

**Crosswalk Between: *Wisconsin’s Model Academic Standards for Science and Wisconsin’s Model Academic Standards for Family and Consumer Education and National Standards for Family and Consumer Sciences***

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A. SCIENCE CONNECTIONS	FACS State and National Education Standards	Crosswalk of Local School Curriculum
<b>Performance Standards</b>		
<i>By the end of Grade 12 students will:</i>	<i>By the end of Grade 12 students will:</i>	
A.12.1 Apply the underlying themes of science to develop defensible visions of the future	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>            3.4 Analyze resource consumption for conservation and waste management practices, (3.4.1 – 3.4.5)            12.1 Analyze principles of human growth and development across the life span, (12.1.1 – 12.1.3)            14.1 Analyze factors that influence nutrition and wellness practices across the life span, (14.1.1 – 14.1.5)            14.4 Evaluate factors that affect food safety from production through consumption, (14.4.1 – 14.4.6)            14.5 Evaluate the influence of science and technology on food composition, safety, and other issues, (14.5.1 – 14.5.4)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences</i></b>            Standard: PAS1: Utilize the practical reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities.            Standard: HD1: Analyze factors that influence human growth and development, (HD1:a-HD1:c)            Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:a; NW1:d)</p>	
A.12.2 Show how conflicting assumptions about science themes lead to different opinions and decisions about evolution, health, population, longevity, education, and use of resources, and show how these opinions and decisions have diverse effects on an individual, a community, and a country, both now and in the future	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>            1.1 Analyze strategies to manage multiple roles and responsibilities (individual, family, career, community, and global), (1.1.1 – 1.1.6)            1.2 Demonstrate transferable and employability skills in school, community, and workplace settings, (1.2.1 – 1.2.8)            1.3 Evaluate the reciprocal effect of individual and family participation in community activities, (1.3.1 – 1.3.6)</p>	

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	<p>9.3 Evaluate nutrition principles, food plans, preparation techniques, and specialized dietary plans, (9.3.1 – 9.3.7)            9.4 Apply basic concepts of nutrition and nutritional therapy in a variety of settings, (9.4.1 – 9.4.5)            14.2 Evaluate the nutritional needs of individuals and families in relation to health and wellness across the life span, (14.2.1 – 14.2.4)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences</i></b>            Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, (PAS1:a;PAS1:e)            Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:c ;FSDN1:d)            Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:b; NW1:e)</p>	
<p>A.12.3 Give examples that show how partial systems, models, and explanations are used to give quick and reasonable solutions that are accurate enough for basic needs</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>            9.6 Demonstrate food science, dietetics, and nutrition management principles and practices, (9.6.1 – 9.6.5)            14.3 Demonstrate ability to acquire, handle, and use foods to meet nutrition and wellness needs of individuals and families across the life span, (14.3.1 – 14.3.3)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>            Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:f)            Standard NW1: Demonstrate nutrition and wellness practices that enhances individual and family well-being, (NW1:a)</p>	

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<p>A.12.4 Construct arguments that show how conflicting models and explanations of events can start with similar evidence</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>                  2.2 Analyze the relationship of the environment to family and consumer resources, (2.2.1 – 2.2.4) also F12.8                  2.3 Analyze policies that support consumer rights and responsibilities, (2.3.1 – 2.3.3)                  2.5 Analyze relationships between the economic system and consumer actions, (2.5.1 – 2.5.4)                  9.2 Apply risk management procedures to food safety, food testing, and sanitation, (9.2.1 – 9.2.9)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences</i></b>                  Standard CFR1: Evaluate management practices related to the human, economic and environmental resources, (CFR1:b; CFR1:c; CFR1:e)                  Standard FSDN1: Integrate knowledge skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:b)</p>	
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<p>A.12.5 Show how the ideas and themes of science can be used to make real-life decisions about careers, work places, life-styles, and use of resources</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>  1.1 Analyze strategies to manage multiple roles and responsibilities (individual, family, career, community, and global), (1.1.1 - 1.1.6)  1.2 Demonstrate transferable and employability skills in school, community, and workplace settings, (1.2.1 – 1.2.8)  1.3 Evaluate the reciprocal effect of individual and family participation in community activities, (1.3.1 – 1.3.6)  9.1 Analyze career paths within food science, food technology, dietetics, and nutrition industries, (9.1.1 – 9.1.6)  9.5 Demonstrate use of current technology in food product development and marketing, (9.5.1 – 9.5.7)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>  Standard CCLC: Integrate multiple roles and responsibilities in family, work and community settings, (CCLC1:a; CCLC: b; CCLC: c)  Standard: FSDN1: Integrate knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:a; FSDN1:e)</p>	
<p>A.12.6 Identify and replace inaccurate personal models and explanations of science-related phenomena using evidence learned or discovered</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>  1 Evaluate reasoning for self and others, (1.1 – 1.4)  4 Implement practical reasoning for responsible action in families, workplaces, and communities, ((4.1 – 4.6)  8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs, (8.5.1 – 8.5.11)  9.2 Apply risk management procedures to food safety, food testing, and sanitation, (9.2.1 – 9.2.9)</p>	

