.

1. Does the beverage have sugar in it? Yes No

2. If so, how many grams (g) of Total Carbohydrate are listed? _____
How many grams (g) of Sugars are listed? _____

3. How many teaspoons or packets of sugar does it contain per serving? Remember, a packet of sugar or 1 teaspoon of sugar = 4 grams of carbohydrate.

How many servings are there in the container?

What is the total amount of sugar if you drink all of it?

4. Look at the ingredient list and circle the ingredients that appear on your label.

Brown sugar	Dextrose	Glucose
Invert sugar	Maltose	Sucrose
Corn sweetener	Fructose	High-fructose corn syrup
Lactose	Molasses	Syrup
Corn syrup	Fruit juice concentrate	Honey
Malt syrup	Raw sugar	Table sugar

5. Does the drink have added sugars? Yes No

6. Write a statement about this drink and whether it could be part of a healthy diet.

7. Explain your answer.

Fast Food or Fat Food?

Grades 5-7

Topic	Nutrition for Health, Promotion of Healthy Behaviors
Activity will meet Performance Standards:	D.8.1 Define the concepts of balance and moderation as part of a healthy diet. D.8.3 Describe the relationship between food choices and health problems, such as dental caries, osteoporosis, diabetes, obesity, and blood pressure. D.8.6 Demonstrate understanding of health promotion concepts.
Lesson Summary	Students will learn that selecting a balanced, healthy diet can be achieved through planning and moderation.

GOALS/OBJECTIVES

Students will select a balanced, healthy diet from fast food restaurants through planning and moderation.

SUPPLIES NEEDED

- Fast food nutritional guides.
- Computer with Internet access.
- Writing materials.

ANTICIPATORY SET

Discussion on fats, nutrients, moderation.

TIMELINE

A homework assignment plus one class period.

SET UP

One week prior to the lesson, ask students to obtain nutrition information from their favorite fast food restaurants or simply provide restaurant nutrition information.

ACTIVITY

1. Make a list of ways to obtain nutritional information about fast foods (*internet, brochures, menu boards, and package information*).

2. Have students first complete the worksheet “Fast Foods Ranking” by reviewing nutrition information and ranking the menu items from lowest to highest saturated fat, least to most calories, and least to most sodium. Ask students to share what they think about the foods, their rankings, and the actual ranking? Ask about any surprises. Is there misleading or confusing information? (*Such as low fat subs are without cheese and mayo.*)
3. Have students review restaurant information in brochures and online, then answer the questions on the worksheet. *Note: answers may change due to changes in menu options.*
4. Have students reflect on their food choices at restaurants. What are the healthiest meal options at their favorite restaurant? Ask the students, “Would you eat this? If not, what is your option for healthy eating?” Ask students what moderation means. Do they need to have moderation with some of their food selections at fast food restaurants?

CLOSURE

Ask students how hard or easy it was to find nutritional information on fast foods.

COOKING CONNECTION

Select a favorite fast food menu item and have students prepare a homemade version of the food item. Students can use Nutrition Facts labels to calculate the calorie, fat, and sodium content of the homemade recipe and compare it to the fast food version.



CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

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- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
- Students will analyze factors that influence human growth and development.
- Students will demonstrate respectful and caring relationships in the family, workplace, and community.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.
- Students will evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will demonstrate how employability skills enhance their employment opportunities and job satisfaction.
- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.

FAST FOOD or FAT FOOD?

Name: _____

Rank these fast food menu items from lowest to highest content.

Food Item	Saturated Fat (Gr)	Rank	Calories (Kcal)	Rank	Sodium (mg)	Rank
Entrée Items						
Taco Bell Beefy 5-Layer Burrito						
Subway Spicy Italian Sub						
McDonalds McDouble						
Culver's Culver's Deluxe Burger						
Pizza Hut Personal Pan Cheese						
Dessert Items						
Culver's Caramel Cashew Sundae						
Cold Stone Oh Fudge™ Shake (love it)						
Dairy Queen Oreo® Cookies Blizzard (med)						

Review restaurant information in brochures and online and answer the questions:

1. What burrito at Taco Bell is the lowest in sodium? _____

2. Which is the lowest in total fat? _____

3. What is lower in calories at McDonalds, a SausageMcMuffin or Cinnamon Melts?

4. Which pizza is the lowest in fat at Pizza Hut?

Pan meat lovers

Thin crust sausage

Hand tossed veggie

Thin crust cheese

5. What is the lower fat sandwich choice at McDonalds?

Filet O' Fish

McChicken

6. What if you ordered without tartar sauce or mayonnaise? Does that make a difference?

7. Choose two subs at Subway that are low in fat and sodium.

8. What is your favorite fast food restaurant?

9. What do you typically order?

10. Review the nutritional information for this restaurant.

11. How do your favorite choices balance out?

12. What are the healthiest meal options at this restaurant for you? Why?

Cafeteria Scene

Investigation (CSI): Awash in Misinformation

Grades 8-9

Topic	Nutrition for Health, Promotion of Healthy Behaviors Critical Thinking Skills/Practical Reasoning
Activity will meet Performance Standards:	D.8.6 Demonstrate understanding of health promotion concepts. C.8.5 Identify examples of how the food companies, advertising, and media encourage people to buy and use different foods. C.8.8 Identify reliable sources of nutrition information.
Lesson Summary	Students will use a case study to evaluate nutritional claims and influences on purchasing behavior.

GOALS/OBJECTIVES

- To evaluate nutritional claims on labels.
- To analyze influences on purchasing behavior.

SUPPLIES NEEDED

A copy of CSI case study for each student.

