

**Agriculture & Natural  
Resource Science  
Standards  
Grade 12  
Plant & Environmental Horticulture Science  
Junior, Senior Level Instruction**



Agriculture Education  
Office of, Career, Technical and Adult Ed.  
Nevada Department of Education, Carson City

## ACKNOWLEDGEMENTS

The Agriculture and Natural Resource Science Standards project was drafted and reviewed by Nevada agriculture education instructors. The document was reviewed by the Nevada Agriculture Education Advisory Board that consisted of Secondary Education, Postsecondary Education, Administration, Business and Industry, parents, and students. The Nevada Department of Education and the Agriculture Education Consultant wishes to acknowledge the contributions of those who worked on the development of these standards.

### **University of Nevada, Las Vegas Center for Workforce Development Staff:**

Dr. Sterling Saddler, Coordinator  
Dr. Cliff McClain, Coordinator  
Dr. Cecilia Maldonado, Coordinator  
Lisa Bybee, Coordinator  
Melissa Pedersen, Recorder

### **Secondary Agriculture Education Instructors:**

#### *Writing Team*

Don Noorda, Team Facilitator, Wells High School, Wells  
Roy Enochson, Team Member, Yerington High School, Yerington  
Dennis Digenan, Spring Creek High School, Spring Creek  
Jeff Earnest, Team Member, Regional Technical Institute, Reno  
Anson Jones, Team Member, Foothill High School, Henderson  
Amber Drabrant, Area Technical Trade Center, Las Vegas  
John Smith, Community College of Southern Nevada, Henderson  
Jim Barbee, Agriculture Consultant, Nevada Department of Education

#### *Review Team*

Kim Bennett, Lund High School, Lund  
Jim Cooney, Elko High School, Elko  
Courtney Dahl, Churchill County High School, Fallon  
Dennis Digenan, Spring Creek High School, Elko  
Roy Enochson, Yerington High School, Yerington  
Tom George, Albert Lowry High School, Winnemucca  
Darryl Grove, Churchill County High School, Fallon  
Tedd Heggie, White Pine County High School, Ely  
Judy Hellwinkel, Churchill County High School, Fallon  
Jared Hyatt, Elko High School, Elko  
Randi Hunewill, Academic Crosswalk, Smith Valley High School, Smith  
Bill Laird, Pershing County High School, Lovelock  
Kristina Moore, Douglas High School, Minden  
Gary Wood, Pahrangat Valley High School, Alamo

## **State Agriculture Advisory Board**

### **Trustees**

Kenny Guinn, Governor, State of Nevada  
John Ensign, Senator, United States of America  
Lawrence Jacobsen, Senator, Nevada State Senate, Minden  
Dean Rhodes, Senator, Nevada State Senate, Tuscarora  
Mark E. Amodei, Senator, Nevada State Senate, Carson City  
Joseph E. Dini, Jr., Assemblyman, Nevada State Assembly, Yerington  
Tom Collins, Assemblyman, Nevada State Assembly, North Las Vegas  
Marcia de Braga, Assemblywoman, Nevada State Assembly, Fallon  
Mike McGinness, Senator, Nevada State Senate, Fallon  
Jon Park, Morgan Stanley Dean Witter, Minden

### **Board**

Dr. Jerry Barbee, Western Nevada Community College, Carson City  
Don Campbell, Stanadyne Automotive Corp., Retired, Carson City  
Bob Butler, WolfPack Meat, University Nevada Reno  
Tonya Dressler, Rancher, Parent, Minden  
Ty Nebe, Vice President, Northern Nevada Bank, Reno  
Dr. Jim Brandmuller, Nevada Department of Energy, Carson City  
Dr. Vern Luft, College of Education, UNR, Reno  
Gail Munk, Nevada Ag Foundation, Lovelock  
Dr. Keith Rheault, Deputy Superintendent, Nevada Department of Education  
Shay Wells, State FFA President, Eureka  
Gary Sundseth, Nevada Vocational Agriculture Teachers Association  
Dennis Hellwinkel, Nevada Farm Bureau President, Fallon  
Gary Waters, Nevada State Occupation Education Board  
Dave Grillo, Nitro-Green, Nevada Landscape Association, Reno & Las Vegas  
Jim R. Barbee, Agriculture Education Consultant, Dept. of Education  
Heather Dye, Executive Director, Nevada FFA Foundation

## **AGRICULTURAL 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.

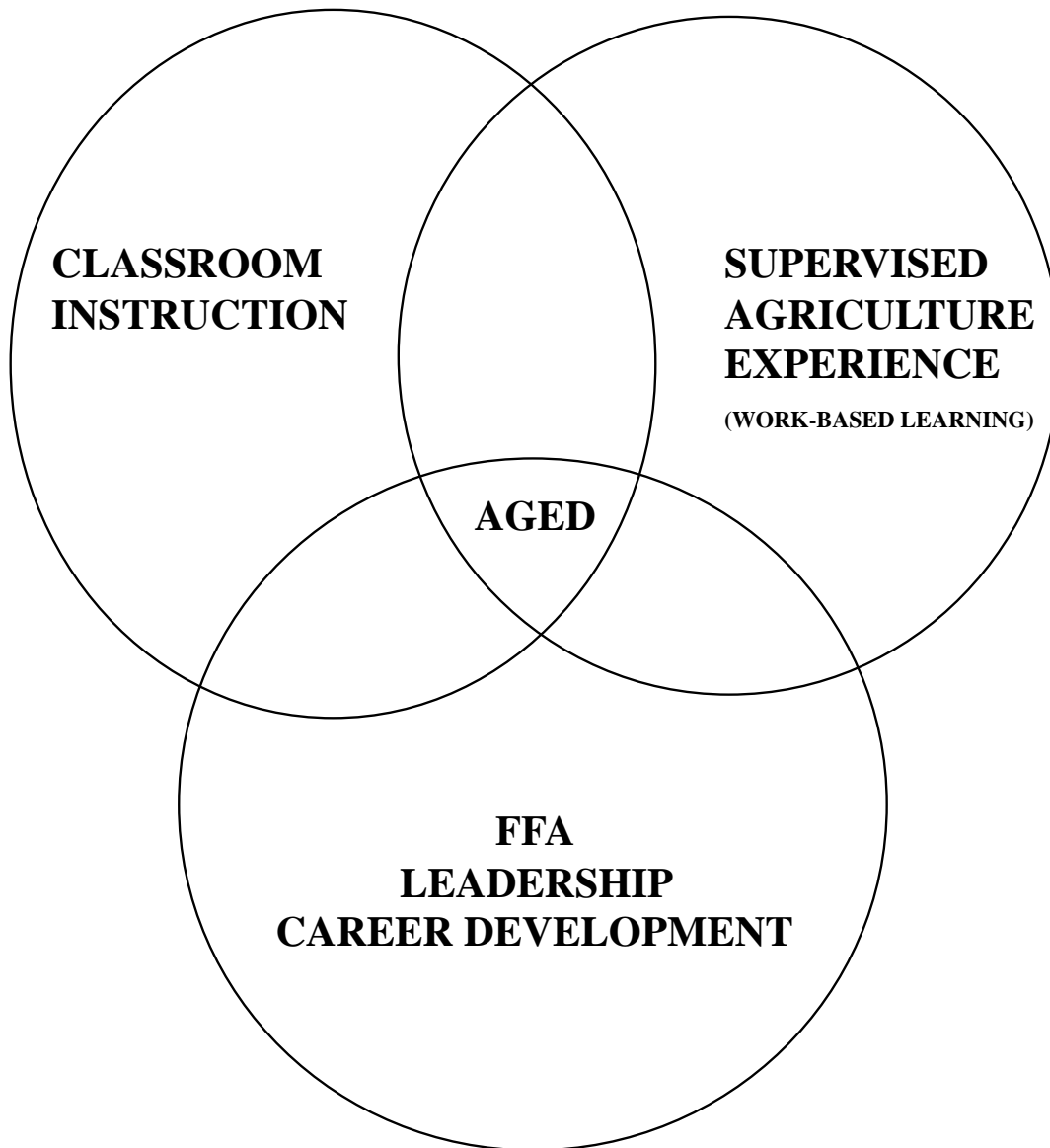
The advent of corporate agriculture and decline of the family-operated agriculture venture mandate the maintenance, expansion and improvement of occupational agriculture education. Through agriculture education, students are prepared for employment in the field of agriculture through planning and managing agriculture, food, fiber, and natural resources systems. Production of agricultural commodities, including food fiber, wood products, horticultural crops, and other plant and animal products. Financing, processing, and marketing and distribution of agriculture products; farm production and supply and service industries; horticulture and landscaping services, and the use and conservation of land and water resources; development and maintenance of recreational resources. It also includes mining and extraction operations and related environmental management services. Source: *USOE/OVAE Brochure*

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 Agriculture 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, veterinary 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  
AGRICULTURE EDUCATION  
Model of Instruction**



**DRAFT**  
**Plant and Environmental Horticulture Science**  
**Performance Level Descriptors**

**Content Standard 1.0: *Plant Science:*** Students will explain plant anatomy, physiology, and reproduction as they relate to environmental horticulture.

