

# ***FOOD SCIENCE TECHNOLOGY STANDARDS***



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Office of Career Readiness, Adult Learning & Education Options  
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**VISION**

*All Nevadans ready for success in the 21<sup>st</sup> century*

**MISSION**

*To improve student achievement and educator effectiveness by ensuring opportunities, facilitating learning, and promoting excellence*



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**BUSINESS AND INDUSTRY VALIDATION**

All CTE standards developed through the Nevada Department of Education are validated by business and industry through one or more of the following processes: (1) the standards are developed by a team consisting of business and industry representatives; or (2) a separate review panel was coordinated with industry experts to ensure the standards include the proper content; or (3) the adoption of nationally-recognized standards endorsed by business and industry.

The Food Science Technology standards were validated through a complete review by an industry panel.

**PROJECT COORDINATOR**

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## AGRICULTURE AND NATURAL RESOURCES

### Program Requirements

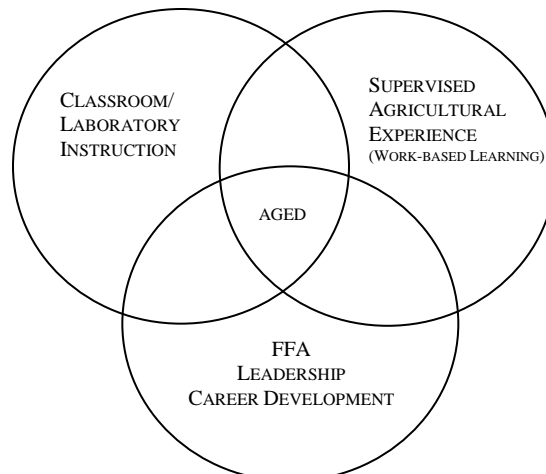
Occupations associated with agriculture production, natural resources, processing and distribution of food and fiber are important to the national interests and provide significant employment opportunities. Occupational education and training in agriculture and agri-business are essential to the continued economic health of Nevada and the nation, as it provides the needed competent and trained work force.

Agriculture education provides high school students with technical and specialized knowledge in production agriculture and natural resources as well as other specific agriculture occupations. The programs are designed to meet students' occupational objectives, interests, and abilities for entry into chosen occupations and can prepare them for advanced education and training. Agriculture education is a coordinated program of group and individual instructional activities consisting of classroom instruction, laboratory experiences, and leadership development. Integral to these activities are FFA (leadership development) and Supervised Agricultural Experience (work-based learning), Nevada Revised Statute 385.110. Federal/Public law#105-225 which was passed in August, 1998, states "Congress of the United States recognizes the importance of the FFA as an integral part of the program of Vocational Agriculture." All students enrolled in Agriculture Education will be recognized as members of the FFA organization. All secondary agriculture education programs and school districts will purchase a curriculum packet consisting of the New Horizons agriculture career and technical magazine, the FFA manual, and the Nevada Record Book on a yearly basis for every student enrolled in agriculture education in their program. Areas of study at the secondary level are divided into Agriculture Science and Specialized Advanced Agriculture Career and Technical Areas.

Agriculture and Society, Plant and Soil Science, Agriculture Mechanical Engineering and Technology, Animal Science, Leadership/FFA, Agriculture Business, Sales, Marketing and Supervised Agriculture Experience, Natural Resources, and Employability are included in the Agriculture Science introduction division.

Instruction in business/specialized agriculture provides training in specific occupational skills, duties, and tasks, as determined by the business and industry needs. Specialized career and technical agriculture programs will include, but are not limited to, the following: ornamental horticulture, floriculture design, turf and landscape management, equine science and technology, forestry technology, wildlife management and enforcement, food science and processing, feedlot management, animal science, Animal Science, agriculture power systems, natural resources and reclamation, mining science and operations, nursery and greenhouse management, landscape architecture, irrigation and chemical management, lawn care and maintenance, and agriculture construction.