ANTICIPATORY SET

This is a wrap-up activity that can be done in class or as a take home assignment.

TIMELINE

At least 15 minutes to discuss the case. If the case is done in class, allow at least 45 minutes.

ACTIVITY

Students will review the case study and answer the questions. Plan to review the questions with the students after they are completed.

OPTIONAL

Students may write a script that leads to their conclusion and can act out the case in small groups.

CLOSURE

Ask students how hard or easy it was to determine if health claims are correct.

COOKING CONNECTION

Provide students with pricing information on a number of products. Have students investigate health claims and perform a cost analysis. Students can then determine if the product is worth the cost. Have students select products that are determined to be worth their cost and incorporate them into a cooking lab.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

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CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.

Cafeteria Scene Investigation: Case Study

CSI: Awash in Misinformation

Ms. Smith, the guidance counselor, has contacted the CSI team to investigate the drinks in the school vending machine. Ms. Smith thinks “Brainiac Water” and “Muscle Water” are making all the students sluggish and may be causing them to gain weight. “Brainiac Water” and “Muscle Water” are heavily advertised on television, and the company also advertises in the local grocery store and at the ballpark concession stand. Ms. Smith wants the vending machines to be taken out of the school so students won’t “waste their money” on all the specialty waters.

The CSI team started an investigation. This article from the last month’s edition of the Business Week News was part of their research.

Muscle Water Muscles in the Sports Drink Market

By Stuart Stewart

In its biggest product launch in 20 years, the United Beverages division of Sodapop International is spending an estimated \$60 million to promote “Muscle Water,” its new protein sports drink. Launched last week, the “Muscle UP with Muscle Water” campaign includes celebrity endorsements by basketball phenom Gerald Harrell and baseball great Hank Legend, an interactive product website, podcasts, search-engine marketing, and a chat room.

Chats with spokespersons are scheduled for next month. Key codes to unlock the pod casts and the chat room features are included in product packaging. The search engine marketing includes pop-ups promoting “muscle water” that appear when anyone searches specific key words or sports sites. A website fan page is also on the way, according to Egbert Dilbert, the product’s brand manager.

The Muscle Water advertising campaign is designed to promote the unique characteristics of the product—protein—through many venues. Muscle Water, according to its website, not only hydrates, but it also helps build muscle. It provides long lasting, sustained energy—so rather than a sugar rush and a quick burst of energy, the energy is sustained over the period of significant exertion, and it helps speed muscle recovery. An unpublished study, conducted at United Beverages facilities, showed increased muscle mass in dogs and rats when Muscle Water was provided as the sole water source as part of an intense training regimen. With a full line of specialty waters, United Beverage is targeting American teens and young adults who exercise regularly. Brainiac Water includes ginkgo biloba to improve memory, and Muscle Water includes a pure vegan soy protein isolate.

According to trade publication Beverage Digest, Americans drink almost 1 billion cases of sports drinks a year, and sales are predicted to continue to increase by double digit proportions.

Interviews

According to the vending manager, there are three flavors of Brainiac Water, four flavors of Muscle Water sports drinks, skim non-fat milk, and unflavored, plain bottled water sold after school in the machines. The machines are available to students from 3:00 to 6:00 pm daily. The most popular waters are the Berry Blend Brainiac Water and the Mucho Mango Muscle Water. Students at the vending machines purchasing the waters were interviewed. The following findings were recorded:

1. Never reads the label, drinks two bottles of Brainiac Water per day, doesn't think he's gained weight recently.
2. Drinks one bottle of Muscle Water every day after practice and has gained three pounds this month.
3. Won't drink anything but noncarbonated, unflavored water. Thinks the other waters are "pure hype."
4. "It tastes great and keeps me hydrated." Purchased skim milk and Mucho Mango Muscle water.
5. "I need the energy rush to make it through the day." Drinks two or three bottles of Brainiac (any flavor) per day and has gained five pounds since the start of the school year.
6. "The label and advertising say this water will help me in sports, and why mess with success?" Purchased Muscle Water.
7. Drinks muscle water in place of milk and soda, trying to lose weight but hasn't seen any changes. Purchased Muscle Water.

Observations:

Berry Blend Brainiac Water (20 oz bottle) *Get Smart – Drink Brainiac Water!!*

Nutrition Facts

Serving Size: 8 oz

Servings per bottle: 2.5

- | | |
|----------------------------|--------------------|
| • Calories: 60 | • Protein: 0g |
| • Total fat: 0g | • Vitamin C: 40% |
| • Sodium: 0mg | • Vitamin B3: 25% |
| • Potassium: 60mg | • Vitamin B6: 20% |
| • Total carbohydrates: 15g | • Vitamin B12: 20% |
| • Sugar: 15g | • Vitamin E: 10% |

Ingredients: vapor distilled/deionized water, crystalline fructose, citric acid, fruit and vegetable juice (color), natural flavor, ascorbic acid (vitamin C), vitamin E acetate, magnesium lactate (electrolyte), calcium lactate (electrolyte), zinc picolinate, monopotassium phosphate (electrolyte), niacin (B3), pyridoxine hydrochloride (B6), cyanocobalamine (B12), ginko biloba extract.

"These statements about Brainiac Water have not been evaluated by the Food and Drug Administration. Brainiac Water is not intended to diagnose, treat, cure, or prevent any disease."

Mucho Mango Muscle Water (20 oz bottle) Hydrate and Build Muscles at the Same Time!