<b>Performance Standard 1.1</b> Students will describe the major external plant structures and their functions.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Collect, dissect and verify plant structures.</li> <li>▪ Summarize plant organs and their relationship to plant growth.</li> </ul>
<b>MEETS STANDARDS</b>	<p>1.12.1 Diagram and label the primary plant organs indicating the function of each.</p> <p>1.12.2 Distinguish between tap and fibrous roots systems.</p> <p>1.12.3 Distinguish between roots and underground stems.</p> <p>1.12.4 Distinguish between specialized roots, stems, and leaves.</p> <p>1.12.5 Examine the structural differences between monocot and dicot plants.</p> <p>1.12.6 Illustrate basic flower structures and their functions.</p> <p>1.12.7 Identify the external structures of a woody stem.</p> <p>1.12.8 Identify the basic structure and function of a leaf.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List the primary plant organs.</li> <li>▪ Recognize the difference between a monocot and dicot plant.</li> <li>▪ Recognize the difference between a woody and herbaceous stem.</li> <li>▪ Recognize the function of a flower.</li> </ul>

Nevada Academic Standards Correlation:

Science: 6.12.2, 7.12.2

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 1.0: *Plant Science*:** Students will explain plant anatomy, physiology, and reproduction as they relate to environmental horticulture.

<b>Performance Standard 1.2</b> Students will describe the major internal plant structures and their functions.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Explain why knowledge of the vascular system is essential for successful grafting.</li> <li>▪ Summarize the effects of girdling a woody plant.</li> <li>▪ Dissect and arrange internal plant parts based on their function.</li> </ul>
<b>MEETS STANDARDS</b>	<p>1.2.12.1 Describe several types of plant tissues.</p> <p>1.2.12.2 Describe the structure and function of meristematic tissues.</p> <p>1.2.12.3 Describe the structure and function of nonmeristematic, nonvascular tissues.</p> <p>1.2.12.4 Describe the structure and function of xylem and phloem.</p> <p>1.2.12.5 Diagram a typical plant cell and its organelles.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List the different types of tissues.</li> <li>▪ List plant cell parts and cell organelles.</li> <li>▪ List the function of xylem and phloem cells.</li> </ul>

Nevada Academic Standards Correlation:

Science: 6.12.2, 6.12.3, 6.12.4, 8.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 1.0: *Plant Science:*** Students will explain plant anatomy, physiology, and reproduction as they relate to environmental horticulture.

<b>Performance Standard 1.3</b> Students will recognize differences in the methods of plant reproduction.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Demonstrate hand pollination.</li> <li>▪ Cultivate plants from asexual reproduction practices including cuttings, layering, and grafting techniques.</li> <li>▪ Demonstrate the proper techniques involved in tissue culture.</li> </ul>
<b>MEETS STANDARDS</b>	<p>1.3.12.1 Compare sexual and asexual reproduction.</p> <p>1.3.12.2 Describe methods and the process of pollination.</p> <p>1.3.12.3 Differentiate between self-fertilization and cross-fertilization.</p> <p>1.3.12.4 Explain how plants produce seed.</p> <p>1.3.12.5 Name four requirements for seeds to germinate and grow.</p> <p>1.3.12.6 Explain dormancy.</p> <p>1.3.12.7 List five ways plants may be propagated without seed and give examples of each.</p> <p>1.3.12.8 Explain the importance of plant genetics and their manipulation.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Label the parts of a seed.</li> <li>▪ Review germination, fertilization, asexual propagation, and sexual propagation.</li> <li>▪ Explain pollination and list several methods of pollination.</li> </ul>

Nevada Academic Standards Correlation:

Science: 8.12.1, 8.12.2, 8.12.3, 8.12.4, 8.12.5, 8.12.6, 8.12.7, 9.12.1, 9.12.2, 9.12.3, 9.12.4, 9.12.5, 9.12.6

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 1.0: *Plant Science*:** Students will explain plant anatomy, physiology, and reproduction as they relate to environmental horticulture.

<b>Performance Standard 1.4</b> Students will describe processes involved in plant growth.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Analyze the role of plants in the ecological system.</li> <li>▪ Apply the principles relating to photosynthesis and respiration to horticultural practices.</li> <li>▪ Design an experiment that demonstrates the importance of environmental factors affecting plant growth.</li> </ul>
<b>MEETS STANDARDS</b>	<p>1.4.12.1 Examine the process of photosynthesis, respiration, and transpiration.</p> <p>1.4.12.2 Write the balanced formula of photosynthesis and respiration.</p> <p>1.4.12.3 Trace the stages of plant development to maturity.</p> <p>1.4.12.4 Identify the environmental factors affecting plant growth.</p> <p>1.4.12.5 Identify the functions of auxins, gibberlins, cytokinins, and ethylene gas as they relate to plant growth and production.</p> <p>1.4.12.6 Differentiate between internal and external stimuli and its affect on growth.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List the requirements for photosynthesis.</li> <li>▪ Explain the importance of plants in the global environment.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 2.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 2.12.6, 3.12.3, 4.12.1, 4.12.2, 4.12.3, 5.12.1, 6.12.5, 7.12.2, 7.12.3, 13.12.6, 15.12.2, 15.12.2, 15.12.3

STATE BOARD APPROVED 12/14/02

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 2.0: *Plant Classification*:** Students will recognize the importance of plant classification and identification. Students will classify and identify local horticulture plant materials.

<b>Performance Standard 2.1</b> Students will recognize the importance of the history and purpose of plant classification and nomenclature.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Use a taxonomic key to identify ten plants.</li> <li>▪ Develop a taxonomic key to identify local plants.</li> </ul>
<b>MEETS STANDARDS</b>	<p>2.1.12.1 Discuss the development of the kingdom concept.            2.1.12.2 Describe the binomial system of plant classification.            2.1.12.3 Discuss three reasons for the use of the modern system of plant classification.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define taxonomy.</li> </ul>

Nevada Academic Standards Correlation:

Science: 8.12.1, 8.12.2, 8.12.3, 9.12.1, 9.12.2, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 2.0: *Plant Classification*:** Students will recognize the importance of plant classification and identification. Students will classify and identify local horticulture plant materials.

<b>Performance Standard 2.2</b> Students will recognize plant characteristics used for identification.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Identify plants using their botanical names.</li> <li>▪ Collect, preserve, and classify plant samples.</li> </ul>
<b>MEETS STANDARDS</b>	<p>2.2.12.1 Contrast the differences between annuals, biennials, perennials, woody and non-woody plants.</p> <p>2.2.12.2 Identify plants by their common names.</p> <p>2.2.12.3 Identify the different types of leaf margins, leaf shapes, and other characteristics of leaves.</p> <p>2.2.12.4 Diagram four types of leaf arrangements on a stem.</p> <p>2.2.12.5 Differentiate between a simple and compound leaf.</p> <p>2.2.12.6 Describe the difference between complete, incomplete, perfect, and imperfect flowers.</p> <p>2.2.12.7 Identify plants using flower shapes or inflorescent types.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize different leaf arrangements.</li> <li>▪ List characteristics used to identify plants.</li> <li>▪ Observe plant differences as they relate to plant classifications.</li> </ul>

Nevada Academic Standards Correlation:

Science: 2.12.1, 9.12.4

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 3.0: *Soil and Water Science:*** Students will recognize the importance of the interaction of soil, water, and fertilizer in plant production.