### NEVADA SCHOOL BASED AGRICULTURAL EDUCATION Model of Instruction



INTRODUCTION

The standards in this document are designed to clearly state what the student should know and be able to do upon completion of an advanced high school Food Science Technology program. These standards are designed for a three-credit course sequence that prepares the student for a technical assessment directly aligned to the standards.

These exit-level standards are designed for the student to complete all standards through their completion of a program of study. These standards are intended to guide curriculum objectives for a program of study.

The standards are organized as follows:

**Content Standards** are general statements that identify major areas of knowledge, understanding, and the skills students are expected to learn in key subject and career areas by the end of the program.

**Performance Standards** follow each content standard. Performance standards identify the more specific components of each content standard and define the expected abilities of students within each content standard.

**Performance Indicators** are very specific criteria statements for determining whether a student meets the performance standard. Performance indicators may also be used as learning outcomes, which teachers can identify as they plan their program learning objectives.

The crosswalk and alignment section of the document shows where the performance indicators support the Nevada Academic Content Standards in Science (based on the Next Generation Science Standards) and the English Language Arts and Mathematics (based on the Common Core State Standards). Where correlation with an academic content standard exists, students in the Food Science Technology program perform learning activities that support, either directly or indirectly, achievement of the academic content standards that are listed.

All students are encouraged to participate in the career and technical student organization (CTSO) that relates to their Food Science Technology program. CTSOs are co-curricular national associations that directly enforce learning in the CTE classroom through curriculum resources, competitive events, and leadership development. CTSOs provide students the ability to apply academic and technical knowledge, develop communication and teamwork skills, and cultivate leadership skills to ensure college and career readiness.

The Employability Skills for Career Readiness identify the “soft skills” needed to be successful in all careers, and must be taught as an integrated component of all CTE course sequences. These standards are available in a separate document.

The **Standards Reference Code** is only used to identify or align performance indicators listed in the standards to daily lesson plans, curriculum documents, or national standards.

|                         |                          |
|-------------------------|--------------------------|
| Program Name            | Standards Reference Code |
| Food Science Technology | FST                      |

Example: FST.2.3.4

|                         |                  |                      |                       |
|-------------------------|------------------|----------------------|-----------------------|
| Standards               | Content Standard | Performance Standard | Performance Indicator |
| Food Science Technology | 2                | 3                    | 4                     |

**CONTENT STANDARD 1.0 : FOOD INDUSTRY AND HISTORICAL DEVELOPMENT**

**PERFORMANCE STANDARD 1.1 : EVALUATE THE SIGNIFICANCE AND IMPLICATIONS OF CHANGES AND TRENDS IN THE FOOD PRODUCTS AND PROCESSING INDUSTRY**

- 1.1.1 Discuss historical changes in the food products and processing industry
- 1.1.2 Evaluate current trends in the food products and processing industry (i.e., dietary food guides, niche markets, marketing trends)
- 1.1.3 Examine issues of safety and environmental concerns in food products and processing (i.e., Genetically Modified Organisms, microorganisms, contamination, irradiation)

**PERFORMANCE STANDARD 1.2 : INVESTIGATE INDUSTRY ORGANIZATIONS, GROUPS AND REGULATORY AGENCIES AFFECTING THE FOOD PRODUCTS AND PROCESSING INDUSTRY**

- 1.2.1 Explain the purposes of organizations that are part of and/or regulate the food products and processing industry
- 1.2.2 Determine the relationship between regulatory agencies (i.e., FDA, USDA, CDC, WHO, etc.) and the food products and processing industry
- 1.2.3 Assess the changes in the food products and processing industry brought about by industry organizations or regulatory agencies
- 1.2.4 Discuss the application of industry standards in the food products and processing industry (i.e., American Meat Science Association, Nevada Dairy Commission, Dairy Farmers of America, Nevada Cattlemen’s Association)

**CONTENT STANDARD 2.0 : FOOD SAFETY AND SANITATION****PERFORMANCE STANDARD 2.1 : MANAGE OPERATIONAL PROCEDURES AND CREATE EQUIPMENT AND FACILITY MAINTENANCE PLANS**