Nutrition Facts

Serving Size: 8 oz

Servings per bottle: 2.5

- Calories: 60
- Total fat: 0g
- Sodium: 30mg
- Total carbohydrates: 10g
- Sugar: 10g
- Protein: 5g
- Vitamin C: 100%
- Calcium: 2%
- Taurine: 2000mg

Ingredients: vapor distilled/deionized water, crystalline fructose/HFCS, citric acid, phosphoric acid, natural flavor (contains soy), soy protein isolate, ascorbic acid (vitamin C), taurine (an amino acid), magnesium lactate (electrolyte), calcium lactate (electrolyte), zinc picolinate, calcium lactate, calcium gluconate, sucralose, yellow #5.

“These statements about Muscle Water have not been evaluated by the Food and Drug Administration. Muscle Water is not intended to diagnose, treat, cure, or prevent any disease.”

Skim milk (16 oz bottle)

Nutrition Facts

Serving Size: 8 oz

Servings per container: 2

- Calories: 86
- Protein: 8g
- Sugar: 11g
- Sodium: 126mg
- Calcium: 30%
- Vitamin D: 25%
- Vitamin A: 10%

Ingredients: Non-Fat Milk, Vitamin A, Vitamin D

Regular water (16 oz bottle)

Nutrition Facts

Serving Size: 8 oz

Servings per bottle: 2

- Calories: 0
- Fat: 0g

Ingredients: Water

Complete these questions as part of your investigation.

Can the CSI team conclude that the Brainiac and Muscle Waters are making the students sluggish and causing them to gain weight? Why or why not?

What other information is needed?

What else do you need to know about the waters?

Is the manufacturer of the Brainiac and Muscle Waters marketing the products deceptively?

How can information be presented to the students to help them make informed decisions about the waters?

Are there healthier choices that should be stocked in the vending machine instead? List your ideas for Ms. Smith to suggest to the Wellness Committee.

The Whole Story

Grades 6-8

Adapted from Kansas State University Agricultural Experiment Station and Cooperative Extension Service Healthful Whole Grains—MF-2560

Topic	Nutrition for Health Promotion of Healthy Behaviors
Activity will meet Performance Standards:	D.8.3 Describe the relationship between food choices and health problems, such as dental caries, osteoporosis, diabetes, obesity, and blood pressure. D.8.5 Identify key nutrients from each food group and list ways nutrients can promote health and prevent chronic disease. D.8.6 Demonstrate understanding of health promotion concepts.
Lesson Summary	Students will identify whole grains and describe the benefit of whole grain foods.

GOALS/OBJECTIVES

Students will be able to identify whole grains and describe their benefits. They will assess their current practices and future plans to consume whole grain foods.

SUPPLIES NEEDED

- Labels from cereals, crackers, breads, and other grain products.
- *Healthful Whole Grains* guide:
<http://www.ksre.ksu.edu/bookstore/pubs/mf2559.pdf>
- *Healthful Whole Grains* handout:
<http://www.ksre.ksu.edu/bookstore/pubs/mf2560.pdf>
- Copy of a picture of a whole grain for each student, such as the picture from <http://wholegrainscouncil.org/whole-grains-101/definition-of-whole-grains>

ADDITIONAL INFORMATION

- www.wholegrainscouncil.org
- www.pbs.org/teachers/includes/content/lunchlab/wholegrains.pdf
- www.choosemyplate.gov/food-groups/grains.html

ANTICIPATORY SET

Previous discussion about label reading, food groups, grain portions.

TIMELINE

One class period.

SET UP

- Provide copies of handouts for each student.
- Provide a variety of cereal, pasta, bread, cracker, and other grain labels.

ACTIVITY

1. Give each student a copy of the Healthful Whole Grain handout and have them read the definition of “whole-grain.” Point out the following: “Wheat flour” and “unbleached wheat flour” are not whole grain.
2. Have each student choose a cereal label and/or bread label and complete The Whole Story worksheet. Share their results with the group.
3. Ask the students how many servings of whole grain products are recommended each day by the Dietary Guideline for Americans? (*Consume at least half the recommended grain servings as whole grains or three, one-ounce equivalents.*)
4. Have students write down what they ate yesterday and how many servings of whole grains they ate.
5. Discuss the benefits of eating whole grains such as whole-wheat or whole grain bread. Briefly mention that diets rich in whole grain foods and low in saturated fat and cholesterol can
 - Help lower total blood cholesterol levels and LDL cholesterol levels.
 - Help reduce risk of heart disease and heart attack.
 - Help lower blood pressure and reduce risk of stroke.
 - Help reduce risk of certain cancers, especially colon and rectal cancers.
 - Help keep you regular and prevent constipation.
 - Help reduce risk of developing Type 2 diabetes.
 - Help lower blood sugar (glucose) levels.
 - Help with weight control—people who eat whole grain foods are more likely to be at a healthy weight.



TEACHER INFORMATION

A large amount of the fiber and other nutrients are lost when grains are processed to make white flour. Most white breads supply less than one gram of fiber per slice, while whole grain breads supply two to four grams of fiber per slice. White flour is enriched to add back some of the vitamins and minerals lost in processing, but it does not have fiber added. One bushel of wheat weighs about 60 pounds. When it is ground, it will yield 60 pounds of whole-wheat flour that can be used to make whole-wheat bread. However, when wheat flour is milled to make white flour, you lose 17 pounds of wheat germ, wheat bran, fiber, vitamins, and minerals, leaving only 43 pounds of white flour.

Finding whole grain cereals can be hard. Fiber numbers make it even more confusing. Compare Honey Nut Cheerios and Puffed Kashi. Both are whole grain cereals, but each has only a gram or two of fiber per serving. Why? It depends on the following:

- How much bran? Whole grain cereals have less fiber than bran cereals.
- How much sugar? Added sugar takes the place of some of the whole grain.
- How dense? Some cereals are less dense than others. Puffs and flakes have less fiber than denser cereals because a serving of dense cereal contains more cereal weight.