<b>Performance Standard 3.1</b> Students will explain the relationship between soils and plant production.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Demonstrate the ability to collect and prepare a soil sample for analysis.</li> <li>▪ Interpret the results of a soil fertility analysis.</li> <li>▪ Perform a chemical soil test.</li> <li>▪ Determine the land class for a given plot of land and select crops compatible for soil conditions.</li> </ul>
<b>MEETS STANDARDS</b>	<p>3.1.12.1 Describe the physical characteristics of soil.            3.1.12.2 Explain the four functions of soil.            3.1.12.3 Describe the chemical characteristics of soil.            3.1.12.4 Describe the relationship between soil properties and plant growth.            3.1.12.5 Describe the types and advantages of soilless media.            3.1.12.6 Explain management practices that aid in soil conservation.            3.1.12.7 Perform a mechanical soil analysis.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List the differences between sand, silt, and clay.</li> <li>▪ Define soil texture and structure.</li> <li>▪ State how and why soils differ.</li> <li>▪ Describe what soil is and where it comes from.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 2.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 4.12.1, 4.12.2, 4.12.3, 4.12.4, 6.12.3, 10.12.1, 10.12.2, 10.12.3, 10.12.4, 10.12.5, 10.12.6

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 3.0: *Soil and Water Science:*** Students will recognize the importance of the interaction of soil, water, and fertilizer in plant production.

<b>Performance Standard 3.2</b> Students will understand plant nutrition practices for plants as it relates to plant growth and health.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Calibrate granular fertilizer application equipment.</li> <li>▪ Calibrate liquid fertilizer injection systems.</li> <li>▪ Demonstrate at least three common methods of fertilizer application.</li> <li>▪ Calculate the N-P-K fertilizer requirements for greenhouse and nursery crops.</li> </ul>
<b>MEETS STANDARDS</b>	<p>3.2.12.1 List and relate the primary, secondary, and micronutrient elements essential to plant growth and their functions and symptoms to their deficiencies in plants.</p> <p>3.2.12.2 List and relate the source of each of the primary elements.</p> <p>3.2.12.3 Describe pH, how it is managed and its impact on nutrient availability.</p> <p>3.2.12.4 Explain the association between soils and nutrients.</p> <p>3.2.12.5 Calculate the content of N-P-K in a fertilizer container.</p> <p>3.2.12.6 List the functions of nutrients to plant growth.</p> <p>3.2.12.7 Distinguish between complete and incomplete fertilizers.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define soil amendment.</li> <li>▪ List three nutrients and symbols required by plants.</li> <li>▪ Name the primary elements listed on a fertilizer product.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0

Science: 4.12.1, 4.12.2, 4.12.3, 4.12.4, 6.12.3, 6.12.4, 10.12.1, 10.12.2, 10.12.4, 10.12.5, 20.12.5

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 3.0: *Soil and Water Science:*** Students will recognize the importance of the interaction of soil, water, and fertilizer in plant production.

<b>Performance Standard 3.3</b> Students will understand effective management practices used in irrigation, drainage, watersheds, and water conservation.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Perform and interpret a water quality test.</li> <li>▪ Formulate a water conservation plan for a greenhouse or nursery crop.</li> <li>▪ Discuss nitrates as both a benefit and a pollution problem.</li> <li>▪ Discuss how evapotranspiration is used to determine the water needs of plants.</li> <li>▪ Design a simple irrigation system.</li> </ul>
<b>MEETS STANDARDS</b>	<p>3.3.12.1 Determine the influence of water and soil on crop yields.</p> <p>3.3.12.2 List and explain the types of soil water and how it moves through different soils.</p> <p>3.3.12.3 Describe the role of water in plants.</p> <p>3.3.12.4 Explain the methods used in water conservation.</p> <p>3.3.12.5 Outline the hydrologic cycle.</p> <p>3.3.12.6 Examine factors that influence the type of irrigation system used.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define the terms irrigation and drainage.</li> <li>▪ List the types of soil water.</li> <li>▪ List three types of irrigation systems.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0

Science: 10.12.6, 13.12.3, 20.12.5

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 4.0: *Pest Control*:** Students will explore basic principles of integrated pest management. They will identify pest and disease damage and learn methods of control.

<b>Performance Standard 4.1</b> Students will describe and explain safe pesticide management practices.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Design and construct safety posters.</li> <li>▪ Design an integrated pest program.</li> <li>▪ Calculate the proper ratios of pesticide.</li> <li>▪ Identify and demonstrate the ability to use safety equipment.</li> </ul>
<b>MEETS STANDARDS</b>	<p>4.1.12.1 Describe the types of pesticides and their safe use.</p> <p>4.1.12.2 Describe the toxicity categories of pesticides and the safety regulations governing them.</p> <p>4.1.12.3 Describe the proper safety equipment for pesticide application.</p> <p>4.1.12.4 Analyze a pesticide label to determine the site, toxicity, application, storage, disposal, and withdrawal period.</p> <p>4.1.12.5 Formulate first aid steps to be taken in case of poisoning.</p> <p>4.1.12.6 Explain best management practices while maintaining environmental integrity.</p> <p>4.1.12.7 Document pesticide applications and maintain a history of use.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Observe instructions listed on a safety label.</li> <li>▪ Identify the safety symbols.</li> <li>▪ Define the term pesticide.</li> <li>▪ Recognize the need for safety when applying pesticides.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 2.0, 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 20.12.5, 24.12.1, 24.12.2, 24.12.3

STATE BOARD APPROVED 12/14/02

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 4.0: Pest Control:** Students will explore basic principles of integrated pest management. They will identify pest and disease damage and learn methods of control.

<b>Performance Standard 4.2</b> Students will identify insects and insect damage and learn methods of pest management as it relates to agricultural and horticultural crops.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Research and develop an integrated insect management program.</li> <li>▪ Create a collection of insects with control methods for each.</li> <li>▪ Justify the use of agricultural insecticides as they relate to cost effective crop production.</li> </ul>
<b>MEETS STANDARDS</b>	<p>4.2.12.1 Identify common insect pests and select an effective control method for each.</p> <p>4.2.12.2 Compare mechanical, cultural, biological, and chemical insect control practices.</p> <p>4.2.12.3 List and describe the names and characteristics of the three major groups of insecticides.</p> <p>4.2.12.4 Distinguish the ways in which insecticides are applied.</p> <p>4.2.12.5 Explain the relationship between the life cycle of insects and the timing of insecticide applications.</p> <p>4.2.12.6 Identify plant damage caused by insects.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define the term insect.</li> <li>▪ Label the parts of an insect.</li> <li>▪ Review the role of insecticides.</li> </ul>

Nevada Academic Standards Correlation:

Science: 6.12.1, 7.12.4, 20.12.5

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 4.0: *Pest Control:*** Students will explore basic principles of integrated pest management. They will identify pest and disease damage and learn methods of control.

<b>Performance Standard 4.3</b> Students will identify weeds and describe methods of weed control as it relates to agricultural and horticultural crops.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Collect, press, and mount weeds common to the local area.</li> <li>▪ Research and develop a weed management program.</li> <li>▪ Identify equipment and demonstrate the safe application of herbicides.</li> </ul>
<b>MEETS STANDARDS</b>	<p>4.3.12.1 Describe how weeds reduce the yield and quality of desirable plants.</p> <p>4.3.12.2 Identify three types of life cycles exhibited by weeds.</p> <p>4.3.12.3 Compare the four general categories of weed control.</p> <p>4.3.12.4 Describe a prohibited noxious weed.</p> <p>4.3.12.5 Identify common weeds and select an appropriate method of control.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define the term weed.</li> <li>▪ Recognize the importance of weed control as it relates to crop production.</li> <li>▪ List two weeds by their common name.</li> <li>▪ List two types of common herbicides.</li> </ul>

Nevada Academic Standards Correlation:

Science: 20.12.5, 24.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 4.0: *Pest Control:*** Students will explore basic principles of integrated pest management. They will identify pest and disease damage and learn methods of control.