- |       |  |
|-------|--|
| 2.1.1 | Evaluate the Sanitation Standard Operating Procedures (SSOP) of a food products and processing company |
| 2.1.2 | Justify the Good Manufacturing Practices (GMP) of a food products and processing company               |
| 2.1.3 | Develop a basic equipment and facility maintenance program   |

**PERFORMANCE STANDARD 2.2 : IMPLEMENT HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP) PROCEDURES TO ESTABLISH OPERATING PARAMETERS**

- |       |  |
|-------|--|
| 2.2.1 | Outline procedures to eliminate possible contamination hazards (i.e., physical, chemical, and biological) associated with food products and processing |
| 2.2.2 | Explain the implementation of the seven principles of HACCP  |
| 2.2.3 | Analyze the effectiveness of a food products and processing company's Critical Control Point procedures  |

**PERFORMANCE STANDARD 2.3 : APPLY SAFETY AND SANITATION PROCEDURES IN THE HANDLING, PROCESSING AND STORING OF FOOD PRODUCTS**

- |       |  |
|-------|--|
| 2.3.1 | Perform quality assurance tests on food products   |
| 2.3.2 | Evaluate food product handling procedures  |
| 2.3.3 | Explain the importance of microbiological tests in food product preparation, listing common spoilage and pathogenic microorganisms |
| 2.3.4 | Interpret microbiological tests for foodborne pathogens and implement corrective procedures  |
| 2.3.5 | Discuss documentation procedures in a food products and processing system  |

**PERFORMANCE STANDARD 2.4 : DEMONSTRATE WORKER SAFETY PROCEDURES WITH FOOD PRODUCT AND PROCESSING EQUIPMENT AND FACILITIES**

- |       |  |
|-------|--|
| 2.4.1 | Outline guidelines for personnel safety in the food products and processing industry |
| 2.4.2 | Critique a facility to determine the implementation of safety procedures             |
| 2.4.3 | Create a successful Crisis Management Program  |
| 2.4.4 | Participate in an employee safety training (i.e., OSHA 10, <i>ServSafe</i> )         |
| 2.4.5 | Describe safety in food science laboratories   |
| 2.4.6 | Demonstrate proper use of common food science equipment                              |



**CONTENT STANDARD 3.0 : THE SCIENCE OF FOOD PRODUCTS AND PROCESSING**

**PERFORMANCE STANDARD 3.1 : APPLY PRINCIPLES OF SCIENCE TO FOOD PROCESSING TO PROVIDE A SAFE, WHOLESOME, AND NUTRITIOUS FOOD SUPPLY**

|       |   |
|-------|---|
| 3.1.1 | Design a research project in food science using the scientific method   |
| 3.1.2 | Explain how the chemical and physical properties of foods influence nutritional value and eating quality                |
| 3.1.3 | Compare and contrast the nutritive value of food and food groups  |
| 3.1.4 | Differentiate between the common food constituents (i.e., proteins, carbohydrates, fats, vitamins, minerals, and water) |
| 3.1.5 | Compare and contrast food constituents and their relative value to product taste, appearance, etc.                      |
| 3.1.6 | Describe the purpose of common food additives   |

**CONTENT STANDARD 4.0 : FOOD SELECTION AND PROCESSING****PERFORMANCE STANDARD 4.1 : UTILIZE HARVESTING, SELECTION, AND INSPECTION TECHNIQUES TO OBTAIN QUALITY FOOD PRODUCTS FOR PROCESSING**

- |       |   |
|-------|---|
| 4.1.1 | Discuss factors that affect quality and yield grades of food products   |
| 4.1.2 | Perform quality control inspections of raw food products for processing   |
| 4.1.3 | Compare and contrast accepted animal treatment and harvesting techniques  |
| 4.1.4 | Explain desirable and undesirable characteristics of both pre-mortem and post-mortem animals in relation to the production of food products |