OPTIONAL

Instruct students to research in greater detail how incorporating whole grains into their daily diet may decrease their risk for a health disease that occurs in their family. Assign students to write a one-page report about their findings and discuss if, and how, they will adjust their diet to consume the recommended amount of whole grains.

CLOSURE

Where are students finding whole grains at home and away from home?

COOKING CONNECTION

Have students cook different types of pasta (white, wheat, enriched) and rice (brown, white, long-grain, short-grain) and compare cooking times, fiber content, appearance, and taste.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will synthesize knowledge, skills, and practices required for careers in family and community services.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
- Students will analyze factors that influence human growth and development.
- Students will demonstrate respectful and caring relationships in the family, workplace, and community.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.



THE WHOLE STORY ABOUT WHOLE GRAINS

Directions:

1. Choose a grain product food label. Look at your food label and decide if it is a whole grain or refined grain product.
2. Check the words in the table below that apply to your label.
3. Add other grains not listed that you find on the ingredient list. Also look for whole grain health claims on the package.

Remember, products that contain 51% or more of whole grain ingredients by weight may make the following FDA approved health claim: “Diets rich in whole grain foods and other plant foods, and low in total fat, saturated fat and cholesterol, may reduce the risk of heart disease and certain cancers.”

Complete a table for each product that you have.

Product #1: _____

Words That Mean Whole Grain	Check if Applies	Words That Do Not Mean Whole Grain	Check if Applies
Whole Grain		Enriched Wheat Flour	
100% Whole Wheat		100% Wheat Flour	
Whole Wheat		Bran	
Cracked Wheat (<i>bulgur</i>)		Stone Ground	
Whole Rye		Rye	
Whole Grain Corn or Whole Grain Cornmeal		Degerminated Corn Meal	
Oatmeal, Whole or Rolled Oats (<i>regular, quick, instant</i>)		Seven-Grain	
Wild Rice		Semolina	
Scotch Barley, Rolled Barley		Multigrain	
Brown Rice (<i>regular or quick</i>)		Pumpernickel	
Graham Flour		Organic	
Popcorn		Wheat germ	
Buckwheat (<i>kasha</i>)		Multigrain	

Is it whole grain? YES NO

Explain:

Product #2: _____

Words That Mean Whole Grain	Check if Applies	Words That Do Not Mean Whole Grain	Check if Applies
Whole Grain		Enriched Wheat Flour	
100% Whole Wheat		100% Wheat Flour	
Whole Wheat		Bran	
Cracked Wheat (<i>bulgur</i>)		Stone Ground	
Whole Rye		Rye	
Whole Grain Corn or Whole Grain Cornmeal		Degerminated Corn Meal	
Oatmeal, Whole or Rolled Oats (<i>regular, quick, instant</i>)		Seven-Grain	
Wild Rice		Semolina	
Scotch Barley, Rolled Barley		Multigrain	
Brown Rice (<i>regular or quick</i>)		Pumpernickel	
Graham Flour		Organic	
Popcorn		Wheat germ	
Buckwheat (<i>kasha</i>)		Multigrain	

Is it whole grain? YES NO

Explain:

Share your findings with your class.

Foreign Foods Tasting Lab

Grades 5-8

Topic	Diversity
Activity will meet Performance Standards:	E.8.1 Locate supplier(s), source(s), or retail outlet(s) for ethnic foods within the community. E.8.3 Describe the food customs and habits of various cultures, and recognize that our culture, ethnicity, and health status may impact our food choices.
Lesson Summary	Students will prepare and eat various ethnic foods.

GOALS/OBJECTIVES

Students will recognize that various cultures meet their dietary needs through a variety of ways and will have the opportunity to explore food from different cultures.

SUPPLIES NEEDED

- “Food Lab Planning Guide” handout, copy for each student.
- Food and equipment to make recipes selected.
- Internet or recipe books to research recipe.
- Local phone book or other means to identify local businesses.

TIMELINE

One class period for initial discussion and work sheet instructions, one class period for presentations and wrap up discussions.

SET UP

If students will be preparing foods in class, equipment will need to be set up.

ACTIVITY

1. Students will be split into groups and find a recipe from an assigned country.
2. Students will investigate the food of a certain country or region and select a recipe.
3. Student groups will complete the lab planning sheet and prepare a presentation on the type of food commonly seen in their assigned country.

OPTIONAL

Visit a local outlet for ethnic foods. Write out your observations on the foods available.

CLOSURE

Ask students to reflect on the differences between foods in different countries and cultures.

COOKING CONNECTION

Have groups prepare their submitted recipe in class and have students taste test and evaluate the different foods prepared.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will synthesize knowledge, skills, and practices required for careers in family and community services.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
- Students will analyze factors that influence human growth and development.
- Students will demonstrate respectful and caring relationships in the family, workplace, and community.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.
- Students will evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will apply accepted ethical practices with respect to cultural, social, and ethical differences within the healthcare environment and perform quality healthcare delivery.



FOOD LAB PLANNING GUIDE

Names of people in group: _____

Each group will be assigned one country or region from the following:

Africa	Italy
Caribbean	Japan
China	Korea
England	Latin America
France	Mexico
Hungary	Poland
Hmong	Russia
Greece	Scandinavian Countries
Germany	Spain
Ireland	Other:

Research Topic

Create a presentation to share with your classmates that contains the following information as it pertains to your assigned country: foods eaten, food availability, food preparation methods, customs, equipment and utensils used, special food celebrations or holiday traditions, typical activities, and anything else of interest related to food.