<b>Performance Standard 4.4</b> Students will identify diseases, disease damage, and describe methods of control.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Design a sanitation program for crop production.</li> <li>▪ Research and compare methods of disease control.</li> <li>▪ Create a diseased plant portfolio.</li> </ul>
<b>MEETS STANDARDS</b>	<p>4.4.12.1 Explain possible ways diseases are spread.</p> <p>4.4.12.2 Explain four symptoms of plant disease.</p> <p>4.4.12.3 Describe the disease triangle.</p> <p>4.4.12.4 Identify plant vectors that spread disease.</p> <p>4.4.12.5 Explain the differences between abiotic and biotic diseases.</p> <p>4.4.12.6 Identify common plant diseases and their affect on the plant.</p> <p>4.4.12.7 Describe the methods of disease control including natural, cultural, biological, and chemical control.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List three plant diseases.</li> <li>▪ Define the term vector.</li> <li>▪ Recognize the importance of proper disease control.</li> <li>▪ Recognize the importance of sanitary cultural practices.</li> </ul>

Nevada Academic Standards Correlation:

Science: 20.12.5

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 5.0: *Arboriculture*: Students will explain basic principles of Arboriculture as it relates to the management of ornamental and production trees and shrubs.**

<b>Performance Standard 5.1</b> Students will explain proper planting and transplanting techniques for ornamental and production trees and shrubs.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Install both bare root and containerized trees and shrubs.</li> <li>▪ Create a photo collection of trees and shrubs that can be used in a local area.</li> <li>▪ Create a management plan for harvesting trees and shrubs.</li> <li>▪ Develop a production plan for commercial fruit trees.</li> <li>▪ Develop a production plan for wholesale nursery.</li> </ul>
<b>MEETS STANDARDS</b>	<p>5.1.12.1 Outline the procedures for installing both bare root and containerized trees and shrubs.</p> <p>5.1.12.2 Outline procedures for field harvesting of trees and shrubs.</p> <p>5.1.12.3 Identify the best season for planting particular trees and shrubs.</p> <p>5.1.12.4 Determine spacing and depth of planting for production trees.</p> <p>5.1.12.5 List and discuss factors to consider when selecting quality trees and shrubs.</p> <p>5.1.12.6 Identify trees suitable for specific environmental conditions.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize the difference between containerized, bare root, and balled and burlapped stock.</li> <li>▪ Identify different sizes of commercial pots or containers.</li> <li>▪ Explain the difference between planting and transplanting.</li> <li>▪ Recognize the different cultural requirements for various production trees and shrubs.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 5.0: *Arboriculture*: Students will explain basic principles of Arboriculture as it relates to the management of ornamental and production trees and shrubs.**

<b>Performance Standard 5.2</b> Students will describe management practices used with ornamental and production trees and shrubs.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Develop a cultural program including fertilization, irrigation, pruning, and pest control.</li> <li>▪ Demonstrate proper pruning methods.</li> </ul>
<b>MEETS STANDARDS</b>	<p>5.2.12.1 Explain the three pruning techniques used for fruit trees.</p> <p>5.2.12.2 Describe basic principles of pruning and training ornamental plants.</p> <p>5.2.12.3 Identify the appropriate time for pruning and training ornamental plants.</p> <p>5.2.12.4 Examine proper watering and nutritional requirements for ornamental and production trees and shrubs.</p> <p>5.2.12.5 Identify pest damage and control methods.</p> <p>5.2.12.6 Discuss ways to protect plants from damage due to environmental conditions.</p> <p>5.2.12.7 Identify proper harvesting and storage techniques for both fruit and nursery stock.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Discuss why pruning is necessary for healthy plant growth and fruit production.</li> <li>▪ Recognize the difference in pruning methods.</li> <li>▪ Describe potentially damaging environmental conditions.</li> </ul>

Nevada Academic Standards Correlation:

Science: 20.12.5

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 5.0: *Arboriculture*: Students will explain basic principles of Arboriculture as it relates to the management of ornamental and production trees and shrubs.**

<b>Performance Standard 5.3</b>	Students will explain and identify tools and equipment involved in the management of ornamental and production trees and shrubs.
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Develop a safety chart for use of pruning tools and equipment.</li> <li>▪ Develop a maintenance schedule for pruning tools and equipment.</li> <li>▪ Demonstrate techniques for sharpening tools.</li> <li>▪ Demonstrate proper use of pruning tools and equipment.</li> </ul>
<b>MEETS STANDARDS</b>	<p>5.3.12.1 Identify pruning tools and equipment.</p> <p>5.3.12.2 Describe proper care and storage of pruning tools and equipment.</p> <p>5.3.12.3 Identify safety practices for using pruning tools and equipment.</p> <p>5.3.12.4 Identify proper use of pruning tools and equipment.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize the difference between pruning tools and equipment.</li> <li>▪ Describe the dangers associated with pruning tools and equipment.</li> <li>▪ Recognize the need to safely use pruning tools and equipment.</li> </ul>

Nevada Academic Standards Correlation:

Science: 24.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 6.0: *Greenhouse*:** Students will understand greenhouse design, construction, management, and operation in the production of a greenhouse crop.

<b>Performance Standard 6.1</b> Students will explain principles of greenhouse and growing structure design, construction, and operation.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Design a complete greenhouse.</li> <li>▪ Design a nutritional and watering schedule for a greenhouse crop.</li> <li>▪ Develop a planting and harvesting schedule for a greenhouse crop.</li> <li>▪ Design and construct a cold frame or shade house.</li> </ul>
<b>MEETS STANDARDS</b>	<p>6.1.12.1 Identify the different styles of greenhouses and growing structures.</p> <p>6.1.12.2 Illustrate the structural components of a greenhouse.</p> <p>6.1.12.3 Explain the differences between the various types of greenhouse coverings.</p> <p>6.1.12.4 Identify the environmental requirements based on climatic location.</p> <p>6.1.12.5 Identify the environmental control systems for greenhouses including heating, cooling, humidity, and lighting.</p> <p>6.1.12.6 Discuss the various bench and bed systems including construction materials.</p> <p>6.1.12.7 Identify the proper nutritional and watering systems used in a greenhouse.</p> <p>6.1.12.8 Identify the components of propagation systems.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Describe the benefits of greenhouses and growing structures.</li> <li>▪ Recognize the different greenhouse structures.</li> <li>▪ Discuss environmental control systems.</li> <li>▪ Discuss nutritional and watering systems.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 2.0, 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 3.12.1, 3.12.3, 4.12.3, 5.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 6.0: *Greenhouse*:** Students will understand greenhouse design, construction, management, and operation in the production of a greenhouse crop.

<b>Performance Standard 6.2</b> Students will explain the principles of management and production of greenhouse crops.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Develop a crop production management schedule.</li> <li>▪ Select and order a greenhouse crop.</li> <li>▪ Produce and market a greenhouse crop.</li> <li>▪ Design, mix, and market a sterile, soilless media mixture.</li> </ul>
<b>MEETS STANDARDS</b>	<p>6.2.12.1 Describe the various types of containers and give examples of their use in a greenhouse.</p> <p>6.2.12.2 Describe the functions of a good growing media and some of the components of soilless media.</p> <p>6.2.12.3 Describe the various methods of planting, spacing, watering, and fertilizing greenhouse crops.</p> <p>6.2.12.4 Explain the importance of light intensity and duration as they influence growth of greenhouse crops.</p> <p>6.2.12.5 Explain the use of growth regulators in greenhouse crops.</p> <p>6.2.12.6 Describe the different practices of greenhouse integrated pest management.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List different types of containers.</li> <li>▪ Identify considerations involved in operating a greenhouse.</li> <li>▪ Recognize the importance of good management practices.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 3.12.3, 5.12.1, 6.12.1, 7.12.4, 19.12.1, 24.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 7.0: *Nursery*:** Students will explore the care and maintenance of nursery stock and understand the importance of wholesale and retail nursery operations.