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	<p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard: PAS1: Utilize the practical reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PSAS1:a; PAS1:d) Standard FPS: Food Production and Services, (FPS1: e) Standard FSDN: Integrate knowledge, skills and practices required for careers in food science, food technology, dietetics, and nutrition, (FSDN1:b)</p>	
A.12.7 Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 1 Evaluate reasoning for self and others, (1.1 – 1.4) 2 Analyze recurring and evolving family, workplace, and community concerns, (2.1 – 2.4) 3 Analyze practical reasoning components, (3.1 – 3.6) 4 Implement practical reasoning for responsible action in families, workplaces, and communities, (4.1 – 4.14) 5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action, (5.1 – 5.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1; Utilize the practical reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:a; PAS1:b; PAS1:c; PAS1:d; PAS1:e)</p>	
<b>B. NATURE OF SCIENCE</b>	<b>FACS State and National Education Standards</b>	<b>Crosswalk of Local School Curriculum</b>
<b>Performance Standards</b>		
<b><i>By the end of Grade 12 students will:</i></b>	<b><i>By the end of Grade 12 students will:</i></b>	
B.12.1 Show how cultures and individuals have	<b><i>National Standards for Family and Consumer Sciences:</i></b>	

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<p>contributed to the development of major ideas in the earth and space, life and environmental, and physical sciences</p>	<p>3 Analyze practical reasoning components, (3.1 – 3.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>  Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:c)</p>	
<p>B.12.2 Identify the cultural conditions that are usually present during great periods of discovery, scientific development, and invention</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>  3.4 Analyze resource consumption for conservation and waste management practices, (3.4.1 – 3.4.5)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>  Standard CFR: Evaluate management practices related to human, economic and environmental resources, (CS1:d)</p>	
<p>B.12.3 Relate the major themes of science to human progress in understanding science and the world</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>  5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action, (5.1 – 5.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>  Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:e)</p>	
<p>B.12.4 Show how basic research and applied research contribute to new discoveries, inventions, and applications</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>  5. Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action, (5.1 – 5.6)  3.5 Demonstrate skills needed for product development, testing, and presentation, (3.5.1 – 3.5.8)  9.5 Demonstrate use of current technology in food product</p>	

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	<p>development and marketing, (9.5.1 – 9.5.7) 14.4 Evaluate factors that affect food safety from production through consumption, (14.4.1 – 14.4.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:e) Standard CS1: Integrate knowledge, skills and practices needed for a career in consumer services, (CS1:e) Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:d)</p>	
B.12.5 Explain how science is based on assumptions about the natural world and themes that describe the natural world	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action, (5.1 – 5.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:e)</p>	
<b>C. SCIENCE INQUIRY</b>	<b>FACS State and National Education Standards</b>	<b>Crosswalk of Local School Curriculum</b>
<b>Performance Standards</b>		
<b><i>By the end of Grade 12 students will:</i></b>	<b><i>By the end of Grade 12 students will:</i></b>	
C.12.1 When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena; build hypotheses that might answer some of these questions; design possible investigations; and describe results that might emerge	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 4 Implement practical reasoning for responsible action in families, workplaces, and communities, (4.1 – 4.6) 5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base</p>	

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from such investigations	<p>judgments for action, (5.1 – 5.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PSA1:d; PSA1:e)</p>	
C.12.2 Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for actions, (5.1 – 5.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PSA1:e)</p>	
C.12.3 Evaluate the data collected during an investigation, critique the data-collection procedures and results, and suggest ways to make any needed improvements	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> None</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> None</p>	
C.12.4 During investigations, choose the best data-collection procedures and materials available, use them competently, and calculate the degree of precision of the resulting data	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 9.5 Demonstrate use of current technology in food product development and marketing, (9.5.1 – 9.5.7)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:e)</p>	