Present to class on _____

Chosen Recipe

As you research your chosen cuisine, find a simple recipe(s) that could be prepared in class for tasting that is representative of your chosen country. Make a copy of the recipe for the class and attach it to this form.

Recipe Name:

Recipe Source:

Recipe Ingredients (include amounts):

Identify a local store where the ingredients for this recipe could be purchased.

Store name, address, and phone number:

Food with Attitude (Common Mexican Foods)

Grades 5-9

Adapted from a lesson by Señorita JoAnn Brun

Topic	Diversity
Activity will meet Performance Standards:	E.8.1 Locate supplier(s), source(s), or retail outlet(s) for ethnic foods within the community. E.8.3 Describe the food customs and habits, of various cultures, and recognize that our culture, ethnicity and health status may impact our food choices.
Lesson Summary	Students will try foods from Mexican culture while practicing the Spanish language.

GOALS/OBJECTIVES

The students will have an opportunity to see, touch, smell, and eat foods and drinks from Mexican culture. This activity begins to break down negative attitudes about trying new foods.

SUPPLIES NEEDED

- Food with Attitude handout.
- Ingredients listed on Food with Attitude handout.
- Utensils and paper supplies.

TIMELINE

One class period.

SET UP

Purchase food and set up tasting stations.

ACTIVITY

1. Students learn the words comida, descripción, actitud antes, and actitud después.
2. Students read about each food item, sample the foods, and complete the handout.
3. Students' homework is to write about what they liked, what ways they could modify their eating habits to be healthier, and ways to adopt some Mexican foods into their diets.

OPTIONAL

Lesson can be adapted to a different ethnic cuisine. The foreign-language vocabulary portion of the activity may be omitted when using any ethnic cuisine. An additional activity will be to have students examine the nutritional values of these foods, both positive and negative.

CLOSURE

Homework is to evaluate this activity. Students need to write about what they liked, how they could modify their eating habits to be healthier, and ways to adopt some Mexican foods into their diets. The next day, the class will share more of their thoughts about what they tried. Teacher will offer students the information on local Hispanic markets and encourage students to go with their parents to explore on their own time.

COOKING CONNECTION

Develop a menu of traditional foods and have students prepare the dishes and celebrate the differences in cuisines around the world.

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- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will synthesize knowledge, skills, and practices required for careers in family and community services.



- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
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CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will apply accepted ethical practices with respect to cultural, social, and ethical differences within the healthcare environment and perform quality healthcare delivery.



FOOD WITH ATTITUDE; COMIDAS NUEVAS

Name: _____ Hora: _____

It is important that we all experience new things, and comida is no exception! Let's think about our attitudes toward the foods we are going to try today before and after you try them. Jot down your initial reaction to the foods and whether or not you have tried the foods before. Then write your thoughts about trying each food.

Comida	Descripción	Actitud Antes	Actitud Después
Chicharones	Often pork rinds, but also come as just flour chips		
Frijoles negros	Mashed up black beans		
Guacamole picante	Home-made, spicy guacamole made with avocado		
Flan	Often described as a "custard dessert" but like a Jell-O or pudding with a caramel drizzle		
Limón	Green limes often add a kick to chips and go great on top of Mexican foods		
Jugo de mango	Mango juice is a bit thicker than orange juice		
Jugo da guayava	Guava juice		
Jugo de guayavana	Guayavana is a fruit		
Horchata	A rice and cinnamon drink; it has a grainy texture		
Manzanita - refresco de manzana	An apple-flavored soda; Pepsi and Coke both make their own versions		

Fruit and Vegetable Challenge

Grades 5-7

Topic	Identification and Classification of Foods
Activity will meet Performance Standards:	F.8.1 Identify foods by food group and nutrient contributions F.8.2 Use descriptive words and sensory characteristics to evaluate and classify foods F.8.3 Identify processed foods by source (plants and animal products) and explain how food may change during processing F.8.4 List the basic food groups, give examples from each group and use the food groups to plan a meal and snack.
Lesson Summary	Students will identify and classify fruits and vegetables by color, nutrient, and other classifications.

GOALS/OBJECTIVES

Color can help identify good sources of nutrients in fruits and vegetables.

SUPPLIES NEEDED

- Websites to visit: Produce for Better Health Foundation, More Matters, Dole.
- Colors for Health handout—chart to record fruit and vegetable intake.
- Plates, napkins, toothpicks, serving utensils for fruit.
- Containers for each color of fruit and vegetables (approximately seven).
- Variety of fruits and vegetables for each color.

ANTICIPATORY SET

Fruits and vegetables provide many vitamins. Eating a variety of fruits and vegetables daily is part of a healthy diet.

TIMELINE

One class period to introduce and reinforce eating more colors of fruits and vegetables, one class period to conduct taste testing lab, and one week to record intake with the challenge

SET UP

List fruits and vegetables on whiteboard; color code by group. Cut up the fruits and vegetables into bite-sized pieces and place in containers according to color.