**PERFORMANCE STANDARD 4.2 : EVALUATE, GRADE, AND CLASSIFY PROCESSED FOOD PRODUCTS**

- |       |   |
|-------|---|
| 4.2.1 | Evaluate, grade and classify processed meat, eggs, poultry, fish, and dairy products      |
| 4.2.2 | Evaluate, grade and classify processed products from fruits and vegetables                |
| 4.2.3 | Evaluate, grade and classify finished products derived from grains, legumes, and oilseeds |

**CONTENT STANDARD 5.0 : FOOD PROCESSING AND PRESERVATION**

**PERFORMANCE STANDARD 5.1 : PROCESS AND PRESERVE FOOD AND FOOD PRODUCTS FOR SALE AND DISTRIBUTION**

- 5.1.1 Use weights and measures to formulate and package food products
- 5.1.2 Evaluate foods prepared for the fresh-food market based on factors such as shelf life, shrinkage, appearance, and weight
- 5.1.3 Preserve foods using various methods and techniques
- 5.1.4 Evaluate ready-to-use food products
- 5.1.5 Analyze the foods stored in various packaging materials to retain desirable food qualities
- 5.1.6 Compare and contrast foods stored under varying conditions for quality, shelf life, and intended use

**PERFORMANCE STANDARD 5.2 : PRESENT FOOD AND FOOD PRODUCTS FOR SALE AND DISTRIBUTION**

- 5.2.1 Explain the required components of a food label
- 5.2.2 Prepare and label foods according to the established standards of regulatory agencies
- 5.2.3 Formulate a new food product

**CONTENT STANDARD 6.0 : MARKETING AND SALES STRATEGIES****PERFORMANCE STANDARD 6.1 : EXPLAIN THE BASICS OF DISPLAYS**

- |       |  |
|-------|--|
| 6.1.1 | Create a display of food products for sale   |
| 6.1.2 | Recognize ways of maintaining and increasing the effectiveness of food business displays |

**PERFORMANCE STANDARD 6.2 : EXPLAIN THE BASICS OF SALES**

- |       |  |
|-------|--|
| 6.2.1 | Market a food product to a target audience |
| 6.2.2 | Complete a sales invoice                   |
| 6.2.3 | Use proper telephone techniques            |
| 6.2.4 | Properly handle a customer complaint       |
| 6.2.5 | Conduct a customer consultation            |

**CONTENT STANDARD 7.0 : EXPLORE CAREER OPPORTUNITIES****PERFORMANCE STANDARD 7.1 : UNDERSTAND EMPLOYMENT FIELDS IN THE FOOD SCIENCE TECHNOLOGY INDUSTRY**

- |       |   |
|-------|---|
| 7.1.1 | List and describe the types of employment opportunities in the Food Science Technology industry |
| 7.1.2 | Explore education and training for different Food Science Technology careers                    |
| 7.1.3 | Understand the process of choosing a career path in the Food Science Technology industry        |

**CONTENT STANDARD 8.0 : LEADERSHIP TRAINING IN FFA****PERFORMANCE STANDARD 8.1 : RECOGNIZE THE TRAITS OF EFFECTIVE LEADERS AND PARTICIPATE IN LEADERSHIP TRAINING THROUGH INVOLVEMENT IN FFA**

- |       |  |
|-------|--|
| 8.1.1 | Expand leadership experience by serving as a chapter officer or on a committee |
| 8.1.2 | Exhibit leadership skills by demonstrating proper parliamentary procedure      |
| 8.1.3 | Participate in a career development event at the local level or above          |

**PERFORMANCE STANDARD 8.2 : UNDERSTAND THE IMPORTANCE OF SCHOOL AND COMMUNITY AWARENESS**

- |       |  |
|-------|--|
| 8.2.1 | Participate in a school improvement or community development project |
|-------|--|