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<p>C.12.5 Use the explanations and models found in earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> None</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> None</p>	
<p>C.12.6 Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action, (5.1 – 5.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences</i></b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PSA1:e)</p>	
<p>C.12.7 Evaluate articles and reports in the popular press, in scientific journals, on television, and on the Internet, using criteria related to accuracy, degree of error, sampling, treatment of data, and other standards of experimental design</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 1 Evaluate reasoning for self and others, (1.1 – 1.4) 5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action, (5.1 – 5.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1: Utilized the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:a; PAS1:e)</p>	

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<b>D. PHYSICAL SCIENCE</b>	<b>FACS State and National Education Standards</b>	<b>Crosswalk of Local School Curriculum</b>
<b>Performance Standards</b>		
<i>By the end of Grade 12 students will:</i>	<i>By the end of Grade 12 students will:</i>	
<b>Structures of Atoms and Matter</b>		
D.12.1 Describe atomic structure and the properties of atoms, molecules, and matter during physical and chemical interactions	<p><i>National Standards for Family and Consumer Sciences:</i> None</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i> None</p>	
D.12.2 Explain the forces that hold the atom together and illustrate how nuclear interactions change the atom	<p><i>National Standards for Family and Consumer Sciences:</i> None</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i> None</p>	
D.12.3 Explain exchanges of energy in chemical interactions and exchange of mass and energy in atomic/nuclear reactions	<p><i>National Standards for Family and Consumer Sciences:</i> None</p> <p><i>Wisconsin for Family and Consumer Sciences:</i> None</p>	
<b>Chemical Reactions</b>		
D.12.4 Explain how substances, both simple and complex, interact with one another to produce new substances	<p><i>National Standards for Family and Consumer Sciences:</i> 5.3 Demonstrate sanitation procedures for a clean and safe environment, (5.3.1 – 5.3.6)</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i> Standard FPS1: Integrate knowledge, skills and practices required for careers in food production and services (FPS1:b)</p>	

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D.12.5 Identify patterns in chemical and physical properties and use them to predict likely chemical and physical changes and interactions	<p><i>National Standards for Family and Consumer Sciences:</i> 9.6 Demonstrate food science, dietetics, and nutrition management principles and practices, (9.6.1 – 9.6.5)</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i> Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:f)</p>	
D.12.6 Through investigations, identify the types of chemical interactions, including endothermic, exothermic, oxidation, photosynthesis, and acid/base reactions	<p><i>National Standards for Family and Consumer Sciences:</i> 8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs, (8.5.1 – 8.5.11)</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i> Standard FPS1: Integrate knowledge, skills and practices required for careers in food production and services, (FPS1:e)</p>	
<b>Motions and Forces</b>		
D.12.7 Qualitatively and quantitatively analyze changes in the motion of objects and the forces that act on them and represent analytical data both algebraically and graphically	<p><i>National Standards for Family and Consumer Sciences:</i> None</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i> None</p>	
D.12.8 Understand the forces of gravitation, the electromagnetic force, intermolecular force, and explain their impact on the universal system	<p><i>National Standards for Family and Consumer Sciences:</i> None</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i> None</p>	
D.12.9 Describe models of light, heat, and sound and	<p><i>National Standards for Family and Consumer Sciences:</i></p>	

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through investigations describe similarities and differences in the way these energy forms behave	None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>Conservation of Energy and the Increase in Disorder</b>		
D.12.10 Using the science themes, illustrate the law of conservation of energy during chemical and nuclear reactions	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>Interactions of Matter and Energy</b>		
D.12.11 Using the science themes, explain common occurrences in the physical world	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
D.12.12 Using the science themes and knowledge of chemical, physical, atomic, and nuclear interactions, explain changes in materials, living things, earth's features, and stars	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>E. EARTH AND SPACE SCIENCE</b>	<b>FACS State and National Education Standards</b>	<b>Crosswalk of Local School Curriculum</b>
<b>Performance Standards</b>		
<i>By the end of Grade 12 students will:</i>	<i>By the end of Grade 12 students will.:</i>	
<b>Energy in the Earth System</b>		
E.12.1 Using the science themes, distinguish between internal energies (decay of radioactive isotopes, gravity) and external energies (sun) in the earth's systems and show how these sources of energy have an impact on those systems	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i>	