ACTIVITY

1. Discuss the different parts of a plant.
 - Roots: carrots, turnips, beets, radishes; this part grows underground
 - Stems: celery and asparagus
 - Leaves: spinach, cabbage, kale, and all kinds of lettuce
 - Fruits: apples, pears, plums, grapes, and mangoes
 - Seeds: corn, peas, dry beans, oats, and nuts
2. Categorize fruits and vegetables they will taste by the color of their edible portion. Have them suggest other fruits and vegetables under the color categories. Have the students wash their hands and take samples of the cut fruits and vegetables.
3. Once all the students are served and sitting in their desks, direct them to write down the feel, taste, smell, and color of the fruit.
4. Direct them to sample their fruits and vegetables if desired.
5. After the sampling, have students share their reactions to the fruits and vegetables. Encourage them to try different foods because it can open a whole new world that stimulates all their senses. Stress that adding colorful fruits and vegetables to our meals and snacks can make eating a fun experience.
6. Have students set a goal for the number of servings and variety of fruits and vegetables. A sample goal could be, “I will eat a dark green fruit or vegetable daily.” Students may also set a class goal.
7. Send the list of fruits and vegetables home with students, and have them complete the Colors for Health handout by recording their fruits and vegetables intake for one week.

CLOSURE

Encourage students to eat a variety of colors of fruits and vegetables.

COOKING CONNECTION

Have students create and prepare colorful salads, pastas, or soups to demonstrate how to incorporate multiple colors of fruits and vegetables into one dish. Examples of colorful recipes can be found in the FAST Recipes cookbook.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

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CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.



Fruits and Vegetables by Color Category

Blue/Purple	Green	White	Yellow/Orange	Red
Purple Asparagus	Green Apples	Banana	Yellow Apples	Red Apples
Purple Belgian Endive	Artichokes	Brown Pears	Apricots	Beets
Blackberries	Arugula	Cauliflower	Yellow Beets	Blood Oranges
Blueberries	Asparagus Avocado	White Corn	Butternut Squash	Cherries
Purple Cabbage	Green Beans	Dates	Cantaloupe	Cranberries Pink/Red
Purple Carrots	Broccoli	Garlic	Cape Gooseberries	Grapefruit Red
Black Currants	Broccoli Rabe	Ginger	Yellow Figs	Grapes
Eggplant	Brussel Sprouts	Jerusalem Artichokes	Grapefruit	Red Onions
Elderberries	Green Cabbage	Jicama	Golden Kiwifruit	Red Pears
Purple Figs	Celery	Kohlrabi	Lemon	Red Peppers
Purple Grapes	Chayote Squash	Mushrooms	Mangoes	Pomegranates
Purple Peppers	Chinese Cabbage (Napa, Bok Choy)	White Nectarines	Nectarines	Red Potatoes
Plums	Cucumbers	Onions	Oranges	Radicchio
Dried Plums	Endive	Parsnips	Papayas	Radishes
Purple Potatoes	Green Grapes	White Peaches	Yellow Pears	Raspberries
Raisins	Honeydew Melon	Potatoes	Yellow Peppers	Rhubarb
Black Salsify	Kiwi Fruit	Shallots	Persimmons	Strawberries
	Leafy Greens	Turnips	Pineapples	Tomatoes
	Leeks		Yellow Potatoes	Watermelon
	Lettuce		Pumpkin Rutabagas	
	Limes		Yellow Summer Squash	
	Okra		Sweet Corn	
	Green Onion		Sweet Potatoes	
	Green Pears		Tangerines	
	Peas (Green, Snap, Snow, Sugar)		Yellow Tomatoes	
	Green Pepper		Yellow Watermelon	
	Spinach		Yellow Winter Squash	

Colors for Health

See how many colors you can eat every day.
Fill in the names of the fruits and vegetables you eat every day under the correct color box.

	Blue/ Purple	Green	White	Yellow/ Orange	Red
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					

Water, Water, Everywhere

Grades 6-7

Adapted from a lesson by Sandra Robinson

Topic	Identification and Classification of Food
Activity will meet Performance Standards:	F.8.3 Identify processed foods by source (plants and animal products), and explain how food may change during processing.
Lesson Summary	Students will investigate how removing water affects the fruit/vegetables.

GOALS/OBJECTIVES

Students will investigate dehydration and determine if removing water affects nutritional content.

SUPPLIES NEEDED

- A small slice of apple, banana, potato, celery, and grape for each student group.
- Commercially dried apple chips, dried bananas, dried potatoes, dried celery, and raisins.
- Reading lamps or other lamp, or a food dehydrator.
- Balance scale (*grams*) and weighing supplies, including weighing paper squares.
- Labeling marker or pen.
- Examples of dehydrated foods.

ANTICIPATORY SET

Water is lost when food is dried; food changes form with processing.

TIMELINE

Two class periods.

SET UP

Have a counter space with lamps available for students to place their foods, or a food dehydrator.

ACTIVITY

1. Have students place each fruit/vegetable slice on a paper square and label.
2. Weigh each slice and record that weight (*in grams*) on a chart.
3. Leave the food slices under a lamp overnight; the light source should be about one to one and a half feet above the food, or place food slices on a tray in a food dehydrator.
4. The next day, students should weigh their foods again. Record the weights and compare the fresh and dried slices.
5. Discuss the weight changes as a class. Then weigh the commercially dried foods. How do they compare to the students weights of their slices?
6. Drinking water is not the only source of water or fluid in our diets. People take in water in many foods they eat. How much water is in some foods?
7. Did the foods gain or lose weight? Why? (*They lost weight because they lost water.*) Which food lost the most weight, or water? The least? (*Probably the apple lost the most and the banana the least.*)
8. Discuss how foods provide fluid. Describe watery foods, such as soup, watermelon, or milk. (*For reference, two cups of water weighs one pound.*)
9. Do students think nutrient composition changes? Have them look it up and discuss changes in nutrient composition.
10. Do the students think that they would eat more or less of a dehydrated food as compared to the fresh version? Why?

CLOSURE

How and why do we use dehydrated foods? (*Soup and casserole mixes, camping/hiking, snacks, for preserving, convenience, etc.*) Show examples.