**CONTENT STANDARD 9.0 : SUPERVISED AGRICULTURAL EXPERIENCE (SAE)**

**PERFORMANCE STANDARD 9.1 : UNDERSTAND THE BENEFITS OF AN SAE PROGRAM**

|       |  |
|-------|--|
| 9.1.1 | Accurately maintain SAE record books                             |
| 9.1.2 | Apply for proficiency award related to SAE program area          |
| 9.1.3 | Actively pursue necessary steps to receive higher degrees in FFA |

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**CROSSWALKS AND ALIGNMENTS OF  
FOOD SCIENCE TECHNOLOGY STANDARDS  
AND THE NEVADA ACADEMIC CONTENT STANDARDS  
AND THE COMMON CAREER TECHNICAL CORE STANDARDS**

**CROSSWALKS (ACADEMIC STANDARDS)**

The crosswalk of the Food Science Technology Standards shows links to the Nevada Academic Content Standards in Science (based on the Next Generation Science Standards – Disciplinary Core Ideas Arrangement) and the English Language Arts and Mathematics (based on the Common Core State Standards). The crosswalk identifies the performance indicators in which the learning objectives in the Food Science Technology program support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the Nevada Academic Content Standards in Science, English Language Arts, and Mathematics.

**ALIGNMENTS (MATHEMATICAL PRACTICES)**

In addition to correlation with the Nevada Academic Content Standards for Mathematics, many performance indicators support the Mathematical Practices. The following table illustrates the alignment of the Food Science Technology Standards Performance Indicators and the Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Food Science Technology program support academic learning.

**CROSSWALKS (COMMON CAREER TECHNICAL CORE)**

The crosswalk of the Food Science Technology Standards shows links to the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Food Science Technology program support the Common Career Technical Core. The Common Career Technical Core defines what students should know and be able to do after completing instruction in a program of study. The Food Science Technology Standards are crosswalked to the Agriculture, Food & Natural Resources Career Cluster™ and the Agriculture, Food & Natural Resources Career Pathway.

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CROSSWALK OF FOOD SCIENCE TECHNOLOGY STANDARDS  
AND THE NEVADA ACADEMIC CONTENT STANDARDS

CONTENT STANDARD 1.0: FOOD INDUSTRY AND HISTORICAL DEVELOPMENT

| Performance Indicators | Nevada Academic Content Standards   |
|------------------------|---|
| 1.1.1                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p>  |
| 1.1.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Engineering Design</u></b><br/>HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</p>   |
| 1.1.3                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Engineering Design</u></b><br/>HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.<br/>HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p> |
| 1.2.1                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>   |
| 1.2.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p>  |

|       |  |
|-------|--|
| 1.2.3 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</u></b><br/> HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> |
| 1.2.4 | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/> SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p> <p><b><u>Science: HS-Earth and Human Activity</u></b><br/> HS-ESS3-6 Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</p>  |

CONTENT STANDARD 2.0 : FOOD SAFETY AND SANITATION

| Performance Indicators | Nevada Academic Content Standards  |
|------------------------|--|
| 2.1.1                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>                     WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> |
| 2.1.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>                     WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>  |
| 2.1.3                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>                     WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b><u>Science: HS-Engineering Design</u></b><br/>                     HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>                                      |
| 2.2.1                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>                     WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b><u>Science: HS-Earth and Human Activity</u></b><br/>                     HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</p>  |
| 2.2.2                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p>  |

|       |   |
|-------|---|
| 2.2.3 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Earth and Human Activity</u></b><br/>HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</p>   |
| 2.3.1 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>  |
| 2.3.2 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>  |
| 2.3.3 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p> <p><b><u>Science: HS-Motion and Stability: Forces and Interactions</u></b><br/>HS-PS2-6 Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.</p> <p><b><u>Science: HS-From Molecules to Organisms: Structures and Processes</u></b><br/>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> |

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| 2.3.4 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>               |
| 2.3.5 | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p>   |
| 2.4.1 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>  |
| 2.4.2 | <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p>   |
| 2.4.3 | <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.2d Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.</p> <p>WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>   |
| 2.4.4 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>   |
| 2.4.5 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> |
| 2.4.6 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>   |

## CONTENT STANDARD 3.0 : THE SCIENCE OF FOOD PRODUCTS AND PROCESSING

| Performance Indicators | Nevada Academic Content Standards  |
|------------------------|--|
| 3.1.1                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p> <p>RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p> <p><b><u>Science: HS-Engineering Design</u></b><br/> HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p> |
| 3.1.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Matter and Its Interactions</u></b><br/> HS-PS1-5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</p>  |
| 3.1.3                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>   |
| 3.1.4                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>   |



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| <p>3.1.5</p> | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Matter and Its Interactions</u></b><br/> HS-PS1-5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</p> |
| <p>3.1.6</p> | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>  |

## CONTENT STANDARD 4.0 : FOOD SELECTION AND PROCESSING

| Performance Indicators | Nevada Academic Content Standards  |
|------------------------|--|
| 4.1.1                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>           SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p>  |
| 4.1.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>           RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>  |
| 4.1.3                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>           RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>           WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>           SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p> |
| 4.1.4                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>           RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>           WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Heredit: Inheritance and Variation of Traits</u></b><br/>           HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>   |
| 4.2.1                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>           RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>  |
| 4.2.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>           RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>  |
| 4.2.3                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>           RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>  |

CONTENT STANDARD 5.0 : FOOD PROCESSING AND PRESERVATION

| Performance Indicators | Nevada Academic Content Standards   |
|------------------------|---|
| 5.1.1                  | <p><b><u>Science: HS-Engineering Design</u></b><br/>                     HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>  |
| 5.1.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p> <p><b><u>Science: HS-Matter and Its Interactions</u></b><br/>                     HS-PS1-5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</p>  |
| 5.1.3                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>   |
| 5.1.4                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p> <p><b><u>Science: HS-Matter and Its Interactions</u></b><br/>                     HS-PS1-5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</p>  |
| 5.1.5                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>                     WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Matter and Its Interactions</u></b><br/>                     HS-PS1-5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</p> |

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| 5.1.6 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/> WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b><u>Science: HS-Matter and Its Interactions</u></b><br/> HS-PS1-5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</p> |
| 5.2.1 | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/> SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.</p>   |
| 5.2.2 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p>   |
| 5.2.3 | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/> RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p>   |

CONTENT STANDARD 6.0 : MARKETING AND SALES STRATEGIES

| Performance Indicators | Nevada Academic Content Standards  |
|------------------------|--|
| 6.1.1                  | <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>                     WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>  |
| 6.1.2                  | <p><b><u>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</u></b><br/>                     RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br/>                     WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> |
| 6.2.1                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p>   |
| 6.2.3                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3 on page 54 for specific expectations.)</p>   |
| 6.2.4                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.1d Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.</p>   |
| 6.2.5                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.1c Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.</p>  |

**CONTENT STANDARD 7.0 : EXPLORE CAREER OPPORTUNITIES**

| Performance Indicators | Nevada Academic Content Standards  |
|------------------------|--|
| 7.1.2                  | <b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br>WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |

**CONTENT STANDARD 8.0 : LEADERSHIP TRAINING IN FFA**

| Performance Indicators | Nevada Academic Content Standards  |
|------------------------|--|
| 8.1.1                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.</p> |
| 8.1.2                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.</p> |
| 8.1.3                  | <p><b><u>English Language Arts: Speaking and Listening Standards</u></b><br/>                     SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.</p> |

**CONTENT STANDARD 9.0 : SUPERVISED AGRICULTURAL EXPERIENCE (SAE)**

| Performance Indicators | Nevada Academic Content Standards  |
|------------------------|--|
| 9.1.1                  | <b><u>English Language Arts: Language Standards</u></b><br>L.11-12.2b Spell correctly.   |
| 9.1.2                  | <b><u>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</u></b><br>WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |



**ALIGNMENT OF FOOD SCIENCE TECHNOLOGY STANDARDS  
AND THE MATHEMATICAL PRACTICES**

| <b>Mathematical Practices</b>                                       | <b>Food Science Technology Performance Indicators</b>  |
|---|--|
| 1. Make sense of problems and persevere in solving them.            | 1.1.3<br>2.3.1, 2.3.3<br>3.1.1<br>5.2.3<br>8.1.3       |
| 2. Reason abstractly and quantitatively.                            | 1.1.2, 1.1.3<br>3.1.1<br>4.1.1; 4.2.1 - 4.2.3<br>6.2.2 |
| 3. Construct viable arguments and critique the reasoning of others. | 1.1.3  |
| 4. Model with mathematics.  | 5.1.1, 5.1.2, 5.1.4, 5.1.5; 5.2.1, 5.2.3               |
| 5. Use appropriate tools strategically.                             | 4.1.2<br>5.1.1, 5.1.2, 5.1.5; 5.2.3                    |
| 6. Attend to precision.   | 4.2.1 - 4.2.3<br>5.2.3<br>6.2.2                        |
| 7. Look for and make use of structure.                              | 6.1.1, 6.1.2   |
| 8. Look for and express regularity in repeated reasoning.           | 5.1.3; 5.2.1, 5.2.3                                    |

**CROSSWALKS OF FOOD SCIENCE TECHNOLOGY STANDARDS  
AND THE COMMON CAREER TECHNICAL CORE**

| <b>Agriculture, Food and Natural Resources Career Cluster (AG)</b>  | <b>Performance Indicators</b>  |
|---|--------------------------------|
| 1. Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster  | 1.1.1 - 1.1.3; 1.2.3           |
| 2. Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy. | 1.2.2, 1.2.4                   |
| 3. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.   | 7.1.1 - 7.1.3<br>8.1.3         |
| 4. Examine and summarize the importance of health, safety and environmental management systems in AFNR businesses.  | 2.3.3 - 2.3.5<br>2.4.1 - 2.4.5 |
| 5. Ensure the presence and function of safety systems and hardware on tools and equipment   | 2.2.2; 2.4.6                   |

| <b>Food Products and Processing Career Pathway (AG-FPP)</b>  | <b>Performance Indicators</b>                |
|--|--|
| 1. Explain the scope of the food industry and the historical and current developments of food products and processing.   | 1.1.1, 1.1.2; 1.2.3                          |
| 2. Develop and implement procedures to ensure safety, sanitation and quality in food product and processing facilities.  | 2.1.1 - 2.1.3; 2.2.1<br>2.3.1, 2.3.3 - 2.3.5 |
| 3. Apply food safety and sanitation procedures in the handling and processing of food products to ensure food quality  | 1.1.3<br>2.3.1 - 2.3.5                       |
| 4. Apply the principles of nutrition and biology to develop food products that provide a safe, wholesome and nutritious food supply for local and global food systems.                                       | 3.1.1 - 3.1.3, 3.1.5, 3.1.6                  |
| 5. Design and apply techniques of food processing, preservation, packaging and presentation for distribution and consumption of food products.   | 4.2.1 - 4.2.3                                |
| 6. Apply principles of human behavior to develop food products to provide a safe, wholesome and nutritious food supply for local and global food systems.  | 5.1.1, 5.1.2, 5.1.4, 5.1.6<br>5.2.1, 5.2.2   |
| 7. Outline appropriate methods and prepare foods for sale and distribution for different markets.  | 5.2.3<br>6.1.1, 6.1.2; 6.2.1 - 6.2.3         |
| 8. Identify and explain the purpose of industry organizations, groups and regulatory agencies that influence the local and global food systems.  | 1.2.1 - 1.2.4                                |
| 9. Identify and describe protocols for inspection and harvesting techniques for animal food products (e.g., pre-mortem and post-mortem inspections, Food Safety Inspection Service guidelines (FSIS), etc.). | 4.1.3, 4.1.4                                 |
| 10. Research and summarize current issues related to the safety and environmental concerns about foods and food processing (e.g., GMOs, irradiation, microorganisms, contamination, etc.).                   | 1.1.3; 2.1.1                                 |