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	None	
<b>Geochemical Cycles</b>		
E.12.2 Analyze the geochemical and physical cycles of the earth and use them to describe movements of matter	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>The Origin and Evolution of the Earth System</b>		
E.12.3: Using the science themes, describe theories of the origins and evolution of the universe and solar system, including the earth system as a part of the solar system, and relate these theories and their implications to geologic time on earth	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
E.12.4 Analyze the benefits, costs, and limitations of past, present, and projected use of resources and technology and explain the consequences to the environment	<i>National Standards for Family and Consumer Sciences:</i> 4 Implement practical reasoning for responsible action in families, workplaces, and communities, (4.1 – 4.6)  <i>Wisconsin Standards for Family and Consumer Sciences:</i> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:d)	
<b>The Origin and Evolution of the Universe</b>		
E.12.5 Using the science themes, understand that the origin of the universe is not completely understood, but that there are current ideas in science that attempt to explain its origin	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>F. LIFE AND ENVIRONMENTAL SCIENCE</b>	<b>FACS State and National Education Standards</b>	<b>Crosswalk of Local School Curriculum</b>
<b>Performance Standards</b>		

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<i>By the end of Grade 12 students will:</i>	<i>By the end of Grade 12 students will:</i>	
<b>The Cell</b>		
F.12.1 Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms	<p><i>National Standards for Family and Consumer Sciences:</i>            8.2 Demonstrate food safety and sanitation procedures, (8.2.1 – 8.2.11)            9.2 Apply risk management procedures to food safety, food testing, and sanitation, (9.2.1 – 9.2.9)            14.4 Evaluate factors that affect food safety from production through consumption, (14.4.1 – 14.4.6)</p> <p><i>Wisconsin Standards for Family and Consumer Sciences:</i>            Standard FPS1: Integrated knowledge, skills and practices required for career in food production and services, (FPS1:b)            Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition (FSDN:b)</p>	
F.12.2 Understand how cells differentiate and how cells are regulated	<p><i>National Standards for Family and Consumer Sciences:</i>            None</p> <p><i>Wisconsin Standards for Family and Consumer Sciences::</i>            None</p>	
<b>The Molecular Basis of Heredity</b>		
F.12.3 Explain current scientific ideas and information about the molecular and genetic basis of heredity	<p><i>National Standards for Family and Consumer Sciences:</i>            None</p> <p><i>Wisconsin Standards for Family and Consumer Sciences::</i>            None</p>	
F.12.4 State the relationships between functions of the cell and functions of the organism as related to genetics and heredity	<p><i>National Standards for Family and Consumer Sciences:</i>            None</p>	

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	<i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>Biological Evolution</b>		
F.12.5 Understand the theory of evolution, natural selection, and biological classification	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences::</i> None	
F.12.6 Using concepts of evolution and heredity, account for changes in species and the diversity of species, include the influence of these changes on science, e.g., breeding of plants or animals	<i>National Standards for Family and Consumer Sciences:</i> 14.1 Analyze factors that influence nutrition and wellness practices across the life span, (14.1.1 – 14.1.5)  <i>Wisconsin Standards for Family and Consumer Sciences::</i> None	
<b>The Interdependence of Organisms</b>		
F.12.7 Investigate how organisms both cooperate and compete in ecosystems	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences::</i> None	
F.12.8 Using the science themes, infer changes in ecosystems prompted by the introduction of new species, environmental conditions, chemicals, and air, water, or earth pollution	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences::</i> None	
<b>Matter, Energy, and Organization in Living Systems</b>		
F.12.9 Using the science themes, investigate energy systems (related to food chains) to show how energy is stored in food (plants and animals) and how energy is	<i>National Standards for Family and Consumer Sciences:</i> None	