COOKING CONNECTION

Have pairs of student teams prepare the same recipe with one team using regular milk and one team using reconstituted dry milk. Have teams conduct taste tests and compare the dishes. Discuss how rehydrating products (milk, instant potatoes) is common and when it can be beneficial.

CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will integrate knowledge, skills and practices required for careers in food production and services.
- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
- Students will demonstrate nutrition and wellness practices that enhance individual and family well-being.

CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.



Give Breakfast a Fast Break

Grades 6-8

Adapted from a lesson by Barb Schmidtke

Topic	Identification and Classification of Foods
Activity will meet Performance Standards:	F.8.1 Identify foods by food group and nutrient contributions. F.8.4 List the basic food groups, give examples from each group and use the food groups to plan a meal and snack.
Lesson Summary	Students will plan and prepare a simple breakfast.

GOALS/OBJECTIVES

Students will learn how to plan and prepare a simple breakfast using food group and nutrient classifications. Youth will practice proper sanitary handling of food for meal preparation. Cooking skills help youth to master their world and to understand and appreciate foods.

SUPPLIES NEEDED

- Handout: “Breakfast Planning”
- Groceries to make breakfast items as planned.

ANTICIPATORY SET

Previous discussion about food groups and nutritional needs.

TIMELINE

One class period and a homework assignment.

SET UP

All ingredients and equipment for cooking breakfast for day two.

ACTIVITY

1. Ask students how many times a week they usually eat breakfast.
2. Divide class into small groups of three or four students.
3. Have students list grab-and-go breakfast ideas. Examples include cold pizza, grapes, apples, bananas, string cheese, granola, fruit juice, crackers and cheese, fruit pieces and crunchy cereal added to yogurt, toasted waffle, and smoothies.

4. Have each group make a list of breakfasts that include three food groups, including a whole-grain food (examples below). Allow 5 to 10 minutes for this activity.
 - Low-fat yogurt with added fruit and low-fat granola cereal topping.
 - Peanut butter rolled inside a tortilla with fruit.
 - Whole-grain waffle layered with 1/2 cup plain, low-fat yogurt and 1/2 cup berries.
 - Raisin bagel topped with fat-free cream cheese and thin apple slices.
 - Whole-wheat pita stuffed with 1/2 cup low-fat cottage cheese and sliced fruit.
 - Scrambled eggs, cheese, and salsa rolled into a soft shell tortilla.
 - Hot oatmeal, reduced-fat milk, and banana.
 - Melted cheese on whole-grain toast with 100% juice.
5. Have each group share their examples. Have the class select two or three breakfasts that include at least three food groups, including a whole-grain food. The breakfasts must be able to be made in one class period and stay within budget. Have the class decide on a breakfast they would like to make.

CLOSURE

Have students individually plan a simple healthy breakfast that they could make for their family the following weekend.

COOKING CONNECTION

Divide students into small groups and have students prepare a different breakfast menu. Have groups sit together to eat their breakfast “family style” and discuss the benefits of each food item.

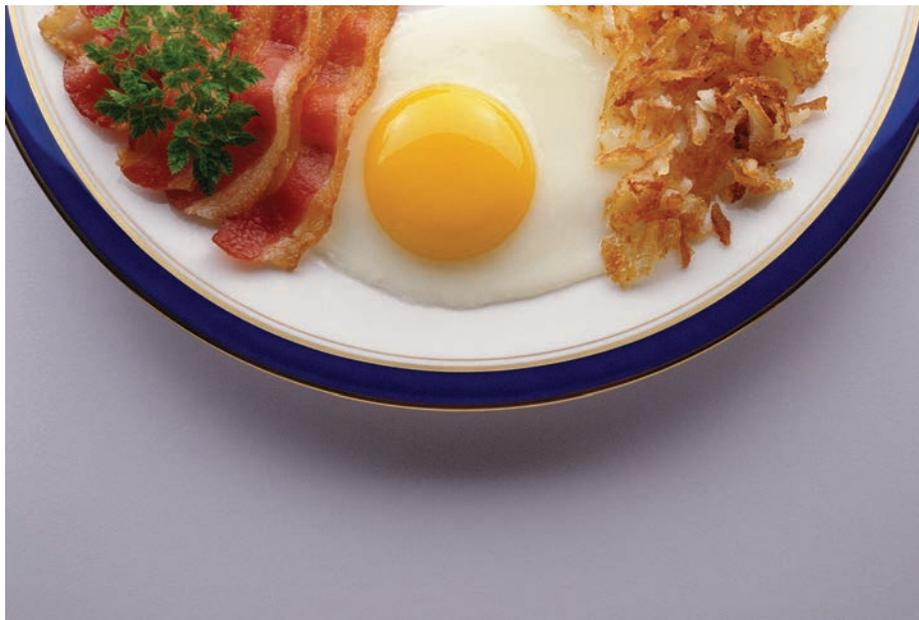
CONNECTION TO WISCONSIN FAMILY AND CONSUMER SCIENCE STANDARDS

- Students will use the reasoning process, individually and collaboratively, to take responsible action in families, workplaces, and communities.
- Students will integrate multiple life roles and responsibilities in family, work, and community settings.
- Students will evaluate management practices related to human, economic, and environmental resources.
- Students will integrate knowledge, skills, and practices required for facilities management and maintenance.

- Students will evaluate the significance of family and its effects on the well-being of individuals and society.
- Students will integrate knowledge, skills, and practices required for careers in food production and services.
- Students will integrate knowledge, skills, and practices required for careers in food science, food technology, dietetics, and nutrition.
- Students will synthesize knowledge, skills, and practices required for careers in hospitality, tourism, and recreation.
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CONNECTION TO WISCONSIN HEALTH SCIENCE STANDARDS

- Students will analyze the fundamentals of wellness and the prevention of disease processes, practicing preventative health behaviors among clients.



BREAKFAST PLANNING

Name: _____

This assignment is to plan a breakfast for your family that includes at least three food groups, including at least one whole grain, such as oats, whole wheat, or barley. You are to choose easy recipes that you and your family would be willing to eat.

1. What foods are planned for breakfast?

2. What ingredients are needed for this breakfast?

3. What food groups are included in your breakfast?

4. What utensils and equipment are needed to prepare this breakfast?

5. How much time do you estimate needing for preparation?

Connection to Careers Pathways

Nutrition is important to the health and well-being of individuals. Education is the best way to maintain health through preventative care as making informed decisions is important to health and well-being. Those interested in nutrition and wellness careers will find a rewarding field that educates and empowers people to make healthy lifestyle choices and achieve a well-balanced life.

Many careers in nutrition, health and wellness are available. It is important to know the opportunities that are available. Selecting a career field that encompasses as many of one's interests and talents as possible will offer the ability to shift between unique job roles while utilizing a good set of basic skills and personal abilities.

Careers to Explore

- Food Scientists & Technologists
- Food Science Technicians
- Chemical Technicians
- Dietitians & Nutritionists
- Dietetic Technicians
- Family and Consumer Sciences Teachers
- Health Educator
- Personal Trainer
- Food Processing Workers, All Other

Career Resources

- American Association of Family and Consumer Science
- American Medical Association
- Association for Career and Technical Association
- Career Health Workforce Development
- Explore Health Careers
- Family, Career and Community Leaders of America
- Health Care Careers (.org)
- Health Occupations Students of America
- Mapping Your Future
- Online Career Center
- Occupational Information Network
- Occupational Outlook Handbook
- U.S. Department of Labor, Employment and Training Administration
- Wisconsin AHEC Health Careers Information Center
- Wisconsin Career Pathways

Resources

Wisconsin Department of Public Instruction Nutrition Education:

<http://ne.dpi.wi.gov/> and http://fns.dpi.wi.gov/fns_ffvpned

USDA Team Nutrition (<http://teammnutrition.usda.gov/>) is an activity-based nutrition education program customized by grade level and developed in cooperation with the USDA. It is free to join!

Lessons and More

- <http://pbskids.org/lunchlab>
- <http://pbs.org/teachersource/healthandfitness>
- <http://www.kidnetic.com/>
- <http://kidshealth.org>
- http://www.isbe.net/career/pdf/fcs_guide.pdf
- <http://www.worh.org/club-scrub>

Government Agencies and Allied Organization

- Agricultural Research Service
- CDC National Center for Health Statistics
- Center for Food Safety and Applied Nutrition
- Center for Policy and Promotion
- Centers for Disease Control and Prevention
- Consumer Product Safety Commission
- Department of Commerce
- Department of Education
- Department of Health and Human Services
- Department of Labor
- Dietary Guidelines for Americans
- Federal Trade Commission
- Food and Nutrition Information Center of the National Agricultural Library
- Food and Nutrition Services
- Healthfinder
- MyPlate Food Guidance System
- National Area Health Education Center
- National Consortium for Health Science Education
- National Institute of Aging
- National Institutes of Health
- National Institutes of Mental Health
- Occupational Information Network
- Occupational Safety and Health Administration
- Office of Safe and Drug Free Schools
- Peace Corps
- President's Council on Physical Fitness and Sports
- School Meals Initiative for Healthy Children

- United State Department of Agriculture
- USDA Agricultural Research Service
- USDA Food and Nutrition Services
- USDA Food Safety and Inspection Service
- USDA Healthy Meals Resource System
- Weight-Control Information Network
- Wisconsin Area Health Education Center
- Wisconsin Office of Rural Health
- World Agricultural Outlook Board
- World Health Organization

Organizations

- The Academy of Nutrition and Dietetics
- American Council on Consumer Interests
- American Council on Exercise
- American Diabetes Association
- American Educational Research Associations
- American Egg Board
- American Heart Association
- American Institute for Cancer Research
- American Meat Institute
- American Medical Association
- Bread for the World
- Center for Science in the Public Interest
- Children’s Defense Fund
- Children’s Nutrition Research Center
- Consumer Federation of America
- Council of Better Business Bureaus
- The Food Allergy Network
- Food for the Hungry
- Food Marketing Institute
- Food Research and Action Center
- FoodFit
- Foodservice Educators Network International
- Grocery Manufacturers of America
- Institute of Food Technologists
- International Food Information Council
- JobWeb
- John Hopkins Medicine
- Mayo Clinic

Organizations (Continued)

- Medline
- Multicultural Foodservice and Hospitality Alliance
- National Cattleman’s Beef Association
- National Chicken Council
- National Consumers League
- National Corn Growers Association
- National Dairy Council
- National Restaurant Association
- National WIC Association
- North American Vegetarian Society
- Organic Trade Association
- Partnership for Food Safety Education
- Produce Marketing Association

- Public Voice for Food and Health Policy
- Safe Tables Our Priority
- School Nutrition Association
- Shape Up America
- STOP Food-borne Illness
- Students Against Destructive Decisions
- United Fresh Produce Association
- U.S. Poultry and Egg Association

Publications

- Choices Magazine
- Consumer Reports
- Developmental Psychology
- Journal of Family and Consumer Sciences
- Journal of the Academy of Nutrition and Dietetics
- Newsweek
- Time
- What's New