<b>Performance Standard 7.1</b> Students will explain principles involved in the production of nursery stock.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Design a wholesale nursery including container and field grown plants.</li> <li>▪ Explain how species are selected for production and how quantities are determined.</li> <li>▪ Plant, maintain, and market a nursery crop.</li> </ul>
<b>MEETS STANDARDS</b>	<p>7.1.12.1 Outline methods of fertilization, irrigation, pruning, and pest control for nursery production.</p> <p>7.1.12.2 Correctly label nursery stock.</p> <p>7.1.12.3 Demonstrate the proper technique for watering nursery stock.</p> <p>7.1.12.4 Examine the proper technique of propagating and transplanting nursery stock.</p> <p>7.1.12.5 Describe the importance of proper nursery site selection, including the role of environmental factors.</p> <p>7.1.12.6 Describe possible layouts of container and field nurseries.</p> <p>7.1.12.7 Describe the concerns for media preparation.</p> <p>7.1.12.8 Describe harvesting, storage, marketing, and distribution of wholesale nursery stock.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize the importance of labeling nursery stock.</li> <li>▪ Distinguish the difference between containerized and field grown crops.</li> <li>▪ Identify environmental conditions suitable for a wholesale nursery operation.</li> <li>▪ Outline the importance of correct planting and transplanting of nursery stock.</li> <li>▪ Define wholesale nursery operation.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 2.0, 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 7.0: *Nursery*:** Students will explore the care and maintenance of nursery stock and understand the importance of wholesale and retail nursery operations.

<b>Performance Standard 7.2</b> Students will describe management practices involved in a retail nursery operation.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Create a retail-marketing program.</li> <li>▪ Design a layout for a retail nursery.</li> <li>▪ Resolve a customer complaint.</li> <li>▪ Demonstrate a nursery operation sale.</li> <li>▪ Rank local nurseries by marketing, layout, and employee relations standards.</li> </ul>
<b>MEETS STANDARDS</b>	<p>7.2.12.1 Explain the steps in ordering, maintaining, and marketing plants for retail sales.</p> <p>7.2.12.2 Outline the steps in establishing a profit margin.</p> <p>7.2.12.3 Demonstrate the proper techniques for watering, fertilizing, and managing pests in retail nursery stock.</p> <p>7.2.12.4 Explain the importance of good customer service.</p> <p>7.2.12.5 Describe the layout of a retail nursery.</p> <p>7.2.12.6 Explain the importance of basic accounting procedures.</p> <p>7.2.12.7 Describe the importance of good employee relations.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define retail nursery operations.</li> <li>▪ Observe a retail nursery operation.</li> <li>▪ Identify the need for a profit margin.</li> <li>▪ Explain potential problems associated with a retail nursery.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 8.0: *Turf grass:*** Students will understand the selection, installation, and maintenance of turf.

<b>Performance Standard 8.1</b> Students will describe the considerations involved in turf grass selection.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Select a grass appropriate for the environmental conditions and intended uses.</li> <li>▪ Identify grasses from their physical characteristics.</li> </ul>
<b>MEETS STANDARDS</b>	<p>8.1.12.1 Identify by common name the warm and/or cool season grass species that are utilized in the local area.</p> <p>8.1.12.2 Classify the different species based on landscape use.</p> <p>8.1.12.3 Explain the different growth habits including rhizomatious, stoloniferous, and bunch-type grasses.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define cool season grasses.</li> <li>▪ Define warm season grasses.</li> <li>▪ Explain the aesthetic and recreational benefits of grasses.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 8.0: Turf grass:** Students will understand the selection, installation, and maintenance of turf.

<b>Performance Standard 8.2</b> Students will describe the various methods of turf grass installation.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Calibrate a drop-type and broadcast spreader used for seed and fertilizer applications.</li> <li>▪ Prepare a seed bed and install turf grass at a given location.</li> </ul>
<b>MEETS STANDARDS</b>	<p>8.2.12.1 Identify the different methods of establishing turf grass.</p> <p>8.2.12.2 Describe the process in establishing a turf grass.</p> <p>8.2.12.3 Identify the steps in soil preparation for turf grass installation.</p> <p>8.2.12.4 Identify the different tools and equipment used in establishing turf grass.</p> <p>8.2.12.5 Describe environmental conditions most suitable for establishing turf grass.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize the different methods of establishing turf grass.</li> <li>▪ Summarize conditions that would affect turf grass installation.</li> <li>▪ Observe the turf grass installation process.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 8.0: *Turf grass*:** Students will understand the selection, installation, and maintenance of turf.

<b>Performance Standard 8.3</b> Students will identify and explain the cultural practices involved in the maintenance and care of turf grass.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Create a maintenance program for professional lawn care.</li> <li>▪ Recommend tools and equipment necessary for a complete turf grass management program.</li> <li>▪ Maintain turf grass tools and equipment.</li> <li>▪ Sharpen turf grass tools and equipment.</li> </ul>
<b>MEETS STANDARDS</b>	<p>8.3.12.1 Identify common turf grass pests and methods of control.</p> <p>8.3.12.2 Explain ways to control thatch.</p> <p>8.3.12.3 Determine the type and amount of fertilizer required for a specific area of lawn.</p> <p>8.3.12.4 Describe maintenance techniques including mowing, watering, aeration, thatching, and fertilizing turf grass.</p> <p>8.3.12.5 Categorize the different types of equipment and their use in turf grass management.</p> <p>8.3.12.6 Describe proper methods of maintaining turf grass tools and equipment.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize the need for fertilizing, watering, and mowing turf grass.</li> <li>▪ Define aeration.</li> <li>▪ Define thatching.</li> <li>▪ Recognize the importance of maintaining turf grass tools and equipment.</li> <li>▪ Observe potential problems with turf grass management.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 24.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 9.0: *Landscape*:** Students will understand the basic principles of landscape planning, design, construction, irrigation, and maintenance.

<b>Performance Standard 9.1</b> Students will describe the principles and practices involved in landscape planning and design.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Prepare a bid on a completed landscape drawing.</li> <li>▪ Design and draft a residential landscape.</li> <li>▪ Arrange a collection of plants used in local landscapes.</li> <li>▪ Develop a plant palette for residential landscapes.</li> </ul>
<b>MEETS STANDARDS</b>	<p>9.1.12.1 Describe the basic principles that lead to good design.</p> <p>9.1.12.2 Describe features of plant materials, hardscape materials, and architecture that make them useful as design elements.</p> <p>9.1.12.3 Interpret and evaluate a landscape design to an appropriate scale.</p> <p>9.1.12.4 Identify the calculations needed for landscape design.</p> <p>9.1.12.5 Identify symbols used in landscape drawings.</p> <p>9.1.12.6 Select and use proper drawing instruments including scales, triangles, and compasses in preparing a landscape drawing.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Review and compare different landscape drawings.</li> <li>▪ Recognize the importance of environmental conditions to landscape plant selection.</li> <li>▪ List the different types of landscape designs.</li> <li>▪ List different features found in a landscape.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 2.0, 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 10.12.6

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 9.0: *Landscape*:** Students will understand the basic principles of landscape planning, design, construction, irrigation, and maintenance.

<b>Performance Standard 9.2</b> Students will describe proper techniques used in landscape construction.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Select and safely use the proper tools necessary for landscape plant installation.</li> <li>▪ Install a landscape design including hardscape components.</li> <li>▪ Demonstrate proper staking and guying techniques for trees.</li> <li>▪ Describe installation problems unique to local climatic regions.</li> </ul>
<b>MEETS STANDARDS</b>	<p>9.2.12.1 Identify tools used in the installation of landscapes.</p> <p>9.2.12.2 Outline the procedures for installing landscape plants.</p> <p>9.2.12.3 Outline procedures for installing hardscape components in a landscape.</p> <p>9.2.12.4 Describe soil preparation techniques.</p> <p>9.2.12.5 Establish proper grading and surface/subsurface drainage in a landscape.</p> <p>9.2.12.6 Determine the best time for the establishment of plant materials.</p> <p>9.2.12.7 Describe proper staking and guying techniques for trees.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Compare the differences of seasonal climates effecting plant installation.</li> <li>▪ Discuss landscape installation procedures and techniques.</li> <li>▪ Differentiate between bare-rooted, balled-and-burlapped and containerized plant materials.</li> <li>▪ Explain the importance of soil preparation.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 10.12.6, 15.12.4, 24.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 9.0: *Landscape*:** Students will understand the basic principles of landscape planning, design, construction, irrigation, and maintenance.