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released by digestion and metabolism	<i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
F.12.10 Understand the impact of energy on organisms in living systems	<i>National Standards for Family and Consumer Sciences:</i> 14.1 Analyze factors that influence nutrition and wellness practices across the life span, (14.1.1 – 14.1.5)  <i>Wisconsin Standards for Family and Consumer Sciences:</i> Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being (NW1:a)	
F.12.11 Investigate how the complexity and organization of organisms accommodates the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain an organism	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>The Behavior of Organisms</b>		
F.12.12 Trace how the sensory and nervous systems of various organisms react to the internal and external environment and transmit survival or learning stimuli to cause changes in behavior or responses	<i>National Standards for Family and Consumer Sciences:</i> None  <i>Wisconsin Standards for Family and Consumer Sciences:</i> None	
<b>G. SCIENCE APPLICATIONS</b>	<b>FACS State and National Education Standards</b>	<b>Crosswalk of Local School Curriculum</b>
<b>Performance Standards</b>		
<i>By the end of Grade 12 students will:</i>	<i>By the end of Grade 12 students will:</i>	
G.12.1 Identify personal interests in science and technology; account for implications that these interests might have for future education, and options to be considered	<i>National Standards for Family and Consumer Sciences:</i> 1.1 Analyze strategies to manage multiple roles and responsibilities (individual, family, career, community, and global), (1.1.1 – 1.1.6) 1.2 Demonstrate transferable and employability skills in	

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	<p>school, community, and workplace settings, (1.2.1 – 1.2.8) 1.3 Evaluate the reciprocal effects of individual and family participation in community activities, (1.3.1 – 1.3.6) 8.1 Analyze career paths within the food production and food services industries, (8.1.1 – 8.1.6) 9.1 Analyze careers paths within food science, food technology, dietetics, and nutrition industries, (9.1.1 – 9.1.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard CCLC1: Integrate multiple life role and responsibilities in family, work and community settings (CCLC1:a; CCLC1:b; CCLC1:c)</p>	
<p>G.12.2 Design, build, evaluate, and revise models and explanations related to the earth and space, life and environmental, and physical sciences</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 1 Evaluate reasoning for self and others, (1.1 – 1.1.4)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:a)</p>	
<p>G.12.3 Analyze the costs, benefits, or problems resulting from a scientific or technological innovation, including implications for the individual and the community</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 2 Analyze recurring and evolving family, workplace, and community concerns, (2.1 – 2.4) 3 Analyze practical reasoning components, (3.1 – 3.6) 4 Implement practical reasoning for responsible action in families, workplaces, and communities, (4.1 – 4.6) 14.5 Evaluate the influence of science and technology on food composition, safety, and other issues, (14.5.1 – 14.5.4)</p>	

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	<p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, PAS1:b; PAS1:c; PAS1:d)</p>	
<p>G.12.4 Show how a major scientific or technological change has had an impact on work, leisure, or the home</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 2 Analyze recurring and evolving family, workplace, and community concerns, (2.1 – 2.4) 9.5 Demonstrate use of current technology in food product development and marketing, (9.5.1 – 9.5.7) 14.5 Evaluate the influence of science and technology on food composition, safety, and other issues, (14.5.1 – 14.5.4)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:b) Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food technology, dietetics and nutrition, (FSDN1:e) Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:2)</p>	
<p>G.12.5 Choose a specific problem in our society, identify alternative scientific or technological solutions to that problem and argue its merits</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 2 Analyze recurring and evolving family, workplace, and community concerns, (2.1 – 2.4) 3 Analyze practical reasoning components, (3.1 – 3.6) 4 Implement practical reasoning for responsible action in families, workplaces, and communities (4.1 – 4.6)</p>	

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	<p>5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action, (5.1. – 5.6) 9.4 Apply basic concepts of nutrition and nutritional therapy in a variety of settings, (9.4.1 – 9.4.6) 14.2 Evaluate the nutritional needs of individuals and families in relation to health and wellness across the life span, (14.2.1 – 14.2.4)</p> <p><b>Wisconsin Standards for Family and Consumer Sciences:</b> Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:b; PAS1:c; PAS1:d; PAS1:e) Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:d) Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:a)</p>	
<b>H. SCIENCE IN SOCIAL AND PERSONAL PERSPECTIVES</b>	<b>FACS State and National Education Standards</b>	<b>Crosswalk of Local School Curriculum</b>
<b>Performance Standards</b>		
<b><i>By the end of Grade 12 students will:</i></b>	<b><i>By the end of Grade 12 students will::</i></b>	
H.12.1 Using the science themes and knowledge of the earth and space, life and environmental, and physical sciences, analyze the costs, risks, benefits, and consequences of a proposal concerning resource management in the community and determine the potential impact of the proposal on life in the community and the region	<p><b>National Standards for Family and Consumer Sciences:</b> 3.4 Analyze resource consumption for conservation and waste management practices, (3.4.1 – 3.4.5)</p> <p><b>Wisconsin Standards for Family and Consumer Sciences:</b> Standard CS1: Integrate knowledge, skills and practices needed for a career in consumer services, (CS1:d)</p>	

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<p>H.12.2 Evaluate proposed policy recommendations (local, state, and/or national) in science and technology for validity, evidence, reasoning, and implications, both short and long term</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 14.4 Evaluate factors that affect food safety from production to consumption, (14.4.1 – 14.4.6) 14.5 Evaluate the influence of science and technology on food composition, safety, and other issues, (14.5.1 – 14.5.4)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:d; NW1:e)</p>	
<p>H.12.3 Show how policy decisions in science depend on many factors, including social values, ethics, beliefs, and time-frames, and considerations of science and technology</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b> 14.4 Evaluate factors that affect food safety from production through consumption, (14.4.1 – 14.4.6)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b> Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:d)</p>	

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<p>H.12.4 Advocate a solution or combination of solutions to a problem in science or technology</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>            9.3 Evaluate nutrition principles, food plans, preparation techniques, and specialized dietary plans, (9.3.1 – 9.3.7)            9.5 Demonstrate use of current technology in food product development and marketing, (9.5.1 – 9.5.7)            9.6 Demonstrate food science, dietetics, and nutrition management principles and practices, (9.6.1 – 9.6.9)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>            Standard FSDN1: Integrate the knowledge, skill and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:c; FSDN1:e; FSDN1:f)</p>	
<p>H.12.5 Investigate how current plans or proposals concerning resource management, scientific knowledge, or technological development will have an impact on the environment, ecology, and quality of life in a community or region</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>            2.2 Analyze the relationship of the environment to family and consumer resources, (2.2.1 – 2.2.4)            2.3 Analyze policies that support consumer rights and responsibilities, (2.3.1 – 2.3.3)            3.4 Analyze resource consumption for conservation and waste management practices, (3.4.1 – 3.4.5)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>            Standard CFR1: Evaluate management practices related to the human, economic and environmental resources, (CFR1:b; CFR1:c)</p>	
<p>H.12.6 Evaluate data and sources of information when using scientific information to make decisions</p>	<p><b><i>National Standards for Family and Consumer Sciences:</i></b>            9.3 Evaluate nutrition principles, food plans, preparation techniques, and specialized dietary plans, (9.3.1 – 9.3.7)            14.1 Analyze factors that influence nutrition and wellness practices across the life span, (14.1.1 – 14.1.5)            14.2 Evaluate the nutritional needs of individuals and</p>	

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	<p>families in relation to health and wellness across the life span, (14.2.1 – 14.2.4)  14.4 Evaluate factors that affect food safety from production through consumption, (14.4.1 – 14.4.6)  14.5 Evaluate the influence of science and technology on food composition, safety, and other issues, (14,5,1 – 14.5.4)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>  Standard FSDN1: Integrate the knowledge, skills and practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:c)  Standard NW1: Demonstrate nutrition and wellness practices that enhance individual and family well-being, (NW1:a; NW1:b; NW1:d; NW1:e)</p>	
<p>H.12.7 When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning</p>	<p><b><i>National Standards for Family and Consumer Sciences</i></b>  5 Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action (5.1 – 5.6)  9.3 Evaluate nutrition principles, food plans, preparation techniques, and specialized dietary plans, (9.3.1 – 9.3.7)  9.4 Apply basic concepts of nutrition and nutritional therapy in a variety of settings, (9.4.1 – 9.4.6)  9.6 Demonstrate food science, dietetics, and nutrition management principles and practices, (9.6.1 -9.6.9)</p> <p><b><i>Wisconsin Standards for Family and Consumer Sciences:</i></b>  Standard PAS1: Utilize the reasoning process, individually and collaboratively, to take responsible action in families, workplaces and communities, (PAS1:e)  Standard FSDN1: Integrate the knowledge, skills and</p>	

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	practices required for careers in food science, food technology, dietetics and nutrition, (FSDN1:c; FSDN1:d; FSDN1:f)	
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