<b>Performance Standard 9.3</b> Students will examine the practices involved in the design, construction, and maintenance of irrigation systems.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Design and install an irrigation system.</li> <li>▪ Maintain, troubleshoot, and repair an irrigation system.</li> <li>▪ Develop a watering schedule for a landscape.</li> <li>▪ Develop a bill of materials including cost breakdown.</li> <li>▪ Program an automatic irrigation controller.</li> </ul>
<b>MEETS STANDARDS</b>	<p>9.3.12.1 Describe historic and current uses of landscape irrigation.</p> <p>9.3.12.2 Distinguish between sprinkler and trickle irrigation use and understand key irrigation terms.</p> <p>9.3.12.3 Select and describe irrigation components.</p> <p>9.3.12.4 Explain precipitation rates and determine water needs by geographical area.</p> <p>9.3.12.5 Describe how irrigation pipe is sized and determine available flow and pressure of water.</p> <p>9.3.12.6 Explain drip tube and emitter placement.</p> <p>9.3.12.7 Interpret simple landscape irrigation designs.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize the importance of landscape irrigation.</li> <li>▪ List and label different irrigation components.</li> <li>▪ Discuss the water requirements of plants.</li> <li>▪ Explain the differences between manual and automatic irrigation systems.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 3.0, 4.0, 6.0, 7.0, 8.0, 9.0

Science: 15.12.4, 24.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 9.0: *Landscape*:** Students will understand the basic principles of landscape planning, design, construction, irrigation, and maintenance.

<b>Performance Standard 9.4</b> Students will explain proper landscape maintenance practices.	
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Develop a landscape maintenance schedule.</li> <li>▪ Demonstrate how to water, fertilize, edge, and mulch trees and shrub plantings.</li> <li>▪ Demonstrate proper tree pruning practices.</li> <li>▪ Develop a pest management program for turf grass and landscape plants.</li> </ul>
<b>MEETS STANDARDS</b>	<p>9.4.12.1 Maintain annual and perennial flower plantings.</p> <p>9.4.12.2 Describe how to water, fertilize, edge, and mulch trees and shrub plantings</p> <p>9.4.12.3 Describe proper tree pruning practices.</p> <p>9.4.12.4 Identify pest damage and recommend methods of control.</p> <p>9.4.12.5 List factors associated with healthy turf maintenance.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Describe the difference between perennial and annual plants.</li> <li>▪ List and discuss proper tree pruning practices.</li> <li>▪ Discuss different types of fertilizers.</li> <li>▪ Explain the importance of a landscape maintenance program.</li> <li>▪ Discuss the importance of mulching trees and shrubs.</li> </ul>

Nevada Academic Standards Correlation:

Science: 24.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 10.0: *Floral Design*: Students will understand the basic principles and skills involved in the design and construction of floral arrangements.**

<b>Performance Standard 10.1</b>	<b>Students will demonstrate the basic design principles used in the floral industry.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Identify types of flowers and foliage that are purchased at different times of the year.</li> <li>▪ Design and create complete floral designs incorporating seasonal flowers and foliage.</li> <li>▪ Critique an arrangement using a rating scale based on the principles of floral design.</li> </ul>
<b>MEETS STANDARDS</b>	<p>10.1 12.1 Name types of flowers and foliage that are purchased at different times of the year.</p> <p>10.1 12.2 List and describe the basic principles of floral design.</p> <p>10.1.12.3 Identify basic floral design shapes.</p> <p>10.1.12.4 Demonstrate how each of the design categories is used in flower arrangements.</p> <p>10.1.12.5 Identify and describe proper use of floral mechanics.</p> <p>10.1.12.6 Describe the procedures for keeping a floral design fresh.</p> <p>10.1.12.7 Classify the major floral design products.</p> <p>10.1.12.8 Use a color wheel to determine combinations for various color schemes.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Identify the origins of many of the floral designs that are popular today.</li> <li>▪ List ways flowers were used in past civilizations.</li> <li>▪ Discuss the rules that control correct color use.</li> </ul>

Nevada Academic Standards Correlation:

Science: 2.12.1, 5.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 10.0: *Floral Design*: Students will understand the basic principles and skills involved in the design and construction of floral arrangements.**

<b>Performance Standard 10.2</b>	<b>Students will identify and use flowers and foliage utilized in the floral industry.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Classify flowers according to four groups based on form and shape.</li> <li>▪ Construct, price, and package the six basic arrangements.</li> <li>▪ Outline storage requirements of flowers and greens.</li> <li>▪ Develop a marketing strategy for seasonal floral arrangements.</li> <li>▪ Incorporate three pricing strategies to calculate the retail value of floral items.</li> </ul>
<b>MEETS STANDARDS</b>	<p>10.2.12.1 Identify different floral and foliage materials used in design.</p> <p>10.2.12.2 Draw and label six basic arrangements.</p> <p>10.2.12.3 Design a specific floral arrangement.</p> <p>10.2.12.4 Demonstrate how each of the design categories is used in floral arrangements.</p> <p>10.2.12.5 Identify ways to increase water intake and decrease biological processes in cut flowers.</p> <p>10.2.12.6 Demonstrate how to properly condition cut flowers after they have been delivered to the florist.</p> <p>10.2.12.7 Describe inflorescence type and their use in floral arrangements.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Differentiate between flowers and foliage.</li> <li>▪ Explain the importance of proper care and conditioning of cut flowers.</li> <li>▪ Discuss design categories used in floral arrangements.</li> <li>▪ Summarize a basic pricing strategy for floral arrangements.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 3.0, 6.0, 7.0, 8.0, 9.0

Science: 2.12.1

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 10.0: *Floral Design*: Students will understand the basic principles and skills involved in the design and construction of floral arrangements.**

<b>Performance Standard 10.3</b>	<b>Students will identify and use floral tools and materials.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Evaluate cutting tools to be used in floral design work.</li> <li>▪ Select and use accessories in floral design work.</li> <li>▪ Categorize containers for floral design.</li> <li>▪ Develop a sanitation and sterilization plan.</li> </ul>
<b>MEETS STANDARDS</b>	<p>10.3.12.1 Identify materials used in floral arrangements.</p> <p>10.3.12.2 Identify, use, and maintain common floral tools and equipment.</p> <p>10.3.12.3 Demonstrate the wiring procedures used with appropriate flowers.</p> <p>10.3.12.4 Select correct ribbon and wire gauge needed for construction of a design.</p> <p>10.3.12.5 Demonstrate the proper techniques used in bow construction.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Discuss the importance of a clean work environment.</li> <li>▪ List materials used in floral arrangements.</li> <li>▪ List common floral tools and equipment.</li> <li>▪ Observe and explain wiring procedures used in floral designs.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 11.0: *Business Management*:** Students will understand the importance of business principles and practices in the horticulture industry.

<b>Performance Standard 11.1</b>	<b>Students will explain the basic business principles.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Develop a financial plan for a horticultural business.</li> <li>▪ Develop a market analysis to determine if there is a need for a horticulture business.</li> <li>▪ Create or manage a student based horticulture enterprise.</li> <li>▪ Demonstrate basic employability skills needed for the workplace today.</li> <li>▪ Secure a job or internship.</li> </ul>
<b>MEETS STANDARDS</b>	<p>11.12.1 Outline procedures to determine if there is a need for a horticulture business.</p> <p>11.12.2 Identify the legal requirements for starting a horticulture business.</p> <p>11.12.3 Explain the need for developing a financial plan.</p> <p>11.12.4 Explain the roles and responsibilities of owners, managers, and employees of horticulture businesses.</p> <p>11.12.5 Explain the basic employability skills needed for the workplace today.</p> <p>11.12.6 Compare and contrast how businesses are organized.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List businesses and/or jobs related to horticulture.</li> <li>▪ Discuss how businesses are organized.</li> <li>▪ Discuss the roles and responsibilities of owners, managers, and employees of horticulture businesses.</li> <li>▪ Define a financial plan.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 3.0, 6.0, 7.0, 8.0, 9.0

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 11.0: *Business Management*:** Students will understand the importance of business principles and practices in the horticulture industry.

<b>Performance Standard 11.2</b>	<b>Students will explain the importance of keeping business and production records.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Demonstrate the characteristics of good record systems.</li> <li>▪ Record and evaluate business records.</li> <li>▪ Evaluate or critique profit and loss statements and balance sheets.</li> <li>▪ Calculate and analyze profit as a percentage of the price.</li> <li>▪ Predict fixed and variable overhead for a horticultural business.</li> </ul>
<b>MEETS STANDARDS</b>	<p>11.12.1 Describe the characteristics of good record systems.            11.12.2 Identify basic types of business records kept.            11.12.3 Explain the benefits of properly kept records.            11.12.4 Define profit-and-loss statements and balance sheets.            11.12.5 Explain the components of a price.            11.12.6 Describe fixed and variable overhead.            11.12.7 Describe profit as a percentage of the price.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ List the characteristics of good record systems.</li> <li>▪ List five fixed and variable costs.</li> <li>▪ Discuss basic types of business records.</li> <li>▪ Discuss and define pricing.</li> </ul>

Nevada Academic Standards Correlation:

Mathematics: 1.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0

Science: 19.12.1, 19.12.2

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 12.0: SAE:** Students will explain the relationship between a Supervised Agriculture Experience (SAE) and their preparation for a career in Horticulture.

<b>Performance Standard 12.1</b>	<b>Students will actively engage in and manage an SAE, which enables them to develop work-based skills.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Qualify for the Silver State FFA Degree.</li> <li>▪ Develop a career plan for accomplishing occupational objectives.</li> </ul>
<b>MEETS STANDARDS</b>	<p>12.12.1 Identify and describe a career interest in horticulture or related occupation.</p> <p>12.12.2 Actively participate in and manage an individual SAE.</p> <p>12.12.3 Keep accurate records as prescribed by the Nevada State FFA policies and procedures.</p> <p>12.12.4 Show progress with individual achievement and growth in an SAE.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define SAE.</li> <li>▪ Plan an individual SAE.</li> <li>▪ Differentiate between the types of SAE.</li> </ul>

Nevada Academic Standards Correlation:

Science: 9.12.2, 20.12.4, 21.12.1, 21.12.2, 21.12.3, 22.12.1, 22.12.2, 22.12.3, 23.12.1, 23.12.4, 24.12.4

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 13.0: *Leadership*:** Students will recognize the importance of leadership skills including interpersonal relations, group management, and communication.

<b>Performance Standard 13.1</b>	<b>Students will recognize the traits of effective leaders and participate in leadership training through involved membership in the FFA.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Apply for an office.</li> <li>▪ Perform a speech for six to eight minutes on a horticultural related topic.</li> <li>▪ Serve or chair on a standing committee.</li> <li>▪ Demonstrate ten procedures of Parliamentary Law.</li> <li>▪ Participate in a Career Development Event above the local level.</li> </ul>
<b>MEETS STANDARDS</b>	<p>13.12.1 Recognize opportunities in high wage, high skill horticulture careers.</p> <p>13.12.2 Demonstrate appropriate attitudes and behaviors for effective leadership.</p> <p>13.12.3 Describe the types of individuals who emerge as a group’s leader.</p> <p>13.12.4 Explain the importance of verbal and non-verbal communication skills in leadership.</p> <p>13.12.5 Select qualities of an effective leader.</p> <p>13.12.6 Describe technical leadership qualities and skills.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Identify opportunities in high wage, high skill horticulture careers.</li> <li>▪ Identify technical leadership qualities and skills.</li> <li>▪ Explain the qualities of a good leader.</li> <li>▪ Differentiate between verbal and non-verbal communication skills in leadership.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard:* Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.1</b>	<b>Students shall demonstrate problem-solving skills.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Solve three problems using the seven steps of problems solving.</li> <li>▪ Incorporate problem-solving skills through a Career Development Event in FFA.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.1.12.1 List and describe the seven steps to problem solving.</p> <p>14.1.12.2 Identify leadership styles used in problem solving.</p> <p>14.1.12.3 Demonstrates brainstorming techniques.</p> <p>14.1.12.4 Examines and explains the advantages and disadvantages of alternative solutions to one or more problems.</p> <p>14.1.12.5 Creates an action plan based upon a solution to a work-related problem.</p> <p>14.1.12.6 Identifies the benefits of solving a work-related problem.</p>
<b>APPROACHES STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Explain the importance of problem solving.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard*: Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.2</b>	<b>Students shall demonstrate critical thinking skills.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Demonstrate critical thinking skills in a Career Development Event.</li> <li>▪ Demonstrate the skills necessary to identify, analyze, and offer solutions for horticultural issues.</li> <li>▪ Formulate, implement, and evaluate an action plan.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.2.12.1 Demonstrate critical thinking skill through the planning and implementation of their SAE program.</p> <p>14.2.12.2 List and describe the skills necessary to identify, analyze, and offer solutions for horticultural issues.</p> <p>14.2.12.3 Use critical thinking processes to support solving problems and making decisions.</p> <p>14.2.12.4 Demonstrates critical thinking skills necessary in the workplace.</p> <p>14.2.12.5 Explain how emotional thinking and logical thinking affect decision making in the workplace.</p> <p>14.2.12.6 Explain the difference between reliable and unreliable observations and statements of facts.</p> <p>14.2.12.7 Recognizes patterns or relationships through observation and discovery.</p>
<b>APPROACHES STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Identify the importance of critical thinking skills in identifying, analyzing, and offering solutions for horticultural issues.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard*: Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.3</b>	Students shall demonstrate the ability to speak, write, and listen effectively.
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Identify ways to adapt their communication style to that of others.</li> <li>▪ Describe and use techniques to improve listening, reading, writing, speaking, and nonverbal communication skills.</li> <li>▪ Explain assertive communication.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.3.12.1 Recognize and overcome communication barriers.</p> <p>14.3.12.2 Describe characteristics of four communication styles.</p> <p>14.3.12.3 Discuss the importance of self-communication and interpersonal communication.</p> <p>14.3.12.4 Identify, research, prepare, and present a horticultural related speech.</p> <p>14.3.12.5 Explain the benefits of effective communication skills in the workplace.</p> <p>14.3.12.6 Effectively interprets and responds to verbal and nonverbal messages.</p> <p>14.3.12.7 Demonstrate proper telephone etiquette.</p> <p>14.3.12.8 Effectively communicates thoughts, ideas, and information in writing.</p> <p>14.3.12.9 Organizes ideas and communicates orally; is able to effectively demonstrate job skills to others.</p> <p>14.3.12.10 Locates, understands, and interprets written information in documents such as manuals, graphs, and schedules.</p> <p>14.3.12.11 Selects and utilizes an appropriate medium for conveying messages with dignity and respect.</p> <p>14.3.12.12 Organizes information into the appropriate format in accordance with standard practices, which includes prewriting, drafting, proofreading, editing/revising, and preparing a final copy.</p> <p>14.3.12.13 Demonstrates sensitivity to cultural diversity in communication.</p> <p>14.3.12.14 Identifies common communication barriers and methods for improving communication.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define communications.</li> <li>▪ Explain the relationship between communication and leadership.</li> <li>▪ Explain the purpose of communication.</li> <li>▪ Explain the communication process.</li> </ul>

Nevada Academic Standards Correlation:

STATE BOARD APPROVED 12/14/02

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard:* Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.4</b>	<b>Students shall demonstrate the ability to select, apply, and maintain appropriate technology.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Complete a computer-based application for an FFA awards program.</li> <li>▪ Complete a computer-based record book program.</li> <li>▪ Conduct agriculture research using print, multimedia, and Internet resources and use graphs, charts, and/or diagrams to describe trends related to the topic.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.4.12.1 Operate a database program as it relates to horticulture.</p> <p>14.4.12.2 Operate a spreadsheet application related to horticulture.</p> <p>14.4.12.3 Operate a word processing program.</p> <p>14.4.12.4 Construct a multimedia presentation.</p> <p>14.4.12.5 Access and demonstrate use of the Internet by accessing and exploring the Nevada State Agriculture web site and related horticulture sites.</p> <p>14.4.12.6 Demonstrate ability to utilize basic keyboarding techniques.</p> <p>14.4.12.7 Demonstrate ability to utilize other input devices.</p> <p>14.4.12.8 Demonstrate ability to utilize various electronic research methods.</p> <p>14.4.12.9 Demonstrate knowledge of the basic technology systems currently available and how they apply to your field.</p> <p>14.4.12.10 Investigate and explain the use, benefits, and costs of technological developments in the workplace and school.</p> <p>14.4.12.11 Identify and demonstrate the appropriate use of technology to enhance the efficiency of the workplace and school.</p> <p>14.4.12.12 Demonstrate routine maintenance and repair of technological equipment.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Recognize the importance of information technology in agriculture.</li> <li>▪ List and describe the types of applications used in information technology.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard*: Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.5</b>	<b>Students shall demonstrate leadership and teamwork skills.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Demonstrate ten procedures of parliamentary law.</li> <li>▪ Lead a group discussion.</li> <li>▪ Analyze five stages of group development.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.5.12.1 Participate in a group panel discussion.</p> <p>14.5.12.2 Participate in one of the seven FFA leadership development conferences.</p> <p>14.5.12.3 Demonstrate five procedures of parliamentary law.</p> <p>14.5.12.4 Participate in planning and conducting of at least three official functions in the FFA Chapter Program of Activities.</p> <p>14.5.12.5 Explain the importance of democratic group leadership.</p> <p>14.5.12.6 Describe the characteristics of functional, task, and informal groups.</p> <p>14.5.12.7 Works cooperatively with others when given a group project.</p> <p>14.5.12.8 Explain traits necessary to effectively lead and influence individuals and groups.</p> <p>14.5.12.9 Demonstrates appropriate attitudes and behaviors for effective leadership.</p> <p>14.5.12.10 Demonstrates respect for team members, team processes, and team goals.</p> <p>14.5.12.11 Participates in the implementation of a group's decision and evaluates the results.</p> <p>14.5.12.12 Demonstrate the qualities of an effective leader and team member.</p> <p>14.5.12.13 Describes the importance of a proper dress code.</p>
<b>APPROACHES STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Explain the importance of groups.</li> <li>▪ Explain how to organize groups.</li> <li>▪ Participate in FFA activities at the local level.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard*: Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.6</b>	<b>Students shall demonstrate sound workplace ethics.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Model the eleven points of FFA Code of Ethics while participating in school, community, or FFA activities.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.6.12.1 Identify and understand the eleven points to the FFA code of Ethics.</p> <p>14.6.12.2 Develop personal work ethics through participation in their SAE.</p> <p>14.6.12.3 Discuss the importance of ethics practiced in the workplace.</p> <p>14.6.12.4 Develops personal work ethics through work experience.</p> <p>14.6.12.5 Describes the importance of ethics practiced in the workplace.</p> <p>14.6.12.6 Demonstrates regular attendance, promptness, and the willingness to follow instructions and complete an assigned task.</p> <p>14.6.12.7 Demonstrates appropriate personal and professional attitudes and behaviors.</p> <p>14.6.12.8 Maintains a safe, clean, and organized work area.</p> <p>14.6.12.9 Demonstrates awareness of legal responsibilities related to individual performance, safety, and customer satisfaction.</p> <p>14.6.12.10 Demonstrates knowledge of various types of harassment.</p>
<b>APPROACHES STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ List the important ethics in the workplace.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard:* Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.7</b>	<b>Students shall demonstrate the ability to effectively manage resources in high-performance workplaces.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Discuss the factors that affect the development of resources in high-performance workplaces.</li> <li>▪ Hold an office or position in the horticulture or FFA program.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.7.12.1 Identify the important resources needed in a workplace.</p> <p>14.7.12.2 Develop skills in evaluating themselves and others in a workplace environment.</p> <p>14.7.12.3 Discuss the importance of managing resources in high-performance workplaces.</p> <p>14.7.12.4 Identifies and organizes the human resources needed to complete a job assignment.</p> <p>14.7.12.5 Identifies and organizes the material resources and space requirements needed to complete a job assignment.</p> <p>14.7.12.6 Effectively uses the highest available technology to complete a job assignment.</p> <p>14.7.12.7 Demonstrate cooperation and leadership in a team at school or in a workplace setting.</p> <p>14.7.12.8 Use the basic components of effective time management.</p> <p>14.7.12.9 Recognize the need for management skills in the workplace with regard to stress, anger management, and substance abuse.</p> <p>14.7.12.10 Estimates costs and prepares a detailed work order for a greenhouse, nursery, or floral shop.</p> <p>14.7.12.11 Develops a time schedule and prioritized task list to complete a job assignment.</p>
<b>APPROACHES STANDARD</b>	<ul style="list-style-type: none"> <li>▪ Define “high-performance workplace”.</li> <li>▪ Discuss the ingredients and resources included in managing resources in high-performance workplaces.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard:* Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.8</b>	<b>Students shall demonstrate career planning and development skills.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Develop a plan to match careers with their personal characteristics.</li> <li>▪ Utilize the resources found in the Career Information System to describe careers in production, plant science, and horticulture.</li> <li>▪ Constructs a career portfolio.</li> <li>▪ Participates in a job interview.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.8.12.1 Develop an employment resume.</p> <p>14.8.12.2 Complete a sample job application.</p> <p>14.8.12.3 Undergo a mock employment interview.</p> <p>14.8.12.4 Demonstrate career planning through the development of their SAE.</p> <p>14.8.12.5 Prepares a job application and personal resume.</p> <p>14.8.12.6 Completes a personal aptitude and interest inventory.</p> <p>14.8.12.7 Establishes short-term and long-term career goals.</p> <p>14.8.12.8 Uses the Nevada Career Information System or a similar computer-based program to research careers in a chosen field.</p> <p>14.8.12.9 Participates in an organized job-shadowing and community service activity.</p>
<b>APPROACHES STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Differentiate between work, job, occupation, and career.</li> <li>▪ Explain the diversity of agriculture education job placement.</li> <li>▪ List sources used in finding employment.</li> </ul>

Nevada Academic Standards Correlation:

**Plant and Environmental Horticulture Science  
Performance Level Descriptors**

**Content Standard 14.0: *Employability Standard:* Students shall achieve competence in workplace readiness, career development, and lifelong learning.**

<b>Performance Standard 14.9</b>	<b>Students shall demonstrate job-retention and lifelong-learning skills.</b>
<b>EXCEEDS STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Discuss how to merit employment promotions.</li> <li>▪ Develop a portfolio based on participation in SAE and leadership activities.</li> <li>▪ Participate in a school-based enterprise.</li> <li>▪ Maintain an employment/career portfolio.</li> </ul>
<b>MEETS STANDARDS</b>	<p>14.9.12.1 Identify and develop employability skills.</p> <p>14.9.12.2 Discuss and develop employable personal management skills.</p> <p>14.9.12.3 Discuss and develop employable academic and technical skills.</p> <p>14.9.12.4 Identify strategies for balancing work and family roles.</p> <p>14.9.12.5 Demonstrate understanding of the need for lifelong learning in a rapidly changing job market.</p> <p>14.9.12.6 Identify strategies to maintain employment in the face of job reductions.</p> <p>14.9.12.7 Develop long-term career planning strategies.</p> <p>14.9.12.8 Identify various educational options needed of job advancement.</p> <p>14.9.12.9 Demonstrates interpersonal skills needed for job retention.</p> <p>14.9.12.10 Identify and model sound workplace ethics, such as loyalty, punctuality, and initiative.</p>
<b>APPROACHES STANDARDS</b>	<ul style="list-style-type: none"> <li>▪ Explain the importance of positive response to authority.</li> <li>▪ Explain the proper procedure for leaving employment.</li> </ul>

Nevada Academic Standards Correlation: